

India I Equities

Industrial Consumables Company Update

Change in Estimates ☑ Target ☑ Reco □

29 October 2020

Carborundum Universal

Ceramics and EMD saw better traction; retaining a Buy

Carborundum Universal (CU) performance was better even with consolidated revenue coming flat at Rs6.9bn. This reflects the pick-up in industrial activity, domestically and internationally. The EBITDA margin was a robust 19.4%, led by prudent cost control, a favourable product mix and better subsidiary performances. With greater utilisation, focus on operational efficiency, product launches and quitting the loss-making Foskor, management is confident of steady margins ahead. Led by the better Q2 performance, both in revenue and margins, we raise our estimates. CU is our top Buy with a revised TP of Rs337 (20x FY23e).

Gradual pick-up in industrial activity: Q2 FY21 performance was better than expected, driven by strong traction in all segments, led by a pick-up in demand from end-users. Revenue was slightly up, 1.1%, to Rs6.9bn (ARe: Rs6bn). The margin too was better, expanding 410bps to 19.4% led by operational efficiencies owing to lower employee, power & fuel and other expenses (as percent of sales). Aided by higher other income and lower depreciation/interest cost, PAT jumped 34% to Rs864m.

Better subsidiary performances: International subsidiaries' ceramics and electro-minerals revenues were up 51% and 5.5%, respectively, while abrasives declined marginally by 2% y/y. The growth in ceramics and EMD was led by higher volumes and better realisation on favourable forex movements. The demand outlook has significantly improved in many regions/sectors internationally and is expected to be better ahead.

Valuation: Management reiterated its positive stance on ceramics and EMD, and a gradual recovery in abrasives. We have raised our margin estimates, expecting better operational performance in H2. The stock trades at 21x/18x/16.2x FY21e/FY22e/FY23e. We maintain a Buy rating with a revised TP of Rs337 (earlier Rs321). **Risks:** Drag in industrial production for long; delay in the sale of Fosker Zirconia.

FY19	FY20	FY21e	FY22e	FY23e
26,889	25,990	24,678	28,005	30,800
2,476	2,724	2,436	2,784	3,191
13.1	14.4	12.9	14.7	16.8
20.5	18.6	20.8	18.2	15.9
11.3	11.9	11.7	10.1	8.6
2.9	2.7	2.5	2.2	2.0
15.1	15.2	12.5	12.9	13.3
19.3	17.4	15.0	15.6	16.1
1.0	1.1	1.0	1.2	1.3
-0.1	-0.2	-0.2	-0.3	-0.3
	26,889 2,476 13.1 20.5 11.3 2.9 15.1 19.3 1.0	26,889 25,990 2,476 2,724 13.1 14.4 20.5 18.6 11.3 11.9 2.9 2.7 15.1 15.2 19.3 17.4 1.0 1.1	26,889 25,990 24,678 2,476 2,724 2,436 13.1 14.4 12.9 20.5 18.6 20.8 11.3 11.9 11.7 2.9 2.7 2.5 15.1 15.2 12.5 19.3 17.4 15.0 1.0 1.1 1.0	26,889 25,990 24,678 28,005 2,476 2,724 2,436 2,784 13.1 14.4 12.9 14.7 20.5 18.6 20.8 18.2 11.3 11.9 11.7 10.1 2.9 2.7 2.5 2.2 15.1 15.2 12.5 12.9 19.3 17.4 15.0 15.6 1.0 1.1 1.0 1.2

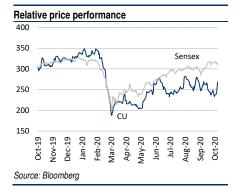
Rating: **Buy** Target Price: Rs337

Share Price: Rs269

Key data	CU IN / CRBR.BO
52-week high / low	Rs361 / 175
Sensex / Nifty	39750 / 11671
3-m average volume	\$1.1m
Market cap	Rs 51bn / \$685.4m
Shares outstanding	189m

Shareholding pattern (%)	Sep-20	June' 20	Mar' 20
Promoters	42.0	42.1	42.1
- of which, Pledged	0.2	0.2	0.2
Free float	58.0	58.0	58.0
- Foreign institutions	5.4	6.6	6.5
- Domestic institutions	29.0	28.0	28.2
- Public	23.6	23.4	23.2

