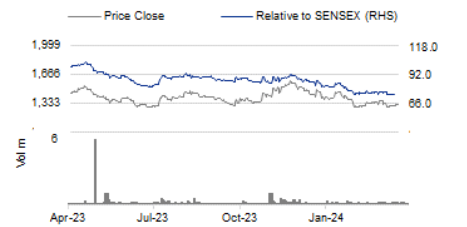


India

REDUCE (previously *Initiating coverage*)

Consensus ratings*:	Buy 5	Hold 4	Sell 3
Current price:	Rs1,321		
Target price:	Rs663		
Previous target:	Rs666		
Up/downside:	-49.8%		
InCred Research / Consensus:	-56.1%		
Reuters:	CLEAN IN		
Bloomberg:	US\$1,682m		
Market cap:	Rs140,327m		
Average daily turnover:	US\$2.7m		
	Rs223.9m		
Current shares o/s:	106.3m		
Free float:	21.5%		

*Source: Bloomberg



Source: Bloomberg

Price performance	1M	3M	12M
Absolute (%)	(2.0)	(10.7)	(8.5)
Relative (%)	(2.6)	(14.1)	(25.0)

Major shareholders	% held
Promoter & Promoter Group	78.5
Axis Mutual Fund Trustee Limited	1.8
Nomura India Investment Fund	1.2

Research Analyst(s)

Satish KUMAR
T (91) 22 4161 1562
E satish.kumar@incredresearch.com

Abbas PUNJANI
T (91) 22 4161 1598
E abbas.punjani@incredresearch.com

Clean Science and Technology

HALS - much ado about nothing

- Clean's traditional business of MEHQ, BHA, 4-MAP & others is of commodity nature but street has is betting high on HALS-an oversupplied commodity.
- Covid-related supply chain uncertainty led to the rise and eventual fall in HALS margins, but in between it has sucked new capital from companies like Clean.
- Incremental margins and thus, RoCE of HALS will be lower than the traditional business. Earnings expectations are hyperinflated. Retain REDUCE rating.

Hindered amine light stabilizers is yet another commodity business

The global market for hindered amine light stabilizers or HALS is around US\$1.4bn, which is growing at 3-4% CAGR. The price of this commodity has remained ~US\$10-11/kg (barring the Covid-related supply chain uncertainty). Naturally, when new producers were planning an entry into the market in 2022, the prevailing circumstances in prices and volume growth weighed on the decision and new capital got sucked in. The belief in HALS is much like the almost venerated commodity, lithium hexafluoro phosphate. However, HALS is still better than LiPF₆, (which has fallen by 92% from its peak), HALS has declined by only ~50%. There are multiple players in HALS and many Chinese producers are also in the market. Indian companies/retailers import HALS chips from multiple Chinese companies. India's imports of HALS have increased from 100t in CY17 to 525t in CY22. It remained stagnant in CY23 and looks likely it will remain at the same level in CY24F as well. India's imports have increased from Italy over the last few years, but cheap Chinese import is also making its way to India.

Imported HALS price is ~Rs1,000/kg; globally there is overcapacity

COVID related Chinese production closure in CY22 led to Italian imports in the Indian market. However, import prices of Italian HALS are much higher compared to Chinese products. Chinese HALS comes at least 40% cheaper compared to Italian or German HALS. Globally, this is a highly competitive market with multiple producers. There are multiple big HALS producers, to cite an example, China's UniteChem Group alone has 56,000t capacity and can service 45% of the global demand.

Clean Science is taking baby steps in HALS, but its valuation is crazy

Clean Science, which primarily makes MEHQ (which is used as a catalyst in super absorbent polymers), BHA (an antioxidant), 4-MAP (used to make fragrances and flavours), TBHQ (another antioxidant), guaiacol (expectorant usage) and anisole. It trades at 20x sales and 65x FY24F EPS. To justify this kind of valuation, maybe it needs to discover a new chemical. Being a commodity, HALS certainly doesn't fit this bill. Ultimately P/E is the function of investors' belief in the narrative, earnings growth, cost of capital and the overall enthusiasm level. Most of the chemical stocks have not fallen despite repeated earnings disappointment. However, please remember that only EPS is the fundamental factor, and all narratives fall flat in any significant correction. We retain our REDUCE rating on the stock with a target price of Rs663. Upside risk: A continuous rally in the stock market.

