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IPO Note – Chemplast Sanmar Limited

08-August-2021

RETAIL RESEARCH

Chemplast Sanmar Limited

Issue Snapshot:
Issue Open: Aug 10 – Aug 12 2021

Price Band: Rs. 530 – 541

*Issue Size: 71,164,510 eq shares
(Fresh issue of 1300 cr + offer for sale of 2550 cr)

*Issue Size: Rs.3771.7 – 3850.0 cr

Reservation for:

QIB	atleast	75% eq sh
Non Institutional	atleast	15% eq sh
Retail	Upto	10% eq sh

Face Value: Rs 5

Book value: Rs -139.15 (Mar 31, 2021)

Bid size: - 27 equity shares and in multiples thereof

100% Book built Issue

Capital Structure:

Pre Issue Equity:	Rs.	67.04 cr
*Post issue Equity:	Rs.	79.05 cr

Listing: BSE & NSE

Global Co-Ordinators and Book Running Lead Managers: ICICI Securities Ltd, Axis Capital Ltd, Credit Suisse Securities (India) Private Ltd, IIFL Securities Limited, Ambit Private Ltd, BOB Capital Markets Ltd, HDFC Bank Ltd

Book Running Lead Managers: IndusInd Bank Ltd, YES Securities (India) Ltd

Registrar to issue: Link Kfin Technologies Private Ltd

Shareholding Pattern

Shareholding Pattern	Pre issue %	Post issue %
Promoter and Promoter Group	100.0	55.0
Public	0.0	45.0
Total	100.0	100.0

*=assuming issue subscribed at higher band
Source for this Note: RHP

Background & Operations:

Chemplast Sanmar Limited (CSL) is a specialty chemicals manufacturer in India with focus on specialty paste PVC resin and custom manufacturing of starting materials and intermediates for pharmaceutical, agro-chemical and fine chemicals sectors. It is one of India's leading manufacturers of specialty paste PVC resin on the basis of installed production capacity, as of December 31, 2020. In addition, it is also the third largest manufacturer of caustic soda and the largest manufacturer of hydrogen peroxide in the South India region, on the basis of installed production capacity as of December 31, 2020 and one of the oldest manufacturers in the chloromethanes market in India. Pursuant to the Chemplast Cuddalore Vinyls Limited (CCVL) Acquisition, it acquired 100.0% equity interest in CCVL that is the second largest manufacturer of suspension PVC resin in India and the largest manufacturer in the South India region, on the basis of installed production capacity as of December 31, 2020.

High barriers to entry and limited competition is expected to benefit existing manufacturers of specialty paste PVC resin in India in the medium term and the demand for specialty paste PVC resin is expected to grow at a CAGR of 6% to 8% between Financial Years 2022 and 2025. The demand for custom manufacturing catered by Indian manufacturers is likely to grow at a CAGR of approximately 12% between Financial Years 2020 and 2025, due to the higher penetration of pharmaceutical molecule, compound and active pharmaceutical ingredient manufacturing in India and India becoming a key supplier of non-commercially available molecules or monomers or polymers. Further, custom manufacturing for agrochemical sectors is also likely to witness a boost with discovery chemistry pertaining to agricultural sector gaining more traction. Demand for caustic soda is also expected to grow at a CAGR of 4% to 5% between Financial Years 2020 and 2025, led by increasing demand from the alumina and chemical industries. CSL is well-positioned to benefit from the industry growth given the chemicals industry is knowledge intensive, involves complex chemistries, is subject to high quality standards and stringent impurity specifications for processes and product capabilities, and is based on complex products that are difficult to replicate.

CSL has four manufacturing facilities, of which three are located in Tamil Nadu at Mettur ("**Mettur Facility**"), Berigai ("**Berigai Facility**") and Cuddalore ("**Cuddalore Facility**"), and one is located in Puducherry at Karaikal ("**Karaikal Facility**"). It has a coal-based captive power plant of 48.5 MW at its Mettur Facility and two natural gas-based captive power plants of 8.5 MW and 3.5 MW respectively, at Karaikal Facility. It has also leased a salt field from the Government of Tamil Nadu at Vedaranyam, Tamil Nadu and has an approval from the TNPCB to extract up to 400 kt of salt per annum. The Company has strong focus on sustainability in all aspects of its operations. Manufacturing facilities of CLS is certified ISO 9001:2015 for quality management systems and ISO 45001:2018 for occupational health and safety management systems, to the extent required. In addition, it has received the Indian Chemical Council certification 'Responsible Care' for maintaining best practices in its operations. CSL is a part of the SHL Chemicals Group, which in turn is a constituent of the Sanmar Group, one among the oldest and most prominent corporate groups in the South India region. Fairfax India Holdings Corporation ("**Fairfax**"), a well-known international investor led by Mr. Prem Watsa, based in Canada, has invested, through FIH Mauritius Investments Limited, in the SHL Chemicals Group since 2016.

Objects of Issue:

The Offer comprises of the Fresh Issue and an Offer for Sale.

Offer for Sale

Each of the Selling Shareholders will be entitled to the proceeds of the Offer for Sale after deducting their respective portion of the Offer related expenses. CSL will not receive any proceeds from the Offer for Sale and the proceeds received from the Offer for Sale will not form part of the Net Proceeds.

Fresh Issue

CSL propose to utilise the Net Proceeds towards funding the following objects:

- Early redemption of NCDs issued by CSL, in full ("NCD Redemption") (Rs.12382.5 mn); and
- General corporate purposes.

In addition, CSL expects to achieve the benefits of listing of the Equity Shares on the Stock Exchanges which, will result in the enhancement of brand name and creation of a public market for its Equity Shares in India.

Competitive Strengths

Well-positioned to capture favorable industry dynamics: CSL's business benefits from favorable underlying market drivers, both in terms of demand and supply.

Specialty paste PVC resin : Due to factors such as low per capita consumption of specialty paste PVC resin in India compared to other countries, lack of substitutes for specialty paste PVC resin, expected growth in the end-user industries such as leather footwear and automotive upholstery, expected increase in demand for vinyl gloves and government initiatives such as *'Make in India'* to boost investment in production of artificial leather and reduce dependence on imports, one of its key end-user industries, the demand for specialty paste PVC resin is expected to grow at a CAGR of 6% to 8% between Financial Year 2022 and Financial Year 2025. There is also a supply deficit of specialty paste PVC resin in the Indian market which is further impacted by limited supply sources of specialty paste PVC resin in India and rationalization of specialty paste PVC resin capacities globally. Given that CSL manufacture significant portion of its EDC and all of CSL's VCM requirements, the intermediates required for manufacturing specialty paste PVC resin, in-house, reliance on external suppliers reduces, thereby helping it to maintain a steady production stream of specialty paste PVC resin. In addition, business benefits from repeat customers.

Approximately 45% of demand in India for specialty paste PVC resin is being met by imports. CSL is the largest manufacturer of specialty paste PVC resin in India, on the basis of installed production capacity as of December 31, 2020, and catered to 45% and44% of the demand for specialty paste PVC resin in India in Financial Years 2020 and 2019, respectively, with 82.0% and 84.0% market share of the specialty paste PVC resin manufactured and sold in India, respectively.

