

Birla Corporation

Estimate change



TP change



Rating change



Bloomberg	BCORP IN
Equity Shares (m)	77
M.Cap.(INRb)/(USD\$)	76.5 / 1
52-Week Range (INR)	1649 / 823
1, 6, 12 Rel. Per (%)	5/-26/-36
12M Avg Val (INR M)	178

Financial Snapshot (INR b)

Y/E MARCH	2022	2023E	2024E
Sales	74.6	87.0	90.6
EBITDA	11.1	10.5	13.9
Adj. PAT	4.3	2.3	4.7
EBITDA Margin (%)	14.9	12.0	15.3
Adj. EPS (INR)	56.0	29.6	61.5
EPS Gr. (%)	-21.0	-47.2	107.8
BV/Sh. (INR)	785	807	856

Ratios

Net D:E	0.5	0.5	0.4
RoE (%)	7.5	3.7	7.4
RoCE (%)	5.5	4.0	6.1
Payout (%)	19.3	24.9	19.5

Valuations

P/E (x)	17.7	33.6	16.2
P/BV (x)	1.3	1.2	1.2
EV/EBITDA(x)	9.7	10.0	7.4
EV/ton (USD)	88	64	63
Div. Yield (%)	1.0	0.7	1.2

Shareholding pattern (%)

As On	Jun-22	Mar-22	Jun-21
Promoter	62.9	62.9	62.9
DII	16.1	16.3	13.8
FII	4.3	4.2	4.0
Others	16.7	16.7	19.4

FII Includes depository receipts

CMP: INR994

TP: INR1,275 (+28%)

Buy

Higher volume and realization drive EBITDA beat

Mukutban plant likely to achieve EBITDA break-even by end-FY23

- Birla Corporation (BCORP)'s 1QFY23 earnings were above our estimate led by higher volume/realization (3%/2% beat); EBITDA/OPM/profit stood at INR2.6b/12%/INR736m (est. INR2.3b/11%/INR418m), respectively.
- The Mukutban plant started commercial production from 30th Apr'22 and should achieve EBITDA break-even by end-FY23. Its cement EBITDA/t would have been INR751 (v/s reported INR645), excluding start-up costs of this plant.
- We raise our FY23E/FY24E EBITDA by 7% each on higher volume/realization, thus driving our EPS increase of 43%/22%, respectively. **We retain our BUY rating, given its attractive valuation (trading at 7.4x FY24E EV/EBITDA).**

Cost escalation hurts profitability; EBITDA/t at INR660

- BCORP's revenue/EBITDA/adjusted PAT stood at INR22b/INR2.6b/INR736m (+26%/-25%/-48% YoY and 4%/12%/76% above our estimates), respectively. Cement realization improved 8% YoY/5% QoQ. Sales volume rose 17% YoY to 3.93mt. Revenue from the Jute segment grew 10% YoY (down 10% QoQ).
- Blended cost of production/t grew 18% YoY, led by a 34% YoY increase in variable cost (due to higher power and fuel prices) and 7% rise in freight cost in 1QFY23. Other expenses/t grew 12% YoY/17% QoQ partly due to start-up cost of the new plant and increased spending on coal mining.
- EBITDA declined 25% YoY and OPM contracted 8pp YoY to 12%. EBITDA/t stood at INR660 v/s INR1,026/INR653 in 1QFY22/4QFY22, respectively. Interest expense and depreciation jumped 10% and 16% YoY, respectively.
- Net debt stood at INR37b v/s INR34b as of Mar'22. Average cost of borrowing was down 65bp YoY to 6.68%.

Highlights from the management commentary

- Capacity utilization (CU) stood at 88% (including Mukutban capacity) v/s 90% in 1QFY22. On a like-for-like basis, CU reached 101% in 1QFY23.
- Coal extraction from captive mine at Sial Ghogri was 19% above its quarterly rated capacity. AFR usage stood at 12% of fuel consumption v/s 4%/7% in 1QFY22/FY22, respectively.

