Techno-Economic Viability Study of 15 TPD Kraft Paper Project at Solapur in Maharashtra

Ayush Paper Mills

ecant Consultants Private Limited

October 10, 2022

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Date	Originators	Checker	Approver	Report Status
27th Sept 2022	Neha Singh	Vatsal Misra	Vatsal Misra	Draft Report
10th Oct 2022	Neha Singh	Vatsal Misra	Vatsal Misra	Final Report

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For and On Behalf of
Secant Consultants Private Limited

Vatsal Misra
Digitally signed by Vatsal Misra
Date: 2022.10.10 21:03:31 +05'30'

Vatsal Misra
Project Director

Abbreviations Used

Abbreviation	Fullform
APM	Ayush Paper Mills
Avg.	Average
B2B	Business to Business
B2C	Business to Customer
bn	Billion
CAGR	Compounded Annual Growth Rate
CMA	Credit Monitoring Arrangement
COD	Commercial Operations Date
DER	Debt Equity Ratio
DPR	Detailed Project Report
DSCR	Debt Service Coverage Ratio
EPA	Environment Protection Agency
FY	Financial Year
g	grams
GFA	Gross Fixed Asset
IRR	Internal Rate of Return
Kg	Kilogram
TPD	Ton Per Day
KPI	Key Performance Indicators
KVA	Kilo Volt Ampere
Kwh	Kilo Watt Hour
LOI	Letter of Intent
m^3	Cubic Meter
Max	Maximum
MT	Metric Ton
NH	National Highway
Nos.	Numbers
NPV	Net Present Value
Q	Quarter
R&D	Research and Development
Rs.	Indian National Rupees
SBI	State Bank of India
SCPL	Secant Consultants Private Limited
Sq. M. or M^2	Square Meters
TPH	Tons Per Hour
WACC	Weight Average Cost of Capital
wt	Weight

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Executive Summary

Study Background

M/s Ayush Paper Mills ('APM' or 'Firm' or 'Company') is partnership firm formed by Mr. Maruti Rangnath Wakhure and Mrs. Asha Maruti Wakhure on 13thJune 2016 at Solapur, Maharashtra. The Partners in the Firm have diverse business activities and include an existing corrugated box manufacturing unit located at Sangola, in Solapur district, for almost two decades.

The Partners of the Firm are now proposing setting up 15 ton per day ('TPD') kraft paper Manufacturing unit, which will be located at taluka Sangola, district Solapur, Maharashtra. The Firm has already acquired necessary land admeasuring 129000 Sq. ft, for purpose of establishing the Project.

The key parameters of the Project have been summarised below –

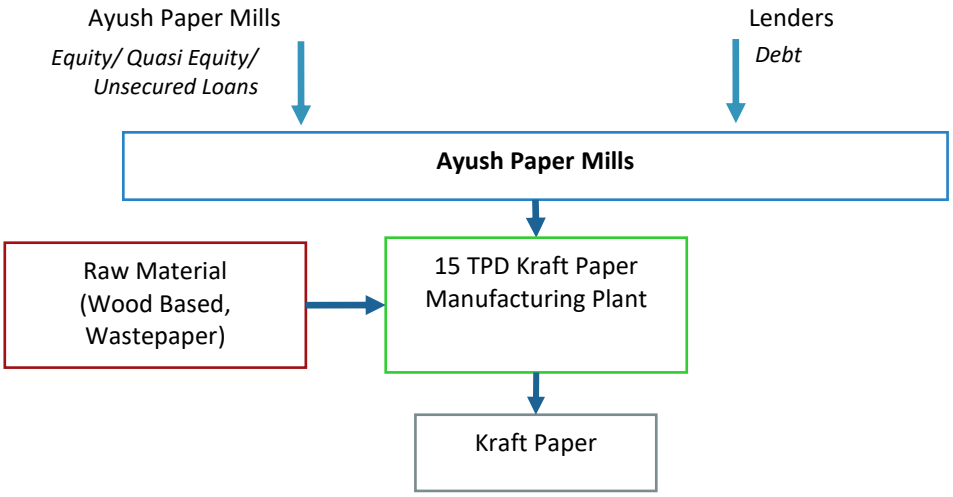
- The installed capacity of the Project will be 15 TPD kraft paper at fully Automatic plant.
- The overall Project Cost has been estimated at Rs. 9.19 Crores.
- The Project is proposed to be funded in a Debt-Equity Ratio of 1.19: 1 or Equity of Rs. 4.19 Crores and term loan from Lenders to the tune of Rs. 5.00 Crores.
- The Project will be implemented over a period of 12 months from date of achieving financial closure, which has been assumed to be October 2022, so effectively the Commercial Operations Date ('COD') of the Project will be 1st October 2023.
- The Net Present Value ('NPV') of the Project has been estimated at Rs. 2.44 Crores, while Internal Rate of Return ('IRR') at 14.02% is higher than Post Tax Cost of Capital at 9.32%, indicating the Project is financially viable.
- The average Debt Service Coverage Ratio ('DSCR') of the Project has been estimated to be 2.12, indicating fair repayment capability of the Project.

The Firm has now approached State Bank of India ('SBI' or 'Bank' or 'Lender') for raising the term loan for implementation of the Project. The Lenders in turn have asked the Company to undertake a techno-economic evaluation of the Project, by an empanelled Technical Consultancy Organisation. In this regard, the APM has approached and appointed Secant Consultants Private Limited for undertaking the Techno-Economic Viability Study of the said Project.

The evaluation and finding of the Consultants have been presented in form of this report.

Project Configuration

The project configuration as envisaged by APM is presented in the exhibit below –



Source: APM and SCPL Estimates

Project Cost

The overall Project cost as estimated for setting up the proposed grading and processing unit is Rs. 9.19 Crores and the same has been summarised in the table below –

All Figures in Rs. Crore			
Description	**31-Mar-23**	**31-Mar-24**	**Total**
Land and Land Development	0.24	-	0.24
Building and Civil work	1.26	0.31	1.57
Plant and Machinery	3.40	2.27	5.67
Miscellaneous Fixed Assets	0.02	0.06	0.08
Preliminary Expenses	0.22	0.09	0.31
Contingency		0.37	0.37
Interest During Construction	0.07	0.17	0.24
Margin Money for Working Capital	-	0.72	0.72
Total Project Cost	**5.20**	**3.99**	**9.19**

Source: APM and SCPL Estimates

Means of Finance

The Company proposes to fund the Project in a Debt-Equity Ratio of 1.19 :1 (including the margin money for working capital), the means of finance for the proposed Project have been presented below –

All Figures in Rs. Crore			
Description	**31-Mar-23**	**31-Mar-24**	**Total**
Equity	2.37	1.82	4.19
Term Loan	2.83	2.17	5.00
Total Means of Finance	**5.20**	**3.99**	**9.19**

Source: APM and SCPL Estimates

The broad covenants of the term loan have been presented in the table below –

Parameter	Details
Term Loan Amount	Rs. 5.00 Crores
Interest Rate	9.50% per annum
Door to Door Tenure	8 Years
Construction Period	12 Months
First Disbursement	October 2022
Commercial Operations Date	1st October 2023
Post Construction Moratorium	6
Installments	78 Equated Monthly Instalments
First Instalment	April of FY 2025-26
Last Installment Due	September of FY 2031-32

Source: SCPL Assumptions

Key Financial Parameters

The key financial parameters of the project have been presented in the table below –

All Figures in Rs. Crore								
Description	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Total Income	5.50	12.95	13.82	14.69	15.55	15.59	15.59	15.59
Total Operating Costs	4.76	11.11	11.75	12.39	13.03	13.06	13.06	13.06
EBIDTA	0.74	1.84	2.07	2.30	2.52	2.53	2.53	2.53
EBIDTA Margin	0.13	0.14	0.15	0.16	0.16	0.16	0.16	0.16
PAT	-0.69	0.38	0.62	0.79	1.05	1.16	1.25	1.34
PAT Margin	-13%	3%	4%	5%	7%	7%	8%	9%
Contribution	1.07	2.62	2.90	3.18	3.46	3.47	3.47	3.47
Contribution Margin	19%	20%	21%	22%	22%	22%	22%	22%
Total Fixed Cost (incl Int and Dep)	1.76	2.23	2.12	1.98	1.86	1.70	1.56	1.43
Break Even Sales	9.06	11.06	10.10	9.15	8.36	7.66	7.01	6.45
Break Even Margin	165%	85%	73%	62%	54%	49%	45%	41%
Cash Break Even	3.16	6.20	6.08	5.80	5.57	5.26	4.94	4.67
Cash Break Even Margin	57.53%	47.84%	43.97%	39.52%	35.79%	33.73%	31.71%	29.95%
Promoters Equity	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Unsecured Loan (Quasi Equity)	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Reserves and Surplus	-0.69	-0.31	0.31	1.10	2.14	3.30	4.56	5.89
Total Net Worth (TNW)	4.28	4.66	5.28	6.07	7.12	8.28	9.53	10.87
Term Loan	5.00	4.23	3.46	2.69	1.92	1.15	0.38	-
Debt-Equity Ratio	1.17	0.91	0.66	0.44	0.27	0.14	0.04	-
Total Outside Liabilities (TOL)	9.26	8.53	7.81	7.08	6.36	5.59	4.82	4.43
TOL/ TNW	2.16	1.83	1.48	1.17	0.89	0.68	0.51	0.41
Cash in Hand/ Bank Balance	0.06	0.26	0.73	1.26	1.94	2.86	3.80	5.15
DSCR	-	1.52	1.62	1.71	1.92	2.02	2.13	2.22
Min DSCR	1.52							
Average DSCR	2.12							
Average ROCE	13.90%							

All Figures in Rs. Crore								
Description	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
NPV	2.43							
IRR	14.01%							
Post Tax Cost of Capital	9.33%							

Source: SCPL Analysis

Sensitivity Analysis

The Consultants had undertaken sensitivity analysis to assess the impact of various scenarios on the financial parameters and the result of the same is presented in the table below –

Description	Project Cost	Project NPV	Project IRR	WACC	Min DSCR	Avg DSCR
	Rs. Crore	Rs. Crore	%	%	Ratio	Ratio
Base Case	9.19	2.43	14.01%	9.33%	1.52	2.12
5% decrease in utilisation	9.16	1.57	12.60%	9.45%	1.37	1.96
2% decrease in selling prices	9.18	1.02	11.58%	9.51%	1.31	1.90
2% increase in raw material price	9.20	1.70	12.75%	9.41%	1.41	2.01
10% increase in hard cost	9.93	1.73	12.89%	9.67%	1.51	2.14
1% increase in interest rate	9.22	2.04	13.93%	9.88%	1.46	2.06
2% increase in interest rate	9.24	1.67	13.86%	10.44%	1.40	2.01

Source: SCPL Estimates

It is noted from the exhibit above, that the Project will be susceptible to 2% decrease in selling price and 2% increase in raw material cost. However, it is also noted that the Project remains viable under all adverse scenarios as NPV remains positive and IRR, remains above WACC under all scenarios.

The average DSCR of the Project is 2.12 which is above the industry benchmark of 1.33, while the minimum DSCR, of the Project also remains above 1.30 in all adverse scenarios, so the Project has fair repayment capacity.

Conclusion

- The kraft paper market is projected to grow to USD 19.32 billion by 2025, recording a CAGR of 3.0% during the forecast period.
- The global pulp and paper market was valued at 351.53 billion U.S. dollars in 2021 - an increase from the previous year. In 2020, the global pulp and paper market declined by 0.1 percent, with the outbreak of COVID-19 causing disruptions throughout the industry.
- The Company proposes to set up a Kraft Paper manufacturing Unit at district Solapur, Maharashtra. The land for setting up the Project has area admeasuring 129,000 Sq. Ft. as is owned by the Partners of the Firm.
- Based on the discussions with the Management of the Company, the Consultants understand that the Company will procure the raw material (Wood and Bamboo) from the nearby area and local whole sellers.

- The power requirement of the proposed project will be fulfilled by a connection of 372 KVA at site however if more power requires the firm will increase the connection load accordingly. Currently the firm has taken power connection from state electricity board (MSEDCL).
- The water supply will be arranged from the ground water boring system which is already installed at site. Company will install more borewells as and when required.
- The Consultants note that the process of Kraft Paper production requires steam to be generated, for which the firm will be installing a 3.00 TPH boiler.
- The manpower required for the proposed project is ascertained at 14 personnel.
- The construction of the project is expected to be completed by September 2023 and after trail runs during September-October 2023, will commence commercial production from October 2023.
- The overall project cost has been estimated at Rs. 9.19 Crores (including the margin money), which is expected to be funded in a Debt-Equity Ratio of 1.19:1. The Promoters Contribution for the Project will be Rs. 4.19 Crores, while the loan will be Rs. 5.00 Crores.
- The Net Present Value of the Project has been estimated at Rs. 2.43 Crores, while Internal Rate of Return at 14.01 % is higher than Post Tax Cost of Capita at 9.33 %, indicating the Project is financially viable.
- The average DSCR of the Project has been estimated at 2.12, indicating fair capability of the Project in repaying the long-term debts.
- The overall project is found to be Techno-Economically Viable

Introduction

Study Background

M/s Ayush Paper Mills is partnership firm formed by Mr. Maruti Rangnath Wakhure and Mrs. Asha Maruti Wakhure on 13 June 2016 at Solapur, Maharashtra. Mr. Maruti Rangnath Wakhure, who is one the Partners in the Firm has been engaged in manufacturing unit of corrugated boxes name of M./s Sridhan Packers since last 20 years.

The Partners have now decided to start the manufacturing of Kraft paper which is mainly used in manufacturing of corrugated boxes. The Partners had undertaken primary market assessment, whereby an interest to purchase about 1,150 Tons of Kraft paper was received from the primary market assessment. The partners have signed the Partnership Deed with following term and conditions –

1. The partnership deed made in the city of Solapur, Maharashtra on 13 June 2016 between Mr. Maruti Rangnath Wakhure and Mrs. Asha Maruti Wakhure.
2. The working address of the Firm is GUT No – 468, AT POST MANJARI, SOLAPUR.

The Partners of the Firm are now proposing setting up fully automatic 15 TPD Kraft paper manufacturing unit, which will be located at Dist. Solapur, Maharashtra. The Firm has already acquired necessary land admeasuring 129,000 Sq. Ft, for purpose of establishing the Project ('Project').

The key parameters of the Project have been summarised below –

- The installed capacity of the Project will be 15 TPD kraft paper at fully Automatic plant.
- The overall Project Cost has been estimated at Rs. 9.19 Crores.
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- The average DSCR of the Project has been estimated at 2.12, indicating fair capability of the Project in repaying the long-term debts.

The Firm has now approached the State Bank of India for raising the term loan for implementation of the Project. SBI in return has asked the Company to undertake a techno-economic evaluation of the Project, by an empaneled Technical Consultancy Organization. In this regard, the APM has approached and appointed Secant Consultants Private Limited for undertaking the Techno-Economic Viability Study of the said Project.

