



**PCG Research** 

# Triveni Engineering and Industries Ltd.

21-Oct-2021

TRIV IN

**Sugar & Engineering** 

Date

STOCK IDEA Rating: BUY

CMP	INR 203
Target Price	INR 254
Potential Upside	25%
Market Data	
O/S Shares (In Cr)	24.17
Mkt Cap (INR Cr)	4,836
52 Wk H/L (INR)	212/62
3M Volume Avg ('000)	816
Face Value	1

BSE Sensex	61,260
NSE Nifty	18,267

# **Comparative Price Chart**

**Bloomberg Code** 



#### **Shareholding Pattern**

Particulars	June 21	Mar 21	Dec 20
Promoters	68.43	68.43	68.43
FII	2.63	2.78	2.99
DII	5.28	4.07	3.83
Others	23.66	24.72	24.75

# Anmol Das

Research Analyst - Equities anmoldas@systematixgroup.in

# **Key Financials**

Particulars (in Rs Cr)	FY18	FY19	FY20	FY21	FY22E	FY23E
Revenue	3,412	3,152	4,437	4,703	5,120	5,704
EBITDA	276	309	543	558	569	907
PAT	119	216	335	295	387	643
Adj. EPS (Rs)	4.62	8.39	13.32	12.01	15.99	26.61
EBITDA Margin (%)	8.1%	9.8%	12.2%	11.9%	11.1%	15.9%
Profit Margin (%)	3.5%	6.9%	7.6%	6.3%	7.5%	11.3%

Triveni is one of the largest integrated sugar manufacturers in India with 7 Sugar manufacturing units located strategically in the sugarcane- rich belt of Uttar Pradesh. They have sugar capacity of 61,000 TCD (Tonnes of canes per day) and 1,95,000 hectare area under sugarcane cultivation. It produces power from bagasse which is used to meet the captive needs and surplus sold to Uttar Pradesh Power Corporation Limited. Company currently operated 6 Cogeneration plants with total capacity of 104.5 MW. The main revenue growth driver for the next few years for Triveni Engg & Industries is its distillery segment with ethanol distillation capacity of 320 KLPD (kilo litres per day) currently, to be expanded to 660 KLPD by FY23. It also has a Power Transmission business, better known as its Gears business with manufacturing facilities for high-speed gears & gearboxes. It is an OEM for the Indian Navy & Coast Guards. The water/waste water treatment business of Triveni has an order-book of Rs 1,580 Cr.

#### **INVESTMENT RATIONALE**

# Distillery Expansion for Ethanol Blending Program

Government's EBP (Ethanol Blending Program) to cause Massive Expansion of Distillery capacity

To reduce the import cost of fuel as well as address environmental concerns, the Government in late 2020 proposed to advance its Ethanol Blending Program of achieving 20% ethanol blending by 2025 (earlier 2030). Triveni Engineering like most other sugar players is expanding its capacity from current 320 KLPD to 660 KLPD by FY23, of which 160 KLPD capacity will be coming by Jan 2022 and 40 KLPD by summer of 2022. The other 160 KLPD will commence from beginning of SS 22-23, i.e. around Oct 2022. Further down the line, Triveni will be required to increase its capacity >1,000 KLPD by FY25 to keep up with its peers and to adhere to achieve India's EBP of 20%.

#### Higher recovery of Sugar with use in making more of B-Heavy molasses

Triveni with its operations wholly within UP state where the SAP (State Advised Price) per quintal of sugarcane has been raised by Rs 25 per quintal to Rs 340 will be able to make commensurate gains with diversion of sugar/juice more towards alcohol distillery. Since, the SAP can be expected to remain at these levels for the next couple of years, an increase in recovery of sugar will compensate for the commensurate increase in SAP.

# Increase in Procurement Price of Ethanol every year by 5-10%

The procurement price per litre of Ethanol obtained from B heavy molasses is higher than ethanol from C by almost Rs 12 per litre for the (sugar season) SS 2020-21. Since, the Government will require more than 1,100 Cr litres per year for 20% blending of Ethanol by 2025, i.e. 348 Cr litres from SS 20-21 making up only 8% of blending, an increase in production by 34% CAGR for next 4 years.