Estimates revision (%)	FY21e	FY22e	FY23e
Sales	3.7	3.6	2.7
EBITDA	9.9	3.4	2.5
EPS	17.5	7.4	5.1



Ashwani Sharma Research Analyst

> Rahul Jain Research Associate

Anand Rathi Share and Stock Brokers Limited (hereinafter "ARSSBL") is a full-service brokerage and equities-research firm and the views expressed therein are solely of ARSSBL and not of the companies which have been covered in the Research Report. This report is intended for the sole use of the Recipient. Disclosures and analyst certifications are present in the Appendix.

Anand Rathi Research India Equities

Quick Glance – Consolidated Financials and Valuations

Fig 1 – Income staten	nent (Rs	m)			
Year-end: Mar	FY19	FY20	FY21e	FY22e	FY23e
Abrasives (% of sales)	42.3	38.7	37.7	38.7	38.2
Net revenues	26,889	25,990	24,678	28,005	30,800
Growth (%)	14.0	-3.2	-5.2	13.6	10.0
Material cost	9,550	8,869	8,422	9,557	10,511
Employee & other exps.	12,957	13,134	12,359	13,992	15,207
EBITDA	4,383	3,986	3,898	4,456	5,082
EBITDA margins (%)	16.3	15.3	15.8	15.9	16.5
- Depreciation	1,083	1,045	1,068	1,197	1,321
Other income	273	450	319	342	366
Interest expenses	85	63	55	57	59
PBT	3,488	3,328	3,094	3,543	4,067
Effective tax rate (%)	34.7	22.7	25.5	25.5	25.5
+ Associates / (Minorities)	199	152	130	145	161
Net income	2,476	2,724	2,436	2,784	3,191
Adjusted income	2,476	2,724	2,436	2,784	3,191
WANS	189	189	189	189	189
FDEPS (Rs / sh)	13.1	14.4	12.9	14.7	16.8
EPS growth (%)	12.6	10.0	-10.6	14.2	14.6

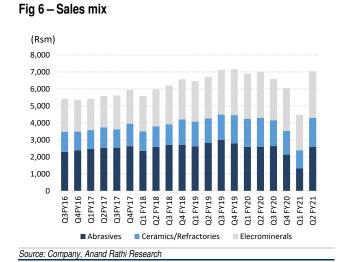
Fig 3 – Cash-flow statement (Rs m)											
Year-end: Mar	FY19	FY20	FY21e	FY22e	FY23e						
PBT	3,488	3,328	3,094	3,543	4,067						
+ Non-cash items	895	658	803	913	1,015						
Oper.prof. before WC	4,383	3,986	3,898	4,456	5,082						
- Incr. / (decr.) in WC	1,183	-1,085	-500	1,360	1,196						
Others incl. taxes	1,353	969	819	913	1,047						
Operating cash-flow	1,847	4,102	3,579	2,182	2,838						
- Capex (tang. + intang.)	-766	-1,179	-1,186	-1,286	-1,286						
Free cash-flow	1,081	2,923	2,392	896	1,552						
Acquisitions	-	-	-	-	-						
- Div. (incl. buyback & taxes)	520	572	512	585	671						
+ Equity raised	0	0	-	-	-						
+ Debt raised	-329	-323	101	100	100						
- Fin investments	462	-378	-660	-	-						
- Misc. (CFI + CFF)	83	441	-294	-329	-367						
Net cash-flow	-314	1,965	2,936	740	1,348						
Source: Company, Anand Rathi Res	earch										

