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### Issue Details

Issue Details	
Issue Size (Value in ₹ million, Upper Band)	2,512
Fresh Issue (No. of Shares in Lakhs)	74.6
Offer for Sale (No. of Shares in Lakhs)	39.0
Bid/Issue opens on	05-Mar-24
Bid/Issue closes on	07-Mar-24
Face Value	₹ 10
Price Band	210-221
Minimum Lot	67

### Objects of the Issue

#### ➤ Fresh Issue: ₹1,650 million

- Investment in Material Subsidiary, viz. BDJ Oxides (i) repayment or pre-payment, in full or in part, of all or certain borrowings availed by its Material Subsidiary; (ii) funding capex requirements for setting up of a R&D center situated in Andhra Pradesh
- Long-term working capital requirements.
- General corporate purposes.

#### ➤ Offer for sale- 862 million

Book Running Lead Managers	
Centrum Capital Limited	
Emkay Global Financial Services Limited	
Keynote Financial Services Limited	
Registrar to the Offer	
KFin Technologies Limited	

Capital Structure (₹ million)		Aggregate Value
Authorized share capital		370.00
Subscribed paid up capital (Pre-Offer)		317.20
Paid up capital (Post - Offer)		391.86

Share Holding Pattern %	Pre-Issue	Post Issue
Promoters & Promoter group	100.0	70.9
Public	0.0	29.1
Total	100	100

### Financials

Particulars (₹ In million)	9M-FY24	FY23	FY22	FY21
Revenue from operations	4,863	7,846	6,128	4,353
Operating expenses	4,582	7,091	5,567	2,107
<b>EBITDA</b>	<b>282</b>	<b>755</b>	<b>562</b>	<b>2,246</b>
Other Income	48	96	102	51
Depreciation	32	34	27	23
EBIT	298	817	637	2,274
Interest	30	50	63	1,862
Profit before tax and Excep item	268	767	574	412
Excep item	18	-	-	-
PBT	250	767	574	412
Tax	64	199	143	124
<b>Consolidated PAT</b>	<b>185</b>	<b>568</b>	<b>431</b>	<b>288</b>
<b>EPS</b>	<b>4.72</b>	<b>14.49</b>	<b>11.01</b>	<b>7.35</b>
<b>Ratios</b>	<b>9M-FY24</b>	<b>FY23</b>	<b>FY22</b>	<b>FY21</b>
EBITDAM	5.79%	9.62%	9.16%	51.61%
PATM	3.81%	7.24%	7.04%	6.62%
Sales growth		28.03%	40.78%	

### Sector- Chemicals

### Company Description

JG Chemicals Limited is India's largest zinc oxide manufacturer in terms of production and revenue for zinc oxide manufacturing through French process, which is the dominant production technology for producing zinc oxide and has been adopted by all the major producers in Americas, Europe, and Asia. The market share of their Company is around 30% as of March 2022. Company sells over 80 grades of zinc oxide and are among the top ten manufacturers of zinc oxides globally. Since their incorporation in 2001, they have expanded their business and scale of operations and have grown into a large, diversified zinc oxide player with a global footprint. Their product caters to a wide spectrum of industrial applications, including in the rubber (tyre & other rubber products), ceramics, paints & coatings, pharmaceuticals & cosmetics, electronics & batteries, agro-chemicals & fertilizers, specialty chemicals, lubricants, oil & gas, and animal feed. Owing to their legacy of over four decades in manufacturing businesses, company benefit from their experience in catering to a wide array of customers and they have built a long-standing relationship with customers across end-user industries in the tyres, ceramics, rubber, paints, cosmetics, and batteries industry. Over the last three years, company marketed and sold their product to over 200 domestic customers and over 50 global customers in more than 10 countries.

In India, tyre industry accounts for 70% of rubber consumption and the companies in the tyre industry are the largest consumers of their product. Along with being suppliers to 9 out of top 10 global tyre manufacturers and to all the top 11 tyre manufacturers in India, they also supply to leading paints manufacturers, footwear players and cosmetics players in India. Their Material Subsidiary, BDJ Oxides is the only zinc oxide manufacturing facility in India to have an IATF certification, which is preferred by tyre manufacturers supplying to original equipment manufacturers. As a manufacturer of zinc oxide, it is a pre-requisite in most of their end-use industries for their products to be customized according to the specifications by customers, which usually acts as a significant entry barrier. Further, high cost of product development, complexity of the chemistry involved in innovating and tailoring their products to the customized needs of their customers, which requires necessary technical expertise and lengthy and stringent supplier qualification process are the other entry barriers in their business. They procure their raw materials from multiple domestic and global suppliers. Their primary raw materials are virgin zinc metal and Zinc Dross (which is a type of zinc scrap). Company procures virgin zinc metal and Zinc Dross from various domestic and global entities. Zinc Dross is primarily produced by steel galvanizers as a by-product of steel production. The availability of zinc scrap is a challenge, and the biggest constraint for new entrants in the market is to build a global supply network.

### Valuation

JG Chemicals Ltd has a leading market position with a diversified customer base, being supplier to 9 out of top 10 global tyre manufacturers and to all the top 11 Indian tyre manufacturers with high entry barriers in key end-use industries and long-term relationships with customers and suppliers & having robust supply chain with more than 250 customers in last 3 years along with focus on long term sustainability with environmental initiatives and safety standards.

At the upper price band company is valuing at P/E of 15.76x and EV/EBITDA 12.3x with a market cap of ₹ 8,660 million post issue of equity shares.

We believe that the IPO is fairly priced and recommend a "Subscribe-Long term" rating to the IPO.

**Business Operations****Product**

Zinc oxide is an inorganic compound, white in colour and insoluble in water. The chemical formula for zinc oxide is ZnO. Zinc oxide is present in the earth's crust as mineral zincite and usually contains manganese and other impurities. Hence, for commercial use it is synthetically made. Zinc oxide has a lot of properties that make it desirable to various end user industries. Zinc oxide as a compound has varying grades, depending on the end-use and is not one size fits all product. Each end user industry segment has its own peculiarities in terms of specifications and within each user industry, each customer also has different specifications and requirements. Hence, there is an extremely high degree of customization which is required not just in operating parameters but also in plant design and engineering which must be factored while building new plants to ensure that multiple grades can be produced at the required volumes on a continuous basis. Company sell over 80 grades of zinc oxide manufactured across all their plants to cater to their variety of customers for a wide spectrum of industrial applications in the rubber (tyre & other rubber products), ceramics, paints & coatings, pharmaceuticals & cosmetics, electronics & batteries, agro-chemicals & fertilizers, speciality chemicals, lubricants, oil and gas and animal feed. They sell their finished goods in the domestic as well as international markets.