Financial Summary	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
Revenue (Rsm)	5,124	6,849	9,358	7,840	9,040
Operating EBITDA (Rsm)	2,590	2,999	4,021	2,617	3,123
Net Profit (Rsm)	1,984	2,285	2,952	2,350	2,716
Core EPS (Rs)	18.7	21.5	27.8	22.1	25.5
Core EPS Growth	42.1%	15.2%	29.2%	(20.4%)	15.6%
FD Core P/E (x)	70.77	61.44	47.56	59.73	51.69
DPS (Rs)	0.0	0.0	0.0	0.0	0.0
Dividend Yield	0.00%	0.00%	0.00%	0.00%	0.00%
EV/EBITDA (x)	53.26	45.93	34.07	47.33	39.00
P/FCFE (x)	3,910.60	288.31	12.13	77.81	78.19
Net Gearing	(45.9%)	(34.5%)	(33.7%)	(144.4%)	(134.2%)
P/BV (x)	26.01	18.27	13.90	12.25	10.13
ROE	45.0%	34.9%	33.2%	21.8%	21.5%
% Change In Core EPS Estimates			0.04%	(0.25%)	(0.24%)
InCred Research/Consensus EPS (x)					

SOURCE: INCRED RESEARCH, COMPANY REPORTS

Hindered amine light stabilizers

What are hindered amine light stabilizers? ►

1. Hindered amine light stabilizers, also known as HALS, are additives used to protect polymers from the degradation caused by ultraviolet (UV) light exposure.
2. They are widely used in various plastic applications to improve their longevity and performance.

How HALS work? ►

1. HALS are activated during light exposure by scavenging free radicals created by photooxidation.
2. HALS additives protect the bulk and surface of the polymer, depending on the thickness. HALS enhance the performance of polyolefin plastics.
3. HALS can regenerate their free radical scavenging ability through a complex chemical cycle. This makes them very efficient and long-lasting stabilizers.
4. HALS are efficient scavengers and function by inhibiting degradation of polymers that have already formed free radicals.

Benefits of using HALS ►

1. Long-term performance.
2. Outstanding colour retention in pigmented systems.
3. Broad food contact approvals.
4. Resistance to acidic conditions.
5. High molecular weight.
6. Effectiveness at low concentrations.

Uses ►

1. It has been found to exert a stabilization effect on methylammonium iodide (MAI) and MAPI(methylammonium lead iodide) against photooxidation. MAPI is a promising material used in highly efficient photovoltaic devices.
2. HALS are used in plastics and coatings to protect surfaces and pigments against photo degradation by deactivation of free radicals.
3. HALS enable in avoiding surface defects, loss of mechanical properties, loss of water impermeability and pigment fading.
4. HALS are generally recognized as the highest-performance stabilizers in the market.
5. HALS reaction is cyclic, and is effective even for materials with a high surface area.
6. HALS are used in various plastic products to enhance their UV resistance, including:
 - A. Automotive components (e.g., dashboards, bumpers).
 - B. Building and construction materials (e.g., siding, pipes).
 - C. Agricultural films (e.g., greenhouses, mulch films).
 - D. Textiles (e.g., outdoor fabrics, awnings).
 - E. Consumer goods (e.g., electrical appliances, outdoor furniture).

Top global manufacturers ►

1. BASF
2. Adeka
3. Solvay
4. SI Group

5. Sabo
6. Anhui Sunshow Chemical Co.
7. Baoxu Chemical, and multiple other small Chinese HALS producers.

Indian manufacturers ►

1. Clean Science is the first manufacturer of HALS in India with its Clean Light Stab 770.
2. Prakash Chemicals – in partnership with top HALS suppliers in India.

Market overview ►

1. The market for hindered amine light stabilizers or HALS was US\$1.2bn in 2023 and is expected to post a CAGR of more than 6.9% globally.
2. The Asia–Pacific region, mainly China and India, is the largest consumer of HALS in the world.
3. The plastics industry contributes the most and the rising awareness about UV radiation harm contributes positively.
4. There are replacements for it (hindered benzoates and oxime-based) and there has been research going on for other replacements as HALS cannot be used on halogen-containing compounds.

