# Rating Methodology – Paper & Paper Products

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**Industry Overview**

Paper has a wide use and applications in our day-to-day life. Besides being the primary mode of communication especially in education, it has wide commercial applications which include providing sustainable packaging solutions and health care. India is the 15th-largest paper producer in the world and the Indian market holds immense potential owing to lowest per capita consumption of paper as compared to the developed nations. The demand and supply disruption caused by the outbreak of COVID-19 pandemic witnessed demand for writing and printing paper (WPP) plummeting to its lowest ebb while the Kraft paper witnessed steady demand and realisation on the back of robust demand for packaging material. Post pandemic there has been pent-up demand for paper aided by the growing economy and the paper industry is expected to grow in sync with the economic growth recording 6% - 8% growth per annum.

**Rating methodology**

CARE Ratings Limited (CARE Ratings) has a standard methodology for the rating of companies belonging to the manufacturing sector. As per this methodology, CARE Ratings' rating process begins with the evaluation of the economy/industry in which the company operates, followed by the assessment of the business risk factors specific to the company. This is followed by an assessment of the financial and project-related risk factors as well as the quality of the management. This methodology is followed while analysing all the industries that come under the purview of the manufacturing sector. However, considering the size and diversity of the manufacturing sector, CARE Ratings has developed methodologies specific to various industries within the sector. These methodologies attempt to bring out factors, over and above those mentioned in the broad methodology, which are considered while analysing companies belonging to the particular industry.

CARE Ratings considers the following factors as critical determinants of credit risk associated with paper manufacturing companies.

1. **Industry risk analysis**

   Based on the end-user segment, paper industry can broadly be classified in the following segments:

   a) Writing and Printing Paper: This primarily includes various grades of paper consumed in the educational sector (textbooks, notebooks) accounting for around 60% of the total demand for the writing and printing paper, while the balance demand is catered by industrial consumption along with business communication which includes office stationery and copier paper.

   b) Packaging paper: The proliferation of e-commerce in India has been a boon for the packaging industry especially during Covid-19 led restrictions which witnessed significant demand and firm realisations for Kraft paper. The packaging paper accounts for significant share across all paper products, led by steady growth from packaging requirements in fast moving consumer goods segment (FMCG), food and beverages, cosmetics, pharmaceuticals among others. The packaging paper includes various grades of paper including Corrugated box, paperboard, Kraft paper, and Duplex paper.

   c) Newsprint: There are three main categories of newsprint which includes standard newsprint, improved newsprint and specialty newsprint. Globally, the print media prefers standard newsprint owing to its affordability. The magazine section of the newspaper which is visually appealing both in terms of colours and texture is printed on the improved newsprint which is relatively better in quality as compared with the standard. The advertising pamphlets and other colourful printed material is speciality paper, which is capable of absorbing colours well, able to withstand being processed through the printers due to which it is thicker than the standard and improved newsprint. India's 60% of Newsprint requirements are met through imports. After the outbreak of Ukraine – Russia war, not only the supplies have been jeopardized, but the newsprint prices also rose sharply.

Paper and paper products have very limited scope for product differentiation which limits the pricing strategy. The proximity of a paper mill to the raw material sources also gives competitive edge resulting in low logistics costs. However, substantial capital investments are required to set up integrated paper mills, which may act as a deterrent to the new players. Moreover, with presence of several mid and small-scale players, the industry is highly fragmented. A new paper line takes anywhere between 2-3 years to be set-up, moreover there are other capex that the company may undertake in order to comply with emission norms or de-bottlenecking capex which may improve yield without augmenting the installed capacity.

Another important feature of the paper industry is cyclicality. The paper industry is highly cyclical and depends on general economic conditions as well as the industry demand and supply. There is a bunching up of new capacity additions which in turn results in higher supply when compared to the demand growth. Companies with strong market position and low leverage are generally able to withstand the impact of high cyclicality. Also, presence in different product segments helps companies to maintain the revenue despite decline in demand for a particular product. The Indian paper industry also faces threat from imports which results in volatile profitability for the companies.
The growth drivers for the WPP industry include growing population, increasing urbanization, disposable income, widening the spread of education, increase in literacy rate, increased private and public spending on education along with growing corporate budget for marketing spend. Furthermore, the implementation of the New Education Policy (NEP) in the K-12 segment in a phased manner is also expected to bolster the demand for writing and printing paper.