Custom manufacturing: Due to factors such as availability of skilled workers at lower rates compared to developed economies, surge in global demand for food grains, growth in demand for drugs and hygiene products, the revised strategy of major economies to reduce their dependence on a single country and government initiatives to support growth of pharmaceutical sector such as introduction of production linked incentive scheme ("**PLI Scheme**") for bulk drug parks; higher penetration of pharmaceutical, molecule, compound, or API manufacturing and India becoming a key supplier of non-commercially available molecules or monomers or polymers, the demand for custom manufacturing is likely to grow at a CAGR of approximately 12% between Financial Years 2020 and 2025.

Chloromethanes: Due to factors such as rapid growth in the pharmaceutical industry, rising demand for agrochemicals and increase usage of hydroflurocarbons that use methylene chloride ("**MDC**") as raw material, the demand for chloromethanes in India is expected to grow at a CAGR of 8% to 9% between Financial Years 2020 and 2025.

Caustic soda: Growth is expected in the demand for caustic soda due to factors such as increasing demand from the alumina and chemicals industries. The Government of India has also announced the setting up of seven mega-textile parks over the next three years to grow the textile industry, one of the end-user industries. Accordingly, the demand for caustic soda is expected to grow at a CAGR of 4% to 5% between Financial Years 2020 and 2025.

Hydrogen Peroxide: Growth is expected in the hydrogen peroxide industry at a CAGR of 6% to 7% between Financial Years 2020 and 2025 due to factors such as growth in paper and pulp and textile industries, increase in the volume of crude oil being processed by existing and upcoming refineries in India and growth in the demand for disinfectants post COVID-19.

Suspension PVC resin: The demand for suspension PVC resin is expected to grow at a CAGR of 7.5% to 8.5% between Financial Years 2021 and 2025 due to a number of factors including lack of viable substitutes for suspension PVC resin, low per capita consumption of suspension PVC resin in India compared to other countries, increased investments in the end-user industries such as irrigation, urban infrastructure and real estate. CSL is well-positioned to benefit from the industry growth given that the chemicals industry is knowledge intensive, involves complex chemistries and is subject to high quality standards and stringent impurity specifications for processes and product capabilities.

Leadership Position in an Industry with High Barriers to Entry: CSL is a specialty chemicals manufacturer in India with focus on specialty paste PVC resin and custom manufacturing of starting materials and intermediates for pharmaceutical, agro-chemical and fine chemicals sectors. CSL is one of India's leading manufacturers of specialty paste PVC resin, on the basis of installed production capacity as of December 31, 2020. In addition, CSL is also the third largest manufacturer of caustic soda and the largest manufacturer of hydrogen

peroxide, each in the South India region, on the basis of installed production capacity as of December 31, 2020 and one of the oldest manufacturers in the chloromethanes market in India. Its success in the chemicals markets is based on its ability to compete successfully in a technologically intensive industry, as well as capability to identify, develop and improve the performance of specialty products which meet the stringent technical performance requirements of its customers. In custom manufacturing, it leverages its chemistry process research and manufacturing capabilities to focus on providing custom made intermediates to end molecules that are in the early stages of their life cycles. This gives CSL the opportunity to be the initial suppliers for such products to the patent holders. Its leadership position has enhanced its ability to benefit from increasing economies of scale with stronger purchasing power and a lower overall cost base, thereby maintaining a competitive cost structure.

The custom manufacturing industry has significant entry barriers, including customer validation and approvals, expectation from customers for process innovation and cost reduction, high quality standards and stringent specifications. Further, the end customers are usually required to register the manufacturer with the regulatory bodies as a supplier of intermediate products or active ingredients. As a result, any change in the manufacturer of the intermediate product or active ingredient may require customers to expend significant time and resources, resulting in switching to new suppliers becoming a lengthy and cumbersome process.

Vertically integrated operations: CSL has vertically-integrated operations for manufacturing of its products. Its vertically-integrated business model brings significant advantages, including:

Stable supply of raw materials. Due to internal manufacturing of EDC, VCM and chlorine, the intermediates required for the manufacturing of CSL's products, it reduce its reliance on external suppliers of these raw materials, thereby helping to maintain a steady production stream. Further, it relies on its own marine terminal facilities at Karaikal and Cuddalore that allows for efficient transport of key raw materials such as ethylene and VCM as well as finished products such as caustic soda manufactured by it.;

Competitive cost structure: As CSL produce EDC, VCM, chlorine and hydrogen that is used internally at its Mettur and Karaikal Facilities, it is able to lower its costs of raw materials and achieve savings on corresponding transportation costs. It has also leased a salt field at Vedaranyam, Tamil Nadu from the Government of Tamil Nadu, to ensure a steady supply of salt that is utilized in the manufacture of caustic soda that further enables to lower the costs of raw materials. In addition, with power and steam supplied by its own power plants, CLS is able to minimize its utility costs. As a result, its vertically-integrated model has improved profit margins;

Sustainable development: CSL endeavor to fully utilize the by-products from its manufacturing process.

Incremental revenues: CSL is able to sell joint products such as caustic soda and value added products such as chloromethanes, to maximize efficiency of its operations and enhance its revenues and profits; and

Flexible manufacturing planning. CSL integrated manufacturing facilities allows to produce a broad range of products across the manufacturing chain. Through effective controls, it is able to closely monitor and efficiently manage manufacturing volumes and product mix as well as optimize the efficiency of the overall manufacturing process.

Quality Manufacturing Facilities with a strong focus on sustainability: CSL has four manufacturing facilities, of which three are located in Tamil Nadu and one is located in Puducherry. Quality is a key differentiator in its business and has made strong efforts to adopt uniform manufacturing standards across all its facilities and to achieve standardized quality for all of its products. Its manufacturing facilities are certified ISO 9001:2015 for quality management systems and ISO 45001:2018 for occupational health and safety management systems, to the extent required. It also has a strong focus on sustainability in all aspects of its operations and has also adopted various measures to optimize energy conservation such as installing variable frequency drive in coal based power plant boilers. having such a strong focus on sustainability is beneficial for its business operations as (i) CSL face minimal disruptions from neighboring communities where its manufacturing facilities are located; (ii) receive more enquiries from potential customers for custom manufacturing due to increased focus on sustainability; and (iii) it helps reduce power and water costs.

Operational excellence: CSL has incurred significant capital expenditure to develop the specialty paste PVC resin manufacturing facility and intend to further invest Rs. 2,560.00 million by Financial Year 2024 to further enhance its manufacturing capacity. Further, it had invested Rs. 1,130.00 million in Financial Year 2020 to purchase plant, machinery and technology for its hydrogen peroxide plant. These investments position CSL well to capture future market growth and its commitment to operational excellence would allow it to remain an industry leader.

Also it derives operational efficiencies by centralizing and sharing certain key functions across the businesses with other companies in The Sanmar Group such as finance, legal, information technology, strategy, procurement and human resources. It invests significant management resources to ensure that it leverage existing inter-linkages between the businesses and are able to maximize the potential synergies amongst them.

Strong Parentage and Experienced management team: CSL is a part of the SHL Chemicals Group, which in turn is a constituent of The Sanmar Group, one among the oldest and most prominent corporate groups in the South India region. Fairfax, a reputed international investor led by Mr. Prem Watsa, based in Canada, has invested, through FIH Mauritius Investments Limited in the SHL Chemicals Group since 2016. The Company has a strong management team with extensive experience in the chemicals industry and a track record of operational excellence, which is necessary to successfully lead the development of the business. Further, its key management team has, in the past, occupied, and continues to occupy, leadership roles in industry associations. Board of Directors, includes a combination of management executives and independent directors who bring in significant business expertise. The combination of its experienced Board of Directors and dynamic management team positions it well to capitalize on future growth opportunities.