Partners Detail

The brief about the Partners of the Firm is provided in the exhibit below –

Director's Name	Designation	Education and Experience
Mr. Maruti Rangnath Wakhure	Partners	Mr. Wakhure have graduation degree. and have more than 35 years of total experience in manufacturing unit of Corrugation boxes.
Mrs. Asha Maruti Wakhure	Partners	Mrs. Wakhure have graduation degree and have experience in accounting and administration.

Source: APM

Partnership Pattern

The partnership pattern of the firm has been presented in the table below –

Partner's Name	Partnership Pattern
Mr. Maruti Rangnath Wakhure	50%
Mrs. Asha Maruti Wakhure	50%
Total	**100%**

Source: APM

Secant Consultants Private Limited

Secant Consultants Private Limited is a growing multi-dimensional technical, development and management consultancy firm with head office at Mumbai and regional office at Lucknow, Noida, and Pune.

The Company's mission is to provide high end consulting services to corporate and government (both central and state) bodies by partnering to overcome their existing problems and to assist them on growth trajectory. SCPL combines industry specific managerial expertise along with consulting competence in all its services.

The team of experts at SCPL has a combined business advisory and operational experience of over 150 years. The Team is an optimum mix of Technocrats, Certified Asset Valuers, Market Research Analysts, Financial Analysts, Contract Specialist, Architects, Economists, Growth Strategists and Health Consultants.

Scope of Services

The Scope of Services, as envisaged by the Consultants is presented as below –

Market Assessment

1. Demand and market
    a) Structure and characteristics of the Products proposed to be manufactured
    b) Approximate present size of demand for products, major determinants and indicators
    c) Supply of the Products proposed to be manufactured
    d) Its past growth, estimated future growth
2. Commenting on the current, as well as the future demand-supply gap scenario

3. Commenting on the historical price trend and expected future price trend
4. Review and comment on the marketing concept, sales forecast and marketing budget
    a) Description of the marketing concept, selected targets and strategies
    b) Estimated annual revenues from products, pricing of the product.
    c) Estimated annual operating cost and expenses towards costs of sales promotion and marketing etc.
    d) Competition Analysis

Technology Assessment

1. Review the reports/ studies as prepared by the Firm.
2. Review and comment on the projection configuration as proposed by the Firm.
3. Review and comment on the production process proposed to be followed at the unit.
4. Review and comment on the land purchase/ sales deed and understand the availability of the land for implementation of the Project. Based on the review undertaken, comment on the adequacy of land for implementation of the Project and possible future expansions (if any).
5. Review the prevailing Environment Policies of the Local Government and comment on the same.
6. Review and comment on the block project cost as estimated by the Firm/ technology providers.
7. Review and comment on the quotations/ agreement/ contract for procurement of plant and machinery and services for the Project
8. Review and comment on the building area proposed to be constructed and comment on the layout of the unit
9. Review/ Comment/ Estimate the Block Project Cost, segregated in following heads –
    a) Land and Land Development
    b) Building and Civil Works
    c) Plant and Machinery Cost
    d) Miscellaneous Fixed Assets
    e) Preliminary and Pre-Operative Expenses
    f) Contingency
    g) Interest During Construction Period
    h) Margin Money for Working Capital
10. Review/ Assess and/ or comment on –
    a) Power requirement
    b) Water requirement

c) Secondary fuel requirement (if any)

d) Utilities requirement etc.

11. Review the manpower requirement and manpower recruitment policy as proposed by the Firm. Understand the organogram as proposed by the Company for operations of the Project post implementation and commenting on the suitability/ adequacy of the same.
12. Review and comment on the Environmental Impact of the Project.
13. Review and comment on the implementation schedule as proposed by the Company/ technology providers. In case need be, suggest modification in the implementation schedule.

Financial Assessment

Based on review of DPR/ Report/ CMA, submitted by the Company to the Lenders, undertake an independent financial evaluation/ assessment which would comprise of –

1. Project Financing
   a. Proposed capital structure and proposed financing
   b. Cost/ Means of finance
1. Production cost (significantly large cost items to be classified by materials, personnel and overhead costs, as well as by fixed and variable costs)
2. Financial evaluation based on the above-mentioned estimated values
3. Commenting on the repayment schedule as proposed by the Firm
4. Commenting on the Viability of the Project, based on –
   a. Net Present Value
   b. Internal Rate of Return and Post Tax Cost of Capital
   c. Debt Service Coverage Ratio
   d. Interest Coverage Ratio
   e. Return on Capital Employed

Risk and SWOT Analysis

1. Based on market, technical and financial assessment, undertake a detailed risk assessment exercise
2. Suggest possible mitigation measures of the risk
3. Undertake SWOT Analysis of the Project

Approach and Methodology

SCPL adopted a consultative approach during the course of the assignment. The team from SCPL worked closely along with the team from Client for successful and early completion of the assignment. All the information required for successful completion of the assignment collated by team SCPL from the following sources –

- In house information available with the Consultants
- Information available with the Client Organization
- Published information available with various Government Departments
- Sector/ Industry/ Country reports published by reputed consultancy organizations
- Journals/ Publication of trade association
- Discussions with industry/ sector experts

Based on the secondary and primary analysis the Consultants estimated the facilities planning to include service offerings. The Consultants have provided estimates of capital investments required and operating costs based on revenue and cost streams

Industry Assessment

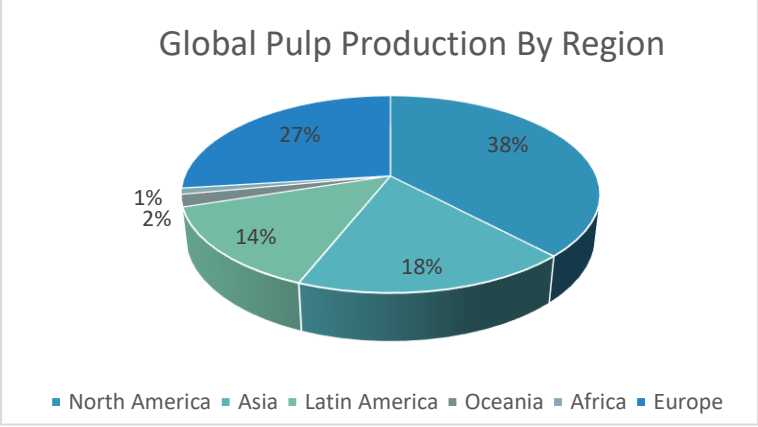
Introduction

Kraft paper is paper or corrugated board with high tear-resistance and strength. Used primarily in the packaging industry, it adds chemicals to wood pulp and recycled materials to increase fiber strength, thickness, and durability while maintaining lightweight. Chemicals are typically added to kraft paper to increase thickness, strength, and durability while maintaining lightweight. Color Craft, White or Bleach Craft, Black Craft, White or Bleach Craft, Natural Recycled Craft, and Print Craft are some of the most widely used forms of craft. The COVID 19 epidemic has hampered the production, supply, and demand of kraft paper and had a negative impact on the market.

As the COVID 19 pandemic spread around the world, governments in many countries have imposed a strict curfew to prevent people from going out. Lockdown closed manufacturing plants, lacked staff, and affected kraft paper production. Kraft paper sales declined due to supply chain disruptions and the closure of specialty stores and other retailers. The closure of hotels and restaurants has reduced the demand for kraft paper for the food packaging business. The blockage restrictions have been gradually lifted, but the restaurant is gradually reopening for takeaway only. This can help increase kraft paper growth in the short term. The growing popularity of fast-food restaurants for young people in urban areas and government regulations imposing a ban on plastics has increased the production of bag wrapping paper. Wheat flour, sugar, starch, food additives, processed and dried fruits, eggs, milk, and other foods are typically shipped using kraft paper. Bag fuel for food packaging is usually used in the form of an open sack or valve sack and consists of 2-3 layers of paper, often a polyethylene (PE) -free film tube with liner and/or coated paper. These factors are driving the growth of kraft paper in the market.

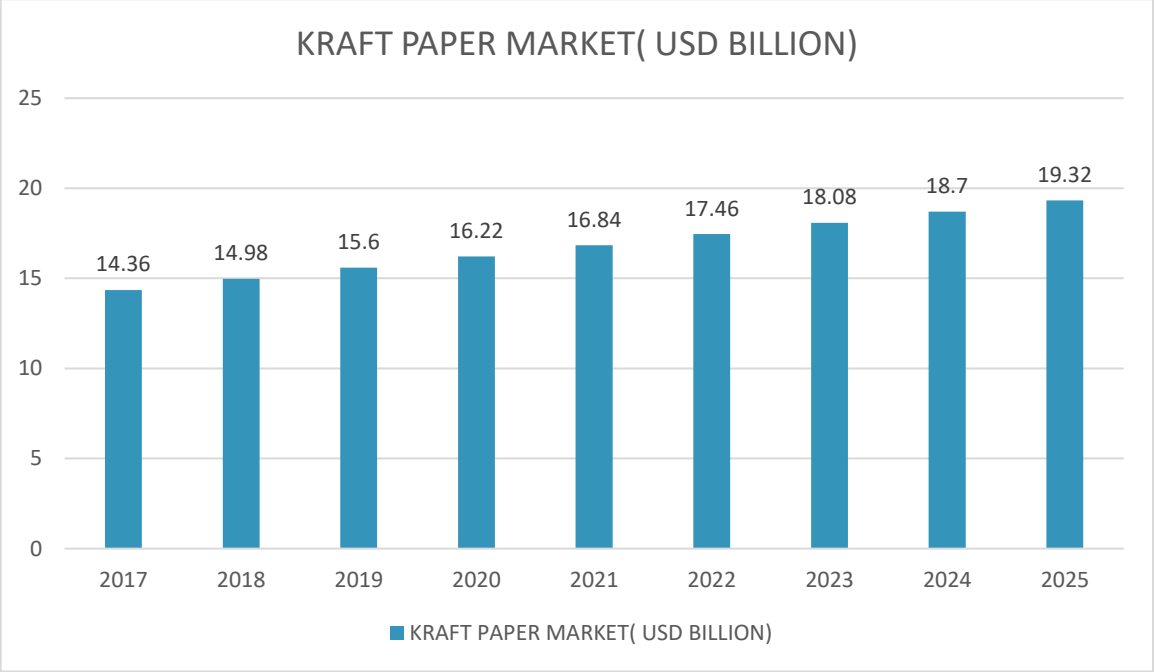
Regulatory authorities are paying more attention to the introduction of paper recycling practices. And due to the packaging properties of various foods such as sandwiches, pizzas, and burgers, the industry has a significant increase in demand for kraft paper from the food and beverage industry. Also, the shift in consumer focus to improving the appearance of end-user products. These factors are driving the demand for the product in the market.

Global Kraft Scenario



The global pulp and paper market was valued at 351.53 billion U.S. dollars in 2021 - an increase from the previous year. In 2020, the global pulp and paper market declined by 0.1 percent, with the outbreak of COVID-19 causing disruptions throughout the industry. The pulp and paper market are projected to grow in the coming years to reach a value of almost 373 billion U.S. dollars by 2029, registering a CAGR of 0.72 percent from 2022. Products in this market include wrapping paper and packaging, newsprint, and printing and writing paper.

The kraft paper market is projected to grow from USD 15.6 billion in 2019 to USD 19.32 billion by 2025, recording a CAGR of 3.0% during the forecast period. The rise in demand for kraft papers in various end-use industries, such as food & beverages, building & construction, cosmetics & personal care automotive, and consumer durables, is a key factor that is projected to drive the growth of the kraft paper market across the globe. In addition, factors such as rapid urbanization across regions and the recyclability feature of kraft papers are projected to contribute to the growth of the kraft paper market during the forecast period. Based on packaging form, the corrugated segment is projected to dominate the kraft paper market, in terms of value and volume, from 2019 to 2025. Corrugated boxes not only offer protection to shipped goods from damages but also offer easy handling features. The reusable and recyclable nature of corrugated boxes reduces packaging waste. This has resulted in an increased demand for corrugated boxes in various industries such as food & beverages, building & construction, clothing, freight forwarding, logistics, cosmetics & personal care, and pharmaceuticals.



The Asia Pacific kraft paper market is projected to grow at the highest CAGR from 2019 to 2025, in terms of value. The growth of the market in the Asia Pacific region is attributed to the increased demand for kraft papers in densely populated countries such as India and China, as it is increasingly used in the production of packages to ensure cost savings, sustainability, and safety of packaged products. Moreover, the increasing application of kraft papers in the food & beverages, healthcare, consumer durables, building and construction industries is projected to drive the growth of the kraft paper market in the Asia Pacific region.

Indian Scenario of Kraft Paper

The India kraft paper market size reached 8.50 million Tons in 2021. Looking forward, IMARC Group expects the market to reach 14.49 million Tons by 2027, exhibiting a growth rate (CAGR) of 9.3% during 2022-2027. Kraft paper is a paper used for material packaging. It is produced from the chemical pulp in the kraft process and is used in many commercial and industrial applications. It is perfect for creating durable wrapping paper and sturdy rigid carton boxes. It has excellent mechanical strength and is widely employed for reusable eco-designed packaging. It is available in an extensive range of shades, designs, and colours, making it very versatile for branded packaging solutions. Due to its high toughness printability and handling capacity, kraft paper is widely

used in the packaging industry. This paper can be converted into wrapping, bags, pouches, cans, cartons, corrugated sheets, and others.

We are regularly tracking the direct effect of COVID-19 on the market, along with the indirect influence of associated industries. These observations will be integrated into the report.

The market in India is majorly driven by the increasing product demand across various industry verticals, such as food and beverages, automotive, and building and construction. Due to its recyclability feature and excellent mechanical properties, kraft paper is witnessing an increasing demand across the country. In line with this, rapid urbanization and rising construction activities are significantly contributing to the market. The kraft paper market is expected to expand due to factors, such as changes in packaging norms and the evolution of the packaging industry. Furthermore, continual technological advancements in building and construction materials are catalysing the market. Besides this, flourishing e-commerce and retail sectors will likely create lucrative growth opportunities for the key players in the kraft paper market.

The growing demand of the product for gift wrapping and DIY is propelling the market. It reduces significant event and wedding costs by creating DIY kraft-inspired decorations and invitations. Moreover, the augmenting demand for food packaging from the food industry is strengthening product demand. The Indian governing authorities are strongly focusing on adopting recycling practices for paper, thus creating a positive outlook for the market. Additionally, an enhanced consumer focus toward improving the appearance of the end user product is providing a boost to the market. Several companies are investing heavily in research and development activities to develop innovative solutions that can enhance the quality and performance of packaging products.

The paper industry in India could be classified into 3 categories according to the raw material consumed.

- Wood based
- Agro based &
- Wastepaper based (wastepaper, secondary fibre, bast fibers and market pulp).

An improvement in the standard of living of Indians, especially in urban areas has resulted in a gradual shift towards better quality papers. This is expected to increase the demand for high-end varieties of paper. Further, with rising exports and keeping in view the current trend of outsourcing, foreign publishers have started outsourcing printing and publishing jobs to India. This would significantly increase the demand for different varieties of paper.