#### Venturing into IMIL business with new 160 KLPD duel feed and 40 KLPD of grain alcohol distillery

Triveni has already ventured in the Indian liquor business from Dec 2020, and is looking to get into the more profitable grain alcohol business. The captive use of its molasses for IMIL business at only Rs 125 per quintal while the free market price for them are more than Rs 450, i.e. ~3.0x, makes the IMIL business highly profitable against other standalone IMIL manufacturers.

#### Valuation and Outlook

We believe the strategy of diverting sugar towards incremental ethanol production for blending with Petrol is a perfect solution to address concerns around crude prices, increasing glut in sugar supply as well as better compensation for sugarcane farmers at large. Like its peers, Triveni will benefit from the incremental growth opportunity that EBP presents and will be laying out massive expansion of its distillery capacities to be increased from current 320 KLPD to more than +1,000 KLPD by FY25. Currently, Triveni Engineering is trading at 9.6x/5.8x EV/EBITDA of FY22/23E respectively. Therefore, we recommend Triveni Engineering with a BUY rating and Target Price of Rs 254 per share at 7.2x EV/EBITDA for FY23E owing to its rapid increase in EBITDA margins in FY23E, flourishing Water and Power Transmission business, and 21.85% stake in Triveni Turbines Ltd.

The distillery
expansion of 160 KLPD
will commence
operations by Jan
2022 with another 40
KLPD by summer of
2022.Further
expansion of 160 KLPD
to commence from
beginning of SS 22-23,
i.e. around Oct 2022.

Increase in
Procurement Price of
Ethanol along with
increasing mix of
ethanol from B heavy
molasses will lead to
higher recovery of
sugar.

Triveni will need to triple their distillery capacity over the next 4-5 years in order to achieve the 20% ethanol blending target.

# **Ethanol Blending Program (EBP)**

The Central Government's ethanol blending program which aims to mix up to 20% of ethanol in Petrol by FY25 will require private sector participation majorly from the sugar companies. It is already incentivizing the cause with increased procurement prices for Ethanol produced from excess sugar/juice in Indian market. Earlier, the excess sugar could only be exported with Government's export incentives. However, now with international prices of sugar at all-time highs of 19-20 cents/pound, sugar manufacturers have the benefit of both the export incentive program as well as diversion for incremental ethanol production.

Ethanol Blending Program	\$\$18	SS19	SS20	SS21	SS22E*	SS23E	SS24E	SS25E
Blended Crude + Ethanol (In mn litres)*	35,664	38,323	34,610	43,500	46,478	49,659	53,058	56,690
Ethanol Blending (%)	4.2	4.9	5.0	8.0	11.0	14.0	17.0	20.0
Ethanol Blending (in million litres)	1,505	1,886	1,731	3,480	5,113	6,952	9,020	11,338

\*Note: Calculated numbers on blending %

Source: Systematix Research, Company Filings

We believe the Government will be increasing the blending mix of ethanol by almost ~3% every year to achieve the ambitious 20% ethanol mixing target, and sugar companies out of temptation will be equally responsive with capacity expansion of their distillery capacities in the next 4 years.

EBP will require more than 1,100 Cr litres per year by FY25 to be procured from sugar industry, from current 348 Cr litres of ethanol for the SS21 (Sugar Season). For this, the private sector sugar companies will require their existing capacities to quadruple times in the next 4 years, hence the increased procurement price for ethanol from molasses.

Ethanol Procurement Prices (Rs/litre)	SS18	SS19	SS20	SS21	SS22E*	SS23E	SS24E	SS25E
C - Heavy Molasses	40.85	43.46	43.75	45.69	47.72	49.83	52.04	54.35
B - Heavy Molasses	-	52.13	54.27	57.61	61.16	64.92	68.91	73.16
Sugarcane Juice	-	59.13	59.48	62.25	65.15	68.18	71.36	74.68

\*Note: Estimates beyond FY21 Prices

Source: Systematix Research, Company Filings

The procurement price per litre of ethanol from the sugar molasses have and will keep on increasing till it reaches parity with petrol prices along with achievement of 20% blending target. The increase in procurement price is the incentive from the government that has made production of ethanol lucrative enough for the sugar companies to enhance their distillery capacities. We expect that the increase in procurement prices of ethanol to continue over the next several years and annual incremental revision imminent to keep the ethanol production business lucrative.