**The table below, demonstrates the percentage of their sales to the various end-use industries they cater to:**

Industry	Nine months period ended December 31, 2023	FY23	FY22	FY21
Rubber and tyres	90.50	90.46	90.10	89.2
Pharmaceuticals & chemicals	7.09	6.79	6.37	7.48
Agriculture	0.75	0.92	2.06	1.79
Others*	1.66	1.83	1.47	1.53
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

As on December 31, 2023, their aggregate installed capacity of 77,040 MTPA is spread across their three manufacturing facilities located at (i) Jangalpur (Kolkata, West Bengal); (ii) Belur (Kolkata, West Bengal); and (iii) Naidupeta (Nellore District, Andhra Pradesh), which is their largest manufacturing facility and is owned and operated by their Material Subsidiary.

Financial year	Installed capacity		
	Zinc oxide	Zinc ingot	Zinc Sulphate and other allied chemicals
December 31, 2023	59,904	7,056	10,080
2023	59,904	7,056	10,080
2022	46,464	5,040	NA
2021	38,832	NA	NA

The installed capacity of their Naidupeta Facility specified above has recently been augmented by an additional 13,440 MTPA for zinc oxide and 10,080 MTPA for zinc sulphate and other allied chemicals. All processes at their manufacturing facilities are undertaken with modern engineering systems to minimize emissions. They have installed recuperators in most of their furnaces to reduce their carbon footprint.

Company have also been granted the consent and hazardous waste authorization order under the 'Orange Category' for generation, collection, storage, transport, reuse, recycling, utilization, processing, and treatment or any other use of hazardous or wastes and permissible quantity of emissions per hour at all their manufacturing facilities by the respective state pollution control boards. In addition to the aforesaid accreditations, they are also a member of the All-India Rubber Industries Association, India Lead Zinc Development Association, Bureau of International Recycling, Indo-German Chambers of Commerce, Material Recycling Association of India, Chemicals and Allied Products Export Promotion Council, and the International Zinc Association.

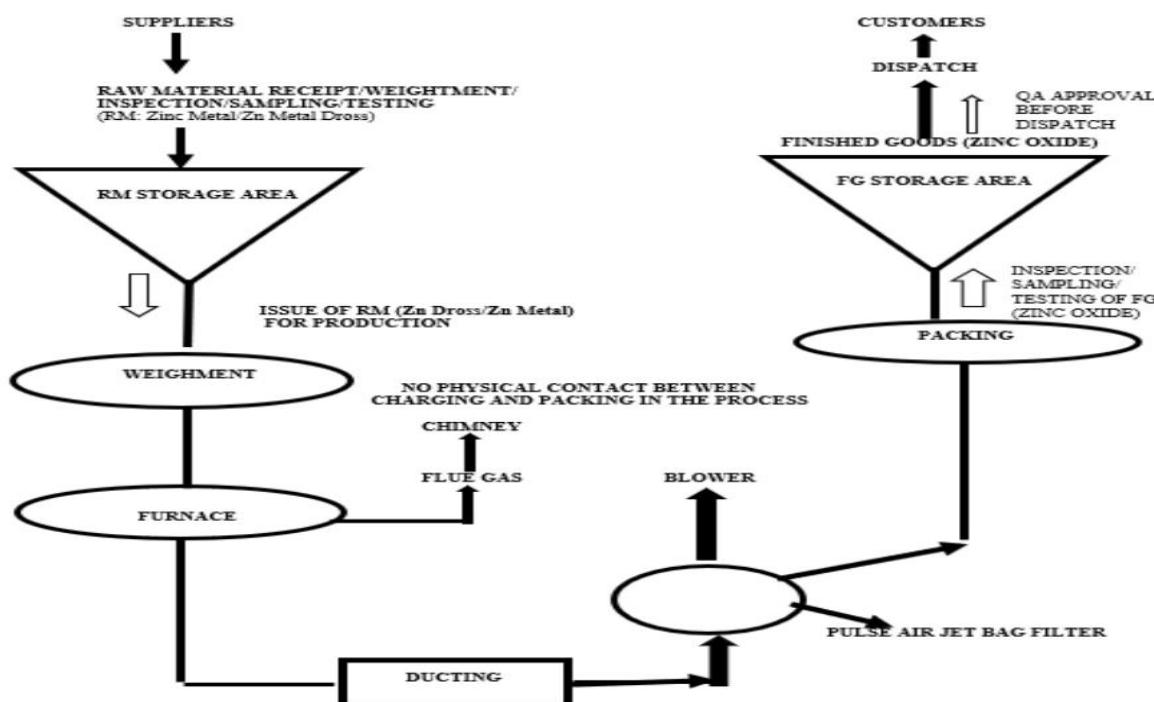
**Manufacturing Process**

Zinc oxide is made through three processes for commercial uses namely, indirect process, direct process, and wet chemical process. The indirect process is also known as the French process. Here, the metallic zinc is melted in silicon carbide / graphite bonded crucibles vapor. It then reacts with oxygen in the air to give zinc oxide. Most of the world's zinc oxide is manufactured through the French process as zinc oxide produced through the French process has use in many applications and its chemical properties are more conducive. The direct process also known as the American process, starts with diverse contaminated zinc composites.

The zinc precursors are reduced by heating with a source of carbon to produce zinc vapor and then oxidized as in indirect process. Since it is produced from impure zinc and zinc ores, the purity level of zinc oxide through the direct process is also of lower quality compared to the indirect process. Similarly, in the wet chemical process which starts with aqueous solutions of zinc salts which are precipitated. The zinc oxide produced using this technology is slight off-white / yellowish in color.

Due to zinc oxide produced through the American process and wet chemical process not being of the highest quality, the usability of the same is very restricted and these processes are slowly reducing as end-user application sectors are reluctant to use the product for a variety of reasons like quality, limited supply, etc. Their manufacturing facilities use the French process to produce various grades of zinc oxide, and modern pulse jet bag filters and combustion systems at all their manufacturing facilities.