Classification of Industry

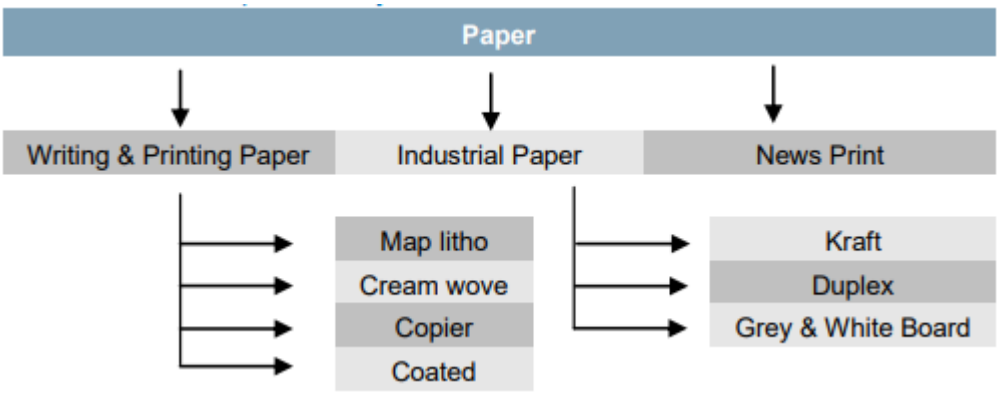
Paper is thin material mainly used for writing upon, printing upon or packaging. It is produced by pressing together moist fibres, typically cellulose pulp derived from wood, rags or grasses, and drying them into flexible sheets. The paper industry is broadly classified into writing and printing (W&P), industrial and newsprint segments. Industrial paper accounts for about 48% with W&P and newsprint accounting for 30% and 19%, respectively.

The paper industry can be broadly categorized into three segments:

- Writing and printing
- Industrial paper

- Newsprint

Classification of Paper Industry



On the basis of raw material use, the industry is classified into three segments: wood and bamboo (21 per cent); Bagasse and Agri residues (8 per cent); and Wastepaper (71 per cent). India is the only country to be using so many varieties of fibre in paper making. Indian paper manufacturing units have, by and large, shown better margins and return on investment than their counterparts elsewhere.

Writing & Printing Paper

This segment includes varieties of paper, normally under 120 GSM (grams per square meter), that are used primarily for writing purposes 14 and printing. The various varieties of writing and printing (W&P) paper starting from the lower end of the value chain are cream wove, map litho, copier and coated paper. While the high-quality paper segments have been gaining a greater share, the low-quality segments still account for a major share of the market. The growth in the demand for paper in this segment is usually due to a large extent, on the growth in population, level of literacy, public and private spending on education, level of business activity and growth in the printing industry.

Industry Paper

This includes Kraft paper, duplex boards, and grey & white board. This paper is used for various industrial purposes. The consumption of industrial paper is closely linked to:

- Growth in the packaging industry.
- Industrial Production.
- Development in packaging technology and substitution by other materials.

The different varieties of paperboards include coated & uncoated Kraft, chromo, and triplex boards. Kraft papers are available in various varieties, differentiated by properties of strength (BF factor) and Gram mage, among other criteria.

Newsprint

Newsprint is mainly used in the printing of newspapers and magazines. Although used for printing purposes, newsprint is considered a separate end-use category because of the marked difference in its production process as compared to other W&P varieties of paper. Besides, newsprint is consumed in very large volumes vis-à-vis

other varieties of paper. Thus, Kraft board is used in a wide variety of packaging applications such as folding cartons, beverage carriers, book, and report cover, mailing tubes, and video cassette boxes, to name just a few. The unit ‘s product line of Paper Boards provides a wide range of quality grades to choose from including a growing selection of weights, grammage, textures and finishes, competitively priced.

Corrugated Boxes to Hold the Significant Market Share

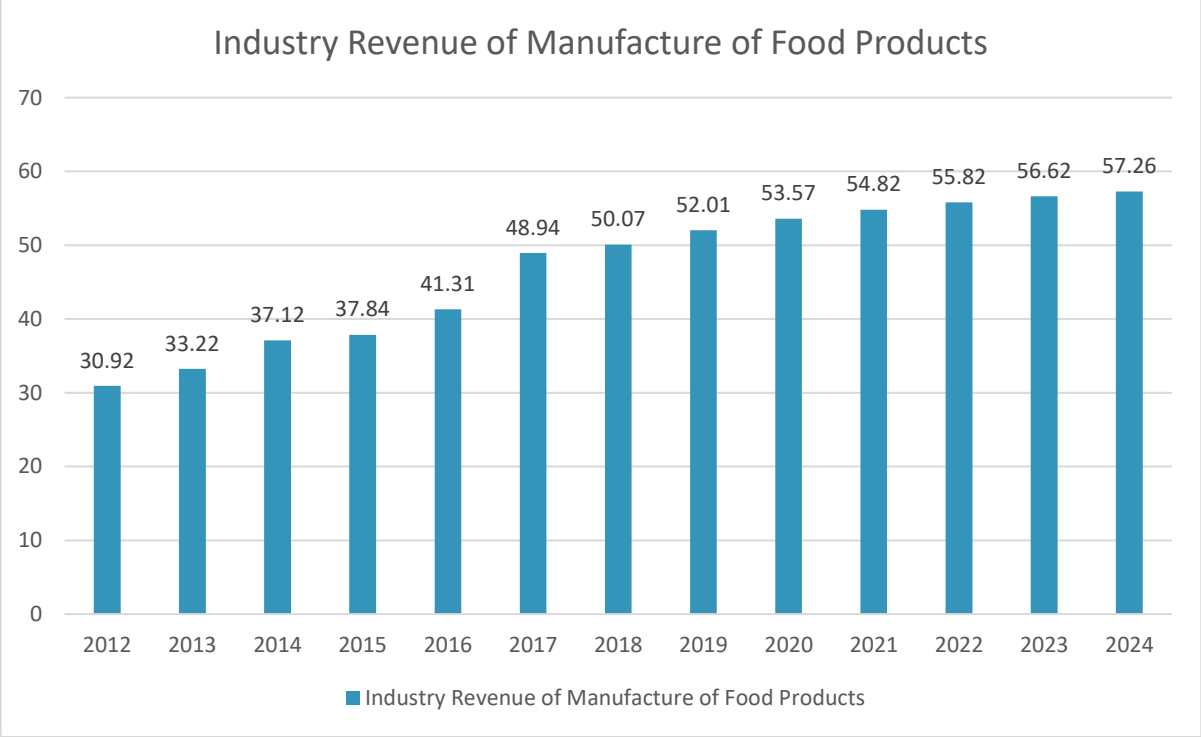
- Corrugated boxes are multi-layered rigid boxes made from two sheets of paper called liners, glued to either side of a corrugated inner 'fluting' that consists of connected arches, allowing for greater strength and resistance. The corrugated board can be cut and folded to produce a custom-manufactured container and then printed using various print methods depending on run size and design needs.
- Corrugated packaging is mainly used as a shipping container for multiple industries and point-of-purchase displays and pallets. The boxes come in different flutes. The wavy layer of paper in the middle of a corrugated board gives rigidity, strength, and stack ability. These flutes range from A to F. The C flute is the most frequently used, offering a good printing surface, crush resistance, and compression properties to secure products such as glassware, food products, etc.
- In addition, the boxes are also classified based on board styles, such as single surface, single wall, double wall, and triple wall. To meet such requirements, Gulf Carton Factory offers corrugated boxes ranging from A to F and a combination of flutes, such as BC and EB.
- Distribution/e-commerce showed the fastest growth, leading to the growth of the corrugated boxes segment of the market studied. E-commerce plays a pivotal role in driving box shipments. Changes in consumer behaviour like ordering products from mobile phones—which never existed two decades ago—are rapidly driving e-commerce growth.
- The corrugated boxes industry in India is dominated by MSMEs equipped with more than 400 automatic corrugators and more than 10,000 semi-automatic units. The industry has been under the immense pressure of unprecedented cost escalation of kraft paper and reluctant supply chain dislocation for the past two years.

Owing Food Industries in India will drive the Growth of the Market

- The Food and Beverages sector in India is growing owing to the growing awareness, convenient access, and changing lifestyles, fuelling the growth of this sector in India. For instance, in 2021, the Trade Commissioner Service in India, in collaboration with Amazon, developed a Canadian store on the Amazon India platform, a Canada-specific landing, and an e-commerce website highlighting Canadian Agri and Agri-food products accessible in the market. The Amazon site now includes more than 10 Canadian goods. The dedicated online store will serve as a one-stop-shop for Canadian products on one of India's largest e-commerce marketplaces.
- Additionally, Reliance Brands established a strategic relationship with worldwide fresh food & organic coffee chain Pret a Manger in July 2022 to launch and expand the brand in India. With this long-term master franchise arrangement, RBL will expand the food chain across the country, beginning with major cities and transport hubs.
- In India, the grocery market is a traditional retail industry, and therefore, online retail penetration is even lower. However, the food delivery and services market are fostering further growth in the country,

with players, like big basket, Grofers, Zomato, Swiggy, and Scootsy registering a rapid increase in sales. According to Japanese conglomerate SoftBank, the revenue of food delivery giant Swiggy has surged 2.8 times in the last year, between June 2020 and June 2021.

- Additionally, the Indian e-commerce industry, expected to reach USD 350 billion by 2030, is driving the growth of food packaging in the country. It has led to the entry of major players, like Amazon and Flipkart, entering the e-commerce space in food. Amazon has invested USD 35 million to enter this space. Flipkart has planned to invest USD 258 million to enter the retail food space.
- Food producers, especially prominent FMCG brands, have set ambitious targets to reduce the use of plastics in food packaging and adopt new eco-friendly materials. Therefore, paper-based packaging materials are becoming increasingly popular in India.
- Further, according to USDA Foreign Agricultural Service, in 2021, the retail sales value of diary food in the Indian packaged foods market amounted to USD 25.10 billion. There was a consistent and significant increase in retail sales value within the packaged food sector. Such increased growth is expected to drive the demand for paper packaging products in India.
- Safe Pack Solutions provides packaging solutions for moist or greasy food items, whether they are fresh, dried, chilled, or frozen, such as ice cream, pizza, and cakes. It provides a variety of boards, such as white-lined chipboard, unlined chipboard, and solid bleached sulfate board, and it offers cost-effective packaging materials without compromising on quality.



Source: Ministry of Statistics and Programme Implementation

Competitive Landscape

The India Paper and Paperboard Packaging Market has many players in this region and is highly fragmented. Hence the market concentration of this market is low. With the rising demand for packaging applications, many companies are expanding their market presence by increasing their production facility and product portfolio.

The major vendors of this market are WestRock India, Trident Paper Box Industries, and TGI Packaging Pvt. Ltd, Kapco Packaging, Avon Pacfo Services LLP, etc.

- November 2021 - TCPL Packaging Limited announced that it had acquired a majority stake in creative offset printers private limited. With the acquisition, TCPL entered the high potential rigid boxes segment focused on one of the fastest-growing smartphone markets in the world. COPPL's manufacturing facility is strategically located at Noida to target the large upcoming mobile manufacturing hub in India.
- October 2021- Japanese Company Oji Holding Corporation acquired an 80% equity stake in Punjab-based Empire Packages Private Limited. The acquisition will enable Oji Holding to realize its vision of expansion in India, giving them access to the paper and packaging industry in India.
- September 2021 - Heinz partnered with WestRock to remove 550 metric tons of plastic packaging from multipacks in UK supermarkets as part of EUR 25 million to invest in sustainable solutions. Heinz announced its mission to remove plastic from supermarket shelves with the UK roll-out of the Heinz Eco-friendly Sleeve Multipack, a new, convenient, super skinny paperboard sleeve for all its multipack canned products. It is made with WestRock's PEFC-certified CarrierKote paperboard; the Heinz Eco-friendly Sleeve is recyclable and comes from sustainably managed forests.

Major Players

- JB Craft Paper LLP
- BN Papers
- Blue Mount Paper and Boards Limited
- Shree Krishna Paper Mills and Industries Ltd.
- Millenium Overseas
- Prima Papers LLP
- Diyan Papers LLP
- Shri Brahma Paper Mill Pvt. Ltd.
- Glint International

Application – Corrugated Box Industry

While the first unit for corrugated packaging in the world was set up as early as 1905, the manufacturing process of corrugated box in India started only in the early fifties. It started in a small way with box making units located only in Mumbai and Kolkata and supplying boxes to users all over the country. It was not unusual for boxes to be shipped from Mumbai to Delhi. In fact, even in those days, corrugated boxes were mainly made using imported sheets from countries like Sweden, with only the scoring, cutting, and stitching being done here. Later a few manufacturers imported corrugating machines and started manufacturing corrugated sheets which were then converted to boxes by themselves and other smaller box makers who bought sheets from them.

The growth of the industry was rapid from the late fifties through the early sixties, because of the thrust given to industrialization by the government after independence. However, the acceptance of corrugated boxes as a

substitute for wooden boxes or other conventional packaging was neither easy nor immediate. This was mainly due to a wrong perception of high cost and poor strength properties. However, with consistent efforts this impression was rectified, and advantages of this highly economical very flexible and high strength product were soon recognized in the marketplace. It was then only a matter of time that the consumer goods like toothpastes, soaps, detergents, oil cans, and hundreds of other items came to be dispatched in corrugated boxes.

This acceptance led to the boom in the corrugated packaging sector. With surging demand, new box makers came in to set up box making capacity. With high growth rates, the industry soon spread geographically and took roots at manufacturing centers across the country and newer units came up in the vicinity of consuming centers and remote industrial towns. Thus, it was that from a handful of box makers in the late fifties the strength of the corrugated packaging industry grew to hundreds by the mid-sixties Today there are a few thousand corrugated packaging units spread all over the country. The industry continues to grow at a healthy pace and armed for the future with both technology and perspective.

Current Trends

Today the corrugated industry is attracting more and more technocrats' engineers and packaging specialists who are transforming it into a progressive and dynamic industry. Over 10 lakh people are directly employed in this industry belonging to the small-scale sector. The corrugated packaging industry has been effectively and completely meeting the packaging requirements of the industry both for domestic needs and for exports.

Keeping in view the need for ecological balance, the corrugated packaging industry has supported the development of non-conventional raw materials as well as the use of wastepaper in the manufacture of its major raw material - Kraft paper. Indian paper industry has successfully made paper from sugarcane residue and recycling of local paper, besides making it from imported OCC as anywhere else in the world.

Recent Advances

With its progressive and dynamic outlook, the corrugated packaging industry has been endeavoring to meet the challenging requirements of the future. New products and innovations in distribution and marketing systems have placed a demand on the corrugated packaging industry. These demands have been successfully met by the corrugation industry through hard work and ingenuity.

Among the recent developments in the corrugated packaging are:

- Surface coatings to give additional functional properties to paper; film laminations for gloss and rub resistance; innovatively designed point of purchase displays which also serve as transport cum consumer packs; the O-Pack for bulk packaging: bag-in-a-box; boxes for horticultural produce like apples, oranges, pineapples, watermelons, and vegetables; packages for electrodes, explosives etc. Segment wise consumption pattern for Corrugated Box.
- Another vital area where corrugated packaging has made a significant contribution is the packaging for defence. Corrugated boxes are being used for packing items like lanterns, enamelled mugs, processed foods, shoes and other ordnance stores. They are also being used for Para-dropping of supplies and other defence items.
- Among other products that will be increasingly packed in corrugated boxes are coffee beans, tea, tobacco, textiles, and fabrics. Non-packaging applications is a new trend. Corrugated packaging has been innovatively used for making storage cabinets, furniture partitions and other items.