# Ethanol Blending Program (20% by FY25)



The Government has been focusing on lowering its closing stock / inventories to avoid any supply glut situation and keep sugar prices firm intact.

While the Crude
Prices may not be
directly related to
Ethanol Procurement
Price, higher
Crude/fuel prices will
be beneficial for
sugar companies
owing to increased
focus on EBP.

# What is in it for Triveni Engineering & Industries?

Triveni Engg & Industries is among the largest sugar manufacturers of India and will be harnessing the maximum benefits of the Government's Ethanol Blending Program. In order to maintain its market share as well as extract higher returns on the excess sugar produced by sugar companies, Triveni will have to keep expanding its capacity for ethanol distillation by more than 3x of current capacity. Its 160 KLPD capacity expansion will commence in Jan 2022 which will have hybrid raw material model, i.e. can take both sugarcane as well as grains as raw material, while a dedicated 40 KLPD grain alcohol capacity will commence in early FY23.

Triveni Engg & Industries	SS18	SS19	SS20	SS21	SS22E*	SS23E
Total Distillery Capacity (KLPD)	320	320	320	320	480	660
OMC Requirement - Ethanol Blending per fiscal (in mn litres)	1,505	1,886	1,731	3,480	5,113	6,952
Ethanol Blending (%)	4.2%	4.9%	5.0%	8.0%	11.0%	14.0%

\*Note: Estimates beyond FY21 Prices

Source: Systematix Research, Company Filings

# Addressing Sugar Supply glut, thereby balancing retail prices

India's increased sugar production which had surpassed its domestic sugar demand was facing a serious supply glut which would have resultantly affected domestic prices of sugar burdening the Government. While export incentives helped push excess sugar out from Indian to global markets, the diversion of excess sugar/juice at the factory level will help benefit the sugar companies harness maximum recovery of sugar as well as keep a check in global sugar inventory levels.

Domestic Sugar Inventories (million tonnes)	SS19	<b>SS20</b>	\$\$21
Opening Stock	10.7	14.6	10.7
Sugar Production	32.4	27.4	30.9
Domestic Consumption	25.0	25.3	26.0
Exports	3.5	6.0	7.0
Closing Stock	14.6	10.7	8.6

Source: Systematix Research, Company Filings

The Government's focus is to lower the closing inventory levels of sugar in Indian market to keep the domestic prices intact against a historically weak price of sugar internationally. In the coming few years, the Government is expected to replace the export incentive with the high procurement price of ethanol for blending purposes: thereby addressing the excess supply situation of sugar by diverting it towards cleaner energy.

Distillery expansion of 660 KLPD will commence operation by sugar season 22-23. We are expecting Triveni to lay out further distillery capacity to >1,000 KLPD to maintain market share in EBP supply.

# Massive expansion of distillery capacity expected in next 3-4 years

Triveni Engineering & Industries is currently operating distillery capacity of 320 KLPD and has laid out plans to expand it to 660 KLPD by FY23, of which 160 KLPD brown field expansion will commence in Jan 2022 and other 40 KLPD distillery capacity to commence in early FY22. Afterwards, we expect the company to keep expanding their distillery business till the requirement of 20% ethanol blending of Government is met, which will be the key revenue growth driver of all sugar companies.

Triveni Engg & Industries	SS18	SS19	SS20	SS21	\$\$22E*	SS23E
Total Distillery Capacity (KLPD)	160	160	320	320	480	660
OMC# Requirement - Ethanol Blending per fiscal (in mn litres)	1,505	1,886	1,731	3,480	5,113	6,952
Ethanol Blending (%)	4.2	4.9	5.0	8.0	11.0	14.0

\*Note: Estimates beyond FY21 Prices. #OMC-Oil Marketing Companies

Source: Systematix Research, Ministry of Petroleum & Natural Gas

Expecting Triveni Management to maintain their market share in both sugar as well as ethanol business, we believe the company is destined to operate more than 1 million litre per day distillery capacity by FY25 end while the overall ethanol requirement of OMCs for blending to surpass 11 billion litres per year from current 3.5 bn litres per year.