A brief and basic flow chart setting out an overview of their manufacturing process is below:



#### Strengths:

##### ➤ **Leading market position with a diversified customer base**

Company is the largest manufacturer of zinc oxides in India and among the top ten manufacturers of zinc oxides globally, with an installed capacity of 59,904 MTPA for zinc oxide, 7,056 MTPA for zinc ingots, and 10,080 MTPA capacity for zinc sulphate and other allied chemicals. The installed capacity of their Naidupeta Facility has recently been augmented by 13,440 MTPA for zinc oxide and 10,080 MTPA for zinc sulphate and other allied chemicals. Production capacities, process of production, grades of ZnO, and variety of application segments are some of the factors through which the key players control the market. They sell over 80 grades of zinc oxide, thereby enabling them to cater to a wide variety of customers across various end-use industries. In terms of volume, the zinc oxide production in India has been around 100 thousand tonnes – 115 thousand tonnes in the past 5 years from Fiscal 2018 to Fiscal 2022.

During this period, the Indian zinc oxide market size is estimated at around ₹ 18,000 million to around ₹ 20,000 million. The Indian zinc oxide market is fragmented with limited presence of organized players, who constitute a major portion of the market due to high entry barriers for any new entrant. In terms of the export market, the top countries where India exported zinc oxide were mainly countries in the SAARC region and in South East Asia, which is also their primary export market, constituting 99.25% of their total exports in Fiscal 2022. Their emphasis on customer-driven marketing, wherein their Promoters take personal interest in sales, marketing, and customer development activities with their key customers, has helped them create a strong presence in the global zinc oxide industry. The company believe this is one of the key factors for them being a supplier to 9 out of top 10 global tyre manufacturers and to all of the top 11 Indian tyre manufacturers.

Their products cater to a wide spectrum of industrial applications including rubber (tyre & other rubber products), ceramics, paints & coatings, pharmaceuticals & cosmetics, electronics & batteries, agro-chemicals & fertilizers, speciality chemicals, lubricants, oil and gas, and animal feed. They cater to a diverse customer base across various end-use industries and have a long-standing relationship with a few marquee customers in such industries. Diversification of their customer base across the domestic and global markets has enabled them to further diversify and expand their business relationships. Their sales from exports for the nine months period ended December 31, 2023, and Fiscals 2023, 2022, and 2021, have been ₹ 462.42 million, ₹ 727.07 million, ₹ 545.08 million, and ₹ 386.90 million, respectively, comprising of 9.51%, 9.27%, 8.90%, and 8.92% of the sale of their finished goods for the corresponding period. Their long-term association with key customers also offers significant advantages such as revenue visibility, industry goodwill, and quality assurance. Company believe that their ability to diversify into new markets, lack of dependence on any specific market, and efficient operating process are key strengths in their business operations.

##### ➤ **High entry barriers in key end-use industries**

Their end-use industries have significant entry barriers due to specific factors unique to such end-use industries. Given the nature of the application of their products and the processes involved, their products are subject to, and measured against, high quality standards and rigorous product approval systems with stringent impurity specifications. Further, because end products manufactured by their customers are typically subject to stringent regulatory and industry standards, any change in the vendor of the product may require significant time and expense on the part of the customers, which acts as an entry barrier and disincentivizes any such changes for them. Some of the entry barriers for their end-use industries are:

- **Stringent vendor approval process** – Tyre manufacturers are under strict scrutiny from the OEMs for product quality. Hence in the last 15 years, they have changed their sourcing strategy from having low-cost suppliers to focus on scalability, reliability of supplies, infrastructure, systems and product quality and systems. Large tyre manufacturing companies want to deal with suppliers who have an existing track record. For any change in suppliers, tyre manufacturers have a lengthy and expensive process of testing the product to evaluate its impact on the tyre quality. Hence, there is resistance to changing or adding any new suppliers, since the

approvals take significant time of upto 5 years once initiated. Even with their existing suppliers, tyre manufacturers insist on taking supplies from the same production facility.

- **Raw material tie-ups-** Zinc Dross is produced as a by-product by steel galvanizers. The availability of Zinc Dross is a challenge and the biggest constraint for new entrants in the market is to build a global supply network. The overall domestic availability of Zinc Dross is far less than requirement and therefore, there is a need to import the same. Since the availability of Zinc Dross is limited and traders prefer selling Zinc Dross to large buyers instead of small ones, due to advanced payment requirement, it prevents new entrants into the market. Due to the difficult sourcing pattern for this product, new players are reluctant to enter zinc oxide business. Several zinc oxide facilities have faced supply side constraints due to which they have been forced to shut / curtail production.
- **Technical expertise-** Most of the zinc oxide produced in India is from Zinc Dross. Zinc Dross is a scrap and there is no uniform grade of zinc scrap. Every galvanizer generates Zinc Dross which is different in terms of quality and therefore the productivity and quality of zinc oxide which is derived from it, varies. The chemistry involved in making a consistent quality of zinc oxide using different types of Zinc Dross is a complex process. Understanding this and customizing the zinc oxide manufactured in line with customer specifications across end-use industries is one of the key challenges as each buyer has a separate specification and there are no standard specifications accepted across any end user application.
- **High working capital requirements-** The traders who sell Zinc Dross, the raw material for zinc oxide production, prefer advance payments from zinc oxide manufacturers. Also, sales made by zinc oxide manufacturers to customers are mostly on credit. These credit terms may vary depending on the customer, industry and the bargaining power of the suppliers and customers, leading to a high working capital requirement in the zinc oxide industry which acts as a major deterrent for the entry of new players. Company procures their raw materials on an advanced basis in cash and the sales made by us to their customers is mostly on credit.
- **Supplier customer relationship-** In the specialty chemicals industry, customers select their suppliers after critically evaluating them and therefore choose to have a long-term relationship with them as the cost to change the suppliers is significant. Various of their customers have conferred on them the status of preferred supplier, primarily due to their focus on building long-term relationships which help them in achieving higher profits with increase in order volumes.

#### ➤ Focus on long term sustainability with environmental initiatives and safety standards.

Companies have a strong focus on sustainability in all aspects of their operations and over the years have adopted various green initiatives. Caring for the environment and sustainable development, along with being the core principles that drive their organization, are also desired by their customers. Accordingly, they constantly strive to reduce emissions and recycle and reuse to conserve natural resources. As a part of their initiatives towards continual improvement, the company have also obtained the Environment Management System certification under the new standard of ISO 14001: 2015 for each of their manufacturing facilities. Company use the French process to produce various grades of zinc oxide and use modern pulse jet bag filters and combustion systems which ensure high productivity, low energy consumption, and maintain required standards with respect to emission norms. They believe in adopting a sustainable manufacturing process and use over 90% recycled metal, i.e., secondary zinc (dross/scrap/scrub) as their raw material, instead of virgin metal, which helps them in lowering the emission of carbon dioxide, reduces air and water pollution, and reduces water use by a considerable quantity. They have also installed recuperators in most of their furnaces. Recuperators are a special-purpose counter-flow energy recovery heat exchanger that recovers the waste heat from the manufacturing process and helps in reducing their carbon footprint and their energy consumption.