Fig 5 - Price movement

Source: Bloomberg

Fig 2 - Balance shee	et (Rs m)				
Year-end: Mar	FY19	FY20	FY21e	FY22e	FY23e
Share capital	189	189	189	189	189
Net worth	17,241	18,584	20,507	22,707	25,227
Debt	919	595	696	796	896
Minority interest	523	455	455	455	455
DTL / (Assets)	254	41	11	1	-9
Capital employed	18,937	19,675	21,670	23,959	26,570
Net tangible assets	5,687	5,907	6,026	6,115	6,081
Net intangible assets	40	31	31	31	31
Goodwill	1,223	1,330	1,330	1,330	1,330
CWIP (tang.& intang.)	464	387	387	387	387
Investments (strategic)	1,304	1,212	1,227	1,227	1,227
Investments (financial)	961	675	-	-	-
Current assets (ex cash)	11,565	10,343	9,980	11,739	13,195
Cash	975	2,940	5,876	6,616	7,965
Current liabilities	3,282	3,150	3,187	3,486	3,646
Working capital	8,283	7,193	6,793	8,253	9,549
Capital deployed	18,937	19,675	21,670	23,959	26,570
Contingent liabilities	886	-	-	-	-

Fig 4 – Ratio analysis					
Year-end: Mar	FY19	FY20	FY21e	FY22e	FY23e
P/E (x)	20.5	18.6	20.8	18.2	15.9
EV / EBITDA (x)	11.3	11.9	11.7	10.1	8.6
EV / Sales (x)	1.9	1.9	1.9	1.6	1.4
P/B (x)	2.9	2.7	2.5	2.2	2.0
RoE (%)	15.1	15.2	12.5	12.9	13.3
RoCE (%) - after tax	19.3	17.4	15.0	15.6	16.1
RoIC (%) - after tax	16.4	18.4	17.2	18.7	19.5
DPS (Rs / sh)	2.8	3.0	2.7	3.1	3.5
Dividend yield (%)	1.0	1.1	1.0	1.2	1.3
Dividend payout (%) - incl. DDT	21.0	21.0	21.0	21.0	21.0
Net debt / equity (x)	-0.1	-0.2	-0.2	-0.3	-0.3
Receivables (days)	71	57	59	62	64
Inventory (days)	73	72	68	70	71
Payables (days)	34	32	36	36	35
CFO: PAT %	74.6	150.6	146.9	78.4	89.0
Source: Company, Anand Rathi Resear	ch				



Result Highlights

Fig 7 – Results (consolidated), by segment											
(Rs m)	Q2 FY20	Q2 FY21	%yoy	FY19	FY20	% yoy					
Revenue											
Abrasives	2,595	2,595	(0.0)	11,244	9,953	(11.5)					
Ceramics	1,711	1,694	(1.0)	6,044	6,290	4.1					
Electro-minerals	2,665	2,754	3.3	10,185	10,258	0.7					
Others	197	168	(15.0)	639	708	10.9					
EBIT margins %											
Abrasives	11.7	14.3	259	12.5	11.3	-112					
Ceramics and Plastics	21.3	28.4	717	17.9	20.9	305					
Electro-minerals	10.2	14.7	444	12.6	10.2	-240					
Source: Company, Anand Rath	i Research										

(Rs m)	Q2 FY20	Q2 FY21	%yoy	FY19	FY20	% yoy
Revenue						
Abrasives	2,101	2,110	0.4	9,209	8,147	-11.5
Ceramics	1,467	1,327	(9.6)	4,985	5,120	2.7
Electro-minerals	1,078	1,078	0.1	4,534	4,109	-9.4
Total	4,646	4,515	(2.8)	18,728	17,376	-7.2
EBIT margins (%)						
Abrasives	13.4	15.2	181	14.1	13.3	-79
Ceramics and Plastics	20.6	25.5	496	16.4	19.5	314
Electro-minerals	5.4	9.7	427	9.8	5.3	-452