Valuation attractive; maintain BUY

- BCORP has been consistent with its capacity addition plans through both organic and inorganic routes. The management aims to expand the installed capacity to 30mtpa by CY27E (current capacity: 19.5mtpa).
- We expect leverage to improve going forward (1.9x in FY24E v/s 2.8x in FY22). The management's continued focus on capacity expansion should drive a re-rating in its valuation multiples.
- BCORP trades at 7.4x FY24E EV/EBITDA (v/s one-year forward EV/EBITDA of 8x over FY14-22), at a much lower valuation than the average for peer companies with similar capacities. We retain our BUY rating with a revised TP of INR1,275 (up from INR1,145 earlier), valuing it at 9x FY24E EV/EBITDA.

Sanjeev Kumar Singh - Research analyst (Sanjeev.Singh@MotilalOswal.com)

Mudit Agarwal - Research analyst (Mudit.Agarwal@MotilalOswal.com)

Investors are advised to refer through important disclosures made at the last page of the Research Report.

MotilalOswal research is available on www.motilalosal.com/Institutional-Equities, Bloomberg, Thomson Reuters, Factset and S&P Capital.

Consolidated performance

(INR b)

Y/E March	FY22				FY23				FY22	FY23E	FY23	Var.
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q			1Q	(%)
Cement Sales (MT)	3.35	3.27	3.35	4.24	3.93	3.62	3.90	4.43	14.22	15.88	3.82	3
YoY Change (%)	39.0	0.3	(5.6)	1.7	17.3	10.6	16.6	4.5	6.2	11.7	13.9	
Cement Realization	4,943	4,878	4,934	5,071	5,344	5,244	5,174	5,070	4,961	5,203	5,251	2
YoY Change (%)	0.2	(0.0)	3.4	4.4	8.1	7.5	4.9	(0.0)	2.2	4.9	6.2	
QoQ Change (%)	1.8	(1.3)	1.2	2.8	5.4	(1.9)	(1.3)	(2.0)			3.5	
Net Sales	17.5	17.0	17.5	22.6	22.0	20.1	21.2	23.7	74.6	87.0	21.1	17.5
YoY Change (%)	43.1	2.6	(1.5)	6.2	26.0	18.3	21.3	4.5	10.0	16.6	20.7	43.1
Total Expenditure	14.1	14.3	15.3	19.9	19.4	18.2	18.8	20.1	63.5	76.5	18.8	14.1
EBITDA	3.4	2.7	2.2	2.8	2.6	1.9	2.4	3.5	11.1	10.5	2.3	3.4
Margin (%)	19.6	15.7	12.7	12.2	11.8	9.4	11.5	14.9	14.9	12.0	11.0	19.6
Depreciation	1.0	1.0	1.0	1.0	1.1	1.3	1.3	1.3	4.0	5.0	1.2	1.0
Interest	0.6	0.6	0.6	0.5	0.7	0.8	0.8	0.8	2.4	3.1	0.7	0.6
Other Income	0.1	0.1	0.1	0.7	0.1	0.2	0.2	0.2	1.0	0.7	0.1	0.1
Profit before Tax	1.9	1.2	0.7	1.9	0.9	0.0	0.5	1.7	5.7	3.1	0.6	1.9
EO (Income)/Expense	-	-	(70)	341	117	-	-	-	271	117	-	-
Profit before Tax after EO	1.9	1.2	0.7	1.6	0.8	0.0	0.5	1.7	5.4	3.0	0.6	1.9
Tax	0.5	0.3	0.1	0.5	0.2	0.0	0.1	0.5	1.4	0.8	0.1	0.5
Rate (%)	25.7	28.2	19.2	29.5	19.7	26.0	26.0	30.8	26.5	27.0	26.0	25.7
Reported PAT	1.4	0.9	0.6	1.1	0.6	0.0	0.4	1.1	4.0	2.2	0.4	1.4
Adj. PAT	1.4	0.9	0.7	1.4	0.7	0.0	0.4	1.1	4.3	2.3	0.4	1.4
Margin (%)	8.1	5.0	3.8	6.1	3.3	0.0	1.9	4.8	5.8	2.6	2.0	8.1
YoY Change (%)	115.3	(48.7)	(55.7)	(16.0)	(48.0)	(101.1)	(38.8)	(17.0)	(21.0)	(47.2)	(70.4)	115.3
Per tonne analysis (INR)*												
Blended Realization	5,221	5,192	5,224	5,340	5,608	5,554	5,436	5,339	5,247	5,478	5,531	1
YoY Change (%)	3.0	2.3	4.4	4.4	7.4	7.0	4.1	(0.0)	3.5	4.4	5.9	
Raw Material	477	772	510	1,110	565	765	665	1,076	741	778	900	(37)
Staff Cost	324	341	343	267	325	337	320	266	315	310	328	(1)
Power and Fuel	1,113	1,035	1,383	1,062	1,564	1,664	1,514	999	1,142	1,417	1,412	11
Transport and Forwarding	1,242	1,185	1,238	1,252	1,330	1,200	1,260	1,228	1,230	1,255	1,275	4
Other Exp.	1,039	1,042	1,087	997	1,163	1,063	1,050	971	1,038	1,059	1,010	15
Total Expenditure	4,196	4,375	4,560	4,688	4,948	5,029	4,809	4,541	4,466	4,819	4,924	0
EBITDA/t	1,026	817	664	653	660	525	627	797	781	659	607	9