#### **Key Strategies:**

##### ➤ **Expand their production capacities and broaden the footprint of manufacturing operations.**

Their Company has existing manufacturing facilities in the eastern and southern parts of India. While company have been delivering their products to all parts of India, they intend to increase their production capacities and broaden their manufacturing operations. They have recently expanded their existing manufacturing facility located in Naidupeta, District Nellore in the state of Andhra Pradesh by 23,520 MTPA, of which 13,440 MTPA will be utilized for zinc oxide and 10,080 MTPA will be utilized for producing zinc sulphate and other allied chemicals. With this expansion, their cumulative installed capacity, along with their subsidiary, has increased to 77,040 MTPA. Further, they propose to establish a greenfield manufacturing facility in the state of Gujarat.

Company believe that establishing a presence in the western part of India by setting up or acquiring a new manufacturing facility will, in addition to augmenting their manufacturing capacity, also enable them to capture market share by catering to the needs of the ceramics, pharmaceuticals, and tyre industries, which have a presence in the western part of India. Setting up manufacturing operations in the western part of India will also provide them easier access to cater to the needs of such industries and increase their sales due to the proximity of various manufacturing facilities in these industries in this part of India. Zinc oxide is also used in other specialty chemicals, petroleum additives, and other allied products, the demand for which is prevalent in the western part of India since it is a large chemical production zone. The new manufacturing facility will also ensure speedier delivery of products to different parts of India and be more cost-efficient in terms of logistics on a pan-India basis. Going forward, they will continue to periodically review the functioning of their product development strategy, identify further scope for expansion, and undertake projects to increase their production capabilities and margins.

➤ **Further diversify their product offerings and enter new verticals.**

Company constantly seek to introduce new product verticals and develop their product capabilities to distinguish themselves from their competitors and enhance their product portfolio. Going forward, growth in the end-user industries is expected to fuel the increase in zinc oxide demand, which possesses properties like high chemical stability, high electrochemical coupling coefficient, a broad range of radiation absorption, and high photo stability. The past two decades have seen a significant shift in the specialty chemicals industry, and as specialty chemical applications increase, specifically due to growth in end-use industries like automotive, rubber industry, ceramics, pharmaceuticals & cosmetics, paints & coatings, agrochemicals, nutraceuticals, animal feed, and batteries in the Indian market, the demand for zinc oxide will grow exponentially.

- **Zinc Sulphate**

The demand for zinc sulphate which is a micro-nutrient used inter alia in the zinc based agri-chemicals industry, has been increasing over the last few years. The soil quality in the southern part of India, primarily in states like Andhra Pradesh, Karnataka, Telangana, Kerala and Tamil Nadu, is deficient in zinc micronutrient, and to meet the zinc deficiency in the soil, zinc sulphate is added, thereby contributing to the rising demand of zinc sulphate in the country. However, sourcing of raw material for manufacturing zinc sulphate, i.e. zinc ash, is a major challenge. Presently, their manufacturing process leads to generation of zinc ash, which they sell in the market. However, going forward, company intend to utilize the in-house availability of zinc ash in production of zinc sulphate, in addition to procuring zinc ash from third parties to tap into the rising demand by various fertilizer and micro-nutrient mixture companies located the southern part of India.

Also, some of their customers use both zinc oxide and zinc sulphate, thereby enabling them to cross sell their products. They have recently expanded their manufacturing facility in Naidupeta, Andhra Pradesh to produce zinc sulphate, which is also capable of producing other allied chemicals, to meet the expected significant demand for zinc sulphate from the southern part of India. The company intends to produce other allied agriculture nutrients like ferrous sulphate hepta hydrate and magnesium sulphate hepta hydrate in the same facility with minor operational modifications, to produce such products with the desired efficiency.

- **Pharmaceutical Grade Zinc Oxide**

Company intends to gradually increase the production of pharmaceutical grade zinc oxide for, which company received license in the year 2020 and for which their subsidiary, BDJ Oxides has already obtained the requisite licenses from Government of Andhra Pradesh Drugs Control Administration in the year 2020, to manufacture zinc oxide in accordance with IP/ BP/ USP/ Ph. Eur. standards and further, intend to obtain the GMP certificate. They believe such certifications will enable them to cater to varying needs of the industry and open new areas of growth.

- **Specialized Zinc Oxide/Activated Zinc Oxide (Zinc Carbonate)**

The company intends to cater to the demand for active zinc oxide grade, which is extensively used in electronics, petroleum, and environmental protection industries. Company believes the various initiatives and PLI schemes offered by the GoI, to focus on the local manufacturing and adoption of zinc oxide will lead to an increase in the demand for high grade zinc oxides which are mostly being imported, at present. Since the production process of this grade is like that of zinc sulphate, it can be produced in the same manufacturing facility, thereby optimizing utilization of such facility.

- **Zinc based agri-chemicals and nutrients.**

The company intend to expand into many other zinc-based chemicals and nutrients such as Zinc EDTA 13% and Zinc 39.5% solution, which find application in agriculture, micronutrients, and zinc-based feeds & additives. They believe that the basic production process for many of these can be achieved within their Naidupeta Facility, which they have recently expanded by adding new plant and machinery. Also, the basic raw materials for the production of these chemicals are zinc oxide and zinc sulphate, both of which are or will be produced by them. Accordingly, they believe they are rightly positioned to leverage their existing position to diversify their product and customer base and consequently, increase their revenues.

➤ **Deep mining of existing customers and continued focus to expand customer base.**

Company believes that their leading market position within the various markets where they are present, as well as their long-standing relations with their customers, positions them well to increase wallet share with their existing customers and to continue focusing on expanding their customer base. Over the years, their company has become a preferred supplier for many global & domestic tyre companies, which have gradually started moving towards the concept of a local vendor base and reducing reliance on imports to rationalize inventory. They believe having a local manufacturing presence in such countries in South-East Asia, which are strong bases of the tyre companies, will help them address the sourcing requirements of their existing customers as well as engaging in deep mining of their current product portfolio across a new spectrum of customers.