- Multi color printed white top boxes are the current trend in corrugated packaging. Die-cut boxes are being made in increasing numbers. Corrugated packaging is also being ingeniously developed into point-of-purchase stands that find their place in supermarkets facilitating product displays and offering consumer convenience.
- One new application is the use of weather resistant corrugated boxes for long term storage of records and files. Another recent advance is the development of standard dimension corrugated boxes for the use by courier companies

Demand and Supply Scenario

Paper consumption in India is likely to witness 6 to 7 per cent annual growth and will reach 30 million tonnes by FY 2026-27, largely driven by emphasis on education and literacy coupled with growth in organised retail, according to industry body IPMA.

The paper Industry holds immense potential for growth in India as the per capita consumption globally is one of the lowest, the Indian Paper Manufacturers Association (IPMA) said in a statement.

- By 2022, the European kraft paper market will hold 22% of the global market share. This region is expected to grow steadily during the forecast period 2022-2032. Due to the region's expanding food industry, these areas are likely to experience moderate expansion in the global kraft papers market. Kraft paper comes in a variety of sizes and shapes. Natural kraft paper is one of the strongest types of paper and is commonly used to package foods like sugar, wheat, and dried fruits and vegetables.
- Food safety requires the use of kraft paper in food packaging. As the demand for food packaging materials rises, so does the expansion of the food packaging with kraft paper is likely to increase in European countries.
- "Around 15 per cent of the world population stays in India but consumes only 5 per cent of the total paper produced in the world," the statement said. The emphasis on education and literacy coupled with growth in organised retail and demand for better quality paper are the major drivers of growth. Moreover, there has been continued demand for quality packaging of FMCG products, pharmaceuticals, textiles, organised retail, booming e-commerce, and other segments, it said.
- According to industry body IPMA, paper consumption in India is projected to grow by 6-7 per cent per annum in the next five years to reach 30 million tonnes by the year FY27, making it the fastest growing paper market in the world. “Paper in the country has undergone a transformation of sorts in the last few years. The industry has gone up the sustainability curve and has become far more technologically advanced. “In the last five to seven years, an amount of over Rs 25,000 crore has been invested in new efficient capacities and induction of clean and green technologies," IPMA President A S Mehta. The estimated turnover of the industry is Rs 70,000 crore with domestic market size of Rs 80,000 crore.

Demand Drivers

The rise in demand for kraft papers in various end-use industries, such as food & beverages, building & construction, cosmetics & personal care automotive, and consumer durables, is a key factor that is projected to drive the growth of the kraft paper market across the globe.

- May 2022 - McDonald's and Deliveroo have committed to a new, long-term worldwide strategic relationship, expanding on their current agreement to provide consumers and McDonald's franchisees with the convenience and value of McDelivery in markets across the world via the Deliveroo platform. The collaboration between McDonald's and Deliveroo will help build the McDelivery business and promote both companies' commitment to providing a seamless customer experience.
- March 2022 - Deliveroo, a worldwide food delivery firm with operations in Europe, the Middle East, Asia, and Australia, has announced the opening its India Engineering Centre in Hyderabad. Its multi-year strategy is to establish a new team focused on creating exceptional experiences for Deliveroo customers, restaurant and grocery partners, and delivery riders, as well as highly scalable, dependable, and inventive next-generation products for its global operations.

Conclusions

- The global pulp and paper market was valued at USD 351.53 billion in 2021 - an increase from the previous year. In 2020, the global pulp and paper market declined by 0.1 percent, with the outbreak of COVID-19 causing disruptions throughout the industry.
- The pulp and paper market are projected to grow in the coming years to reach a value of almost 373 billion U.S. dollars by 2029.
- The kraft paper market is projected to grow from USD 15.6 billion in 2019 to USD 19.32 billion by 2025, recording a CAGR of 3.0% during the forecast period.
- The rise in demand for kraft papers in various end-use industries, such as food & beverages, building & construction, cosmetics & personal care automotive, and consumer durables, is a key factor that is projected to drive the growth of the kraft paper market across the globe.
- The India kraft paper market size reached 8.50 million Tons in 2021. Looking forward, IMARC Group expects the market to reach 14.49 million Tons by 2027, exhibiting a growth rate (CAGR) of 9.3% during 2022-2027.

Business Model Assessment

SWOT Analysis

Strengths

- The Partners in the Firm have prior experience of successfully operating other businesses, which is an added strength for the Project
- The Management of the Firm is a fair mix of experience and youth.
- The flexibility in the process to manufacture the final product kraft paper
- Ample amount of availability of raw material i.e., Wood based, Agro based, Wastepaper.

Weakness

- Inconsistency of supply and requirement
- Lower customer satisfaction reviews.

Opportunities

- Raw Material use for making kraft paper is easily available.
- Increasing demand of Paper made product in the Indian market provides opportunity for the Firm.

Threats

- Generic threat of slowdown/ recessionary trend in the global and domestic markets on account of pandemic like scenarios, which result in lockdowns, resulting in reduction of demand
- The entry barrier in this line of business is low, which make it easier for new entrants to enter the markets

Risk Analysis and Mitigation Measures

The risk analysis and mitigation measures for the Project have been presented in the exhibit below –

Parameter	Carrier of Risk	Remark
Experience Risk	APM	The Partners of the Firm have prior experience of over 20 years in corrugated box industry. The proposed project will be a backward integration for the existing business of the Partners. However, it is noted that Partners have no prior experience in operating a Kraft paper unit. *Hence there is a slight risk associated with the experience of the Promoter, which may be mitigated by recruiting a senior experienced professional from industry to oversee the day-to-day operations.*
Funding Risk	APM	The Project is proposed to be funded in a DER of 1.19 : 1. Meaning the Project will be funded by Equity of Rs. 4.19 Crores and term loan of Rs. 5.00 Crores. The Company has

Parameter	Carrier of Risk	Remark
		not achieved financial closure as off the date of release of this report. *Hence there is a funding risk associated with the Project, till the time the Project achieves financial closure.*
Technology Risk	APM	The technology which is use for manufacturing of Kraft Paper is a well-established technology. There are a series of Projects based on same/ similar technology already operational across the country. *Hence technology related risk is not envisaged for the Project.*
Cost Overrun Risk	APM	The Consultants note that the Company has received the quotation for building and civil works and plant and machinery from various vendors. These costs have been accounted for while estimating the total project cost. Further a contingency of 5% on the hardware cost (excluding land) has been considered to take care of any escalation in commodity prices like cement and steel, during the course of implementation of the Project. Additionally, the Consultants tested the sensitivity of 10% increase in the hardware cost and the project remains viable under this adverse scenario. *Hence cost overrun related risk is not associated with the Project. Still in case there is a cost overrun, on account of unforeseeable reasons, then the overrun will be funded by Company through its own sources.*
Time Overrun Risk	APM	The Consultants note that the Project is not complicated in terms of implementation and based on discussion with the Partners of the Firm, the Consultants understand that plant and machinery vendors have been finalised and final negotiations is underway. The longest time-consuming process will be building and civil works, which can be completed in over 9 months' time frame. Taking these points into consideration, the Project can be easily commissioned within 12 months duration from the date of financial closure. Hence the project completion is considered as September-October 2023 and commercial operations will begin from October 2023.

Parameter	Carrier of Risk	Remark
		Hence time overrun risk is not associated with the Project. Still in case there is a time overrun, on account of unforeseeable reasons, then the overrun cost will be funded by Partners of Firm, from own sources.
Statutory Approvals Risk	APM	The Consultants note that the Firm is yet to start the process of acquiring the project specific approvals and clearances. *Hence approvals related risk is associated with the Project. Lenders may take a note of the same and include appropriate clause in the sanction letter in this regard.*
Pricing Risk	APM	The Consultants note that the Firm proposed to follow the pricing policy of mark to the market. So effectively any increase/ decrease in raw material prices is immediately passed on to the end users. Considering the same, the Consultants tested sensitivity, considering 2% decrease in selling price and 2% increase in raw material prices, to see the impact on the financial viability of the Unit. The Project remains viable under both adverse scenarios. *Since the Company will be marking the product price at market levels, hence pricing risk is not envisaged.*
Market Risk	APM	Based on the market assessment undertaken by SCPL, it is understood that there is ample amount of market available for the Kraft Paper sale in India. However, during management Discussion it is noted that they will with B2B business with renowned companies like R.A Kraft Paper Pvt. Ltd., R.S Papers and many more. *Hence marketing related risk is not envisaged for the Project.*
Force Majeure	APM / Insurer	Lenders may ask the Company to purchase adequate insurance cover to mitigate these risks.

Business Plan

Based on the discussions with the Partners of the Firm, the business plan of the Company, as envisaged by the Consultants has been discussed below –

Product

The Firm is proposing to manufacture Kraft paper from used paper/ recycled paper/ bamboo and wood pulp. Kraft paper proposed to be manufactured by the Firm will be utlised by corrugated box manufacturing/ processing companies, which will be further used by utilities for packaging of goods.

Place/ Target Market

The project is proposed to be located at Sangola in district Sholapur in Maharashtra. The produce from the proposed unit will be marketed in the district of Sholapur and adjoining areas including –

- Satara
- Pune
- Ahmednagar
- Osmanabad
- Sangli

The target industries will be corrugated box industries, manufacturing corrugated boxes for Clients like Dominos, FMCG players etc.

Pricing

Based on the discussions with the Management of the Company, it is understood that the Company will follow the pricing policy of market, whereby the products will be priced at par with the prevailing market price. The same has been assumed while considering the selling prices for purpose of financial evaluations.

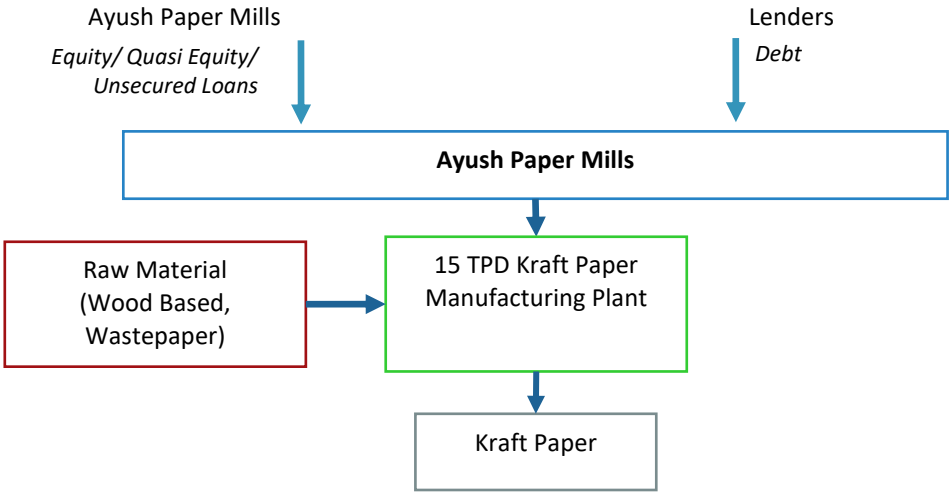
Promotion/ Distribution

Based on the discussions with the Management of the Company, it is understood that Company will deploy its own sales and distribution team in district and nearby region to increase the penetration of their products in the market.

Technical Assessment

Project Configuration

The project configuration as envisaged by the Firm is presented in the exhibit below –



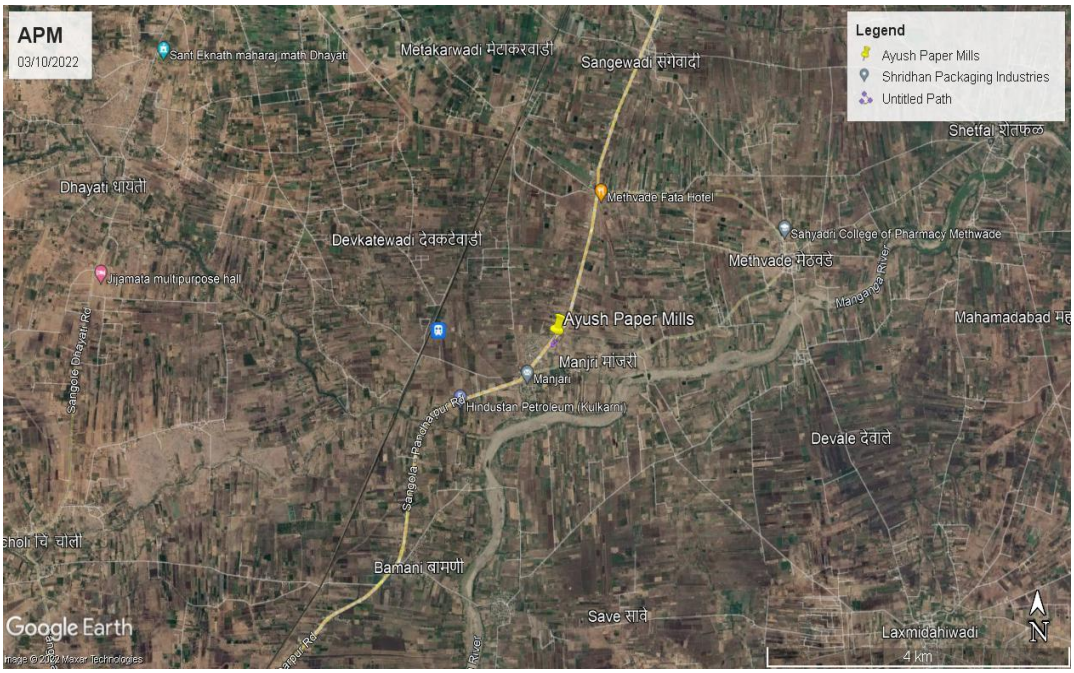
Source: APM and SCPL Estimates

Land Details

The land for setting up the proposed project is owned by the Partners of the Firm, with total area admeasuring 129,000 sq ft. The unit is located adjacent to the existing corrugated box units of the Partners.

Project Location

The location of the plot viz-a-viz the nearby landmarks have been provided in the figures below –



Source: Google Earth

The distance of the project site from various key demand centres has been provided in table below –

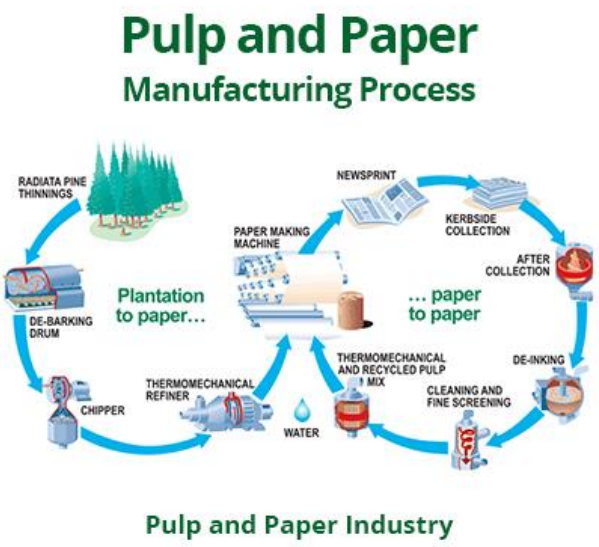
Demand Centre	Distance
Nearest Village	Manjari (5km)
Nearest Road	Sangola- Pandharpur Road (200m)
Nearest Highway	Sangola- Pandharpur Highway (0.00Km)
Nearest Railway Station	Bamani Railway Station (3.00Km)
Nearest Airport	Sholapur Airport (78.00Km)
Bijapur	94.00 Km

Source: Site Visit Analysis

Manufacturing Process

Raw Material

There are two main fibrous raw materials used in papermaking. These are wood pulp and wastepaper. In addition, a quantity of additives (mainly natural mineral fillers) and dyestuffs are used together with traces of auxiliary chemicals. A further raw material is water, which is used in large quantities during the papermaking process but is then recovered and reused or returned to the watercourse from which it is extracted.