(Rs m)	Q2 FY18	Q3 FY18	Q4 FY18	Q1 FY19	Q2 FY19	Q3 FY19	Q4 FY19	Q1 FY20	Q2 FY20	Q3 FY20	Q4 FY20	Q1 FY21	Q2 FY21
Sales	5,872	6,116	6,495	6,343	6,596	6,929	7,021	6,714	6,843	6,494	5,940	4,496	6,920
Material cost	2,060	2,051	2,257	2,197	2,334	2,571	2,448	2,384	2,440	2,253	1,793	1,428	2,463
Employee cost	761	790	801	826	843	791	813	840	917	886	805	824	855
Power and fuel	768	835	896	875	914	1,018	979	955	937	900	925	706	904
Other expenses	1,224	1,403	1,383	1,371	1,421	1,517	1,589	1,583	1,504	1,491	1,392	1,104	1,359
% of sales													
Material cost	35.1	33.5	34.8	34.6	35.4	37.1	34.9	35.5	35.7	34.7	30.2	31.8	35.6
Employee cost	13.0	12.9	12.3	13.0	12.8	11.4	11.6	12.5	13.4	13.6	13.5	18.3	12.3
Power and fuel	13.1	13.7	13.8	13.8	13.9	14.7	13.9	14.2	13.7	13.9	15.6	15.7	13.1
Other expenses	20.8	22.9	21.3	21.6	21.5	21.9	22.6	23.6	22.0	23.0	23.4	24.6	19.6
Margins	18.0	17.0	17.8	16.9	16.4	14.9	17.0	14.2	15.3	14.9	17.3	9.6	19.4

(Rs m)	Q2 FY18	Q3 FY18	Q4 FY18	Q1 FY19	Q2 FY19	Q3 FY19	Q4 FY19	Q1 FY20	Q2 FY20	Q3 FY20	Q4 FY20	Q1 FY21	Q2 FY21
Sales	3,895	4,115	4,493	4,154	4,426	4,641	4,600	4,307	4,401	4,150	3,655	2,381	4,303
Material cost	1,704	1,716	1,851	1,707	1,869	2,063	1,881	1,795	1,804	1,696	1,302	1,104	1,824
Employee cost	427	457	443	476	475	431	439	495	527	527	410	462	483
Power and fuel	365	417	465	445	485	534	465	470	454	429	456	210	390
Other expenses	735	884	918	839	867	889	984	937	944	876	795	512	842
% of sales													
Material cost	43.7	41.7	41.2	41.1	42.2	44.5	40.9	41.7	41.0	40.9	35.6	46.4	42.4
Employee cost	11.0	11.1	9.9	11.5	10.7	9.3	9.5	11.5	12.0	12.7	11.2	19.4	11.2
Power and fuel	9.4	10.1	10.3	10.7	11.0	11.5	10.1	10.9	10.3	10.3	12.5	8.8	9.1
Other expenses	18.9	21.5	20.4	20.2	19.6	19.2	21.4	21.8	21.5	21.1	21.7	21.5	19.6
Margins	17.0	15.6	18.2	16.6	16.5	15.6	18.1	14.2	15.2	15.0	18.9	4.0	17.8

Concall highlights

Abrasives: Mass market, auto sector, exports saw traction

Abrasives outperformed during the quarter led by increased demand for mass-market products. Precision-abrasives saw growth from the auto segment led by greater demand for two-wheelers. This is expected to be healthy in the festival season ahead. In Russia, growth of bonded abrasives is expected to be robust, while coated abrasives would increase, with a greater response from export markets. CUMI America volumes are lower than last year; however H2 is expected to be better than H1. CUMI Middle East grew ~36% y/y led by execution of large project orders. Sterling Abrasives grew ~5% backed by demand from agro-processing and industrials like bearings, gear grinders, etc., doing well. Segment margins improved 260bps y/y to 14.3% backed by certain fixed-cost savings, which are likely to be permanent.

Electro-mineral division (EMD): Better performance in subsidiaries

The EMD was flat standalone, while revenue from subsidiaries was up 5.5% y/y, driven by healthy growth in Volzhsky Abrasives Works, Russia and Foskor Zirconia, South Africa. Volzhsky volumes and realisations saw healthy growth, with all-time high exports and favourable forex. With demand for abrasives reviving, fused alumina performance improved in the second half of Q2. Demand for specialties from Diesel Particulate Filter (DPF) has been better (making up 5% of the segment's revenue); however this can be for a shorter period. The margin improved 450bps y/y led by the better product mix, prudent cost control in the domestic business and Volzhsky's consistent performance.