The process to make HALS is as follows: ►

Acetone and ammonia react to make 2, 2, 6, 6-tetramethyl-4-piperidinol. 2, 2, 6, 6-tetramethyl-4-piperidinol react with hydrogen to manufacture 4-hydroxy-2, 2, 6, 6- tetramethylpiperidin-1-yloxy, (TEMPO-OH) or HALS.

Figure 1: Acetone and ammonia react to make 2, 2, 6, 6-tetramethyl-4-piperidinol

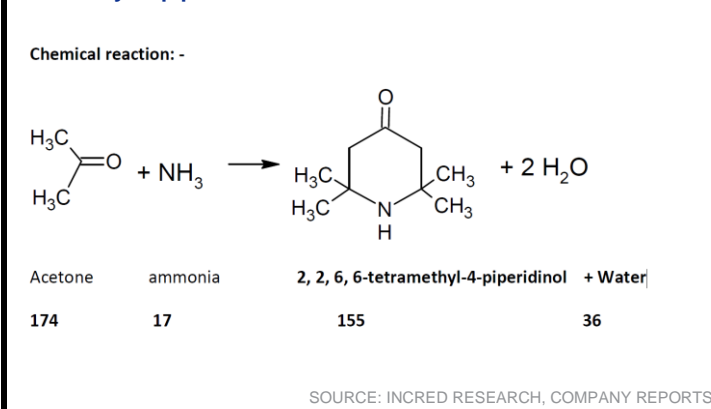
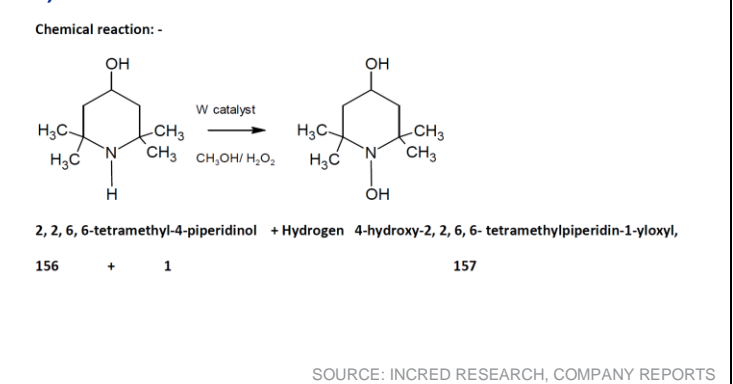


Figure 2: 2, 2, 6, 6-tetramethyl-4-piperidinol and hydrogen react to make 4-hydroxy-2, 2, 6, 6- tetramethylpiperidin-1-yloxy, (TEMPO-OH)



The raw material balance for HALS is shown in the table below:

Figure 3: 1 kg of TA OH needs the following inputs

Raw Materials			
Sr. No	Input	Purity (%)	Qty (kg)
1	Acetone	100	3.8
2	Ammonia gas	100	0.15
3	hydrogen gas	100	0.02
4	Zeolite Catalyst - 1	100	0.02
5	Pt/C Catalyst - 2	100	0.02
Total			4.01