Wood pulp normally arrives at the paper mill in the form of very thick sheets and recovered paper normally arrives in the form of large, compressed bales. Both these materials must be broken down so that the individual fibres they contain are completely separated from each other. This process is performed in large vessels known as pulpers where the raw materials are diluted with up to 100 times their weight of water and then subjected to violent mechanical action using steel rotor blades. The resulting slurry (known as papermaking stock) is then passed to holding tanks. During this preliminary stage, auxiliary chemicals and additives may be added. The auxiliary chemicals are usually combined with the fibrous raw materials at levels from below 1% to 2% and can be sizing agents that reduce ink and water penetration, and process anti-foaming agents. Common additives consist of clay, chalk or titanium dioxides that are added to modify the optical properties of the paper and board or as a fibre substitute. The stock is then pumped through various types of mechanical cleaning equipment to the paper machine.

It is noted that Ayush Paper Mills will adopt the process of manufacturing Kraft paper using recycled wastepaper as basic raw material.

Paper Making Process

The wastepaper will be separated on the basis of their use in the final product i.e., to be used as top layer, as bottom layer or as middle layer or filler.

The major raw material that will be used in the process will be wastepaper. It can be Indian / exported wastepaper consisting of corrugated boxes.

The processes that will be involved in the manufacturing process are stated as follows:

Pulping

In pulping division raw material intake would be wastepaper. The wastepaper will be slashed in the pulp machine along with chemicals like caustic soda, sodium silicate, chlorine, de-inking chemicals etc. Caustic soda is one of the main chemicals used for making pulp, while chlorine is used for bleaching the pulp and paper. The consumption of these chemicals will depend upon the size of the unit, type of raw material used for making pulp and type of technology used.

The pulping will induce an intense fibre friction and reduce the residual flake content in the slashed pulp. This pulp will be taken by high consistency pumps to high consistency cleaners, Turbo and Vibrating Screens followed by high / medium consistency screens. The pulp will 30 then be screened to remove the various contraries (clips, pieces of stone, strings etc.). This cleaned pulp will be considered as suitable for deinking.

Deinking

In the deinking process, air will be injected into the system with the help of specially designed pumps. The air will create the bubbles over which the ink particles get attached. The deinked pulp will have heavy particles like sand and stickies etc. To remove them, centric-cleaning and slot screening procedures will be adopted. The pulp will be subsequently thickened and pumped to screw press to attain required consistency of 28%-30%. The pulp will then be taken through for the process of dispersing of the ink particles and peroxide bleaching. Thereafter, to remove the finest ink particles and improve the brightness, the pulp will be passed through eco cells during post floatation. The pulp would then be passed through a disc filter for thickening and subjected to reductive bleaching for removing the coloured ink particles found in wastepaper.

In this deinked pulp, chemicals like raisin / alum / starches / soapstone powder etc. will be mixed in proportion as per the requirement of the final products i.e., desired grade of paper.

Paper Making

Approach flow system -The cleaned pulp will be stored into the machine chest. It will be mixed with machine backwater for reducing the consistency to 0.6% to 0.8% and then will be passed through centric cleaners and pressure screens to remove any residual sand particles.

Wire Part/ Formers

From there the pulp will be sent to the wire part consisting of the head box (to even out the pulp by passing through holey rolls) and four drainer table (consisting of various drainage elements for removing the water from the pulp).

Formers with Head Box will be used for making this duplex board grade. At least 8 formers are required for the whole section.

Dryers

The dryers will be used to dry the paper using steam as heat energy. The steam that will enter the dryer would heat its surface over which the paper will be passed and dried. This process will be consecutively done through a series of dryers mounted in two-tier installation. The sheet will achieve a dryness of around 95% after passing through the dryers.

Press Part

The pulp that will come out of the wire part will be in a sheet form from which as much water as possible will be taken out. This will be achieved by picking up the sheet from the wire part with the help of suction pick up roll and passing the sheet between felts and rolls. The sheet will be passed through 3 presses after which a dryness of around 42% would be achieved.

Coating

The sheet so dried will then be passed through multistage coaters as well as hot air dryers and dry cylinders.

Calendaring

In this process, the sheet of paper will be passed through a calendar consisting of chilled cast iron rolls mounted one over the other in order to achieve the desired smoothness. After being calendared by calendar stock, the sheet will be passed thorough brush calendar.

Reeling

The paper at this step will be ready and will be reeled in the form of jumbo rolls in a section called Pop reel.

Finishing

The paper will be required to be cut into reels or sheets as per the required specifications or market requirements. This will be achieved by passing the paper through a rewinder, which will cut the jumbo reels and rewinds into reels as per the market size or a cutter, which will cut the jumbo reels into sheets of specific sizes.

The paper so cut will be packed in HDPE bags, weighed & noted on the outer skirts of the packing for easy identification and shipment.

Plant and Machinery

During the discussion with the Promoters, it has been noted that Company has contacted the plant and machinery suppliers and has received the firm quotations. Based on the same, the details of the plant and machinery is provided in the exhibit below –

The details of the plant and machinery proposed to procure by the Firm is provided in the table below

Description	Rate	Value (Rs. Crore)
PLANT 15 T MACHINE SECTION AND PULP SECTION	30,430,000	3.04
EOT CRAINE 5 TON CAPACITY LONG TRAVEL ARRANGEMENT 396 FT	2,115,000	0.21
3 TONNE 10.54 PRESSURE BOILER	4,445,000	0.44
CHIMONY 1500 MM X 550MM X24 MTR HT	825,000	0.08
CHIMONEY ERECTION CHARGES	100,000	0.01
ALL PUMP MOTOR SOAL PLATE MACHINE FOUNDATION	6,660,019	0.67
ELECTRONOC WEIGH BRIDGE 80 TONNES	1,240,000	0.12
NEP 2 MT 1200 X1200 ELECTRONICS WEIGH BRIDGE	102,000	0.01
HARDWARE, M.S MATERIAL,ELT,ETC.	500,000	0.05
MAIN POWER CONNECTION LINE	1,620,500	0.16
Sub Total	**48,037,519**	**4.59**
GST	8,646,753	0.86
Plant and Machinery Cost	**56,684,272**	**5.67**

Source: APM

Raw Material

The paper industry in India could be classified into 3 categories according to the raw material consumed.

- Wood based
- Agro based &
- Wastepaper based (wastepaper, secondary fibre, bast fibers and market pulp).

The major raw material that will be used in the process will be recycled wastepaper. It can be Indian /exported wastepaper consisting of corrugated boxes. These raw materials are easily available in nearby areas. Ayush Paper Mills is planning to procure these raw materials in the open market from dealers.

Utilities

The major utility required for the project like fuel, power, and water is discussed in this section.

Power & Fuel Application

Ayush Paper Mills will source power from Maharashtra State Electricity Distribution Co. Ltd. It is noted that Ayush Paper Mills will apply for 500 HP High Tension line from Maharashtra State Electricity Distribution Co. Ltd. This power is sufficient for power consumption of a 15 TPD paper plant. It is observed that approximately 372 KWh of power is required to produce a Ton of Kraft paper.

Water

Water is one of the most essential utilities for manufacturing Kraft paper. It is estimated that around 20 Cu. M. of water would be required during the process. Ayush Paper Mills has acquired the land having borewell in place which will suffice all its water requirements.

Fuel

The Consultants note that the Firm will be installing a 3.00 Ton boiler at the site for stream requirement of the Project. The fuel for operating the boiler will be biomass briquettes made from wood/ bamboo chipping and agro waste. At peak 100% capacity utlisation level, the annual requirement of biomass briquettes will be 2,740 Tons.

Manpower

Manpower planning is one of the important aspects of paper industry as there would be requirement of both skilled and un-skilled labour. However, Ayush Paper Mills would not foresee any problem as the required manpower would be cheap and easily available from the nearby area.

Description	Unit	Value	Unit	Value
Manpower Requirement				
Supervisor	Nos.	2	Rs./Month	25,000
Sales person	Nos.	2	Rs./Month	10,000
Skilled Worker	Nos.	6	Rs./Month	15,000
Unskilled Worker	Nos.	4	Rs./Month	10,500
Total	Nos.	14		

Source: APM and SCPL Estimates

Here it should be noted that the Consultants have considered benefits to the tune of 8%, up and above the base salaries as provided in table above.

There are a series of ITI and Diploma colleges in an around the city of Sholapur and hence the Consultants do not foresee any issues in recruitment of right manpower for the Project.

Statutory Approvals and Clearances

The Consultants had sought the copies of approvals and clearances from the Company and VE duly provided copies of the approvals already received by the Company. These have been presented in the table below –

Parameter	Status	Date of Registration/Approval Obtained
Partnership Deed	Partnership Deed Signed	11th April,2014
PAN	AANFV8488Q	14th April,2014
GST Registration	09AANFV8488Q1ZN	11th August,2022
Udyog Aadhar	UDYAM-MH-32-0057868	6th June, 2022
Electricity Connection	From Maharashtra State Electricity Distribution Company Limited (MSEDCL), State Electricity Board, Maharashtra.	
Water Pollution	Applied For	
Air Pollution	Applied For	

Parameter	Status	Date of Registration/Approval Obtained
Fire Safety	Yet to be applied	
Explosives Department	Yet to be applied	
Factory License	Yet to be applied	
Labour Approval	Yet to be applied	
Environmental Clearance	Yet to be applied	

Source: APM

The Firm has basic requirements accomplished and is yet to start the process of filing application with various department/ statutory bodies for project specific approvals and clearances. The Lenders may take a note of the same and include appropriate clause in the sanction letter in this regard.

Implementation Schedule

Based on the discussions with the Management of the Firm, the Consultants understand that the Project will executed over a period of 12 months from the date of financial closure. Assuming the financial closure will be achieved during the month of October 2022, the project is expected to then achieve commercial operation by October 2023.

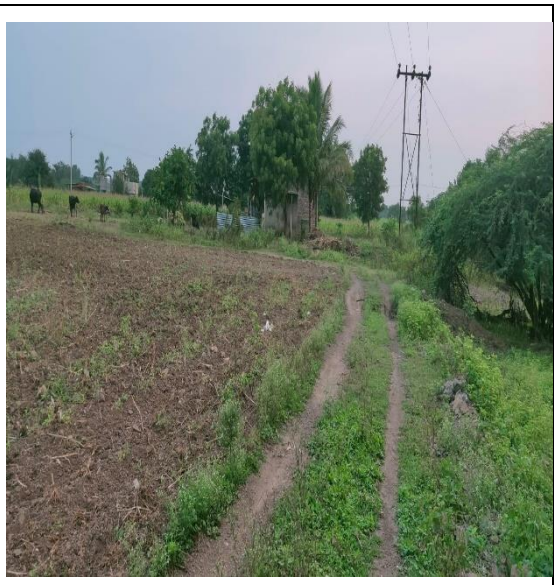
The Consultants have drawn a basic level 1 implementations schedule for the Project and the same has been presented in the exhibit below –

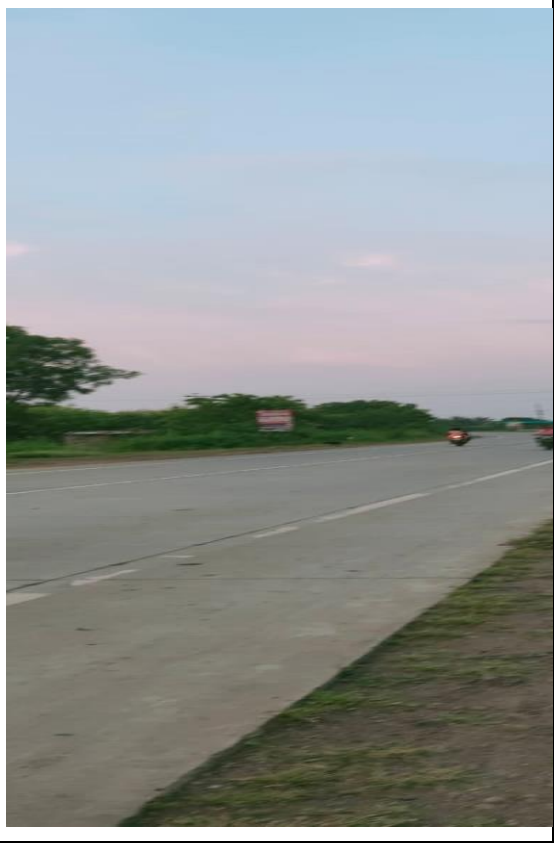
Description				FY 2023-24			
	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Financial Closure							
Land and Land Development							
Building and Civil Works							
Plant and Machinery							
Miscellaneous Fixed Assets							
Trial Runs							
Commercial Operations							

Source: SCPL Estimates

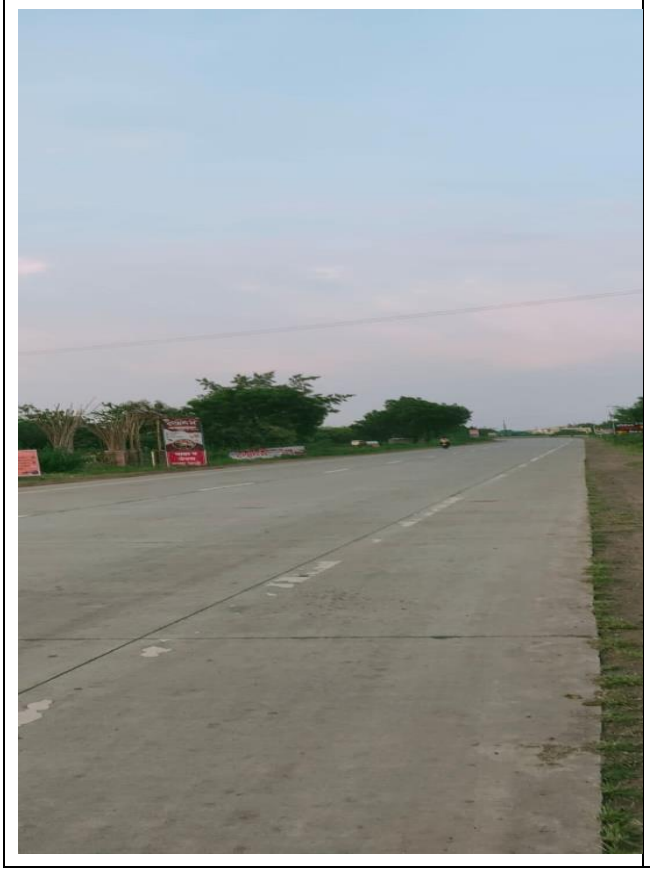
Site Visit Assessment

Site Visit Photographs






AYUSH PAPER MILLS



Source: Site Visit Analysis

Project Cost

The overall Project cost as estimated for setting up the proposed grading and processing unit is Rs. 9.19 Crores and the same has been summarised in the table below –

All Figures in Rs. Crore			
Description	**31-Mar-23**	**31-Mar-24**	**Total**
Land and Land Development	0.24	-	0.24
Building and Civil work	1.26	0.31	1.57
Plant and Machinery	3.40	2.27	5.67
Miscellaneous Fixed Assets	0.02	0.06	0.08
Preliminary Expenses	0.22	0.09	0.31
Contingency		0.37	0.37
Interest During Construction	0.07	0.17	0.24
Margin Money for Working Capital	-	0.72	0.72
Total Project Cost	**5.20**	**3.99**	**9.19**

Source: APM and SCPL Estimates

Land and Land Development

The requisite land for setting up the said Project is owned by one of the Partners and hence land acquisition cost has not been considered for the Project. However, part of land will require land development in terms of land filling, levelling etc, cost of same has been considered at Rs 0.24 Crores.