Ceramics: Drop in standalone revenue offset by strong subsidiary performance

In its standalone business, technical ceramics saw the highest ever volumes in Q2 FY21. Wear ceramics performance continue to do well; however project ordering is muted. To tackle the ongoing weak demand, the company is focusing on repairs and maintenance in various sectors. Refractories had a tepid quarter as steel and the renewables sectors were muted. Healthy sales volumes were seen in metalised cylinders and alternative energy and Q3 is expected to see similar volumes. However, volumes would be lower in Q4 as customer inventory would have already built up. Subsidiary performances were robust with 51% y/y revenue growth. CUMI America ceramics revenue grew 21%. Consolidated segment margin saw an exceptional 710bps y/y expansion to 28.4%, led by cost reduction in wear ceramics and higher volumes in technical ceramics. Management said it is targeting steel and coal mining to expand its scope for wear materials and expects 15% volume growth in technical ceramics.

Demand improving; coming opportunities could bring added business

The overall demand scenario in the home market has improved in certain sectors like auto & auto ancillaries, some areas of real estate (esp. house refurbishing's) and construction. The steel sector too is reviving and greater traction is seen in repairs and maintenance from industries such as coal and power. Project orders were slow; however they expected to revive over H2. Moreover, the shift of demand from China is visible in greater enquiries. The government sops to the electronics sector would be a good opportunity. Currently, the company offers precision abrasives in this sector, which can grow significantly. Also, ceramics, alumina and silicon

carbide (SiC) for chip-making would be the biggest opportunity.

Mixed situation in the global market

The US home market is at a 15-year high leading to greater demand for coated abrasives. Europe saw a tepid quarter; however the automobile picked up somewhat in Q2. EMD and ceramics exports picked up from Russia, coupled with the reviving demand scenario in CUMI America. Australian and Russian subsidiaries' revenues grew respectively 13% and 7% y/y.

Other key highlights

- SiC capacity expansion: Equipment is in place; however, there has been delay in commissioning as German engineers are awaiting easing of international travel. CU managed to commission one line through digital means.
- The Foskor Zirconia deal is expected to be closed in Q3 FY21.
- Working capital improved to 88 days in Sep'20 from 103 in Mar'20. Collections were robust across businesses. Abrasives would see some inventory build-up due to greater demand from end-users.
- Capex during Q2 FY21 was Rs530m. The debt-equity came at 0.03x with debt of Rs659m (vs. Rs630m the quarter prior). Cash was Rs5.6bn, vs. Rs3.9bn in Jun'20.

Valuation

We expect CUMI to be an early beneficiary of normal industrial activity. Ceramics would add to healthy growth because of good demand in Australia and in metallised cylinders. With its focus on operating efficiency, cost control, launches of products in ceramics and quitting the loss-suffering Foskor Zirconia this year, management is confident of steady margins ahead. We maintain a Buy on the stock, with a revised TP of Rs337 (20x FY23e).

Fig 11 – Change in estimates									
	Old Estimates			New Estimates			Change (%)		
Rs mn	FY21e	FY22e	FY23e	FY21e	FY22e	FY23e	FY21e	FY22e	FY23e
Revenue	23,801	27,032	29,979	24,678	28,005	30,800	3.7	3.6	2.7
EBITDA	3,546	4,308	4,956	3,898	4,456	5,082	9.9	3.4	2.5
EPS (Rs)	11.0	13.7	16.0	12.9	14.7	16.8	17.5	7.4	5.1
Source: Ana	and Rathi Res	earch							



Key risks

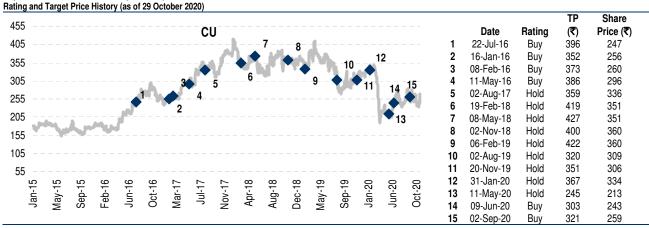
- Highly responsive to growth (or the lack of it) in user industries: Slowdown in user industries could lead to Carborundum Universal's growth contracting.
- Delay in sale of Foskor Zirconia: If management cannot find a suitable buyer, margins would keep shrinking.