### Venture into IMIL (Indian Made Indian Liquor)

Triveni Engineering & Industries forayed into IMIL segment in Dec 2020, eyeing the vast margin gain it can have using its captive molasses based ENA (Extra Neutral Alcohol) which will cost them around Rs 125 per quintal against selling them to other IMIL manufacturers / breweries at free market rates of Rs >450 per quintal. Therefore, Triveni aims to reap the benefits of its captive raw material for IMIL business where they will be able to maximize their returns against smaller & standalone country liquor makers.

#### What triggered Triveni's entry into liquor business?

The UP Government recently mandated that at least 18% of ENA produced from distilleries of sugar companies be supplied to country liquor makers to attain a steady supply of non-toxic ethanol to IMIL manufacturers. This spooked several UP based sugar players who realized that the price of the mandated sale fetches them Rs 125 per quintal for molasses against free market price of Rs >450 per quintal. Soon, these sugar makers realized the opportunity and started making their own liquor which would both suffice the mandated new rule as well as leads to them foraying into spirits business.

# Dual feed new brown field unit of 160 KLPD coming up by Jan 2022, 40 KLPD grain alcohol unit by summer of 2022

The ENA produced from these distilleries can be further used either as ethanol for blending with Petrol or supplied to IMFL (Indian Made Foreign Liquor) makers. Since, the distillery (one of 160 KLPD) can use both grain as well as molasses for making ENA, any grain based ethanol supplied to IMFL brewers will fetch higher realization per litre of such alcohol.

As of recent past, Triveni was selling some 125,000 cases (12 bottles of 750 ml each) of IMIL per month, which means a business volume of around 22 lakh litres of ENA processed for making IMIL liquor. Triveni has got approval to process up to 52.8 lakh litres of ENA for manufacture of IMIL. The Management intends to increase their capacity to 3,00,000 cases per month of IMIL. Apart from ethanol processed from molasses, Triveni also aspires to grow its IMFL capabilities with grain based ethanol which has much higher margin.

In the long run, we are expecting Triveni to continue IMIL business using ethanol from molasses. The grain alcohol unit will provide them entry into high margin IMFL business.

Recently executed the EPC Project of \$ 25 million in Maldives which was completed satisfactorily with new experience gained working overseas, along with new Projects in Rajasthan.

Triveni Engineering's
Defense business is
serving as an OEM to
Indian Navy and Coast
Guard Services. With
the Government
looking to expand the
naval reach of India,
Triveni will benefit
from the newer
warship building
programs of Indian
Navy.

# Other Businesses apart from Sugar & Distillery

Triveni Engineering & Industries has 2 other streams of business: Water/waste water Treatment and Gears/Gearboxes manufacturing, known as Power Transmission segment.

#### Water / Waste Water Treatment Business:

The waste water treatment business of Triveni Engineering & Industries got affected due to Covid-19 in FY21 as well as in the Q1FY22 due to the precautionary steps taken to safeguard manpower. The water business constituted around 5.14% in FY21, down from 6.47% in FY20 due to the Covid induced lockdowns.

We believe that Triveni Management is on the right track to evolve their water / waste water treatment business considering several factors such as:

- 1. India being a densely populated nation with ~35% of population living in urban areas against more than ~70% of population in urban areas in the developed nations, will see robust urbanization in the next few decades. The rapid urbanization in India will hold key to the demand of water in cities which are already running tight.
- 2. Development of more industries for manufacturing would require more use of water either diverted to industries or already polluted with industrial effluents. Since, the Government has already shown eagerness to abide by Paris Climate Summit restrictions on Pollution levels in the Energy field, we can very much expect similar resolution regarding discharging of waste water under ESG norms.
- 3. The Management has recently quoted of the EPC Project of \$ 25 million in Maldives which was completed satisfactorily with new experience gained working overseas. We expect such Projects to keep coming up to Triveni Engg. in the future and executed at faster rates with order-book of water business standing at Rs 1,580 Cr.

Hence, we expect Triveni Engineering's water business to flourish in the future with revenues of around Rs 350 Cr alone from it by FY23 and grow at a much faster rate as time passes by.