Description	Unit	Quantity	Rate	Value (Rs. Crore)
Own Land	Sq. Ft.	1,29,000	-	-
Land Development Cost				
Land Area to be Development	Sq. Ft.	9,591	250.00	0.24
Land and Land Development Cost	**Rs. Crores**			**0.24**

Source: APM and SCPL Estimates

Building and Civil Works

The building and civil works cost for the project has been estimated at Rs. 1.57 Crores. The details of building and civil works as estimated has been provided in the exhibit below –

Description	Unit	Quantity	Rate	Value (Rs. Crore)
Factory Shed	Sq. ft			0.85
MACHINE SHED AND BOILER HOUSE			72,29,030	0.72
Building and Civil works				**1.57**

Source: APM

The above is based on the quotation as received from SS Construction.

Plant and Machinery Cost

The plant and machinery cost for the project has been estimated at Rs. 5.67 Crores, the details of which have been provided in the table below –

Description	Rate	Value (Rs. Crore)
PLANT 15 T MACHINE SECTION AND PULP SECTION	3,04,30,000	3.04
EOT CRAINE 5 TON CAPACITY LONG TRAVEL ARRANGEMENT 396 FT	21,15,000	0.21
3 TONNE 10.54 PRESSURE BOILER	44,45,000	0.44
CHIMONY 1500 MM X 550MM X24 MTR HT	8,25,000	0.08
CHIMONEY ERECTION CHARGES	1,00,000	0.01
ALL PUMP MOTOR SOAL PLATE MACHINE FOUNDATION	66,60,019	0.67
ELECTRONOC WEIGH BRIDGE 80 TONNES	12,40,000	0.12
NEP 2 MT 1200 X1200 ELECTRONICS WEIGH BRIDGE	1,02,000	0.01
HARDWARE, M.S MATERIAL, ELT, ETC.	5,00,000	0.05
MAIN POWER CONNECTION LINE	16,20,500	0.16
Sub Total	**4,80,37,519**	**4.59**
GST	86,46,753	0.86
Plant and Machinery Cost	**5,66,84,272**	**5.67**

Source: APM

The plant and machinery cost as provided above is based on quotations received by the Firm. The Consultants have reviewed the quotations and find the same to be order and as per the prevailing market rates.

Miscellaneous Fixed Assets

The miscellaneous fixed assets for the Project have been estimated at Rs. 0.08 Crores, the details of which have been tabulated in the exhibit below –

Description	Rate	Value (Rs. Crore)
Security Deposit	3,50,000	0.04
TRANSPORATION OF ALL MACHINES	4,00,000	0.04
Miscellaneous Fixed Assets	**7,50,000**	**0.08**

Source: APM

Preliminary and Pre-operative

The preliminary and pre-operative expense for the project has been estimated at Rs. 0.31 Crores. The preliminary and pre-operative expense include –

Description	Unit	Quantity	Rate	Value (Rs. Crore)
TEV Study Cost	Lumpsum			0.01
Salaries	Months	12	1,25,000	0.15
Approvals and Clearances	Lumpsum			0.15
Bank Processing Charges	%	0.50%		
Preliminary Expenses				**0.31**

Source: APM

Contingency

The prices of commodity items like cement and steel fluctuate on daily basis and hence a contingency of 5.00% on the hardware cost (excluding land) has been considered by the Consultants, to take care of any escalation in the cost of commodity items, during the course of implementation of the Project.

Interest During Construction

The Project is proposed to be funded in a DER of 1.19 :1, whereby the Company will be availing term loan of Rs. 5.00 Crores from the Banks. The interest rate for the term loan has been considered at 9.50 %. The interest during construction period has been estimated at Rs. 0.24 Crore.

Margin Money

The margin money for working capital, for the proposed 15 TPD kraft Paper unit at Solapur has been estimated at Rs. 0.72 Crores. The same has been considered as part of the overall project cost.

The working of margin money and working capital requirement for the Project has been discussed in detail in the subsequent chapter on Financial Assessment.

Reasonableness of Project Cost

The Consultants have reviewed all the quotations as provided by the Company for the said Project. The proposed Project capital investment is slightly lower than similar size other Project, as the land cost has not been considered a part of the overall Project. Overall basis, on review of all the quotations and considering the prevailing market conditions, the Project Cost is found to be reasonable.

Conclusion

- The Company proposes to set up a Kraft Paper manufacturing unit with installed capacity of 15 TPD at Solapur, Maharashtra on land admeasuring 129,000 Sq. Ft.
- The Consultants note that the proposed Kraft Paper manufacturing units of APM will be set up in Solapur, which falls in Maharashtra. Based on the discussions with the Management of the Company, the Consultants understand that the Company will procure the raw material (Wood based Agro based & Wastepaper based) from the nearby area and local whole sellers.
- The power requirement of the proposed project will be fulfilled by a connection of 372 Kwh at site however if more power requires the firm will increase the connection load accordingly. Currently the firm has taken power connection from state electricity board (MSEDCL)
- The water supply will be arranged from the ground water boring system which is already installed at site. Company will install more borewells as and when required.
- The manpower required for the proposed project is ascertained at 14 personnel.
- The overall project cost including the margin money for working capital has been estimated at Rs. 9.19 Crores.
- The construction of the project is expected to be completed by September-October 2023 and after trail runs during September 2023, will commence commercial production from October 2023.
- The project is technically feasible.

Financial Assessment

Introduction

As discussed in previous section of the report, the proposed project will be a 15 TPD Kraft Paper Manufacturing unit, located in Solapur district in Maharashtra. The Projects like these have long economic life in excess of 20-25 years or so, however, to undertake financial evaluation for appraisal purpose, the horizon is considered till the time the term loan is repaid. The same has been considered for the Project as well, where the term loan will be repaid by September 2031 and hence the projections have been retained till FY 2031.

The Consultants have evaluated the viability of the Project based on parameters like NPV, IRR, WACC and DSCR. The Cost Stream and the Revenue Stream as expected from the Project have been discussed in this chapter, before moving on to working capital assessment and discussion the means of finance and financial ratios, as expected.

Capacity and Utilization

As discussed previously, the installed capacity of the project will be 15 TPD Kraft Paper manufacturing. Considering these assumptions, the capacity and capacity utilisation for the Project has been presented in the table below –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Days in year	Nos.	182	365	365	365	365	365	365	365
Operating Days	Nos.	165	330	330	330	330	330	330	330
Kraft Paper									
Installed Capacity	TPD	15	15	15	15	15	15	15	15
Installed Capacity	TPA	2,475	4,950	4,950	4,950	4,950	4,950	4,950	4,950
Utilization Rate	%	70%	75%	80%	85%	90%	90%	90%	90%

Source: APM Estimates

The Consultants have considered the following while assessing the capacity utilisation level for the Project –

- The Project will be operational for half a year during FY 2023-24, as the commercial operations will be achieved during October 2023
- Initially the capacity utilisation has been considered at 70%, as the new plant with have tethering issues and hence will have higher down-time
- The peak capacity utilisation level has been considered to be 90%, which is considering the fact that the Project will have unscheduled maintenance shutdowns as well.

Sales Quantity, Selling Price, and Realization

While undertaking the financial assessment, the Consultants have considered a stock holding period of 2 days of work in progress and 15 days of finished goods. Considering the same, the stock available for sales or sales quantity for the Project is presented in the exhibit below –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Kraft Paper									
Sales Quantity	Tons	1,571	3,701	3,948	4,196	4,443	4,455	4,455	4,455
Selling Price	Rs. /Ton	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Total Sales Realization	**Rs. Crore**	**5.50**	**12.95**	**13.82**	**14.69**	**15.55**	**15.59**	**15.59**	**15.59**

Source: SCPL Estimates

While assessing sales realisation, the Consultants have considered the prevailing prices of finished Kraft paper as the selling prices (net of GST) for purpose of financial evaluation.

Variable Cost

In this section of the chapter, the Consultants have discussed the variable costs associated with the Project, which are based on the industry norms and experience of the Consultants in undertaking similar assignments in recent past.

Raw Material Cost

The raw material prices as considered for the purpose of financial evaluation are the prevailing raw material prices and the same have been considered after taking to dealers and traders of recycled paper. The raw material consumption norm and prices as considered have been presented in the table below –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Wet Strength Kraft Waste	Ton/Ton	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416
NDLKC	Ton/Ton	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369
OCC	Ton/Ton	0.382	0.382	0.382	0.382	0.382	0.382	0.382	0.382
Wet Strength Kraft Waste	Rs./ Ton	13,500	13,500	13,500	13,500	13,500	13,500	13,500	13,500
NDLKC	Rs./ Ton	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500
OCC	Rs./ Ton	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000
Total Raw Material Cost	**Rs. Crore**	**2.83**	**6.07**	**6.47**	**6.88**	**7.28**	**7.28**	**7.28**	**7.28**

Source: SCPL Estimates

Stores And Consumables

The Consultants note that manufacturing of Kraft Paper requires Alum, Rosin and other Miscellaneous stores and consumable, which have been estimated by the Consultants as presented in the table below –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Alum	Ton/Ton	0.040	0.040	0.040	0.040	0.040	0.040	0.040	0.040
Rosin	Ton/Ton	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002
Other Miscellaneous	Ton/Ton	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Alum	Rs./ Ton	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Rosin	Rs./ Ton	85,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Other Miscellaneous	Rs./ Ton	600	600	600	600	600	600	600	600
Stores and Consumables	**Rs. Crore**	**0.31**	**0.63**	**0.67**	**0.72**	**0.76**	**0.76**	**0.76**	**0.76**

Source: SCPL Estimates

Power Cost

The Power cost as considered for the Project are based on the industry norms and experience of the Consultants in undertaking similar assignments in recent past.

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Power Consumed	Kwh/Ton	372	372	372	372	372	372	372	372
Unit Price	Rs./Kwh	11.50	11.50	11.50	11.50	11.50	11.50	11.50	11.50
Power Cost	Rs. Crore	0.74	1.59	1.69	1.80	1.91	1.91	1.91	1.91

Source: SCPL Estimates

Fuel Cost

The fuel cost as estimated for the Project has been presented in the exhibit below –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Capacity of Boiler	Tons/ Hour	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000
Boiler Efficiency	%	70%	70%	70%	70%	70%	70%	70%	70%
Fuel Requirement	Kg/ Hour	346.00	346.00	346.00	346.00	346.00	346.00	346.00	346.00
Daily Fuel Requirement	Tons	1,370	2,740	2,740	2,740	2,740	2,740	2,740	2,740
Cost of Biomass Briquette	Rs. / Ton	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00	4,500.00
Fuel Cost	Rs. Crore	0.62	1.23	1.23	1.23	1.23	1.23	1.23	1.23

Source: SCPL Estimates

Water Cost

The Consultants note that the water requirement of the Project will be fulfilled from the borewells at site. However, there is cost associated with pumping of the water procured from the borewell. The same has been considered by the Consultants as water cost for the Project and detailed as below –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Water Consumption	Cu. M.	20	20	20	20	20	20	20	20
Annual Consumption	KL	34,650	74,250	79,200	84,150	89,100	89,100	89,100	89,100
Rate per KL	Rs. /KL	20	20	20	20	20	20	20	20
Water Cost	**Rs. Crore**	**0.07**	**0.15**	**0.16**	**0.17**	**0.18**	**0.18**	**0.18**	**0.18**

Source: SCPL Estimates

Repairs and Maintenance Cost

The repairs and maintenance cost for the project as estimated is percentage of Gross Fixed Asset and the same has been presented in the exhibit below –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Repairs and Maintenance	% of GFA	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Repairs and Maintenance Cost	**Rs. Crore**	**0.04**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**	**0.08**

Source: SCPL Estimates

Material Handling and Transport Cost

The repairs and maintenance cost for the project as estimated is percentage of per ton production and the same has been presented in the exhibit below –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Material Handling and Transport	Rs. /Ton	950	950	950	950	950	950	950	950
Material Handling and Transport	Rs. Crore	0.16	0.35	0.38	0.40	0.42	0.42	0.42	0.42

Source: SCPL Estimates

Manpower Cost

The overall manpower requirement for the project has been estimated at 14 personnel. The manpower requirement of the project and their expected monthly salaries has been provided in the table below –

Description	Unit	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Manpower Requirement										
Supervisor	Nos.	2	2	2	2	2	2	2	2	2
Salesperson	Nos.	2	2	2	2	2	2	2	2	2
Skilled Worker	Nos.	6	6	6	6	6	6	6	6	6
Unskilled Worker	Nos.	4	4	4	4	4	4	4	4	4
Total	Nos.	14	14	14	14	14	14	14	14	14
Manpower Requirement										
Supervisor	Rs. /Month	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000

Description	Unit	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Marketing	Rs. /Month	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Skilled Worker	Rs. /Month	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Unskilled Worker	Rs. /Month	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500	10,500
Benefits	%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Manpower Cost	Rs. Crore	-	0.13	0.26	0.26	0.26	0.26	0.26	0.26	0.26

Source: SCPL Estimates

Here it should be noted that the Consultants have considered benefits to the tune of 8% up and above per annum the base salaries as indicated in the table above.

Fixed Costs

The fixed cost as considered for the Project is based on experience of the Consultants in undertaking similar assignments in recent past and includes –

Description	Unit	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Administrative Expenses	% of Sales	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Selling and Distribution Expenses	% of Sales	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
Administrative Expenses	Rs. Crore	0.11	0.26	0.28	0.29	0.31	0.31	0.31	0.31
Selling and Distribution Expenses	Rs. Crore	0.22	0.52	0.55	0.59	0.62	0.62	0.62	0.62

Source: SCPL Estimates

Administrative Expenses

The administrative expenses for the Project have been considered at 2.00% of the sales realisation till FY 2030-31, subsequently the costs have been frozen at same level. The administrative expenses as considered include the following –

- The salaries and remuneration of the Partners
- Rental cost for land
- Audit cost
- Insurance cost
- Travelling, boarding and lodging cost of administrative staff
- Stationary cost etc.