SOURCE: INCRED RESEARCH, ENVIRONMENTAL CLEARANCE DOCUMENT FILED BY CLEAN SCIENCE

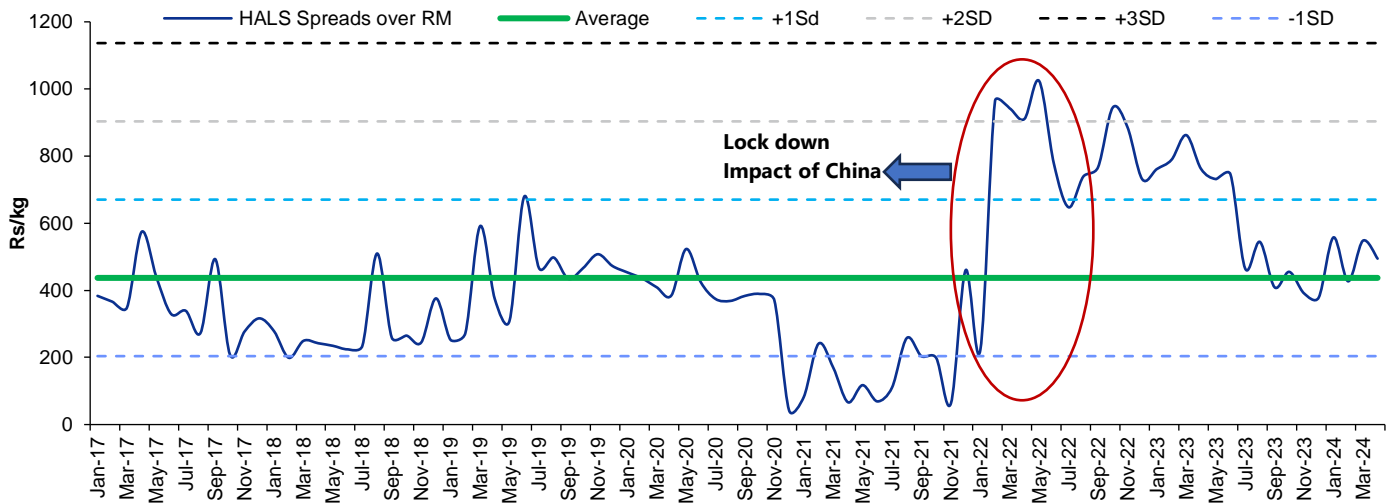
Figure 4: 1 kg of HALS or TEMPO-OH needs the following inputs

Raw Materials			
Sr. No	Input	Purity (%)	Qty (kg)
1	TA-OH	100	0.94
2	Hydrogen peroxide in water (60%)	60	0.51
3	Catalyst	100	0.01
4	Methylene chloride	100	1
5	Methanol	100	1
Total			3.46

SOURCE: INCRED RESEARCH, ENVIRONMENTAL CLEARANCE DOCUMENT FILED BY CLEAN SCIENCE

HALS spreads over raw material show a typical commodity behaviour ➤

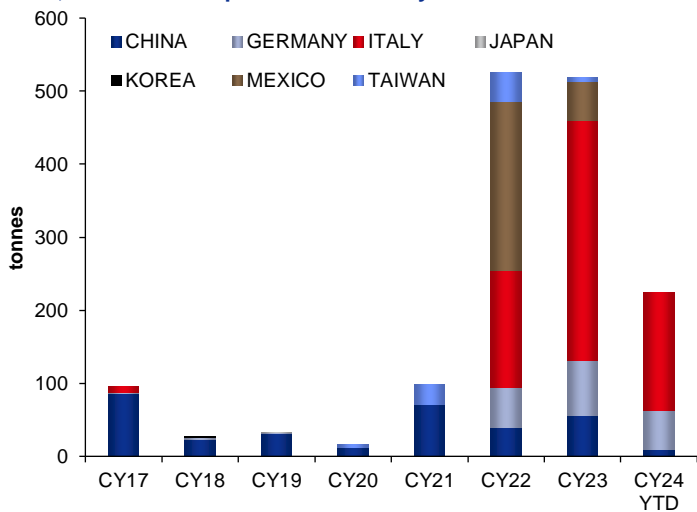
Figure 5: HALS spreads over raw material are around the historical average and oversupply of this commodity means they will remain under pressure; please remember the average is also distorted by China's lockdown-driven supply chain uncertainty



SOURCE: INCRED RESEARCH, COMPANY REPORTS

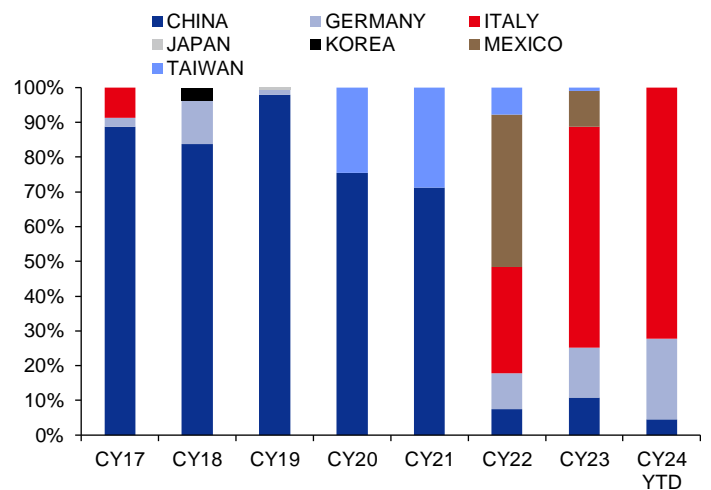
India's import substitution market for HALS is too small ➤