# Power Transmission / Gearboxes Business:

Triveni's gearboxes business is one of the largest turbo gear manufacturing including R&D, reverse engineering and replacement solutions. It constituted 2.57% of total sales in FY21 against 3.26% in FY20 due to Covid effect. Currently, Triveni Engineering's Defence business is serving as an OEM to Indian Navy and Coast Guard Services.

We expect the defence business to gradually pick-up led by an expanding Naval Forces of India. As the nation's strategic exosphere keeps on stretching into blue international waters, the Naval forces will require more number of warships for patrolling, and more of technological transfers & domestic manufacturing to ease the exchequer expenses. While, the defense sector manufacturing takes up big size and faster execution, Triveni will benefit from increased defense spending of India.

With the defense forces contracts with Triveni as OEM for them, we can very well expect the revenue from overall Gearboxes / Power Transmission division to hover around Rs 200 Cr by FY23 and increase exponentially further.

Since the above business segments come as high Precision Engineering requirement, therefore is highly profitable. However, considering both the segments require bureaucratic approvals and transactions with Government / Quasi Government institutions, we have estimated a conservative growth for them in the near future.

# **Peer Comparison**

Comparable Peers	Sugarcane Crushed (lakh tonnes)	Sugar Recovery (%)	Sugar Production s (lakh tonnes)	Market Cap (Rs Cr)	Distillery Capacity (KLPD)	Ethanol Production (mn litres)	Capacity Expansion (KLPD)	Distillery Capacity after Expansion (KLPD)
Triveni Engg. & Industries	85.4	11.86	11.0	4,864	320	107	340	660
Balrampur Chini Mills	103.3	11.77	11.0	7,903	520	150	530	1,050
Dhampur Sugar	80.0	10.64	8.5	2,161	400	112	100	500
Dalmia Bharat Sugar	52.7	12.42	6.0	3,676	305	84	285	590
Avadh Sugar	57.8	10.75	6.2	929	240	65	80	320
Dwarikesh Sugar	39.7	12.32	4.6	1,420	163	32	175	338

Comparable Peers	Market Cap (Rs Cr)	P/E (x)	P/BV (x)	Operating Margins (%)	EV/EBITDA (x)	Debt/Equity (x)	RoE (%)	RoCE (%)
Triveni Engg. & Industries	4,864	16.1	3.2	12.1	10.0	0.6	20.5	19.1
Balrampur Chini Mills	7,903	18.9	3.0	13.9	13.5	0.5	18.8	16.5
Dhampur Sugar	2,161	9.9	1.4	11.4	7.0	0.7	15.7	13.7
Dalmia Bharat Sugar	3,676	13.7	1.7	15.8	10.0	0.5	14.7	14.5
Avadh Sugar	929	10.8	1.4	9.9	8.2	2.1	12.4	10.3
Dwarikesh Sugar	1,420	14.1	2.5	11.7	9.3	1.1	17.2	13.3
Average		13.9	2.2	12.5	9.7	0.9	16.6	14.6

Source: Systematix Research, Company Filings

# **Key Management Personnel**

Name & Designation	Brief Profile of Board of Directors
<b>Mr. Dhruv Sawhney</b> Chairman & Managing Director	Mr. Dhruv Sawhney is Chairman of Triveni Turbine Ltd. and Triveni Engineering and Industries Ltd. with a Group turnover and market capitalisation of over US\$ 900 Million. He graduated with a Master's degree in Mechanical Sciences from Emmanuel College, University of Cambridge, U.K., and an M.B.A with distinction from the Wharton School, University of Pennsylvania, U.S.A.
<b>Mr. Tarun Sawhney</b> Vice Chairman and Managing Director	Tarun Sawhney is the Vice Chairman and Managing Director of (TEIL) Triveni Engineering and Industries Ltd and Director of Triveni Turbine Limited, one of the leading producers of industrial turbines globally. He is graduated with a Bachelor's Degree and a Master's Degree from Emmanuel College, University of Cambridge, UK, and an MBA from the Wharton School, University of Pennsylvania, USA. He has been conferred the Industry Excellence Award for contributions to the sugar industry by the Hon. President of India, Smt. Pratibha Rao Patil.
<b>Suresh Taneja</b> Group Chief Financial Officer	He joined the Company in 1994 and has earlier worked with Oman National Transport Company, Muscat, and Eicher Tractors. He has honours degree in B.Sc. (Chemistry) from Delhi University and is a Fellow of Chartered Accountants from the Institute of Chartered Accountants.