Source: Company, MOFSL Estimates; Note: ** including non-cement business



Highlights from the management commentary

- **Mukutban plant:** Mukutban plant started commercial production from 30th Apr '22 and should become EBITDA break-even by end-FY23. This plant is eligible for 100% reimbursement of SGST, electricity duty and royalty on limestone. Incentive on account of SGST reimbursement will start to accrue after exhaustion of the input tax credit on capital expenditure from FY24. It will significantly boost the Company's profitability. Cement EBITDA/t would have been at INR751 (v/s reported INR645/t) excluding start-up costs of this plant.
- **Coal, power cost and cost saving initiatives:** Cost of power generation at captive power plants at Satna and Chanderia plants shot up sharply (INR433/t of production v/s INR372 last year) due to poor availability of linkage coal. Coal extraction from captive mine at Sial Ghogri was 19% above its quarterly rated capacity of 75,000tons. This led to higher cost of extraction of INR430m v/s INR140m in 1QFY22. AFR usage was at 12% of fuel consumption v/s 4%/7% in 1QFY22/FY22. Green power consumption was at 22.8% v/s 22.3%/21.8% in 1QFY22/FY22. Fly ash transportation through wagons was increased which led to INR35/t YoY cost reduction to INR437/t.

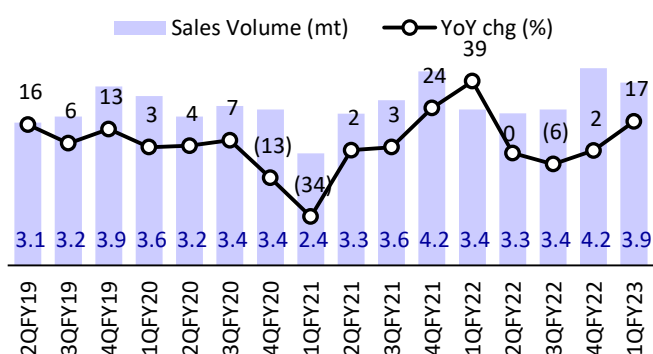
- **Sales-mix:** Blended cement sales was at 91% v/s 92% in 1QFY22. Trade sales were at 79% v/s 83% in 1QFY22 with premium cement contributing to 47% of trade sales v/s 51% last year. Sales volume of premium cement was up 3% YoY while that of blended cement was up 15%.
- **Capacity utilization** was at 88% v/s 90% in 1QFY22. On a like-for like basis CU reached at 101%. The company registered volume growth in all its key markets in north, central and east India, driven largely by infrastructure sector
- **Net debt** stood at INR37b v/s INRINR34b in Mar-22. Cost of borrowing was at 6.68%, down 65bps YoY.
- **Jute segment** reported 17% YoY decline in cash profit to INR85.2m in 1QFY23, due to a sharp increase in raw jute prices (rose 11.4% YoY). The division continues to focus on exports of value-added jute products as a measure to reduce dependence on government orders at regulated prices.