Figure 6: India's import market for HALS is 500t and in recent times, most of the imports are from Italy

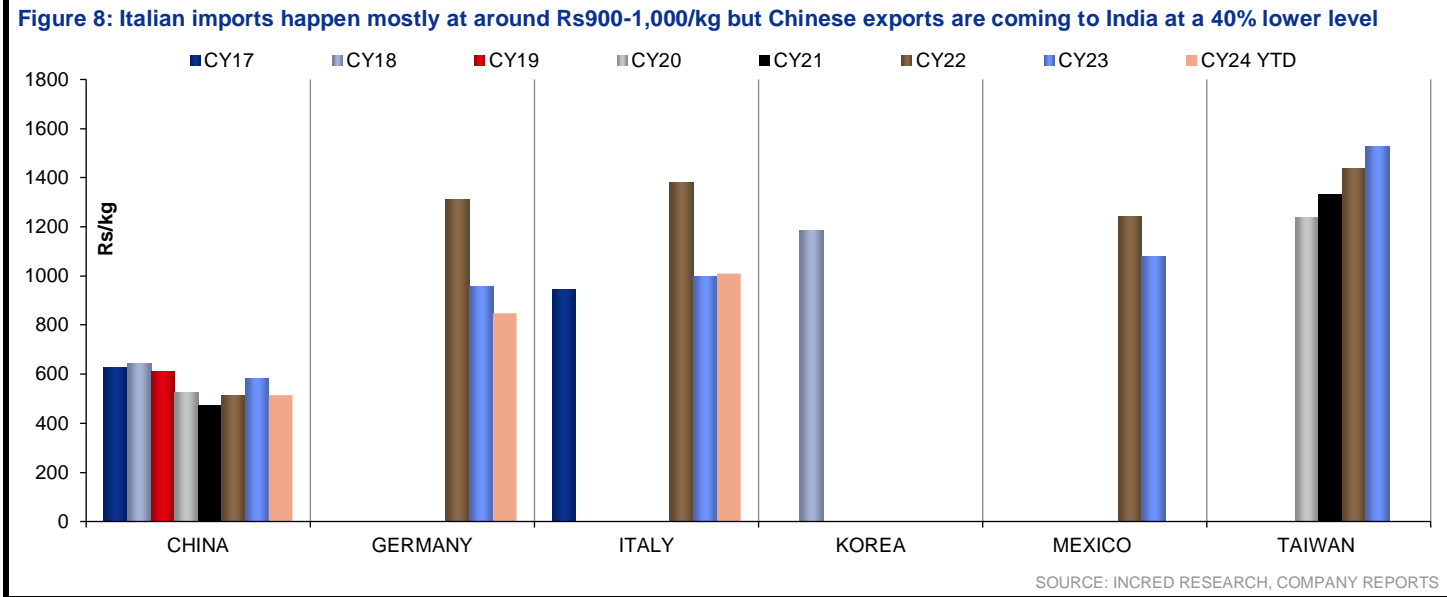


SOURCE: INCRED RESEARCH, COMPANY REPORTS

Figure 7: China used to contribute 80% to imports initially, but its share has come down

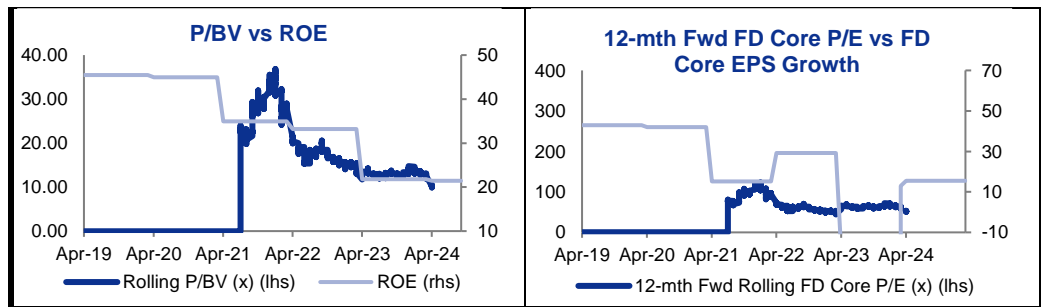


SOURCE: INCRED RESEARCH, COMPANY REPORTS



We acknowledge the contribution of Shakthi Sharvani Karanam (Intern) in the writing of this note.