Selling and Distribution Cost

The selling and distribution cost of the Project has been considered at 4.00% of the sales realisation till FY 2030-31, subsequently the costs have been frozen at same level. The selling and distribution expenses as considered include –

- The discounts provided by Company on bulk purchases
- Losses due to pilferage
- Boarding, travelling, and lodging cost of sales team

Working Capital Norms

The working capital norm of the Project as considered and based on the benchmarks of the industry and include the following –

- Raw material inventory of 70 days
- Stores and Consumables for 30 days
- Work in Progress for 2 days
- Finished goods inventory of 15 days
- Debtors/ Receivables of 64 days
- Trade Creditor Trading of 30 days
- Expense Creditors of 30 days

Based on the holding norms as discussed, the working capital requirement of the Project as estimated is presented in the exhibit below –

All Figures In Rs. Crore									
Description	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**	**31-Mar-32**
Raw Material Cost	1.09	1.16	1.24	1.32	1.40	1.40	1.40	1.40	1.40
Stores and Consumables	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Work in Progress	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Finished Goods	0.43	0.46	0.48	0.51	0.54	0.54	0.54	0.54	0.54
Debtors	1.93	2.27	2.42	2.58	2.73	2.73	2.73	2.73	2.73
Current Assets	**3.55**	**3.99**	**4.25**	**4.51**	**4.78**	**4.78**	**4.78**	**4.78**	**4.78**
Creditors - Trade	0.47	0.50	0.53	0.57	0.60	0.60	0.60	0.60	0.60
Creditors - Expense	0.19	0.20	0.21	0.22	0.23	0.23	0.23	0.23	0.23
Current Liabilities	**0.66**	**0.70**	**0.74**	**0.79**	**0.83**	**0.83**	**0.83**	**0.83**	**0.83**
Working Capital Gap	**2.89**	**3.29**	**3.51**	**3.73**	**3.94**	**3.95**	**3.95**	**3.95**	**3.95**
Margin Money	0.72	0.82	0.88	0.93	0.99	0.99	0.99	0.99	0.99
Bank Borrowing	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**	**1.00**

All Figures In Rs. Crore									
Description	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31	31-Mar-32
Interest on Working Capital	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%
Interest on Working Capital	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Source: SCPL Estimates

It is noted from the table above, that the margin money for working capital requirement has been estimated to be Rs 0.72 Crores and the same has been considered as part of overall project cost, discussed in previous chapter.

Means of Finance

The Company proposes to fund the Project in a Debt-Equity Ratio of 1.19 :1 (including the margin money for working capital), the means of finance for the proposed Project have been presented below –

All Figures In Rs. Crore			
Description	31-Mar-23	31-Mar-24	Total
Equity	2.37	1.82	4.19
Term Loan	2.83	2.17	5.00
Total Means of Finance	**5.20**	**3.99**	**9.19**

Source: APM and SCPL Estimates

The broad covenants of the term loan have been presented in the table below –

Parameter	Details
Term Loan Amount	Rs. 5.00 Crores
Interest Rate	9.50% per annum
Door to Door Tenure	8 Years
Construction Period	12 Months
First Disbursement	October 2022
Commercial Operations Date	1st October 2023
Post Construction Moratorium	6
Installments	78 Equated Monthly Instalments
First Instalment	April of FY 2025-26
Last Installment Due	September of FY 2031-32

Source: SCPL Assumptions

Other Assumptions

The other assumption related to Project, as considered by the Consultants have been presented in the table below –

Particulars	Unit	Value
Debt Equity Ratio	Ratio	1.19
Cost of Equity	%	14.00%
Cost of Long-Term Loan	%	9.50%
Cost of Working Capital Loan	%	9.50%
Post-Tax Cost of Capital	%	9.33%
Average Income Tax Rate	%	25.18%

Sensitivity Analysis

The Consultants had undertaken sensitivity analysis to assess the impact of various scenarios on the financial parameters and the result of the same is presented in the table below –

Description	Project Cost	Project NPV	Project IRR	WACC	Min DSCR	Avg DSCR
	Rs. Crore	Rs. Crore	%	%	Ratio	Ratio
Base Case	9.19	2.43	14.01%	9.33%	1.52	2.12
5% decrease in utilisation	9.16	1.57	12.60%	9.45%	1.37	1.96
2% decrease in selling prices	9.18	1.02	11.58%	9.51%	1.31	1.90
2% increase in raw material price	9.20	1.70	12.75%	9.41%	1.41	2.01
10% increase in hard cost	9.93	1.73	12.89%	9.67%	1.51	2.14
1% increase in interest rate	9.22	2.04	13.93%	9.88%	1.46	2.06
2% increase in interest rate	9.24	1.67	13.86%	10.44%	1.40	2.01

Source: SCPL Estimates

It is noted from the exhibit above, that the Project will be susceptible to 2% decrease in selling price and 2% increase in raw material cost. However, it is also noted that the Project remains viable under all adverse scenarios as NPV remains positive and IRR, remains above WACC under all scenarios.

The average DSCR of the Project is 2.12 which is above the industry benchmark of 1.33, while the minimum DSCR, of the Project remains above 1.30 in all adverse scenarios, so the Project has fair repayment capacity.

Key Financial Parameters

The key financial parameters of the project have been presented in the table below –

All Figures in Rs. Crore								
Description	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Total Income	5.50	12.95	13.82	14.69	15.55	15.59	15.59	15.59
Total Operating Costs	4.76	11.11	11.75	12.39	13.03	13.06	13.06	13.06
EBIDTA	0.74	1.84	2.07	2.30	2.52	2.53	2.53	2.53
EBIDTA Margin	0.13	0.14	0.15	0.16	0.16	0.16	0.16	0.16
PAT	-0.69	0.38	0.62	0.79	1.05	1.16	1.25	1.34
PAT Margin	-13%	3%	4%	5%	7%	7%	8%	9%
Contribution	1.07	2.62	2.90	3.18	3.46	3.47	3.47	3.47
Contribution Margin	19%	20%	21%	22%	22%	22%	22%	22%
Total Fixed Cost (incl Int and Dep)	1.76	2.23	2.12	1.98	1.86	1.70	1.56	1.43
Break Even Sales	9.06	11.06	10.10	9.15	8.36	7.66	7.01	6.45
Break Even Margin	165%	85%	73%	62%	54%	49%	45%	41%

All Figures in Rs. Crore								
Description	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Cash Break Even	3.16	6.20	6.08	5.80	5.57	5.26	4.94	4.67
Cash Break Even Margin	57.53%	47.84%	43.97%	39.52%	35.79%	33.73%	31.71%	29.95%
Promoters Equity	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Unsecured Loan (Quasi Equity)	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Reserves and Surplus	-0.69	-0.31	0.31	1.10	2.14	3.30	4.56	5.89
Total Net Worth (TNW)	4.28	4.66	5.28	6.07	7.12	8.28	9.53	10.87
Term Loan	5.00	4.23	3.46	2.69	1.92	1.15	0.38	-
Debt-Equity Ratio	1.17	0.91	0.66	0.44	0.27	0.14	0.04	-
Total Outside Liabilities (TOL)	9.26	8.53	7.81	7.08	6.36	5.59	4.82	4.43
TOL/ TNW	2.16	1.83	1.48	1.17	0.89	0.68	0.51	0.41
Cash in Hand/ Bank Balance	0.06	0.26	0.73	1.26	1.94	2.86	3.80	5.15
DSCR	-	1.52	1.62	1.71	1.92	2.02	2.13	2.22
Min DSCR	1.52							
Average DSCR	2.12							
Average ROCE	13.90%							
NPV	2.43							
IRR	14.01%							
Post Tax Cost of Capital	9.33%							

Source: SCPL Analysis

Conclusions

Based on the study undertaken by the Consultants, the following is concluded about the proposed Project of APM: –

- The overall project cost has been estimated at Rs. 9.19 Crores (including the margin money), which is expected to be funded in a Debt-Equity Ratio of 1.19 :1. The Promoters Contribution for the Project will be Rs. 4.19 Crores, while the loan will be Rs. 5.00 Crores Lakhs.
- The Net Present Value of the Project has been estimated at Rs. 2.43 Crores, while Internal Rate of Return at 14.01 % is higher than Post Tax Cost of Capita at 9.33%, indicating the Project is financially viable.
- The average DSCR of the Project has been estimated at 2.12, indicating fair capability of the Project in repaying the long-term debts.
- The overall project is found to be Techno-Economically Viable.

Annexure 1 – Financial Statements of Project

Profit and Loss Account

All Figures In Rs. Crore								
Description	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**
Net Sales	5.50	12.95	13.82	14.69	15.55	15.59	15.59	15.59
Other Income								
Total Income	**5.50**	**12.95**	**13.82**	**14.69**	**15.55**	**15.59**	**15.59**	**15.59**
Variable Costs								
Raw Material Cost	2.83	6.07	6.47	6.88	7.28	7.28	7.28	7.28
Stores and Consumables	0.31	0.63	0.67	0.72	0.76	0.76	0.76	0.76
Power Cost	0.74	1.59	1.69	1.80	1.91	1.91	1.91	1.91
Fuel Cost	0.62	1.23	1.23	1.23	1.23	1.23	1.23	1.23
Water Cost	0.07	0.15	0.16	0.17	0.18	0.18	0.18	0.18
Repairs and Maintenance Cost	0.04	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Material Handling and Transport	0.16	0.35	0.38	0.40	0.42	0.42	0.42	0.42
Manpower Cost	0.13	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Total Variable Costs	**4.90**	**10.37**	**10.95**	**11.54**	**12.12**	**12.12**	**12.12**	**12.12**
Opening Balance - WIP	-	0.04	0.05	0.05	0.05	0.05	0.05	0.05
Sub Total	**4.90**	**10.41**	**11.00**	**11.59**	**12.17**	**12.18**	**12.18**	**12.18**
Closing Balance WIP	0.04	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Opening Balance - Finished Goods	-	0.43	0.46	0.48	0.51	0.54	0.54	0.54
Sub Total	**4.86**	**10.80**	**11.41**	**12.02**	**12.63**	**12.66**	**12.66**	**12.66**
Closing Balance - Finished Goods	0.43	0.46	0.48	0.51	0.54	0.54	0.54	0.54
Total Cost of Production	**4.43**	**10.34**	**10.92**	**11.51**	**12.10**	**12.12**	**12.12**	**12.12**
Fixed Costs								
Administrative Expenses	0.11	0.26	0.28	0.29	0.31	0.31	0.31	0.31
Selling and Distribution Expenses	0.22	0.52	0.55	0.59	0.62	0.62	0.62	0.62
Total Fixed Costs	**0.33**	**0.78**	**0.83**	**0.88**	**0.93**	**0.94**	**0.94**	**0.94**
Total Operating Costs	**4.76**	**11.11**	**11.75**	**12.39**	**13.03**	**13.06**	**13.06**	**13.06**
EBDITA	**0.74**	**1.84**	**2.07**	**2.30**	**2.52**	**2.53**	**2.53**	**2.53**
EBDITA Margin	**13.44%**	**14.21%**	**14.96%**	**15.63%**	**16.23%**	**16.25%**	**16.24%**	**16.24%**
Depreciation	1.15	0.98	0.84	0.72	0.62	0.53	0.46	0.40
Interest on Term Loan	0.24	0.38	0.35	0.28	0.21	0.14	0.07	0.01
Interest on Working Capital Loan	0.05	0.10	0.10	0.10	0.10	0.10	0.10	0.10

All Figures In Rs. Crore								
Description	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**
Total Expenditure	**6.19**	**12.57**	**13.04**	**13.49**	**13.95**	**13.83**	**13.68**	**13.56**
Profit Before Tax	**-0.69**	**0.38**	**0.78**	**1.20**	**1.60**	**1.76**	**1.91**	**2.03**
Applicable Tax	-	-	0.16	0.41	0.55	0.61	0.66	0.70
Profit After Tax	**-0.69**	**0.38**	**0.62**	**0.79**	**1.05**	**1.16**	**1.25**	**1.34**
PAT Margin	-12.6%	3.0%	4.5%	5.4%	6.7%	7.4%	8.0%	8.6%

Balance Sheet

All Figures In Rs. Crore									
Description	**31-Mar-23**	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**
Sources of Funds									
Shareholders Funds									
Equity Capital/ Quasi Equity	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37	2.37
Reserves and Surplus	-	-0.69	-0.31	0.31	1.10	2.14	3.30	4.56	5.89
Total Shareholders Funds	**2.37**	**1.68**	**2.06**	**2.68**	**3.47**	**4.52**	**5.68**	**6.93**	**8.27**
Loan Funds									
Term Loan	2.83	5.00	4.23	3.46	2.69	1.92	1.15	0.38	-
Working Capital Loan	-	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Unsecured Loan	-	2.60	2.60	2.60	2.60	2.60	2.60	2.60	2.60
Total Loan Funds	**2.83**	**8.60**	**7.83**	**7.06**	**6.29**	**5.52**	**4.75**	**3.98**	**3.60**
Total Sources of Funds	**5.20**	**10.28**	**9.89**	**9.74**	**9.76**	**10.04**	**10.43**	**10.91**	**11.87**
Application of Funds									
Gross Fixed Assets	5.20	8.47	8.47	8.47	8.47	8.47	8.47	8.47	8.47
Cumulative Depreciation	-	1.15	2.13	2.97	3.70	4.32	4.85	5.31	5.71
Net Fixed Assets	**5.20**	**7.33**	**6.34**	**5.50**	**4.78**	**4.15**	**3.62**	**3.16**	**2.77**
Current Assets	**-**	**3.61**	**4.25**	**4.99**	**5.77**	**6.72**	**7.64**	**8.59**	**9.93**
Inventories	-	1.61	1.72	1.83	1.94	2.05	2.05	2.05	2.05
Debtors	-	1.93	2.27	2.42	2.58	2.73	2.73	2.73	2.73
Cash and Bank Balance	-	0.06	0.26	0.73	1.26	1.94	2.86	3.80	5.15
Current Liabilities	**-**	**0.66**	**0.70**	**0.74**	**0.79**	**0.83**	**0.83**	**0.83**	**0.83**
Creditors - Trade	-	0.47	0.50	0.53	0.57	0.60	0.60	0.60	0.60
Creditors - Expense	-	0.19	0.20	0.21	0.22	0.23	0.23	0.23	0.23
Net Current Assets	**-**	**2.95**	**3.55**	**4.24**	**4.98**	**5.89**	**6.81**	**7.75**	**9.10**
Expenses Written Off									
Total Application of Funds	**5.20**	**10.28**	**9.89**	**9.74**	**9.76**	**10.04**	**10.43**	**10.91**	**11.87**