Harnessing their global footprint and experience, they intend to increase the reach of their specialty products to their existing customers and expand their wallet share with them and have deeper penetration in the markets. In addition to the above, companies are also exploring the possibilities of developing new chemicals and compounds to cater to their existing customers. For instance, they are exploring both organic and inorganic growth opportunities for manufacturing zinc stearate and further, intend to develop more products which address disparate aspects within the rubber industry such as reclaim rubber which has several ends uses for their customers. They expect the reclaim rubber industry to undergo changes due to the proposed laws of recycled content in tyres and the company intends to develop more products which address disparate aspects within the rubber industry such as reclaimed rubber. They believe that there are several smaller rubber chemical manufacturers, and they expect to avail themselves of inorganic growth opportunities that arise in the

industry. The company believe that this will put them in a unique position to cater to their existing customers. The company intends to continue to leverage their direct marketing and distributor network and their industry standing to establish relationships with new export and local customers and expand their customer base. They intend to increase the export contribution to their revenue by adding more new and customized products to their product portfolio.

➤ **Increasing focus on R&D to support complex chemistries, product innovation and cost efficiencies.**

The company has a dedicated focus on developing specialty products, customized to the specific needs of their customers, which has been demonstrated by their long-term customer relationships. Presently, their R&D processes focus on manufacturing zinc oxide with varied specifications suited for their end-use industries, on the floor of their manufacturing facilities itself, without there being a need for a separate R&D facility for such advances. However, as one of the objectives of the Offer, they intend to establish a separate R&D facility to undertake complex innovations in their products for making the same available to pharmaceuticals, agro-chemicals, and battery end-use industries, among others. Presently, their Restated Consolidated Financial Information included in this Red Herring Prospectus does not have a separate line item for expense on R&D activities.

Companies are also exploring ways to develop battery-grade zinc oxide and chemicals. Zinc oxide battery helps to play a major role in semiconductor ceramic elements for operation at elevated temperatures or high voltages. They are already catering to some existing battery manufacturers and are working on developing certain tailor-made products for the battery sector. The battery industry is emerging as a critical sector in the transition to a more sustainable future, and this industry is expected to grow since the market is shifting to renewable technologies. India is currently at the nascent stage of creating a domestic cell manufacturing ecosystem and has a negligible presence in the global market for manufacturing advanced cell technologies. But there is enormous potential for large-scale battery manufacturing units which could allow domestically produced batteries to cater to the demand of grid storage applications, consumer electronics, and other uses. It is estimated that in the accelerated case, the annual demand for batteries by 2030 will be around 106GWh to 260 GWh. In terms of market size, the annual market for stationery and mobile batteries could surpass ₹ 1.12 trillion by 2030.

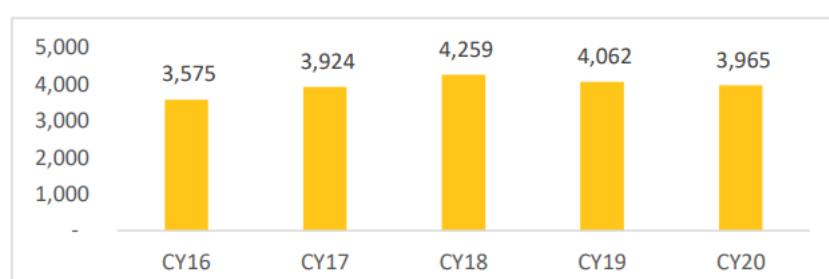
**Industry Snapshot:**

**Chemicals and Specialty Chemicals Industries**

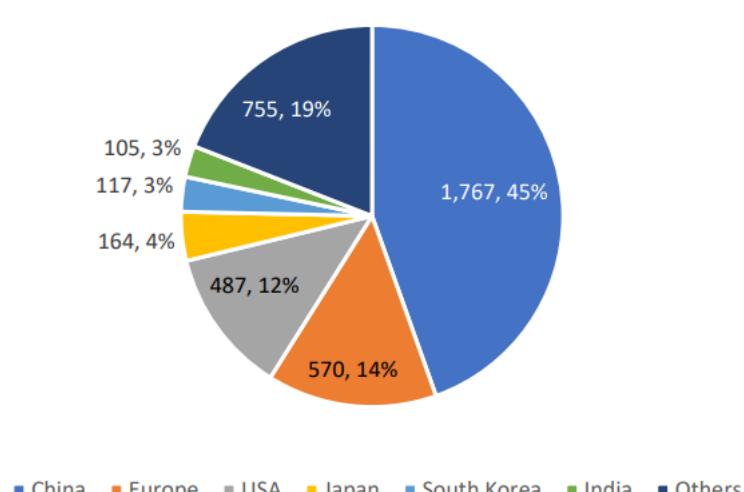
**Global overview**

The importance of chemical industry has resulted in proliferation of chemicals across the globe with the industry sales growing at a Compounded Annual Growth Rate (CAGR) of 4.3% from USD 3,575 billion in (Calendar Year) CY16 to USD 4,062 billion in CY19 and is estimated to grow at a CAGR of 5% to 6% through CY27. This growth will largely be driven by developing markets like Asia Pacific (APAC) which are likely to grow at a higher CAGR of around 7%-8% compared to the growth in more matured markets like US and Europe which will be lower at around 2%-4%. The industry sales are led by a handful of countries. Of USD 3,965 billion sales reported by the global chemicals industry during CY20, sales from 10 countries accounted for a significant share of 86.6% representing USD 3,434 billion of sales during the year. Sales from rest of the world contributed to 13.4% of the total sales in CY20. For CY21, the industry sales is estimated to have crossed around USD 4,100 billion and is yet to breach its CY18 high of USD 4,259 billion.

**Chart 14: Trend in global chemical sales (USD billion)**



**Chart 15: Country-wise international chemical sales (USD billion)**



## India overview

The Indian chemicals industry is widely diversified to include more than 80,000 commercial products. This includes basic chemicals and its products, petrochemicals, fertilizers, paints, varnishes, gases, soaps, perfumes and toiletry and pharmaceuticals. Chemicals industry is significantly important for agricultural and industrial development of India. The industry serves as a building block for several downstream industries, such as textiles, papers, paints, varnishes, soaps, detergents, pharmaceuticals, etc. According to the Government of India's Department of Chemicals and Petrochemicals, chemical and chemical products sector (industry division 20 of NIC 2008), accounted for 1.42% of the Gross Value Added (GVA) for all economic activity in 2020-21 at constant prices (at 2011-12 prices). The share of GVA in the manufacturing sector during 2020-21 is about 7.98%. The size of the Indian chemical industry (industry division 20 of NIC 2008), in terms of value of output in the year 2020-21 was around Rs 9.87 lakh crore (about USD 132 billion). The size of chemical industry, including pharmaceuticals, in terms of value of output in the year 2020-21 was around Rs 14.3 lakh crore (about USD 193 billion).