The demand for packaging paper is driven on the back of changing lifestyles and deep media penetration through internet and television giving wider access of products, brands and substitutes. The regulatory ban on the use of single use plastic has further aided the demand for paper packaging. In terms of long-term sustainable packaging solutions, paper industry is the one that has minimal environmental impact or carbon footprint and expected to drive growth in the near to medium term.

## 2. Business risk analysis

### Market position

The paper industry is highly fragmented with presence of several mid and small-scale players. CARE Ratings conducts detailed assessment of a company based on its size of operations, evaluation of the installed capacity and level of utilisation, total number of products offered by the company and proportion of revenue from value-added products to gauge the market position of an entity. Different products in the paper industry often face varying supply and demand trends.

Strong market position of a company enables it to better withstand the fluctuations in prices and demand. Market position assessment is especially important in case of a cyclical industry with low entry barriers.

**Level of integration in operations**

Under this, the extent of both backward and forward integration in operations are analysed. Backward integration, including pulping and power generation capacities, is more critical in case of a wood-based mill. The degree of backward integration, whether the captive pulp and power generated are adequate for the entire capacity available with a company, is seen. The waste and chemicals generated during the conversion process can also be used as fuel for power generation, thereby reducing the cost. Although this kind of integration is capital intensive resulting in high fixed costs for a company, it results in stable profitability for a company provided the paper mill attains optimum capacity utilisation for effective absorption of the fixed overheads. In times of global supply constraints which may lead to substantial rise in the input cost (pulp), an integrated paper mill with in-house pulping capacity may benefit immensely.

Similarly, a high degree of forward integration is seen positively as it results in higher profit margins. For example, a paper board manufacturer manufacturing cardboard boxes will enjoy high and stable profits.

**Sourcing arrangement of various raw materials**

As discussed earlier, the paper and paper products can be manufactured using the three key raw materials, viz, wood, wastepaper and agri-residues. In terms of share in total production, approximately 22% are based on wood which has been on a declining trend, 70% on recycled / recovered (commonly known as wastepaper in India) fibre and 8% on agro-residues. The geographical location of the mill often determines the type of raw material used. Most mills in the northern and western regions of India utilise agricultural residues and recovered paper, while southern and eastern regions mills use wood and bamboo as raw materials. Around 75% of the paper mills are clustered around six states including Gujarat, Uttar Pradesh, Tamil Nadu, Mahrashtra, Punjab and Andhra Pradesh with major pulp and paper mills cluster around Muzzaffarnagar, Vapi, Kashipur, Coimbatore and Ahmedabad.

The industry faces supply challenges for these raw materials in the country. In case of wood-based mills, the land that can be held is restricted resulting in limited forest resources and remains dependent on imported wood/ wood pulp which in turn is dependent availability in global markets as well as their price movement. Also, the farmers' willingness to cultivate a particular crop depends on the kind of profits they can generate and the time taken to generate those profits. Even the wastepaper mills depend on imports as the collection rate from domestic sources is quite low and, in this case, network which an entity has for collection of waste paper is critical. The challenges faced by agri-residues-based mills are alternate use and seasonal availability of raw materials. The companies who have the ability to use different raw materials and whose mills are located closer to raw material sources are viewed favourably. The overall efficiency in raw material procurement is assessed which is reflected from cost of raw material per tonne. In case a company relies more on imports, it is exposed to foreign exchange fluctuation risk and also the inventory holding period is expected to be longer.

**Cost structure and operational efficiency**

Cost structure of paper manufacturing company is largely dominated by raw material costs followed by power and fuel cost, chemical cost, employee and labour costs as well as selling expenses. Analysis of each component vis-à-vis total operating income is very crucial to understand the operational efficiency of the company. Both the raw material and power costs differ depending on the raw material used by a mill. In case of wood-based mill, raw material cost per ton is higher when compared to that of a wastepaper mill.

Also, the power consumption in case of a wood pulp mill is much higher than that of a wastepaper mill. The past trends in the cost structure as well as comparison with the other industry players is also undertaken. Ratios such as Raw Material Cost per Tonne and Power Cost per Tonne are analysed and compared with other industry players. The ability of the company to consistently operate at high-capacity utilisation levels is also important in order to ensure that the cost per tonne is lower and the company remains competitive.