BY THE NUMBERS



Profit & Loss

(Rs mn)	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
Total Net Revenues	5,124	6,849	9,358	7,840	9,040
Gross Profit	3,888	4,602	6,098	4,939	5,695
Operating EBITDA	2,590	2,999	4,021	2,617	3,123
Depreciation And Amortisation	(172)	(249)	(361)	(7)	(24)
Operating EBIT	2,417	2,750	3,660	2,610	3,099
Financial Income/(Expense)	(1)	(1)	(2)	(1)	(1)
Pretax Income/(Loss) from Assoc.					
Non-Operating Income/(Expense)	256	300	298	533	533
Profit Before Tax (pre-EI)	2,673	3,048	3,956	3,142	3,631
Exceptional Items					
Pre-tax Profit	2,673	3,048	3,956	3,142	3,631
Taxation	(689)	(763)	(1,005)	(792)	(915)
Exceptional Income - post-tax					
Profit After Tax	1,984	2,285	2,952	2,350	2,716
Minority Interests					
Preferred Dividends					
FX Gain/(Loss) - post tax					
Other Adjustments - post-tax					
Net Profit	1,984	2,285	2,952	2,350	2,716
Recurring Net Profit	1,984	2,285	2,952	2,350	2,716
Fully Diluted Recurring Net Profit	1,984	2,285	2,952	2,350	2,716

Cash Flow

(Rs mn)	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
EBITDA	2,590	2,999	4,021	2,617	3,123
Cash Flow from Invt. & Assoc.					
Change In Working Capital	(149)	(1,210)	(51)	147	(245)
(Incr)/Decr in Total Provisions					
Other Non-Cash (Income)/Expense	(109)	(125)			
Other Operating Cashflow	257	301	298	533	533
Net Interest (Paid)/Received	(1)	(1)	(2)	(1)	(1)
Tax Paid	(659)	(691)	(1,005)	(792)	(915)
Cashflow From Operations	1,928	1,272	3,262	2,504	2,496
Capex	(844)	(1,397)	4,155	(350)	(350)
Disposals Of FAs/subsidiaries	4	1			
Acq. Of Subsidiaries/investments					
Other Investing Cashflow	(1,028)	611	4,155	(350)	(350)
Cash Flow From Investing	(1,868)	(786)	8,310	(700)	(700)
Debt Raised/(repaid)	(25)				
Proceeds From Issue Of Shares					
Shares Repurchased					
Dividends Paid	(33)		(738)	(588)	
Preferred Dividends					
Other Financing Cashflow	(1)	(1)			
Cash Flow From Financing	(59)	(1)	(738)	(588)	
Total Cash Generated	2	485	10,834	1,217	1,796
Free Cashflow To Equity	36	487	11,572	1,804	1,796
Free Cashflow To Firm	62	488	11,574	1,805	1,796

SOURCE: INCRED RESEARCH, COMPANY REPORTS

BY THE NUMBERS...cont'd

Balance Sheet					
(Rs mn)	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
Total Cash And Equivalents	2,478	2,658	3,401	16,550	18,607
Total Debtors	742	1,535	1,462	1,758	2,027
Inventories	529	881	1,088	1,009	1,163
Total Other Current Assets	203	628	352	352	352
Total Current Assets	3,952	5,703	6,303	19,669	22,150
Fixed Assets	2,408	3,399	577	22	(161)
Total Investments			255		
Intangible Assets					
Total Other Non-Current Assets	239	145	160	160	160
Total Non-current Assets	2,647	3,544	992	182	(1)
Short-term Debt		1	1	1	1
Current Portion of Long-Term Debt					
Total Creditors	610	1,021	805	1,169	1,348
Other Current Liabilities	410	327	349	349	349
Total Current Liabilities	1,020	1,349	1,155	1,520	1,699
Total Long-term Debt	3	3		3	3
Hybrid Debt - Debt Component					
Total Other Non-Current Liabilities			23		
Total Non-current Liabilities	3	3	23	3	3
Total Provisions	179	211	240	163	163
Total Liabilities	1,203	1,562	1,418	1,686	1,865
Shareholders Equity	5,397	7,684	10,100	11,457	13,860
Minority Interests					
Total Equity	5,397	7,684	10,100	11,457	13,860