During last six years, i.e. within 2014-15 to 2019-20, real growth rate in output of chemical industry excluding pharmaceuticals industry was 8.1% which was 8.2% for chemical industry including pharmaceutical industry. Growth in value of output for manufacturing sector during the same period was 6.3%. In 2021, in terms of trade as per the Government of India's Department of Chemicals and Petrochemicals, India ranks 12th in the world exports of chemicals (excluding pharmaceutical products) and ranks 5th in the world imports of chemicals (excluding pharmaceutical products). India's exports of chemicals (excluding pharmaceutical products) was USD 36.6 billion in 2020. India's share in world exports of chemicals (excluding pharmaceutical products) was 2.4% in 2021. India's imports of chemicals (excluding pharmaceutical products) was USD 53.1 billion in 2020. India's share in world imports of chemicals (excluding pharmaceutical products) was 3.4% in 2020.

## Zinc Oxide Industry

Zinc oxide is an inorganic compound, white in colour and insoluble in water. The chemical formula for zinc oxide is ZnO. Zinc oxide is present in the earth's crust as mineral zincite and usually contains manganese and other impurities. Hence for commercial use it is synthetically made. Zinc oxide has a lot of properties that makes it desirable to various end user industries. It is used as an additives to various products like rubber, ceramics, cosmetics, food supplements, plastics, paints, sealants, batteries, animal feed, etc.

Zinc oxide is produced from two types of raw materials namely zinc metal and zinc scrap (dross). The availability of raw materials impacts zinc oxide prices and production. Zinc oxide produced from zinc metal is of high quality and is the preferred material for production of zinc oxide for purity level of 99.9%. This raw material is used to produce high quality of zinc oxide for end user industries like pharmaceuticals and other specialty applications.

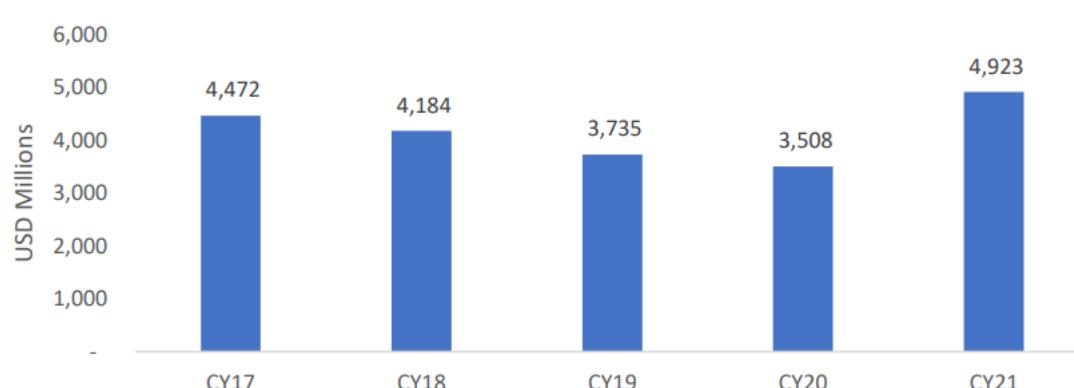
### Zinc scrap includes two main types: Zinc Dross and Zinc ash

- Zinc Dross is the scrap that remains after steel is galvanized. This scrap is generated by large steel mills like SAIL, JSW Steel, Tata Steel etc. and by several other galvanizers across the country and globally. The overall availability of Zinc Dross is far less than the total requirement in India. As a result, a significant quantity of Zinc Dross is imported in India.
- In addition to Zinc Dross, another by-product is generated during the galvanizing process which is called zinc ash. Zinc ash is used as a raw material to make zinc sulphate, zinc borate, zinc carbonate and various other zinc based chemical derivatives. Similar to the procurement of Zinc Dross which is a challenge, the availability of zinc ash is also a challenge.
- The sourcing of Zinc Dross and ash is a big challenge and domestic availability is not sufficient. Hence developing a strong supply chain poses a big issue for players in zinc oxide and sulphate industry.

## Overall Global Market size

During the five-year period CY17 to CY21, the global zinc oxide market size grew from USD 4,472 million in CY17 to USD 4,923 million in CY21 and increased at a CAGR (compound annual growth rate) of 2.4% backed by demand from end user industries.

**Chart 17: Global market size of zinc oxide (USD million)**



## Factors driving growth

- **Automobile and rubber industry**

The Indian tyres industry size is estimated around ₹ 75,000 crores in FY23. With 41 tyre companies and 62 tyre manufacturing plants, this sector produces the largest variety of tyres in the world. The tyre industry has not been much impacted due to the Omicron wave due to its dependence on replacement demand. Vehicles require tyre replacement due to wear and tear which would positively influence the sales of tyres. With the surging demand for replacement tyres, the market is witnessing a healthy growth in this segment. Exports are expected to grow for the tyre industry. Steady demand from major export destinations such as the USA, the UK, and the European nations including Germany, France and Italy supported exports in FY21 and is likely to continue growing forward. India's tyre industry is expected to grow favourably with a CAGR of 8%-10% over the next 4 years by FY27. The expected growth in project completions by automobile and tyre industries in the upcoming years with an improvement in demand and consumer sentiments is also likely to increase the consumption of zinc oxide. In addition to this, the momentum in EV segment have also led to evolution of tyres that handles instant torque and higher inertia, carries heavier load provides proper grip and resistance. Going forward, the automobile industry in India is expected to grow at a CAGR of 6%-8% over the next 4 years by FY27.

- **Ceramics**

With the overall real estate market in India witnessing a strong growth, ceramics industry also stands to benefit and observe a robust growth in the coming years. In India, the real estate industry is one of the major sectors in terms of its direct, indirect and induced effects on the economy. It is the second largest employment generator after agriculture. Broadly, the real estate industry can be classified into residential and commercial real estate. The commercial real estate segment can be further segmented into office, retail and hospitality. The residential real estate accounts for nearly 80% of the total real estate market in India as it is more end-user driven. The commercial segment depends on employment opportunities in the country, particularly for the office space. Since the demand for office space translates into better employment opportunities and possible relocations, higher investments in commercial real estate translate into increased demand for residences in these localities. Resultantly, the demand for residential real estate is propped up by the demand for commercial real estate.