Appendix

Analyst Certification

The views expressed in this Research Report accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report. The research analysts are bound by stringent internal regulations and also legal and statutory requirements of the Securities and Exchange Board of India (hereinafter "SEBI") and the analysts' compensation are completely delinked from all the other companies and/or entities of Anand Rathi, and have no bearing whatsoever on any recommendation that they have given in the Research Report.

Important Disclosures on subject companies



Anand Rathi Ratings Definitions

Analysts' ratings and the corresponding expected returns take into account our definitions of Large Caps (>US\$1bn) and Mid/Small Caps (<US\$1bn) as described in the Ratings Table below:

Ratings Guide (12 months)				
, ,	Buy	Hold	Sell	
Large Caps (>US\$1bn)	>15%	5-15%	<5%	
Mid/Small Caps (<us\$1bn)< td=""><td>>25%</td><td>5-25%</td><td><5%</td><td></td></us\$1bn)<>	>25%	5-25%	<5%	

Research Disclaimer and Disclosure inter-alia as required under Securities and Exchange Board of India (Research Analysts) Regulations, 2014

Anand Rathi Share and Stock Brokers Ltd. (hereinafter refer as ARSSBL) (Research Entity) is a subsidiary of Anand Rathi Financial Services Ltd. ARSSBL is a corporate trading and clearing member of Bombay Stock Exchange Ltd, National Stock Exchange of India Ltd. (NSEIL), Multi Stock Exchange of India Ltd (MCX-SX) and also depository participant with National Securities Depository Ltd (NSDL) and Central Depository Services Ltd. ARSSBL is engaged in the business of Stock Broking, Depository Participant and Mutual Fund distributor.

The research analysts, strategists, or research associates principally responsible for the preparation of Anand Rathi research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors and firm revenues.

General Disclaimer: This Research Report (hereinafter called "Report") is meant solely for use by the recipient and is not for circulation. This Report does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. The recommendations, if any, made herein are expression of views and/or opinions and should not be deemed or construed to be neither advice for the purpose of purchase or sale of any security, derivatives or any other security through ARSSBL nor any solicitation or offering of any investment /trading opportunity on behalf of the issuer(s) of the respective security (ies) referred to herein. These information / opinions / views are not meant to serve as a professional investment guide for the readers. No action is solicited based upon the information provided herein. Recipients of this Report should rely on information/data arising out of their own investigations. Readers are advised to seek independent professional advice and arrive at an informed trading/investment decision before executing any trades or making any investments. This Report has been prepared on the basis of publicly available information, internally developed data and other sources believed by ARSSBL to be reliable. ARSSBL or its directors, employees, affiliates or representatives do not assume any responsibility for, or warrant the accuracy, completeness, adequacy and reliability of such information / opinions / views. While due care has been taken to ensure that the disclosures and opinions given are fair and reasonable, none of the directors, employees, affiliates or representatives of ARSSBL shall be liable for any direct, indirect, special, incidental, consequential, punitive or exemplary damages, including lost profits arising in any way whatsoever from the information / opinions / views contained in this Report. The price and value of the investments referred to in this Report and the income from them may go down as well as up, and

Opinions expressed are our current opinions as of the date appearing on this Research only. We do not undertake to advise you as to any change of our views expressed in this Report. Research Report may differ between ARSSBL's RAs and/ or ARSSBL's associate companies on account of differences in research methodology, personal judgment and difference in time horizons for which recommendations are made. User should keep this risk in mind and not hold ARSSBL, its employees and associates responsible for any losses, damages of any type whatsoever.

ARSSBL and its associates or employees may; (a) from time to time, have long or short positions in, and buy or sell the investments in/ security of company (ies) mentioned herein or (b) be engaged in any other transaction involving such investments/ securities of company (ies) discussed herein or act as advisor or lender / borrower to such company (ies) these and other activities of ARSSBL and its associates or employees may not be construed as potential conflict of interest with respect to any recommendation and related information and opinions. Without limiting any of the foregoing, in no event shall ARSSBL and its associates or employees or any third party involved in, or related to computing or compiling the information have any liability for any damages of any kind.