Key Ratios					
	Mar-21A	Mar-22A	Mar-23F	Mar-24F	Mar-25F
Revenue Growth	22.2%	33.7%	36.6%	(16.2%)	15.3%
Operating EBITDA Growth	39.8%	15.8%	34.1%	(34.9%)	19.3%
Operating EBITDA Margin	50.5%	43.8%	43.0%	33.4%	34.5%
Net Cash Per Share (Rs)	23.28	24.97	31.99	155.65	175.00
BVPS (Rs)	50.77	72.29	95.01	107.78	130.38
Gross Interest Cover	2,656.58	1,870.54	1,876.95	2,932.81	3,481.84
Effective Tax Rate	25.8%	25.0%	25.4%	25.2%	25.2%
Net Dividend Payout Ratio					
Accounts Receivables Days	51.31	60.69	58.46	74.94	76.40
Inventory Days	129.20	114.56	110.26	131.92	118.51
Accounts Payables Days	142.77	132.49	102.25	124.19	137.32
ROIC (%)	84.2%	66.5%	52.1%	78.6%	130.0%
ROCE (%)	53.0%	40.8%	40.2%	23.8%	24.2%
Return On Average Assets	36.4%	28.9%	35.7%	17.3%	12.9%

SOURCE: INCRED RESEARCH, COMPANY REPORTS

DISCLAIMER

This report (including the views and opinions expressed therein, and the information comprised therein) has been prepared by Incred Research Services Private Ltd. (formerly known as Earnest Innovation Partners Private Limited) (hereinafter referred to as "IRSPL"). IRSPL is registered with SEBI as a Research Analyst vide Registration No. INH000011024. Pursuant to a trademark agreement, IRSPL has adopted "Incred Equities" as its trademark for use in this report.

The term "IRSPL" shall, unless the context otherwise requires, mean IRSPL and its affiliates, subsidiaries and related companies. This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject IRSPL and its affiliates/group companies to registration or licensing requirements within such jurisdictions.

This report is being supplied to you strictly on the basis that it will remain confidential. No part of this report may be (i) copied, photocopied, duplicated, stored or reproduced in any form by any means; or (ii) redistributed or passed on, directly or indirectly, to any other person in whole or in part, for any purpose without the prior written consent of IRSPL.

The information contained in this report is prepared from data believed to be correct and reliable at the time of issue of this report.

IRSPL is not required to issue regular reports on the subject matter of this report at any frequency and it may cease to do so or change the periodicity of reports at any time. IRSPL is not under any obligation to update this report in the event of a material change to the information contained in this report. IRSPL has not any and will not accept any, obligation to (i) check or ensure that the contents of this report remain current, reliable or relevant; (ii) ensure that the content of this report constitutes all the information a prospective investor may require; (iii) ensure the adequacy, accuracy, completeness, reliability or fairness of any views, opinions and information, and accordingly, IRSPL and its affiliates/group companies (and their respective directors, associates, connected persons and/or employees) shall not be liable in any manner whatsoever for any consequences (including but not limited to any direct, indirect or consequential losses, loss of profits and damages) of any reliance thereon or usage thereof.

Unless otherwise specified, this report is based upon reasonable sources. Such sources will, unless otherwise specified, for market data, be market data and prices available from the main stock exchange or market where the relevant security is listed, or, where appropriate, any other market. Information on the accounts and business of company(ies) will generally be based on published statements of the company(ies), information disseminated by regulatory information services, other publicly available information and information resulting from our research. Whilst every effort is made to ensure that statements of facts made in this report are accurate, all estimates, projections, forecasts, expressions of opinion and other subjective judgments contained in this report are based on assumptions considered to be reasonable as of the date of the document in which they are contained and must not be construed as a representation that the matters referred to therein will occur. Past performance is not a reliable indicator of future performance. The value of investments may go down as well as up and those investing may, depending on the investments in question, lose more than the initial investment. No report shall constitute an offer or an invitation by or on behalf of IRSPL and its affiliates/group companies to any person to buy or sell any investments.