Business Strategy:

Focus on developing and improving product portfolio: CSL continue to seek to develop or improve products and processes to meet demands of its existing customers, to further enhance the performance of specialty products and to respond to increasing compliance requirements under the environmental regulations. Specialty products have high barriers to entry and as such provide better operating margins. As a result, it also plans to leverage its strong process chemistry and engineering skills to perform custom manufacturing for a range of multinational innovator companies and cater to customers across new industry verticals and in new geographies to grow the business.

Expanding production capacities: High barriers to entry and limited competition is expected to benefit existing manufacturers of specialty paste PVC resin in India in the medium term and the demand for specialty paste PVC resin is expected to grow at a CAGR of 6% to 8% between Financial Years 2022 and 2025. In addition, the demand for custom manufacturing catered by Indian manufacturers is likely to grow at a CAGR of approximately 12% between Financial Years 2020 and 2025 and the demand for caustic soda is expected to grow at a CAGR of 4% to 5% between Financial Years 2020 and 2025. Further, the demand for suspension PVC resin is expected to grow at a CAGR of 7.5% to 8.5% between Financial Years 2021 and 2025. Given the expected continuing strong demand for products, it intends to continue to add production capacity selectively to its business lines

Going forward, CSL is proposing to expand its operations by (i) increasing the installed production capacity of specialty paste PVC resin by 35 kt; (ii) setting up a multipurpose facility with two blocks for custom manufacturing operations; and (iii) increasing the installed production capacity of suspension PVC resin by 31 kt by de-bottlenecking the suspension PVC resin plant. It also intends to improve its operational efficiencies in its manufacturing process at the Karaikal Facility by de-bottlenecking the caustic soda plant.

Improving financial performance through focus on operational efficiencies: CSL is committed to prudent balance sheet management and maximizing its free cash flow through continued disciplined approach to financial management. In particular, it is focused on managing its working capital more efficiently, which assists in freeing up additional capital to support the growth of the business. Its focus on maximizing free cash flow should enable to reduce its overall indebtedness and improve credit metrics. It intends to continue to actively manage its operating costs to improve margins through various measures, including:

- De-bottlenecking of facilities to improve operational metrics
- Continue to focus on selling a significant majority of its non-specialty products to customers in South and East India to save on freight costs;
- Sustained measures taken to optimise conversion cost of suspension PVC resin; and
- Leveraging the scale of operations to source raw materials at favorable prices and optimizing logistics cost.

Industry

Specialty paste PVC resin

PVC and its types

Poly Vinyl Chloride ("**PVC**") resins are derived from its monomer, Vinyl Chloride Monomer ("**VCM**"). VCM is polymerised to obtain PVC. All types of PVC resins are sold in the form of white or off white powder. The polymer degrades under high temperature and hence is invariably fortified with additives, known as stabilizers, before processing to yield useful products. Essentially, PVC resins can be classified in to:

- Suspension resin;
- Specialty paste resin, also called emulsion or dispersion resin or micro-suspension resin; and
- Copolymer resin.

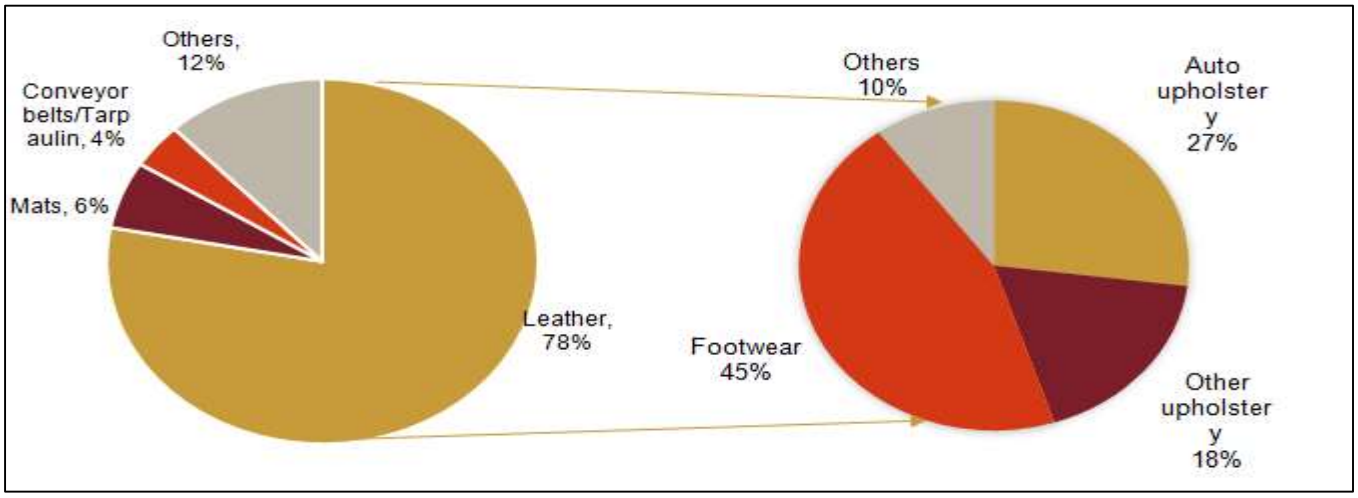
Specialty paste PVC resin is used to make flexible products (such as artificial leather, gloves, tarpaulins, conveyor belts and coated fabrics). Suspension PVC is largely a basic product while specialty paste PVC resin is a specialty product. In India, CSL and Finolex Industries Limited (Finolex Industries) are the only producers of specialty paste grade PVC resin.

Specialty paste PVC resin market in India

The specialty paste PVC resin market size in India was at 143 kilo tons per annum ("**KTPA**") in financial year 2020. The market has been growing at a compound annual growth rate ("**CAGR**") of 3% between financial years 2015 and 2020, driven by growth in the leather cloth industry, which contributes to 78% of the demand.

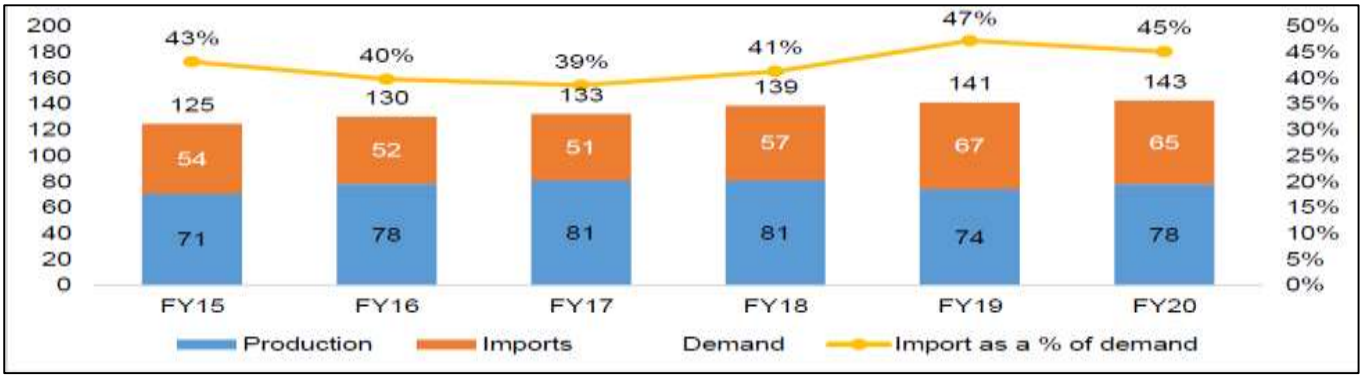
India's specialty paste PVC resin consumption by end-use (financial year 2020) is shown below:

Specialty Paste PVC resin **Break up of Specialty Paste PVC resin consumption – Leather only**



Only two producers in India, namely CSL (capacity 66 KTPA) and Finolex Industries Limited (capacity of 22 KTPA) produce specialty paste PVC resin. Total production of specialty paste PVC resin in India in financial year 2020 stood at 78 KTPA against a demand of 143 KTPA. Hence, 45% of the demand was met through imports.