**Environmental, Social and Governance Risk (ESG)**

The pulp and paper industry is among the most polluting industries owing to large amount of water consumed along with hazardous chemicals used during the pulp bleaching process and therefore faces high risks emanating from Environmental and Social factors (E&S). Besides there are environmental concerns owing to replacement of natural forests by plantations. A significant amount of capital expenditure may be required to comply with the guidelines issued by the Central Pollution Control Board (CPCB)/ State Pollution Control Board (SPCB) to keep the waste generation and carbon emissions under check. An entity's commitment towards sustaining ecological balance, harnessing energy conservation measures and ensuring lowest possible solid and effluent discharge is studied. It may be noted that when compared to wastepaper mills, the effluents and environmental concerns are higher in case of wood-based mills as the water, power and chemical required are significantly higher in case of the former. Also, approval of pollution control board is required for effluent discharge norms as well as for operation of the power plant. The kind of measures adopted by the companies for water treatment and effluent treatment before they are discharged are critical for the long-term viability of the operations.

The social risk emanates from qualitative including health and safety standards for employees and labour, reduce social disparity, labour relations with any instances of any labour unrest in the past and presence of labour union. The factors considered for governance risks includes transparency & disclosure standards in terms of quality/timeliness and granularity of data, independence of the board of directors and its rotation, and cases filed against the management for unfair trade practices.

**Marketing network and geographical diversification**

Majority of the sales of paper companies are undertaken through dealers and a small portion is through corporate tie-ups and Government orders. Strong and widespread dealer network helps the company to serve different geographies, thereby increasing scale of operations and strengthening the business risk profile. Also, long association with the dealers ensures sales of a company's products even during times of low demand. The dealers generally favour companies who supply a wide range of quality products in a timely manner and provide extended credit period, when needed. For exports, an entity which has a paper mill close to the port will benefit substantially as compared with a non-port-based mill owing to huge transportation cost especially during times of weak domestic demand/ healthy export demand.

**Capital expenditure for capacity expansion as well as modernisation of facilities**

New capacities coming on stream is an important determinant to evaluate the demand-supply dynamics. In order to cater to the increasing market and increase/maintain their market position, the companies in the paper industry continuously incur capital expenditure for de-bottlenecking the existing facilities and setting-up new capacities. However, it takes around 18-24 months for any new paper capacity to start commercial operations. This entails significant capital outlay and the fixed asset turnover during the initial phase of stabilization remains low. They also expend on various cost-efficiency measures for remaining competitive as well as for adherence to environmental norms. The cost of capex projects and funding pattern are taken into consideration while evaluating capex-related aspects. The extent of capital outlay will depend on nature of capex - greenfield, brownfield, maintenance, debottlenecking, etc.

The completion of capacity enhancement project during low demand and oversupply scenario is likely to impact the profitability of the company and take longer than expected to derive the benefits of expansion. The companies who have adequate cash flows and liquidity buffer to withstand any uncertainty with regard to the capex are seen favourably.

3. **Financial risk analysis**

The financial analysis considers both historical and projected financial performance of the rated entity. Trend of the financial analysis over the last 5-year period is analysed and compared with the average industry trend. CARE Ratings' analysis is largely focused on the stability and sustainability of the earnings so that the cash flows generated from the operating activities are adequate for debt servicing as well as for meeting the equity requirement of capex. The quantitative analysis in conjunction with the demand-supply position entails analysing the past trend and expected sales volume, net sales realisation (NSR), gross margins and PBILDT per tonne to understand the operational efficiency. The other parameters indicating the operating efficiency include Operating Profitability Margins which are largely governed by raw material cost per tonne, and power cost per tonne among others, cash flow from operations and Return on Capital Employed (ROCE). ROCE is an important ratio as the companies in this sector have different capital intensities depending on the type of mill operated. Apart from the internal accruals, the companies in this sector need to borrow debt for funding the capex. In light of the above, leverage ratio and the level of financial flexibility are key factors influencing the credit quality of the company in this industry. The financial risk profile is assessed based on detailed analysis of leverage, debt coverage and liquidity.

For more details on Financial ratios please refer to the methodology on 'Financial Ratios-Non financial sector entities' which is available on www.careedge.in.

**Conclusion**

Overall credit risk profile of companies in the paper sector is driven by their product portfolio, relative position in the key markets, geographical diversification and the ability to improve the scale of operations while maintaining operational viability as utility costs are higher. Nevertheless, the rating outcome is ultimately an assessment of the fundamentals and the probabilities of change in the fundamentals. CARE Ratings analyses each of the above factors and their linkages to arrive at the overall assessment of credit quality, by taking into account the industry's cyclicality. While the methodology encompasses comprehensive financial, commercial, economic and management analysis, credit rating is an overall assessment of all aspects of the issuer.

**[**For previous version please refer 'Rating Methodology – Paper & Paper Products' issued in November 2020**]**

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**About:**

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