The opinions expressed are based on information which are believed to be accurate and complete and obtained through reliable public or other non-confidential sources at the time made. (Information barriers and other arrangements may be established where necessary to prevent conflicts of interests arising. However, the analyst(s) may receive compensation that is based on his/their coverage of company(ies) in the performance of his/their duties or the performance of his/their recommendations. In reviewing this report, an investor should be aware that any or all of the foregoing, among other things, may give rise to real or potential conflicts of interest. Additional information is, subject to the duties of confidentiality, available on request.

The report is not a "prospectus" as defined under Indian Law, including the Companies Act, 2013, and is not, and shall not be, approved by, or filed or registered with, any Indian regulator, including any Registrar of Companies in India, SEBI, any Indian stock exchange, or the Reserve Bank of India. No offer, or invitation to offer, or solicitation of subscription with respect to any such securities listed or proposed to be listed in India is being made, or intended to be made, to the public, or to any member or section of the public in India, through or pursuant to this report.

The research analysts, strategists or economists principally responsible for the preparation of this research report are segregated from the other activities of IRSPL. Information barriers and other arrangements have been established, as required, to prevent any conflicts of interests.

The research analysts, strategists or economists principally responsible for the preparation of this research report are segregated from the other activities of IRSPL. Information barriers and other arrangements have been established, as required, to prevent any conflicts of interests.

IRSPL may have issued other reports (based on technical analysis, event specific, short term views etc.) that are inconsistent with and reach different conclusion from the information presented in this report.

Holding of Analysts/Relatives of Analysts, IRSPL and Associates of IRSPL in the covered securities, as on the date of publishing of this report

	Analyst/ Relative	Entity/ Associates
any financial interests in the company covered in this report (subject company) and nature of such financial interest	NO	NO
actual/beneficial ownership of 1% or more in securities of the subject company at the end of the month immediately preceding the date of publication of the research report or date of the public appearance;	NO	NO
any other material conflict of interest at the time of publication of the research report or at the time of public appearance	NO	NO
received any compensation from the subject company in the past twelve months for investment banking or merchant banking or brokerage services or investment advisory or depository or distribution from the subject company in the last twelve months for products/services other than investment banking or merchant banking or broker- age services or investment advisory or depository or distribution from the subject company in the last twelve months	NO	NO
managed or co-managed public offering of securities for the subject company in the last twelve months	NO	NO
received any compensation or other benefits from the subject company or third party in connection with the research report	NO	NO
served as an officer, director or employee of the subject company	NO	NO
been engaged in market making activity for the subject company	NO	NO

Analyst declaration

- The analyst responsible for the production of this report hereby certifies that the views expressed herein accurately and exclusively reflect his or her personal views and opinions about any and all of the issuers or securities analysed in this report and were prepared independently and autonomously in an unbiased manner.
- No part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations(s) or view(s) in this report or based any specific investment banking transaction.
- The analyst(s) has(have) not had any serious disciplinary action taken against him/her(them).
- The analyst, strategist, or economist does not have any material conflict of interest at the time of publication of this report.
- The analyst(s) has(have) received compensation based upon various factors, including quality, accuracy and value of research, overall firm performance, client feedback and competitive factors.

IRSPL and/or its affiliates and/or its Directors/employees may own or have positions in securities of the company(ies) covered in this report or any securities related thereto and may from time to time add to or dispose of, or may be materially interested in, any such securities.

IRSPL and/or its affiliates and/or its Directors/employees may do and seek to do business with the company(ies) covered in this research report and may from time to time (a) buy/sell the securities covered in this report, from time to time and/or (b) act as market maker or have assumed an underwriting commitment in securities of such company(ies), and/or (c) may sell them to or buy them from customers on a principal basis and/or (d) may also perform or seek to perform significant investment banking, advisory, underwriting or placement services for or relating to such company(ies) and/or (e) solicit such investment, advisory or other services from any entity mentioned in this report and/or (f) act as a lender/borrower to such company and may earn brokerage or other compensation. However, Analysts are forbidden to acquire, on their own account or hold securities (physical or uncertificated, including derivatives) of companies in respect of which they are compiling and producing financial recommendations or in the result of which they play a key part.