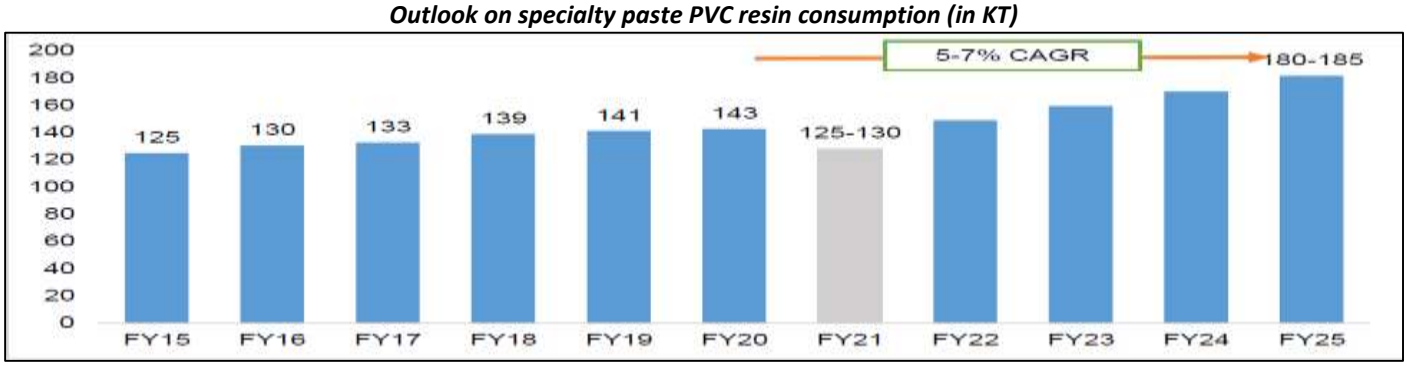
India specialty paste PVC resin demand by source (in KT)- historical



Specialty paste PVC resin demand to grow at 5-7% CAGR over next five financial years

Demand is expected to grow 5-7% CAGR between financial years 2020 and 2025 to 182 KT. With the economy reviving in financial year 2022, CSL0 expects demand from various end-user industries to recover. As a result, specialty paste PVC resin demand is expected to rebound 15-17% on-year in financial year 2022, from a sharp drop this financial year. Moreover, demand growth is likely to remain healthy at 6-8% CAGR between financial years 2022 and 2025.

Outlook on specialty paste PVC resin consumption (in KT)



Import dependence to continue in medium term

Over the next five financial years, though, the operating rates of domestic specialty paste PVC resin producers are expected to remain high on account of healthy demand growth. CSL is planning to add a 35 KT capacity at Cuddalore, which is expected to come on stream in financial year 2024. Demand is expected to increase at 5-7% CAGR between financial years 2020 and 2025. Dependence on imports is expected to reduce to 38% of demand.

Key Growth Drivers

Low per-capita consumption compared with other regions

The per capita consumption of specialty paste PVC resin in India is 0.1 kg compared with China's 0.6 kg and Western Europe's 2.4 kg. Thus, the Indian market is fairly underpenetrated and has significant potential for demand growth in the coming years.

Per capita consumption of specialty paste PVC resin (kg, 2019)

Lack of substitutes

Application of specialty paste PVC resin in leather cloth and other end uses has no major substitutes, which is a key factor driving demand growth, going forward.

Leather footwear market has significant growth potential

Per capita footwear consumption in India is 1.7 pairs, compared to six pairs in developed markets. Assuming that this level of per capita demand for footwear in India will be reached by calendar year 2030, the overall demand for footwear could reach up to 9 billion pairs from 2.3 billion pairs as of today. The market is estimated to have witnessed a sharp decline in financial year 2021 due to a slump in demand induced by the COVID-19 pandemic. However, over a five-year period, demand is expected to recover and grow at 5-6% CAGR between financial years 2020 and 2025.

Automotive market recovering sharply

CRISIL Research expects the automotive market to grow at 7-9% CAGR between financial years 2020 and 2025. The industry grew at 6% CAGR between financial years 2015 to 2020, pulled down by a decline in demand in financial year 2020.

- Commercial vehicle production is expected to grow by 5-7% in the next 5 years (over a low base of financial year 2020 and despite a weak financial year 2021) on account of improvement in infrastructure expenditure and under penetration in light commercial vehicles. Demand is expected to increase during the period owing to an improvement in industrial activity, rising replacement volume and government's thrust on rural transportation.
- The passenger vehicle production is expected to witness 6-8% growth between financial years 2020 and 2025. Demand is expected to pick up post financial year 2021 due to rising disposable incomes, low passenger vehicle penetration and new model launches. Other factors that would aid demand are increasing urbanisation, government support to farm incomes, and improved availability of finance.
- Two wheeler production is expected to grow by a modest 4-6% CAGR between financial years 2020 and 2025. It is expected that the medium term demand, especially post financial year 2021, to be supported by rising farm incomes and improving rural infrastructure, especially as the government continues to invest in developing rural roadways.

Moreover, the recently announced vehicle scrappage policy is expected to give a boost to automobile production. Thus, overall demand for automotive upholstery is also expected to witness growth, driven by rising automobile production, thus boosting overall demand for specialty paste PVC resin.

Government initiatives like Make in India to boost investment in artificial leather production

The Government of India launched the 'Make in India' campaign on September 25, 2014, which is a major initiative designed to facilitate investment, foster innovation, enhance skill development, protect intellectual property, and build best-in-class manufacturing infrastructure in India. Attracting foreign direct investments ("**FDI**") and encouraging joint venture collaborations between foreign and Indian firms to manufacture in India is the major focus of this programme. This will boost domestic manufacturing of artificial leather and reduce dependence on imports.

Usage of vinyl gloves rising rapidly post COVID-19 pandemic

The COVID-19 pandemic has led to a significant surge in the market for vinyl gloves, which use specialty paste PVC resin as a raw material. Not only in India, but countries across the world have been ramping up their usage of vinyl gloves. The world demand has multiplied 3 to 4 times post COVID-19.

The pre COVID-19 per capita consumption of vinyl gloves was 150 to 200 in the USA, 100 to 150 in Europe, 6 to 9 in China and 2 to 3 in India. Considering a population of 1.3 billion, even small increases in per capita consumption of vinyl gloves could lead to a sharp rise in demand in India. The demand is expected to grow, even post COVID-19, as general awareness about health, safety and hygiene is rising across industries.