- **Agrochemicals**

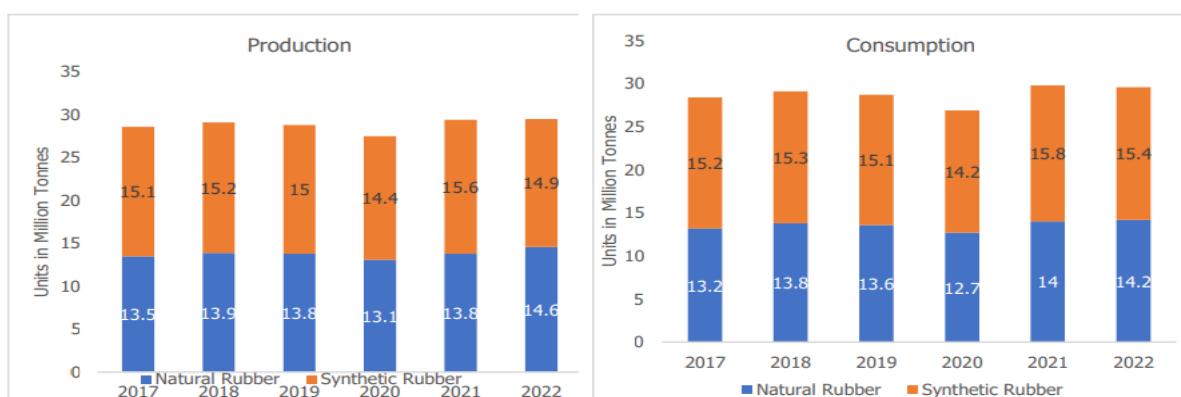
Agrochemicals are used in agriculture to support the growth and safety of plants. They are produced to protect crops from pests and are used for auguring the yields of crops. Agrochemicals are made to prevent crops from insects, diseases and weeds. These pests when not controlled affects the volume and quality of food crops. Zinc oxide is widely used in agro chemicals industry due to its fertilizing property which adds this micronutrient to soil in India which lacks such micronutrients. Zinc oxide helps in better yield and growth of food crops. The photocatalytic property of zinc oxide makes it an excellent antibacterial agent. As per the Fertilizers Association of India (FAI) of all the micro-nutrient deficiencies in the country, zinc deficiency is highest at 36.5% at all-India level compared to that of iron (12.8%), copper (4.2%), manganese (7.1%) and boron (23.4%). To address zinc deficiency, the Government of India provides additional subsidy on usage of fortified fertilizers (fortified with boron and zinc) in order to increase their usage. As per Schedule I of Fertilizer Control Order (FCO) 1985, zinc forms part of micronutrients which includes zinc sulphate heptahydrate, chelated zinc as Zn-EDTA, 150 zinc sulphate mono-hydrate, zinc sulphate monohydrate (granular). Also, it is included under fortified fertilizers which consists zincated urea, zincated phosphate (suspension) – for seed treatment, NPK complex fortified with zinc, DAP fortified with zinc and in 100% water soluble complex fertilizers that includes NPK Zn.

## Tyres and Industry

### Global Overview of Rubber Industry

The rubber and rubber products industry is a diverse industry. Rubber products market includes the sale of rubber products such as tyres, rubber sealants, rubber hoses and other rubber products by the organizations for domestic as well as industrial applications. There are numerous applications of rubber in various industrial sectors like adhesives, belting, padding, automobile sector for belts, moldings, hoses, construction for roofing, sealants and other sectors. There are two types of rubber: Natural Rubber and Synthetic Rubber. Natural rubber is obtained from the latex of the sap trees which is also a vulcanized rubber that is used to manufacture various rubber products. It has high resistance to tensile and tear. Synthetic rubber is the primary raw material used for the manufacturing of rubber 189 190 179 181 218 50 100 150 200 250 FY18 FY19 FY20 FY21 FY22 ₹ 153 products. Its properties include good elasticity, better heat and aging resistance, and better abrasion resistance. Synthetic rubber is often used in surgical gloves and drapes, radial tyres, rubber bands, shoe soles. The demand for synthetic rubber has increased due to the growing demand for non-tyre products, increasing automobile production.

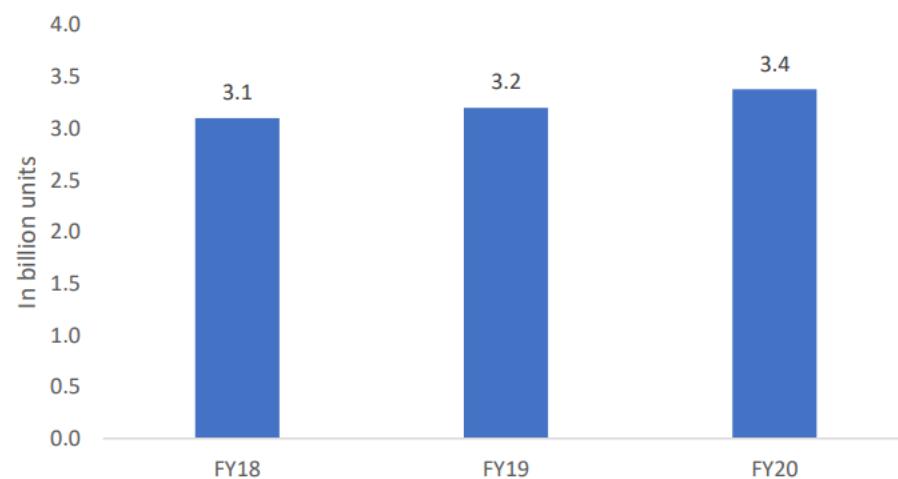
### Global Production and Consumption of Natural Rubber and Synthetic Rubber



## Overview of Global Tyres Industry

The growth in the global tyres market is driven by expansion in global production and sales of vehicles. The Asia Pacific region accounts for highest demand due to the technological advancements and key R&D investments by major market players. The global tyres market has been classified into radial and bias tyres. The radial tyres segment is growing faster on account higher vehicle efficiency, reduced fuel efficiency, lower ground damage, lower transverse slip.