# **Balance Sheet**

Particulars (in Rs Cr)	FY18	FY19	FY20	FY21	FY22E	FY23E
Non-current assets						
Property, plant and equipment	835	830	1,074	1,059	1,087	1,124
Capital work-in-progress	10	205	26	22	31	33
Investment accounted in equity method	112	109	138	139	151	169
Income Tax Assets (Net)	57	51	44	11	12	14
Other non-current assets	6	9	7	21	23	26
Total Non-current assets	1,044	1,230	1,396	1,407	1,460	1,539
Inventories	1,579	2,119	1,912	1,734	1,994	2,432
Trade receivables	311	237	268	208	224	250
Cash and cash equivalents	4	15	32	11	114	312
Bank balances other than cash & cash eq.	3	4	1	1	1	1
Loans	1	3	3	18	20	22
Other financial assets	4	2	2	3	3	3
Other current assets	86	195	432	230	251	279
Assets Held for Sale	0	0	0	7	7	8
Total current assets	1,988	2,575	2,650	2,213	2,615	3,308
TOTAL ASSETS	3,032	3,805	4,046	3,620	4,075	4,847
Equity & Liabilities						
Equity share capital	26	26	25	24	24	24
Other equity	921	1,115	1,314	1,531	1,865	2,442
Total Equity	946	1,141	1,339	1,556	1,889	2,467
Non-current liabilities						
Borrowings	35	373	444	309	139	150
Provisions	40	43	48	52	56	63
Deferred tax liabilities (Net)	42	32	78	134	146	163
Total non-current liabilities	118	479	601	515	363	400
Current liabilities						
Borrowings	1076	1235	943	562	550	550
Trade payables	628	638	756	624	735	774
Other financial liabilities	164	126	201	158	307	342
Other current liabilities	80	144	165	149	179	200
Provisions	19	32	32	37	51	114
Total current liabilities	1,968	2,186	2,106	1,549	1,822	1,980
Total liabilities	2,086	2,665	2,707	2,064	2,186	2,380
TOTAL EQUITY AND LIABILITIES	3,032	3,805	4,046	3,620	4,075	4,847

Source: Systematix Research, Company Filings

# **Income Statement**

Particulars (in Rs Cr)	FY18	FY19	FY20	FY21	FY22E	FY23E
Revenues	3,412	3,152	4,437	4,703	5,120	5,704
COGS	2,631	2,231	3,252	3,465	3,831	4,036
Gross profit	781	920	1,185	1,238	1,289	1,668
Employee cost	202	224	256	271	290	311
Other expenses	302	388	386	409	430	451
EBITDA	276	309	543	558	569	907
EBITDA Margin	8%	10%	12%	12%	11%	16%
Depreciation & amortization	55	57	75	79	84	89
EBIT	236	316	505	510	519	855
Interest expense	85	68	79	52	43	40
Other income	15	64	36	30	33	37
PBT	151	248	425	459	477	815
Tax	50	52	110	165	120	205
PAT	119	216	335	295	387	643
EPS (Rs)	4.62	8.39	13.32	12.01	15.99	26.61

Source: Systematix Research, Company Filings

# **Cash-flow Statement**

Particulars (in Rs Cr)	FY18	FY19	FY20	FY21	FY22E	FY23E
Net Cash Generated From Operations	621	(169)	510	791	512	426
Net Cash Flow from Investing Activities	(41)	(215)	(107)	(108)	(114)	(129)
Net Cash Flow from Financing Activities	(583)	394	(386)	(704)	(295)	(101)
Net Inc/Dec in cash equivalents	(3)	11	17	(21)	103	197
Opening Balance	7	4	15	32	11	114
Closing Balance Cash and Cash Eq.	4	15	32	11	114	312

Source: Systematix Research, Company Filings

# **Key Ratios**

Particulars	FY18	FY19	FY20	FY21	FY22E	FY23E
EBITDA Margin (%)	8.1	9.8	12.2	11.9	11.1	15.9
Tax rate (%)	33.0	20.8	26.0	36.0	25.2	25.2
Net Profit Margin (%)	3.5	6.9	7.6	6.2	7.5	11.3
RoE (%)	12.6	19.0	25.0	18.9	20.5	26.1
RoCE (%)	11.5	11.5	18.5	21.0	20.1	27.0
EPS (INR)	4.62	8.39	13.32	12.01	15.99	26.61