Cash Flow Statement

All Figures In Rs. Crore										
Description	**31-Mar-23**	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**	**31-Mar-32**
Sources of Funds										
PAT	-	-0.69	0.38	0.62	0.79	1.05	1.16	1.25	1.34	1.38
Depreciation	-	1.15	0.98	0.84	0.72	0.62	0.53	0.46	0.40	0.34
Increase in Equity	2.37	-	-	-	-	-	-	-	-	-
Increase in Term loans	2.83	2.17	-	-	-	-	-	-	-	-
Increase in Working Capital Loan	-	1.00	-	-	-	-	-	-	-	-
Increase in Unsecured Loan	-	2.60	-	-	-	-	-	-	-	-
Increase in Long Term Liabilities	-	-	-	-	-	-	-	-	-	-
Increase in Trade Creditors	-	0.47	0.03	0.03	0.03	0.03	-	-	-	-
Increase in Expense Creditors	-	0.19	0.01	0.01	0.01	0.01	-	-	-	-
Decrease in Gross Fixed Assets	-	-	-	-	-	-	-	-	-	-
Decrease in Deposits										
Decrease in Inventories	-	-	-	-	-	-	-	-	-	-
Decrease in Debtors	-	-	-	-	-	-	-	-	-	-
Total Sources of Fund	**5.20**	**6.88**	**1.41**	**1.51**	**1.55**	**1.72**	**1.69**	**1.71**	**1.73**	**1.72**
Application of Funds										
Decrease in Equity	-	-	-	-	-	-	-	-	-	-
Decrease in Term Loan	-	-	0.77	0.77	0.77	0.77	0.77	0.77	0.38	-
Decrease in Working Capital Loan	-	-	-	-	-	-	-	-	-	-
Decrease in Unsecured Loan	-	-	-	-	-	-	-	-	-	-
Decrease in Trade Creditors	-	-	-	-	-	-	0.00	-	-	-
Decrease in Expense Creditors	-	-	-	-	-	-	0.00	-	-	-
Increase in Gross Fixed Assets	5.20	3.27	-	-	-	-	-	-	-	-
Increase in Deposits										
Increase in Inventories	-	1.61	0.11	0.11	0.11	0.11	0.00	-	-	-
Increase in Debtors	-	1.93	0.34	0.15	0.15	0.15	0.01	-	-	-
Total Uses	**5.20**	**6.82**	**1.21**	**1.03**	**1.03**	**1.03**	**0.78**	**0.77**	**0.38**	**-**
Net Cash Flow	-	0.06	0.20	0.48	0.52	0.68	0.92	0.94	1.35	1.72
Opening Balance		-	0.06	0.26	0.73	1.26	1.94	2.86	3.80	5.15
Closing Balance	-	0.06	0.26	0.73	1.26	1.94	2.86	3.80	5.15	6.87

Depreciation Schedule

Depreciation - The Income Tax Act – WDV

All Figures In Rs. Crore								
Description	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**
Opening Block	**5.20**	**8.47**	**8.47**	**8.47**	**8.47**	**8.47**	**8.47**	**8.47**
Land and Land Development	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Building and Civil work	1.34	1.79	1.79	1.79	1.79	1.79	1.79	1.79
Plant and Machinery	3.61	6.36	6.36	6.36	6.36	6.36	6.36	6.36
Miscellaneous Fixed Assets	0.02	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Addition (Deletion)	**3.27**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Land and Land Development	-	-	-	-	-	-	-	-
Building and Civil work	0.45	-	-	-	-	-	-	-
Plant and Machinery	2.75	-	-	-	-	-	-	-
Miscellaneous Fixed Assets	0.07	-	-	-	-	-	-	-
Closing Gross Block	**8.47**	**8.47**	**8.47**	**8.47**	**8.47**	**8.47**	**8.47**	**8.47**
Land and Land Development	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Building and Civil work	1.79	1.79	1.79	1.79	1.79	1.79	1.79	1.79
Plant and Machinery	6.36	6.36	6.36	6.36	6.36	6.36	6.36	6.36
Miscellaneous Fixed Assets	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
Depreciation	**1.15**	**0.98**	**0.84**	**0.72**	**0.62**	**0.53**	**0.46**	**0.40**
Land and Land Development	-	-	-	-	-	-	-	-
Building and Civil work	0.18	0.16	0.14	0.13	0.12	0.11	0.09	0.09
Plant and Machinery	0.95	0.81	0.69	0.59	0.50	0.42	0.36	0.31
Miscellaneous Fixed Assets	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
Cumulative Depreciation	**1.15**	**2.13**	**2.97**	**3.70**	**4.32**	**4.85**	**5.31**	**5.71**
Land and Land Development	-	-	-	-	-	-	-	-
Building and Civil work	0.18	0.34	0.48	0.61	0.73	0.84	0.93	1.02
Plant and Machinery	0.95	1.77	2.46	3.04	3.54	3.96	4.32	4.63
Miscellaneous Fixed Assets	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.06
Net Fixed Assets	**7.33**	**6.34**	**5.50**	**4.78**	**4.15**	**3.62**	**3.16**	**2.77**
Land and Land Development	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Building and Civil work	1.61	1.45	1.30	1.17	1.05	0.95	0.85	0.77

All Figures In Rs. Crore								
Description	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Plant and Machinery	5.41	4.60	3.91	3.32	2.82	2.40	2.04	1.73
Miscellaneous Fixed Assets	0.07	0.06	0.05	0.04	0.04	0.03	0.03	0.02

Term Loan Repayment Schedule

All Figures In Rs. Crore									
Description	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Interest Rate	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%	9.50%
Annual Summary									
Opening Balance of Loan	-	2.83	5.00	4.23	3.46	2.69	1.92	1.15	0.38
Addition of Loan	2.83	2.17	-	-	-	-	-	-	-
Repayment of Loan	-	-	0.77	0.77	0.77	0.77	0.77	0.77	0.38
Closing Balance of Loan	2.83	5.00	4.23	3.46	2.69	1.92	1.15	0.38	-
Interest for the Period		0.24	0.38	0.35	0.28	0.21	0.14	0.07	0.01
April									
Opening Balance of Loan		2.83	5.00	4.23	3.46	2.69	1.92	1.15	0.38
Addition of Loan		0.36							
Repayment of Loan			0.06	0.06	0.06	0.06	0.06	0.06	0.06
Closing Balance of Loan	-	3.19	4.94	4.17	3.40	2.63	1.86	1.09	0.32
Interest for the Period	-	0.02		0.03	0.03	0.02	0.01	0.01	0.00
May									
Opening Balance of Loan	-	3.19	4.94	4.17	3.40	2.63	1.86	1.09	0.32
Addition of Loan		0.36							
Repayment of Loan			0.06	0.06	0.06	0.06	0.06	0.06	0.06
Closing Balance of Loan	-	3.55	4.87	4.10	3.33	2.56	1.79	1.03	0.26
Interest for the Period	-	0.03	0.04	0.03	0.03	0.02	0.01	0.01	0.00
June									
Opening Balance of Loan	-	3.55	4.87	4.10	3.33	2.56	1.79	1.03	0.26
Addition of Loan		0.36							
Repayment of Loan			0.06	0.06	0.06	0.06	0.06	0.06	0.06
Closing Balance of Loan	-	3.91	4.81	4.04	3.27	2.50	1.73	0.96	0.19

All Figures In Rs. Crore									
Description	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Interest for the Period	-	0.03	0.04	0.03	0.03	0.02	0.01	0.01	0.00
July									
Opening Balance of Loan	-	3.91	4.81	4.04	3.27	2.50	1.73	0.96	0.19
Addition of Loan		0.36							
Repayment of Loan			0.06	0.06	0.06	0.06	0.06	0.06	0.06
Closing Balance of Loan	-	4.28	4.74	3.97	3.21	2.44	1.67	0.90	0.13
Interest for the Period	-	0.02	0.02	0.02	0.01	0.01	0.01	0.00	0.00
August									
Opening Balance of Loan	-	4.28	4.74	3.97	3.21	2.44	1.67	0.90	0.13
Addition of Loan		0.36							
Repayment of Loan		-	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Closing Balance of Loan	-	4.64	4.68	3.91	3.14	2.37	1.60	0.83	0.06
Interest for the Period	-	0.04	0.04	0.03	0.03	0.02	0.01	0.01	0.00
September									
Opening Balance of Loan	-	4.64	4.68	3.91	3.14	2.37	1.60	0.83	0.06
Addition of Loan		0.36							
Repayment of Loan		-	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Closing Balance of Loan	-	5.00	4.62	3.85	3.08	2.31	1.54	0.77	-
Interest for the Period	-	0.04	0.04	0.03	0.02	0.02	0.01	0.01	0.00
October									
Opening Balance of Loan	-	5.00	4.62	3.85	3.08	2.31	1.54	0.77	-
Addition of Loan	0.47								
Repayment of Loan		-	0.06	0.06	0.06	0.06	0.06	0.06	
Closing Balance of Loan	0.47	5.00	4.55	3.78	3.01	2.24	1.47	0.71	-
Interest for the Period	0.00	0.04	0.04	0.03	0.02	0.02	0.01	0.01	-
November									
Opening Balance of Loan	0.47	5.00	4.55	3.78	3.01	2.24	1.47	0.71	-
Addition of Loan	0.47								
Repayment of Loan		-	0.06	0.06	0.06	0.06	0.06	0.06	-

All Figures In Rs. Crore									
Description	31-Mar-23	31-Mar-24	31-Mar-25	31-Mar-26	31-Mar-27	31-Mar-28	31-Mar-29	31-Mar-30	31-Mar-31
Closing Balance of Loan	0.94	5.00	4.49	3.72	2.95	2.18	1.41	0.64	-
Interest for the Period	0.01	0.04	0.04	0.03	0.02	0.02	0.01	0.01	-
December									
Opening Balance of Loan	0.94	5.00	4.49	3.72	2.95	2.18	1.41	0.64	-
Addition of Loan	0.47								
Repayment of Loan		-	0.06	0.06	0.06	0.06	0.06	0.06	-
Closing Balance of Loan	1.41	5.00	4.42	3.65	2.88	2.12	1.35	0.58	-
Interest for the Period	0.01	0.04	0.04	0.03	0.02	0.02	0.01	0.00	-
January									
Opening Balance of Loan	1.41	5.00	4.42	3.65	2.88	2.12	1.35	0.58	-
Addition of Loan	0.47								
Repayment of Loan		-	0.06	0.06	0.06	0.06	0.06	0.06	-
Closing Balance of Loan	1.89	5.00	4.36	3.59	2.82	2.05	1.28	0.51	-
Interest for the Period	0.01	0.04	0.03	0.03	0.02	0.02	0.01	0.00	-
February									
Opening Balance of Loan	1.89	5.00	4.36	3.59	2.82	2.05	1.28	0.51	-
Addition of Loan	0.47								
Repayment of Loan		-	0.06	0.06	0.06	0.06	0.06	0.06	-
Closing Balance of Loan	2.36	5.00	4.29	3.53	2.76	1.99	1.22	0.45	-
Interest for the Period	0.02	0.04	0.03	0.03	0.02	0.02	0.01	0.00	-
March									
Opening Balance of Loan	2.36	5.00	4.29	3.53	2.76	1.99	1.22	0.45	-
Addition of Loan	0.47								
Repayment of Loan		-	0.06	0.06	0.06	0.06	0.06	0.06	-
Closing Balance of Loan	2.83	5.00	4.23	3.46	2.69	1.92	1.15	0.38	-
Interest for the Period	0.02	0.04	0.03	0.03	0.02	0.02	0.01	0.00	-

IDC	0.07	0.17

Financial Ratios

ROCE

All Figures In Rs. Crore								
Description	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**
Earnings								
PBT	-0.69	0.38	0.78	1.20	1.60	1.76	1.91	2.03
Finance Cost	0.28	0.48	0.44	0.37	0.30	0.23	0.16	0.10
Total Earnings (A)	**-0.41**	**0.86**	**1.22**	**1.57**	**1.90**	**2.00**	**2.07**	**2.14**
Capital Employed								
Net Fixed Assets excluding capex	7.33	6.34	5.50	4.78	4.15	3.62	3.16	2.77
Non Current Assets (Excluding Investments)								
Current Assets including cash	3.61	4.25	4.99	5.77	6.72	7.64	8.59	9.93
Total Assets	**10.94**	**10.59**	**10.49**	**10.55**	**10.87**	**11.26**	**11.75**	**12.70**
Less: Current Liabilities	0.66	0.70	0.74	0.79	0.83	0.83	0.83	0.83
Total (B)	**10.28**	**9.89**	**9.74**	**9.76**	**10.04**	**10.43**	**10.91**	**11.87**
ROCE (A/B)	**-3.96%**	**8.67%**	**12.56%**	**16.10%**	**18.95%**	**19.16%**	**19.00%**	**18.02%**
Average ROCE	**13.90%**							

NPV, IRR

All Figures In Rs. Crore									
Description	**31-Mar-23**	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**
Initial Cashflow									
Initial Outflow	-5.20	-3.27	-	-	-	-	-	-	-
Increase in working capital	-	-2.89	-0.40	-0.22	-0.22	-0.22	-0.01	-	-
Total (a)	**-5.20**	**-6.16**	**-0.40**	**-0.22**	**-0.22**	**-0.22**	**-0.01**	**-**	**-**
Operating Cashflow									
PAT	-	-0.69	0.38	0.62	0.79	1.05	1.16	1.25	1.34
Depreciation	-	1.15	0.98	0.84	0.72	0.62	0.53	0.46	0.40
Interest Coverage	-	0.28	0.48	0.35	0.25	0.20	0.15	0.11	0.07
Total (b)	**-**	**0.74**	**1.84**	**1.81**	**1.76**	**1.87**	**1.85**	**1.82**	**1.80**
Terminal Cashflow									
Salvage Value									2.77
Release of Working Capital									8.10
Terminal Value	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**10.87**
Net Cash inflow	**-5.20**	**-5.42**	**1.44**	**1.60**	**1.54**	**1.65**	**1.84**	**1.82**	**12.66**
NPV	**2.43**								
IRR (after tax)	**14.01%**								

WACC

Loans	Amount	ROI	Tax Rate	Post tax cost of capital (%)	Proportion	WACC
Equity	2.37	14.00%	0.00%	14.00%	32.18%	4.50%
Term Loan	5.00	9.50%	25.18%	7.11%	67.82%	4.82%
Total	**7.37**					**9.33%**

DSCR

All Figures in Rs. Crore								
Description	**31-Mar-24**	**31-Mar-25**	**31-Mar-26**	**31-Mar-27**	**31-Mar-28**	**31-Mar-29**	**31-Mar-30**	**31-Mar-31**
PAT	-0.69	0.38	0.62	0.79	1.05	1.16	1.25	0.67
Add: Depreciation	1.15	0.98	0.84	0.72	0.62	0.53	0.46	0.20
Add: Interest on Term Loan	0.24	0.38	0.35	0.28	0.21	0.14	0.07	0.01
Total Available (A)	**0.69**	**1.75**	**1.81**	**1.79**	**1.88**	**1.83**	**1.78**	**0.87**
Interest on Term Loan	0.24	0.38	0.35	0.28	0.21	0.14	0.07	0.01
Principal Repayment	-	0.77	0.77	0.77	0.77	0.77	0.77	0.38
Total Obligation (B)	**0.24**	**1.15**	**1.12**	**1.05**	**0.98**	**0.91**	**0.84**	**0.39**
DSCR (A/B)	**-**	**1.52**	**1.62**	**1.71**	**1.92**	**2.02**	**2.13**	**2.22**
Min DSCR	**1.52**							
Average DSCR	**2.12**							