Exhibit 1: Revisions to our estimates

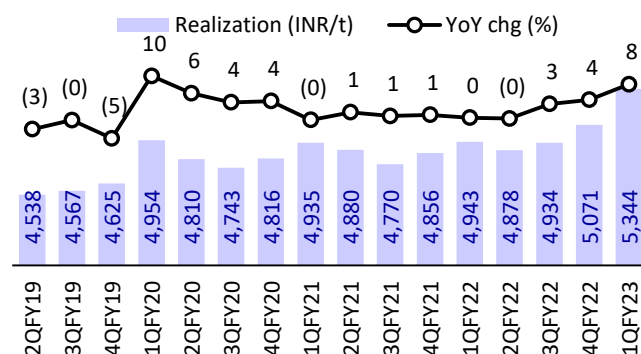
(INR b)	Revised		Old		Change (%)	
	FY23E	FY24E	FY23E	FY24E	FY23E	FY24E
Revenue	87.0	90.6	84.6	88.9	3	2
EBITDA	10.5	13.9	9.8	12.9	7	7
PAT	2.3	4.7	1.6	3.8	44	24
EPS (INR)	29.6	61.5	20.5	49.6	44	24

Source: Company, MOFSL estimates

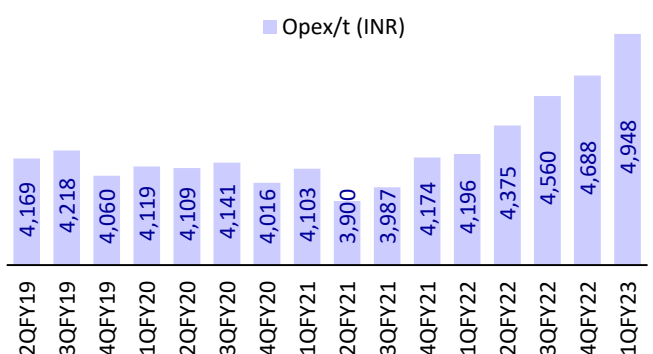
Story in charts

Exhibit 2: Sales volume up 17% YoY but declined 7% QoQ

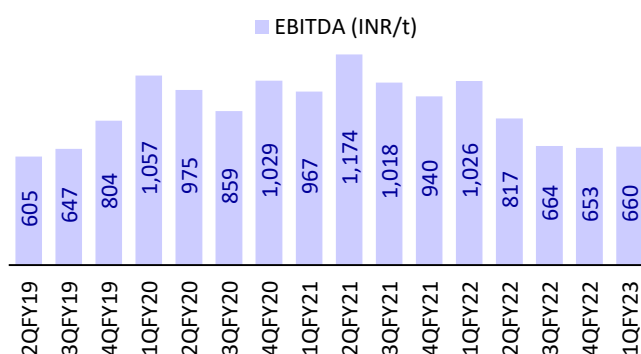
Source: Company, MOFSL

Exhibit 3: Cement realization up 8% YoY and 5% QoQ

Source: Company, MOFSL

Exhibit 4: OPEX/t increases by 18% YoY....

Source: Company, MOFSL

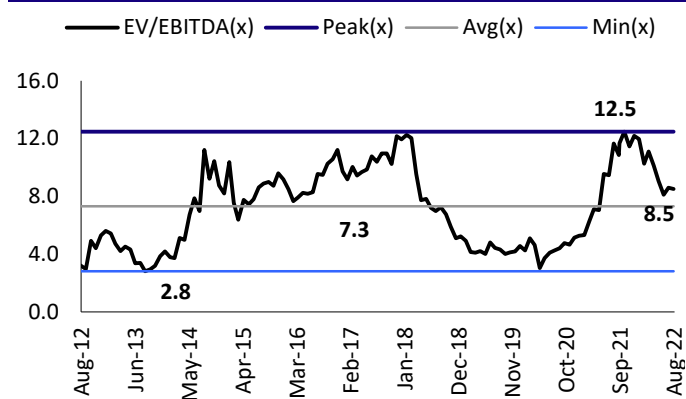
Exhibit 5:leading to 36% YoY EBITDA/t drop

Source: Company, MOFSL

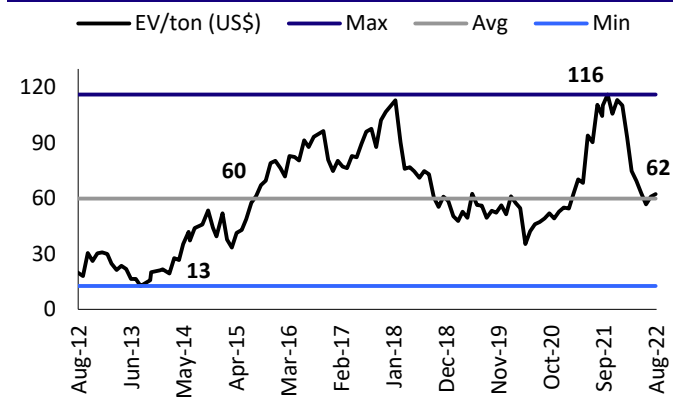
Exhibit 6: Key performance indicators – per ton analysis