Details of Associates of ARSSBL and Brief History of Disciplinary action by regulatory authorities & its associates are available on our website i.e. www.rathionline.com

Disclaimers in respect of jurisdiction: This report is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or which would subject ARSSBL to any registration or licensing requirement within such jurisdiction(s). No action has been or will be taken by ARSSBL in any jurisdiction (other than India), where any action for such purpose(s) is required. Accordingly, this Report shall not be possessed, circulated and/or distributed in any such country or jurisdiction unless such action is in compliance with all applicable laws and regulations of such country or jurisdiction. ARSSBL requires such recipient to inform himself about and to observe any restrictions at his own expense, without any liability to ARSSBL. Any dispute arising out of this Report shall be subject to the exclusive jurisdiction of the Courts in India.

Statements on ownership and material conflicts of interest, compensation - ARSSBL and Associates

Answers to the Best of the knowledge and belief of ARSSBL/ its Associates/ Research Analyst who is preparing this report

Research analyst or research entity or his associate or his relative has any financial interest in the subject company and the nature of such financial interest.	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have actual/beneficial ownership of one per cent or more securities of the subject company, at the end of the month immediately preceding the date of publication of the research report?	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have actual/beneficial ownership of one per cent or more securities of the subject company	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have any other material conflict of interest at the time of publication of the research report?	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation from the subject company in the past twelve months	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have managed or co-managed public offering of securities for the subject company in the past twelve months	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation for investment banking or merchant banking or brokerage services from the subject company in the past twelve months	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company in the past twelve months	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation or other benefits from the subject company or third party in connection with the research report	No	
ARSSBL/its Associates/ Research Analyst/ his Relative have served as an officer, director or employee of the subject company.	No	

Other Disclosures pertaining to distribution of research in the United States of America

This research report is a product of ARSSBL, which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S. regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of FINRA or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances and trading securities held by a research analyst account.

This report is intended for distribution by ARSSBL only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a 6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this report and return the same to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any U.S. person, which is not the Major Institutional Investor.

In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors, ARSSBL has entered into an agreement with a U.S. registered broker-dealer, Cabrera Capital Markets. ("Cabrera"). Transactions in securities discussed in this research report should be effected through Cabrera or another U.S. registered broker dealer.

- 1. ARSSBL or its Affiliates may or may not have been beneficial owners of the securities mentioned in this report.
- 2. ARSSBL or its affiliates may have or not managed or co-managed a public offering of the securities mentioned in the report in the past 12 months.
- 3. ARSSBL or its affiliates may have or not received compensation for investment banking services from the issuer of these securities in the past 12 months and do not expect to receive compensation for investment banking services from the issuer of these securities within the next three months.
- 4. However, one or more of ARSSBL or its Affiliates may, from time to time, have a long or short position in any of the securities mentioned herein and may buy or sell those securities or options thereon, either on their own account or on behalf of their clients.
- 5. As of the publication of this report, ARSSBL does not make a market in the subject securities.
- 6. ARSSBL or its Affiliates may or may not, to the extent permitted by law, act upon or use the above material or the conclusions stated above, or the research or analysis on which they are based before the material is published to recipients and from time to time, provide investment banking, investment management or other services for or solicit to seek to obtain investment banking, or other securities business from, any entity referred to in this report.
- © 2019. This report is strictly confidential and is being furnished to you solely for your information. All material presented in this report, unless specifically indicated otherwise, is under copyright to ARSSBL. None of the material, its content, or any copy of such material or content, may be altered in any way, transmitted, copied or reproduced (in whole or in part) or redistributed in any form to any other party, without the prior express written permission of ARSSBL. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of ARSSBL or its affiliates, unless specifically mentioned otherwise.

Additional information on recommended securities/instruments is available on request.

ARSSBL registered address: Express Zone, A Wing, 9th Floor, Western Express Highway, Diagonally Opposite Oberoi Mall, Malad (E), Mumbai – 400097. Tel No: +91 22 6281 7000 | Fax No: +91 22 4001 3770 | CIN: U67120MH1991PLC064106.