Lack of raw material availability and technology creates barriers to enter specialty paste PVC resin market
The demand for specialty paste PVC resin has been growing at a healthy pace. However, approximately 50% of the demand is met using imports. Despite healthy demand, no new players have entered the specialty paste PVC resin market in several years. This is largely on account of lack of availability of raw material and technology. Thus, high entry barriers and limited competition is expected to existing benefit specialty paste PVC resin manufacturers in the medium term.

Raw materials for specialty paste PVC resin
Major raw materials for making PVC are ethylene and chlorine. Ethylene is converted into EDC by reacting either with chlorine (in the direct chlorination process) or with hydrochloric acid (in the oxy chlorination process), then converted into VCM which is further polymerised into PVC. Specialty paste resin is produced either through emulsion polymerisation or through micro-suspension polymerisation.

Ethylene is produced using naphtha or natural gas (ethane or propane component). Their prices are linked to the global demand-supply dynamics and movement in crude oil or natural gas prices.

Ethylene: Ethylene capacity in India stood at 7.5 million metric tons (mmt) in financial year 2020. Reliance Industries Limited ("**RIL**") is the largest manufacturer of ethylene in India with a capacity of 3.8 mmt. India imports ethylene to meet part of its demand requirement. Import duty for ethylene is 2.5%. However, under the India-ASEAN free trade agreement ("**FTA**"), it is nil.

After declining 30% on-year in 2019, ethylene prices are estimated to have dived further by 14-15% on-year in 2020 to $730 per MT. The key reason for this is the crash in crude oil prices and global surplus. Furthermore, petrochemicals demand was expected to pick up in 2020 after a relatively weak 2019. Instead, the COVID-19 pandemic dealt another severe blow. Several capacities for ethylene are coming up in the US, due to increasing shale production, as well as in China due to CTO/MTO projects. Moreover, there is a new ethylene export terminal commissioned in Texas. These factors are expected to keep a check on ethylene prices in the medium term.

EDC: India imported 780 KTPA of EDC in financial year 2020. RIL, CSL and Finolex Industries Limited are some of the key EDC producers in India. Saudi Arabia, the US, Qatar, and South Korea are the major countries from where EDC is imported.

Global specialty chemical overview
The global chemicals market is segregated into basic chemicals, industrial gases, petrochemicals, polymers, speciality chemicals, and others. China, Japan and the US are leaders in chemicals space.

Speciality chemicals are low volume, high value chemicals with specific applications. These are classified based on end-user industries. Unlike bulk chemicals, speciality chemicals are used in low quantities and are consumed for specific end-use applications. They are chemical products that are sold on the basis of specific requirement in end-user segments rather than their composition. These chemicals impart a variety of properties to products and have a high degree of value addition.

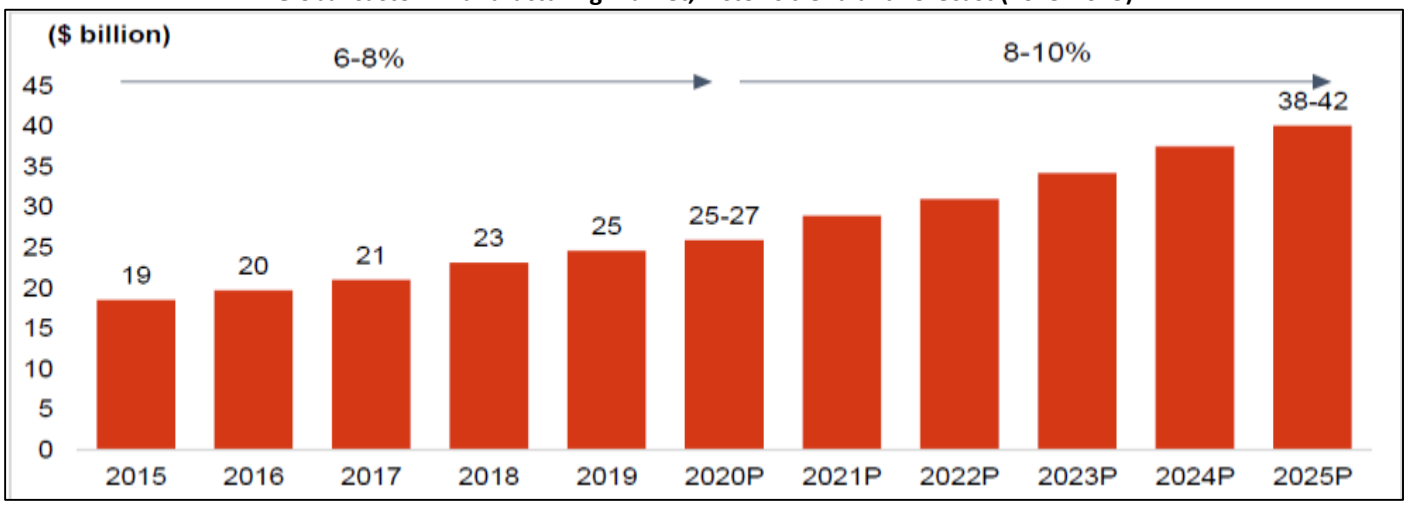
Indian specialty chemical overview
The chemicals industry supports India's agricultural and industrial development. It provides raw materials, intermediates and process chemicals industries such as for agro chemicals, detergents and soaps, textiles, paper, paints, pharmaceuticals, varnish.

Specialty chemicals segment clocked 8-9% CAGR from financial years 2015 to 2020, driven by an increase in domestic consumption from various end-user industries and rising exports. CRISIL Research expects this segment to clock 5-6% CAGR during financial years 2020 to 2025 driven by rising domestic consumption and exports. Exports accounts for 35-40% of revenue for key speciality chemicals players in India.

In financial year 2021, the industry witnessed a de-growth of 5-6% due to slowdown in economic activity which is likely to result in fall in demand from end use industries, the impact is expected to be significant on segments such as polymer additives, textile chemicals and colorants whereas segments such as agrochemicals, surfactants are likely to lend some support.

Global custom manufacturing market review and outlook
The global demand for custom manufacturing and synthesis grew from around $ 19 billion in 2015 to $ 25-27 billion by 2020, owing to increased demand from the pharmaceutical and agrochemical sector.
Demand is expected to grow at 8-10% between 2020 and 2025 compared with 6-8% between 2015 and 2020.