INR/t	1QFY23	1QFY22	YoY (%)	4QFY22	QoQ (%)
Blended realization	5,608	5,221	7	5,340	5
RM Cost	565	477	18	1,110	(49)
Employee Expenses	325	324	0	267	22
Power, Oil, and Fuel	1,564	1,113	41	1,062	47
Freight and Handling Outward	1,330	1,242	7	1,252	6
Other Expenses	1,163	1,039	12	997	17
Total Expenses	4,948	4,196	18	4,688	6
EBITDA	660	1,026	(36)	653	1

Source: Company, MOFSL

Exhibit 7: One-year forward EV/EBITDA trend

Source: Company, MOFSL

Exhibit 8: One-year forward EV/t trend

Source: Company, MOFSL

Financials and valuations

Consolidated Income Statement

	(INR m)							
Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Net Sales	43,477	57,342	65,487	69,157	67,855	74,612	87,003	90,609
Change (%)	33.0	31.9	14.2	5.6	-1.9	10.0	16.6	4.1
Total Expenditure	37,241	49,275	56,001	55,797	54,163	63,512	76,534	76,758
EBITDA	6,235	8,066	9,486	13,360	13,691	11,100	10,470	13,851
Margin (%)	14.3	14.1	14.5	19.3	20.2	14.9	12.0	15.3
Depreciation	2,555	3,322	3,391	3,519	3,708	3,969	4,966	5,190
EBIT	3,680	4,745	6,095	9,841	9,984	7,131	5,504	8,660
Int. and Finance Charges	2,768	3,776	3,705	3,877	2,963	2,427	3,122	2,989
Other Income - Rec.	1,459	755	785	851	673	988	696	725
PBT after EO	2,303	1,598	3,174	6,815	8,375	5,421	2,961	6,396
Change (%)	14.6	-30.6	98.6	114.7	22.9	-35.3	-45.4	116.0
Tax	108	59	617	1,763	2,074	1,435	800	1,663
Tax Rate (%)	4.7	3.7	19.4	25.9	24.8	26.5	27.0	26.0
Reported PAT	2,195	1,540	2,557	5,052	6,301	3,986	2,161	4,733
Extra-Ordinary Expenses	68	124.8	0.0	0.0	-681.1	270.7	116.5	0.0
PAT Adjusted for EO Items	2,263	1,664	2,557	5,052	5,460	4,313	2,278	4,733
Change (%)	13.8	-26.4	53.6	97.6	8.1	-21.0	-47.2	107.8
Margin (%)	5.2	2.9	3.9	7.3	8.0	5.8	2.6	5.2

Balance Sheet

	(INR m)							
Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Equity Share Capital	770	770	770	770	770	770	770	770
Reserves	32,092	42,028	44,182	47,291	54,090	59,718	61,341	65,150
Net Worth	32,862	42,798	44,952	48,061	54,860	60,488	62,111	65,920
Loans	40,705	38,951	40,492	42,820	40,464	42,080	40,080	38,580
Deferred Liabilities	5,645	7,452	7,422	8,568	8,668	9,722	9,722	9,722
Capital Employed	79,212	89,201	92,866	99,449	1,03,992	1,12,291	1,11,913	1,14,222
Gross Block	67,689	81,071	83,400	87,430	91,087	97,586	1,24,597	1,28,597
Less: Accum. Deprn.	4,042	7,361	10,738	14,158	17,852	21,821	26,787	31,978
Net Fixed Assets	63,647	73,710	72,662	73,273	73,235	75,765	97,809	96,619
Capital WIP	8,034	7,599	9,119	16,020	21,048	25,511	3,000	3,000
Investments	5,644	6,723	8,769	8,363	7,526	10,093	10,093	10,093
Curr. Assets	19,653	22,717	22,765	24,098	27,147	27,147	27,650	28,086
Inventory	6,302	6,870	7,830	7,876	8,101	8,200	8,700	8,608
Account Receivables	1,325	1,914	2,622	2,504	2,795	3,028	3,306	3,171
Cash and Bank Balance	3,125	2,198	1,390	2,558	1,773	1,380	1,828	2,077
Others	8,901	11,735	10,924	11,160	14,479	14,539	13,815	14,230
Curr. Liability and Prov.	17,766	21,548	20,450	22,306	24,964	26,225	26,640	23,576
Account Payables	17,215	21,056	19,911	21,637	24,230	25,453	26,101	22,652
Provisions	551	492	538	669	734	772	539	924
Net Current Assets	1,887	1,169	2,316	1,793	2,184	922	1,010	4,510
Appl. of Funds	79,212	89,201	92,866	99,449	1,03,992	1,12,291	1,11,913	1,14,222