Source: Systematix Research, Company Filings

#### **DISCLOSURES/APPENDIX**

#### **ANALYST CERTIFICATION**

I/We, **Anmol Das**, hereby certify that (1) views expressed in this research report accurately reflect my/our personal views about any or all of the subject securities or issuers referred to in this research report, (2) no part of my/our compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this research report by Systematix Shares and Stocks (India) Limited (SSSIL) or its group/associate companies, (3) reasonable care is taken to achieve and maintain independence and objectivity in making any recommendations.

Disclosure of Interest Statement	Update
Analyst holding in the stock (%)	None
Served as an officer, director or employee	No

ISSUER SPECIFIC REGULATORY DISCLOSURES, unless specifically mentioned in point no. 9 below:

- 1. The research analyst(s), SSSIL, associates or relatives do not have any financial interest in the company(ies) covered in this report.
- 2. The research analyst(s), SSSIL, associates or relatives collectively do not hold more than 1% of the securities of the company(ies) covered in this report as of the end of the month immediately preceding the distribution of the research report.
- 3. The research analyst(s), SSSIL, associates or relatives did not have any other material conflict of interest at the time of publication of this research report.
- 4. The research analyst, SSSIL and its associates have not received compensation for investment banking or merchant banking or brokerage services or any other products or services from the company (ies) covered in this report in the past twelve months.
- 5. The research analyst, SSSIL or its associates have not managed or co-managed a private or public offering of securities for the company(ies) covered in this report in the previous twelve months.
- 6. SSSIL or its associates have not received compensation or other benefits from the company(ies) covered in this report or from any third party in connection with this research report.
- 7. The research analyst has not served as an officer, director or employee of the company(ies) covered in this research report.
- 8. The research analyst and SSSIL have not been engaged in market making activity for the company(ies) covered in this research report.
- 9. Details of SSSIL, research analyst and its associates pertaining to the companies covered in this research report:

S. No.	Particulars Particulars	Y/N
1	Whether compensation was received from the company(ies) covered in the research report in the past 12 months for investment banking transaction by SSSIL.	N
2	Whether research analyst, SSSIL or its associates and relatives collectively hold more than 1% of the company(ies) covered in the research report.	Ν
3	Whether compensation has been received by SSSIL or its associates from the company (ies) covered in the research report.	N
4	Whether SSSIL or its affiliates have managed or co-managed a private or public offering of securities for the company(ies) covered in the research report in the previous twelve months.	N
5	Whether research analyst, SSSIL or associates have received compensation for investment banking or merchant banking or brokerage services or any other products or services from the company(ies) covered in the research report in the last twelve months.	N

10. There is no material disciplinary action taken by any regulatory authority that impacts the equity research analysis activities.

EXPLANATION TO RATINGS: BUY: TP>15%; ACCUMULATE: 5%<TP<15%; HOLD: -5%<TP<5%; REDUCE: -15%<TP<-5%; SELL: TP<-15%

#### DISCLAIMER

The information and opinions contained herein have been compiled or arrived at based on the information obtained in good faith from sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy completeness or correctness. This document is for information purposes only. This report is based on information that we consider reliable; we do not represent that it is accurate or complete and one should exercise due caution while acting on it. Description of any company(ies) or its/their securities mentioned herein are not complete and this document is not and should not be construed as an offer or solicitation of an offer to buy or sell any securities or other financial instruments. Past performance is not a guide for future performance, future returns are not guaranteed and a loss of original capital may occur. All opinions, projections and estimates constitute the judgment of the author as on the date of the report and these, plus any other information contained in the report, are subject to change without notice. Prices and availability of financial instruments are also subject to change without notice. This report is intended for distribution to institutional investors.