### Global Tyres Demand



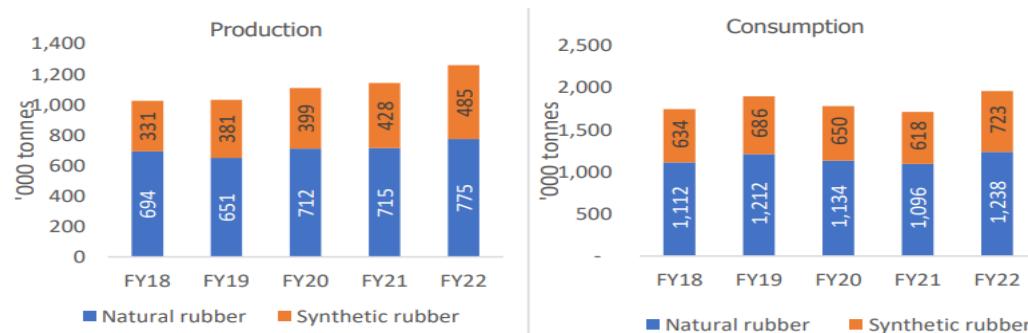
## Indian Overview on Rubber Industry

Indian rubber industry is characterized by the co-existence of a well-established rubber production sector and a fast-growing rubber product manufacturing and consuming sector. India is the 5th largest producer of natural rubber. The rubber industry value chain begins from natural rubber plantations and ends with a huge range of dry rubber and latex based products. The key factors which have contributed to the growth of Indian rubber industry are positive intervention of institutional agencies aiming at self-sufficiency and import substitution. The rubber consumption in India is mostly in automobile sector, civil and aviation sector, railways and agricultural transport, pharmaceuticals, steel plants and mines, aeronautic, and textile engineering industries. Its application can be in automobile tyre, bicycle tubes and tyres, belts and hoses, footwear, latex and other products. Traditional rubber growing states comprising Kerala and Tamil Nadu account for 81% of production. Major non-traditional rubber growing regions are the North Eastern states of Tripura, Assam and Meghalaya, Odisha, Karnataka, Maharashtra and West Bengal. The growth of the rubber industry is enhanced by the boom in the automobile industry and rapid industrialization.

## Production and Consumption of Rubber

India is currently the 5th largest producer of natural rubber in the world. The total production in India stood at 775,000 tonnes (0.78 million tonnes) in FY22. Ribbed smoked sheet rubber accounted for around 63% of natural rubber production in FY22 followed by solid block rubber (20%) and latex concentrates (14%) as per the Rubber Board of India. India is the 2nd largest consumer of natural rubber globally with consumption of around 1.3 million tonnes in CY21. As per the Rubber Board of India, ribbed smoked sheet rubber, solid block rubber and latex concentrates accounted for 42%, 48% and 8%, respectively, in natural rubber consumption during FY22. Around 40% of the total natural rubber consumption in India is at present met from import of rubber. About 70% of natural rubber consumption in India is in the automobile tyres sector.

### India Production and Consumption of Natural Rubber and Synthetic Rubber



## Accounting ratios

Particulars	December 31, 2023	FY23	FY22	FY21
Revenue from operations	4,863.22	7,845.76	6,128.30	4,352.98
Total Income	4,910.99	7,941.88	6,230.47	4,404.05
EBITDA	329.42	851.17	663.78	486.07
EBITDA Margin (%)	6.77%	10.85%	10.83%	11.17%
PAT	185.10	567.93	431.26	287.99
PAT Margin (%)	3.81%	7.24%	7.04%	6.62%
Operating Cash Flows	671.13	311.66	67.52	-73.46
Net Worth	2178.56	1998.86	1476.58	1084.77
Net Debt	(709.07)	(421.51)	(39.59)	(136.22)
Debt Equity Ratio	0.11	0.34	0.62	0.69
ROCE (%)	11.86%	29.38%	25.83%	25.27%
ROE (%)	8.20%	30.50%	30.64%	24.23%

**Comparison with listed entity**

Name of the company	Face Value (₹ per share)	Revenue from operations (₹ million)	EPS (Basic)(₹)	EPS (Diluted)(₹)	P/E	RONW%	NAV (₹ per share)
J.G.Chemicals Limited	10	7,941.88	14.49**	14.49**	15.76*	27.49	63.02
<b>Listed peers</b>							
Rajratan Global Wire Limited	2	8,986.80	19.72	19.72	33.43	22.79	86.54
NOCIL Limited	10	16,228.10	8.95	8.92	30.97	9.61	93.14
Yasho Industries Limited	10	6,825.95	59.54	59.54	30.03	28.52	208.75

Note: 1) P/E Ratio has been computed based on the closing market price of equity shares on NSE on February 22, 2024.

2) \*/\*\* P/E and EPS of company is calculated on basis TTM and post issue no. of equity shares issued.

**Key Risk:**

- Companies' business is almost completely dependent on the sale of one principal product i.e. zinc oxide (in various grades) and any reduction in the demand of the same may have an adverse effect on their business and financial performance.
- Company is significantly dependent on the business operations of their material subsidiary i.e. BDJ Oxides Private Limited and any deterioration in the performance of their material subsidiary may adversely affect the business, financial condition and results of operations.
- Company derives a significant part of their revenue from select customers. If one or more of such customers choose not to source their requirements from them, their business, financial condition, and results of operations may be adversely affected.
- Their logo is not registered as a trademark. If they are unable to protect intellectual property rights, their business, financial condition and results of operations may be adversely affected.
- Company operates in a competitive industry. Any inability to compete effectively may lead to a lower market share or reduced operating margins.
- Their operations are heavily dependent on the rubber and tyre industry and there is a lack of diversification in their business across other Application Industries.
- Company's business is heavily dependent on procurement of raw materials from overseas suppliers. They do not have long-term agreements with their suppliers of raw material and any increase in the cost of, or a shortfall in the availability of, such raw materials could have an adverse effect on their business and results of operations.

**Valuation:**

JG Chemicals Ltd has a leading market position with a diversified customer base, being supplier to 9 out of top 10 global tyre manufacturers and to all the top 11 Indian tyre manufacturers with high entry barriers in key end-use industries and long-term relationships with customers and suppliers & having robust supply chain with more than 250 customers in last 3 years along with focus on long term sustainability with environmental initiatives and safety standards.

At the upper price band company is valuing at P/E of 15.76x and EV/EBITDA 12.3x with a market cap of ₹ 8,660 million post issue of equity shares.

We believe that the IPO is fairly priced and recommend a "**Subscribe-Long term**" rating to the IPO.

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