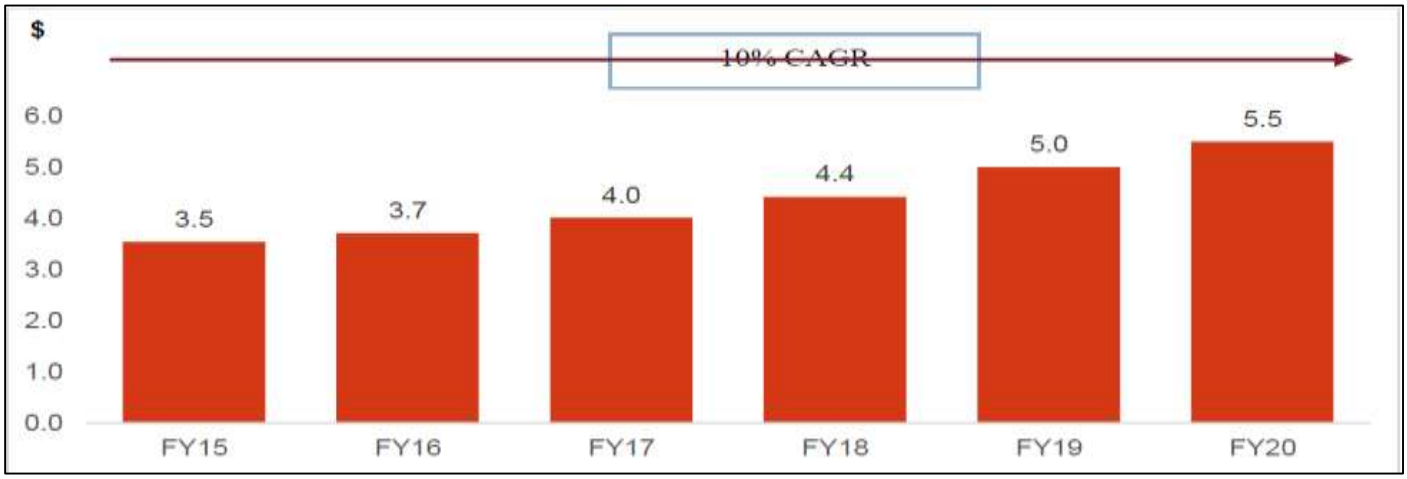
Global custom manufacturing market, historic trend and forecast (2015-2025)



Review of Indian custom manufacturing market

The size of the custom manufacturing market in India increased at a CAGR of 10% from financial year 2015 to financial year 2020. The Indian market is generally focused on pharmaceutical segment demand from various foreign players in mature markets such as US and Europe. The demand for custom manufacturing has shifted to the developing countries due to developing countries offering better cost economics compared to developed economies.

Indian custom manufacturing demand review (financial year 2015 to financial year 2020)



Indian Market to reach $8-9 billion by financial year 2025

The demand for custom manufacturing catered to by Indian manufacturers is likely to grow at around 12% CAGR between financial years 2020 and 2025, owing to higher penetration of pharmaceutical molecule or compound or API manufacturing and India becoming a key supplier of non-commercially available molecules or monomers/polymers. The COVID-19 pandemic has further strengthened the demand for pharmaceutical custom manufacturing in the country, with global pharmaceutical giants outsourcing vaccine manufacturing to Indian players. In addition to this, agrochemical custom manufacturing is also likely to see a boost with discovery chemistry pertaining to the agriculture sector attracting more traction.

Key growth drivers

India to be a focus region as companies move away from China

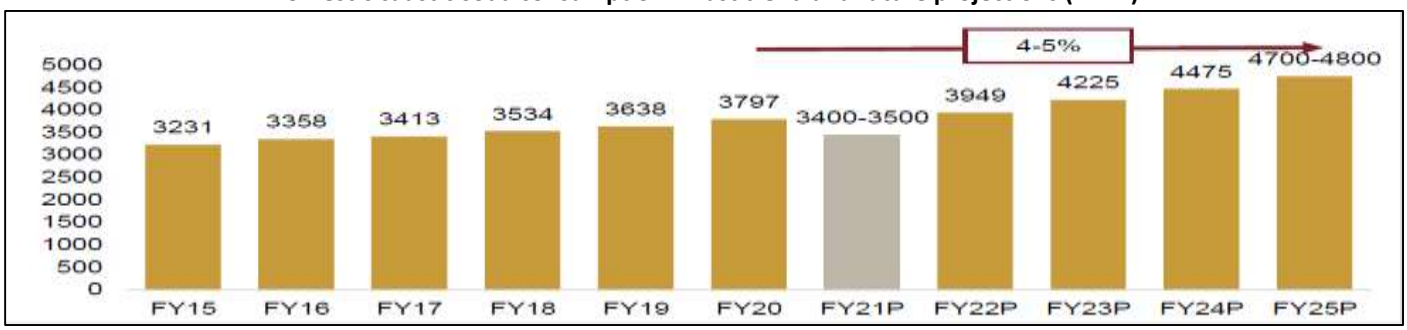
Custom manufacturing demand has grown tremendously in India due to the availability of skillful workforce at lower rates compared with developed economies. Considering the surge in demand for foodgrain, demand from agro industry for custom manufacturing is likely to see a rise. However, the pharmaceutical industry is likely to remain the frontrunner in the custom manufacturing market. With stringent regulations likely to be implemented for chemical synthesis or discovery chemistry, larger Indian players are likely to witness more demand for manufacturing services compared to smaller companies.

Pharmaceuticals being an essential commodity, witnessed a healthy demand even during the lockdown in the first quarter of financial year 2021. The demand surged with heightened need of drugs and hygiene products. Post lifting of lockdown across major economies, a strong shift from China to South-Asian countries was observed in custom pharmaceutical manufacturing. This is a result of global giants following

China plus 1 strategy to reduce their dependency on a single country. Indian custom manufacturing players are likely to be benefitted from this move further boosted by outsourced vaccine manufacturing to Indian companies. Government of India, has also supported the growth of pharmaceutical sector by introducing production linked schemes for bulk drug parks. Moreover, the manufacturing and research and development capabilities of Indian players has boosted the reliance of global giants on Indian custom manufacturing players. This has also resolved the concerns relating to IP protection and environmental health safety (EHS) compliance. Thus making India a global hub for custom synthesis and manufacturing.

On the other hand, agriculture was also among the industries to show positive trends during and post lockdown. However, due to export ban in the first quarter of financial year 2021, agrochemical custom manufacturing was greatly impacted as it is a export dominated market in India.

Domestic caustic soda consumption – Past trend and future projections (KTPA)



Key Growth Drivers

Stringent regulations push environment-friendly caustic soda production

Environment regulations have resulted in shutting down of mercury based capacities worldwide. However, there are some mercury and diaphragm based capacities operational in the Americas, Europe, and Asia. With countries committed to supporting global efforts in mercury reduction and elimination, the mercury and diaphragm capacities are likely to be phased out during the forecast period. This will further tighten the supply of caustic soda and drive up the global caustic prices. On the contrary, India has already moved to environment-friendly membrane cell capacity.

Import duty boost self-reliance and reduce dependency on imports

The current anti-dumping duty of $21.39 per MT on South Korean produce and $48.39 on Chinese produce have managed to curb imports from these countries. The share of imports from China and South Korea fell to 4% and 10%, respectively, in financial year 2018, from 19% and 25%, respectively, in financial year 2015. However, the share of caustic soda imports from China and South Korea reached 14% and 16%, respectively, in financial year 2020. Furthermore, the government has removed anti-dumping duty on the US, Iran, and Saudi Arabia, as the major domestic players have been operating at an utilisation rate of 80-85%. The import duty on caustic soda is 10% (basic duty) and 7.5% (SCH duty).

Textile parks to boost the demand for caustic soda

In order to enable the textile industry to become globally competitive, attract large investments and boost employment generation, Government of India has planned to launch a scheme of mega textiles parks in addition to the, PLI scheme. Under this seven mega textile parks are expected to come up in next three years. In addition to this, Government of India had announced its plan to establish a number of pharmaceutical parks in the country. Consequently, the demand for caustic soda is expected to increase over the forecast period.