Source: Company, MOFSL Estimates

Financials and valuations

Ratios

Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
Basic (INR)								
EPS	29.4	21.6	33.2	65.6	70.9	56.0	29.6	61.5
Cash EPS	62.6	64.7	77.2	111.3	119.0	107.6	94.1	128.9
BV/Share	426.7	555.8	583.7	624.1	712.4	785.5	806.5	856.0
DPS	6.5	6.5	7.5	7.5	10.0	10.0	7.0	12.0
Payout (%)	26.5	37.8	26.2	13.3	12.2	19.3	24.9	19.5
Valuation (x)								
P/E			29.9	15.2	14.0	17.7	33.6	16.2
Cash P/E			12.9	8.9	8.3	9.2	10.6	7.7
P/BV			1.7	1.6	1.4	1.3	1.2	1.2
EV/Sales			1.5	1.3	1.3	1.1	1.2	1.1
EV/EBITDA			11.3	8.1	7.9	9.7	10.0	7.4
EV/t - Cap (USD)			88	89	88	88	64	63
Dividend Yield (%)			0.8	0.8	1.0	1.0	0.7	1.2
Return Ratios (%)								
RoE	7.3	4.4	5.8	10.9	10.6	7.5	3.7	7.4
RoCE	8.2	6.3	6.1	8.2	7.9	5.5	4.0	6.1
RoIC	8.6	6.8	6.7	10.0	10.3	7.0	4.7	6.5
Working Capital Ratios								
Inventory (Days)	53	44	44	42	44	40	37	35
Debtor (Days)	11	12	15	13	15	15	14	13
Working Capital Turnover (Days)	0.5	0.6	0.7	0.7	0.7	0.7	0.8	0.8
Leverage Ratio								
Current ratio	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.2
Debt/Equity (x)	1.2	0.9	0.9	0.9	0.7	0.7	0.6	0.6

Cash Flow Statement

(INR m)

Y/E March	FY17	FY18	FY19	FY20	FY21	FY22	FY23E	FY24E
OP/(Loss) before Tax	2,303	1,598	3,174	6,815	7,126	5,378	2,961	6,396
Depreciation	2,555	3,322	3,391	3,519	3,708	3,969	4,966	5,190
Interest and Finance Charges	2,768	3,776	3,705	3,877	2,963	2,427	3,122	2,989
Direct Taxes Paid	-505	-552	-469	-418	-843	-610	-800	-1,663
(Inc.)/Dec. in WC	1,066	481	1,309	207	-201	-2	361	-3,251
CF from Operations	8,187	8,625	11,111	14,000	12,752	11,162	10,610	9,662
Others	-1,414	-577	-470	-588	532	-770	0	0
CF from Operating incl. EO	6,773	8,049	10,641	13,412	13,284	10,392	10,610	9,662
(Inc.)/Dec. in FA	-2,041	-2,754	-4,030	-9,860	-8,028	-7,762	-4,500	-4,000
Free Cash Flow	4,732	5,295	6,611	3,552	5,256	2,629	6,110	5,662
(Pur.)/Sale of Investments	13,119	-541	-1,521	-446	2,438	-1,269	0	0
Others	-21,163	-129	-550	74	-1,699	950	0	0
CF from Investments	-10,085	-3,423	-6,101	-10,232	-7,289	-8,082	-4,500	-4,000
Issue of Shares	0	0	0	0	0	0	0	0
Inc./(Dec.) in Debt	6,102	-1,391	-1,297	1,860	-2,252	1,246	-2,000	-1,500
Interest Paid	-2,744	-3,558	-3,448	-3,872	-3,493	-3,179	-3,122	-2,989
Dividend Paid	-462	-501	-501	0	-1,036	-770	-539	-924
Others	-94	-102	-103	0	0	0	0	0
CF from Fin. Activity	2,803	-5,552	-5,349	-2,012	-6,781	-2,703	-5,661	-5,413
Inc./Dec. in Cash	-509	-926	-808	1,169	-786	-393	449	248
Opening Balance	3,634	3,125	2,198	1,390	2,559	1,772	1,380	1,828
Closing Balance	3,125	2,198	1,390	2,559	1,772	1,380	1,828	2,077