This report is not directed to or intended for display, downloading, printing, reproducing or for distribution to or use by, any person or entity that is a citizen or resident or located in any locality, state, country or other jurisdiction where such distribution, publication, reproduction, availability or use would be contrary to law or regulation or what would subject to SSSIL or its affiliates to any registration or licensing requirement within such jurisdiction. If this report is inadvertently sent or has reached any individual in such country, especially USA, the same may be ignored and brought to the attention of the sender. Neither this document nor any copy of it may be taken or transmitted into the United States (to U.S. persons), Canada, or Japan or distributed, directly or indirectly, in the United States or Canada or distributed in Japan or to any resident thereof. Any unauthorized use, duplication, redistribution or disclosure of this report including, but not limited to, redistribution by electronic mail, posting of the report on a website or page, and/or providing to a third party a link, is prohibited by law and will result in prosecution. The information contained in the report is intended solely for the recipient and may not be further distributed by the recipient to any third party.

SSSIL generally prohibits its analysts, persons reporting to analysts, and members of their households from maintaining a financial interest in the securities or derivatives of any companies that the analysts cover. Additionally, SSSIL generally prohibits its analysts and persons reporting to analysts from serving as an officer, director, or advisory board member of any companies that they cover. Our salespeople, traders, and other professionals or affiliates may provide oral or written market commentary or trading strategies to our clients that reflect opinions that are contrary to the opinions expressed herein. Our proprietary trading and investing businesses may make investment decisions that are inconsistent with the recommendations expressed herein. The views expressed in this research report reflect the personal views of the analyst(s) about the subject securities or issues and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report. The compensation of the analyst who prepared this document is determined exclusively by SSSIL; however, compensation may relate to the revenues of the Systematix Group as a whole, of which investment banking, sales and trading are a part. Research analysts and sales persons of SSSIL may provide important inputs to its affiliated company (ies).

Foreign currencies denominated securities, wherever mentioned, are subject to exchange rate fluctuations which could have an adverse effect on their value or price or the income derived from them. In addition, investors in securities such as ADRs, the values of which are influenced by foreign currencies, effectively assume currency risk. SSSIL, its directors, analysts or employees do not take any responsibility, financial or otherwise, of the losses or the damages sustained due to the investments made or any action taken on the basis of this report including but not restricted to fluctuation in the prices of shares and bonds, changes in the currency rates, diminution in the NAVs, reduction in the dividend or income, etc.

SSSIL and its affiliates, officers, directors, and employees subject to the information given in the disclosures may: (a) from time to time, have long or short positions in, and buy or sell, the securities thereof, of company (ies) mentioned herein or (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation (financial interest) or act as a market maker in the financial instruments of the company (ies) discussed herein or act as advisor or lender / borrower to such company (ies) or have other potential material conflict of interest with respect to any recommendation and related information and opinions. The views expressed are those of the analyst and the company may or may not subscribe to the views expressed therein.

SSSIL, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall SSSIL, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. The company accepts no liability whatsoever for the actions of third parties. The report may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the report refers to website material of the company, the company has not reviewed the linked site. Accessing such website or following such link through the report or the website of the company shall be at your own risk and the company shall have no liability arising out of, or in connection with, any such referenced website.

SSSIL will not be liable for any delay or any other interruption which may occur in presenting the data due to any technical glitch to present the data. In no event shall SSSIL be liable for any damages, including without limitation, direct or indirect, special, incidental, or consequential damages, losses or expenses arising in connection with the data presented by SSSIL through this presentation.

SSSIL or any of its other group companies or associates will not be responsible for any decisions taken on the basis of this report. Investors are advised to consult their investment and tax consultants before taking any investment decisions based on this report.





Systematix Shares and Stocks (India) Limited

Registered and Corporate address: The Capital, A-wing, No. 603 – 606, 6th Floor, Plot No. C-70, G Block, BandraKurla Complex, Bandra (East), Mumbai – 400 051 CIN: U65993MH1995PLC268414| BSE SEBI Reg. No.: INZ000171134 (Member Code: 182) | NSE SEBI Reg. No.: INZ000171134 (Member Code: 11327) | MCX SEBI Reg. No.: INZ000171134 (Member Code: 1281) | Depository Participant SEBI Reg. No.: IN-DP-CDSL-246-2004 (DP Id: 34600) | PMS SEBI Reg. No.: INP000002692 | Research Analyst SEBI Reg. No.: INH200000840 | Investment Advisor SEBI Reg. No. INA000010414 | AMFI: ARN – 64917