Supply tightness globally to support caustic soda prices in medium term

After declining by around 27% on-year in calendar year 2019, global caustic soda prices are estimated to have further declined 32% on-year to $250 per MT (CFR price for India) in 2020, owing to lower demand from end-use industries amid the COVID-19 pandemic. While demand from certain applications (hygiene/sanitary products such as soaps and detergents) could see some support, these account for only 10% of overall caustic soda demand. Further, prices declined due to ample supply in the global market owing to good demand for by-product chlorine from the downstream PVC segment.

In 2021, CRISIL Research expects caustic soda prices to improve, led by gradual recovery in demand. However, a further rise in prices will be slower owing to the fresh capacity additions in the domestic caustic soda market. On the other hand, global caustic soda capacities are expected to be at 90% utilization due to recovery in demand while not being matched by new capacity additions by 2025. Therefore, going forward global pricesand margins are expected to go up due to this mismatch and aid healthy margins.

In financial year 2022, ECU realisation is expected to improve marginally with pick-up in demand. However, a further rise in prices will be restricted owing to the oversupplied caustic soda market.

Suspension PVC Overview

Overview

Suspension PVC (S-PVC) is made either through mass or bulk polymerisation or through suspension polymerisation. S-PVC is used in both rigid and flexible applications. pipes, profiles and roofing sheets are typical examples of rigid applications while flexible hoses, tubings, wires and cables, footwear, calendared sheets and films, extruded films are typical examples of flexible applications. Global demand for S-PVC was 41 mmt in financial year 2015, which increased at a 3.1% CAGR over 2015-19 to 46 mmt in 2019. Demand for S-PVC in the global market is largely linked to the construction industry and therefore economic development. In recent years, S-PVC consumption has been concentrated in the developing Asian economies such as China, India, Vietnam, and Indonesia. By region, China accounts for more than 40% of global S-PVC consumption. India is one of the fastest growing large markets for SPVC in the world while other major consuming regions are other Asia-Pacific countries, North America, Western Europe, and the Middle East and Africa ("**MEA**").

Global S-PVC capacity utilisation to rise in absence of additional capacities

Over the years, many S-PVC plants have had to shut down or shift from mercury-based catalyst processes to mercury-free processes owing to strict environmental regulations in China. This led to a shutdown of 4.5 mmtpa of S-PVC capacities in China over 2015-19. Over 2021-25, global S-PVC capacity is expected to increase by 1-2 mmt. In contrast, demand is expected to grow at a faster pace, increasing by almost 7-8 mmt. Thus, S-PVC plant operating rate is expected to increase from 87% in financial year 2019 to 95-96% by 2025.

Domestic market has been growing due to rapid growth in the pipes and fittings market

The Indian S-PVC market is more than five decades old, with the first plant of 6 KTPA capacity set up in 1961 by Calico Mills. With the introduction of various PVC products in the 1970s, PVC consumption started doubling almost every five years. Between 1985 and 1995, the green revolution resulted in an increased use of PVC pipes in the agriculture sector due to their superior performance. The pipes industry has logged a high CAGR of 10-12% in the past five financial years, driven by increasing demand for pipes in the construction/building and irrigation industries; nationwide infrastructural development; the government's focus on urban/rural development; and the Smart City initiative.

Domestic demand for S-PVC was 3.3 mmt in financial year 2020. The market logged a CAGR of 5.5% over financial years 2015-20, led by growth in the pipes and fittings segment, which accounts for 73% of the overall demand. The Indian plastic pipes and fittings industry clocked a healthy CAGR of 10-12% over financial years 2015-20, reaching about Rs. 330-340 billion. Industry growth was driven by rising demand from the construction and irrigation sectors. In the construction space, increasing investments in water supply and sanitation (WSS) projects, substitution of metal pipes with polymer pipes, and replacement demand propelled S-PVC offtake. Initiatives such as Pradhan Mantri Krishi Sinchayee Yojana ("**PMKSY**"), Accelerated Irrigation Benefits Programme ("**AIBP**"), and Command Area Development and Water Management ("**CADWM**") Programme fuelled S-PVC offtake in the irrigation sector.

Additionally, the industry received a boost from the government's Atal Mission for Rejuvenation and Urban Transformation ("**AMRUT**") scheme, which is aimed at providing basic services such as WSS and ensuring every household has access to a tap with assured water supply and a sewerage connection. As a result, demand for soil, waste and rain, and drainage pipes was robust.

Supply tightness to support S-PVC prices in the medium term

In January-September 2020, S-PVC price declined 7% owing to tepid demand in key global markets. Also, demand from the construction sector, which is a key end-user of S-PVC, tumbled owing to the COVID-19 pandemic. However, in the fourth quarter of calendar 2020, S-PVC price increased a sharp 30% on-year to $1,080 per MT due to strong demand, especially from China, and tight supply after scheduled plant turnarounds. Also, supply from the US was constrained in September and October owing to the Hurricane Laura. Higher prices of feedstock EDC and VCM also supported S-PVC price. Overall, in 2020, price of S-PVC is estimated to have risen 2-3% on-year to $870-880 per MT.

Consequently, margin in the S-PVC manufacturing through VCM route is estimated to have expanded to $185 per MT in 2020, owing to a fall in raw material cost. CRISIL Research expects S-PVC price to have remained elevated during the first quarter of 2021. However, after that the price is expected to see some correction with ease in supply tightness. Therefore, in 2021, It is expected that the price to range between $1,000-1,100. However, a gradual recovery in demand will restrict any further decline in price.

Over the years, many S-PVC plants in China shut down or were forced to shift from mercury-based catalyst processes to mercury-free processes, because of strict environmental regulations. Around 18 mmt capacity in China is still dependent on mercury-based catalyst processes. If these also have to shut down under the Minamata Convention without replacement, then the market will get even tighter and prices/margins could increase.

Key Concerns:

- The extent to which the coronavirus disease (COVID-19) affects CSL's business, results of operations and financial condition will depend on future developments, which are uncertain and cannot be predicted.

- CSL does not own premises for its registered office. Further, it operates its manufacturing facility on parcels that are held by it on leasehold as well as free hold basis. In addition, its lease for the Vedaranyam Salt Field has expired.
- CSL has incurred significant indebtedness and its lenders have imposed certain restrictive conditions on it under its financing arrangements. This may limit the ability to pursue its business and limit its flexibility in planning for, or reacting to, changes in business or industry.
- Intellectual property rights may not be adequately protected against third party infringement.
- 100% of the share capital of CCVL, which is held by CSL, is pledged in favour of Housing Development Finance Corporation Limited.
- Faces foreign exchange fluctuation risks that could adversely affect the results of operations.
- Ability to access capital at attractive costs depends on credit ratings. Non-availability of credit ratings or a poor rating may restrict its access to capital and thereby adversely affect the business and results of operations.
- Some of CSL's Group Companies and CCVL, its wholly owned subsidiary have incurred losses in recent Financial Years, based on its last available audited financial statements.
- Unplanned slowdowns or shutdowns in CSL's manufacturing operations or under-utilization of manufacturing capacities could have an adverse effect on the business, results of operations, cash flows and financial condition.
- Manufacturing facilities are concentrated in Tamil Nadu and Puducherry and any adverse developments affecting Tamil Nadu or Puducherry could adversely affect the business, results of operations, cash flows, and financial condition.
- CLS derives a significant portion of its revenues from the sale of specialty paste PVC resin and any reduction in the demand for specialty paste PVC resin could have an adverse effect on the business, results of operations, cash flows and financial condition.
- Business and the demand for CSL's products is heavily reliant on the demand from end-user industries and any downturn in the end-user industries could have an adverse impact on its business, results of operations, cash flows and financial condition.
- Any adverse developments in relationship with CSL's customers could have an adverse effect on the business, results of operations, cash flows and financial condition.
- If CSL is unable to obtain or maintain regulatory approvals for its manufacturing facilities and products, it may be unable to operate its manufacturing facilities or sell its products, which could adversely affect the business, cash flows and results of operations
- Non-compliance with increasingly stringent safety, health, environmental and labour laws and other applicable regulations, may adversely affect the business, results of operations, cash flows and financial condition.
- CSL's inability to accurately forecast demand for its products and manage its inventory may have an adverse effect on its business, results of operations, cash flows and financial condition.
- CSL sources its raw material from a limited number of suppliers and any delay, interruption or reduction in the supply of raw materials to manufacture products may adversely affect the business, results of operations, cash flows and financial condition.
- A shortage or non-availability of electricity, fuel or water or an increase in fuel prices may adversely affect the manufacturing operations and have an adverse effect on the business, results of operations, cash flows and financial conditions.
- CSL's operations depend on the availability of timely and cost-efficient transportation and other logistic facilities and any prolonged disruption may adversely affect the business, results of operations, cash flows and financial conditions.
- Some of the raw materials that CSL use as well as its finished products are hazardous, corrosive and flammable and require expert handling and storage.
- CSL has significant planned capital expenditure, and such expenditure may not yield the benefits it anticipates.
- CCVL became CSL's wholly owned subsidiary pursuant to the CCVL Acquisition and any failure to realize the anticipated benefits of the CCVL Acquisition or any acquisition, joint venture or partnership that it may undertake in the future, may have an adverse effect on the business, results of operations, cash flows and financial condition.

- Inability to respond to changing customer preferences in a timely and effective manner, may have an adverse effect on the business, results of operations, cash flows and financial condition.
- CCVL's business is subject to seasonal and cyclical variations that could result in fluctuations in results of operations.
- CSL is susceptible to potential product liability claims that may not be covered by insurance, which may require substantial expenditure and may adversely affect the reputation and if successful, could require it to pay substantial sums
- Failure to maintain confidential information of customers could adversely affect the results of operations and, or, damage its reputation.
- Changes in technology may render CSL's current technologies obsolete or require it to incur substantial capital expenditure.
- CSL engages contract labour for carrying out certain non-core functions of the business operations.
- If CSL is unable to raise additional capital, its business, results of operations and financial condition could be adversely affected.
- The success of CSL's business and operations are dependent upon certain quality accreditations which are valid for a limited time period.
- If CSL is unable to manage growth strategy effectively, its business and prospects may be adversely affected.
- Political, economic or other factors that are beyond control may have an adverse effect on the business and results of operations.
- Fluctuation in the exchange rate between the Indian Rupee and foreign currencies may have an adverse effect on the value of CSL's Equity Shares, independent of its operating results.

Profit & Loss

Particulars (Rs in million)	FY21	FY20	FY19
Revenue from Operations	37987.3	12576.6	12543.4
Other Income	163.8	78.5	124.4
Total Income	**38151.1**	**12655.1**	**12667.7**
Total Expenditure	**28372.6**	**9453.4**	**9333.0**
Cost of materials consumed	20657.6	4365.2	4081.5
Purchase of stock in trade	310.8	0.0	0.0
Changes in inventories of finished goods, work- in-progress and stock-in-trade	262.8	-151.5	-80.1
Employee benefits expense	1135.8	828.1	778.0
Other expenses	6005.6	4411.5	4553.6
PBIDT	**9778.4**	**3201.7**	**3334.7**
Interest	4333.6	954.6	482.8
PBDT	**5444.8**	**2247.2**	**2852.0**
Depreciation and amortization	1309.8	873.6	563.8
PBT	**4135.0**	**1373.6**	**2288.2**
Share of Restated Profit / (Loss) from Joint Venture and Associate	-3315.9	-656.5	-354.2
Profit on sale/redemption of investments in Joint Venture and Associate	4809.7	0.0	0.0
Exceptional items	-156.8	0.0	0.0
Tax (incl. DT & FBT)	**-1369.5**	**-255.8**	**-749.4**
Current tax	-811.7	-298.8	-522.0
Income Tax relating to earlier years	35.1	-1.1	2.8
Deferred Tax	-592.9	44.2	-230.2
PAT	**4102.4**	**461.3**	**1184.6**
EPS (Rs.)	30.60	2.04	4.53
Face Value	5	5	5
OPM (%)	25.3	24.8	25.6
PATM (%)	10.8	3.7	9.4

(Source: RHP)

Balance Sheet

Particulars (Rs in million) As at	FY21	FY20	FY19
Assets			
Non-current assets			
Property, plant and equipment	31325.8	21563.2	20871.1
Capital work-in-progress	250.8	83.8	1172.4
Investments in Joint Venture and Associate	0.0	14575.0	0.0
Right of use assets	149.2	179.0	208.8
Financial assets			
- Investments	0.4	0.4	0.4
- Other financial assets	242.9	151.8	163.3
Non-Current tax assets	43.3	18.2	182.1
Other non-current assets	101.5	77.6	63.1
Total non-current assets	**32113.9**	**36649.0**	**22661.2**
Current assets			
Inventories	4070.9	1818.3	2003.2
Investments in Joint Venture	0.0	0.0	11587.5
Financial assets			
- Derivative Assets	0.0	74.5	0.0
- Trade receivables	739.3	482.0	669.0
- Cash and cash equivalents	3034.9	753.5	488.5
- Other Bank balances	3477.7	373.7	34.0
- Other financial assets	892.2	808.3	288.9
Assets classified as held for sale	198.9	0.0	0.0
Other current assets	333.2	116.3	283.4
Total current assets	**12747.1**	**4426.4**	**15354.4**
Total assets	**44860.9**	**41075.4**	**38015.6**
Equity and Liabilities			
Equity			
Equity Share Capital	670.4	670.4	670.4
Instruments entirely in the nature of equity	343.2	0.0	6375.0
Other equity	-4511.3	18454.8	17952.4
Total equity	**-3497.7**	**19125.2**	**24997.8**
Liabilities			
Non-current liabilities			
Financial liabilities			
- Borrowings	20245.5	12066.8	393.5
- Other Financial Liabilities	758.8	704.7	784.8
Other non-current liabilities	173.6	55.7	51.6
Deferred tax liabilities	7198.5	4845.3	4867.3
Total non-current liabilities	**28376.5**	**17672.4**	**6097.3**
Current liabilities			
Financial liabilities			
- Borrowings	0.0	477.4	1533.8
- Trade payables			
Total outstanding dues of micro enterprises and small enterprises	67.7	22.0	0.0
Total outstanding dues of creditors other than micro enterprises and small enterprises	16493.8	2137.6	2197.3
- Derivative liabilities	156.5	0.0	121.3
- Other financial liabilities	2469.3	1191.4	1504.6
Other current liabilities	402.1	228.0	1091.6
Current tax liabilities	392.8	221.5	471.9
Total current liabilities	**19982.2**	**4277.9**	**6920.5**
Total equity and liabilities	**44860.9**	**41075.4**	**38015.6**

(Source: RHP)