Source: Company, MOFSL estimates

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	< - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst is inconsistent with the investment rating legend for a continuous period of 30 days, the Research Analyst shall within following 30 days take appropriate measures to make the recommendation consistent with the investment rating legend.

Disclosures

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations).

Motilal Oswal Financial Services Ltd. (MOFSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Investment Advisory Services, Depository participant services & distribution of various financial products. MOFSL is a subsidiary company of Passionate Investment Management Pvt. Ltd.. (PIMPL). MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOFSL (erstwhile Motilal Oswal Securities Limited - MOSL) is registered with the Securities & Exchange Board of India (SEBI) and is a registered Trading Member with National Stock Exchange of India Ltd. (NSE) and Bombay Stock Exchange Limited (BSE), Multi Commodity Exchange of India Limited (MCX) and National Commodity & Derivatives Exchange Limited (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) National Securities Depository Limited (NSDL), NERL, COMRIS and CCRL and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products and Insurance Regulatory & Development Authority of India (IRDA) as Corporate Agent for insurance products. Details of associate entities of Motilal Oswal Financial Services Limited are available on the website at <http://onlinereports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf>

MOFSL and its associate company(ies), their directors and Research Analyst and their relatives may; (a) from time to time, have a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein. (b) be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report

MOFSL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that MOFSL may have a potential conflict of interest that may affect the objectivity of this report. Compensation of Research Analysts is not based on any specific merchant banking, investment banking or brokerage service transactions. Details of pending Enquiry Proceedings of Motilal Oswal Financial Services Limited are available on the website at <https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx>

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOFSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOFSL research activity and therefore it can have an independent view with regards to Subject Company for which Research Team have expressed their views.

Regional Disclosures (outside India)

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 MOFSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY-301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Securities (SEBI Reg No. INH000000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S.

Motilal Oswal Financial Services Limited (MOFSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOFSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act") and together with the 1934 Act, the "Acts), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOFSL, including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOFSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited. ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

In Singapore, this report is being distributed by Motilal Oswal Capital Markets Singapore Pte Ltd ("MOCMSPL") (Co.Reg. NO. 201129401Z) which is a holder of a capital markets services license and an exempt financial adviser in Singapore. As per the approved agreement under Paragraph 9 of Third Schedule of Securities and Futures Act (CAP 289) and Paragraph 11 of First Schedule of Financial Advisors Act (CAP 110) provided to MOCMSPL by Monetary Authority of Singapore. Persons in Singapore should contact MOCMSPL in respect of any matter arising from, or in connection with this report/publication/communication. This report is distributed solely to persons who qualify as "Institutional Investors", of which some of whom may consist of "accredited" institutional investors as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Accordingly, if a Singapore person is not or ceases to be such an institutional investor, such Singapore Person must immediately discontinue any use of this Report and inform MOCMSPL.

Specific Disclosures

- 1 MOFSL, Research Analyst and/or his relatives does not have financial interest in the subject company, as they do not have equity holdings in the subject company.
- 2 MOFSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- 3 MOFSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 4 MOFSL, Research Analyst and/or his relatives do not have material conflict of interest in the subject company at the time of publication of research report
- 5 Research Analyst has not served as director/officer/employee in the subject company
- 6 MOFSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 7 MOFSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- 8 MOFSL has not received compensation for other than investment banking/merchant banking/brokerage services from the subject company in the past 12 months
- 9 MOFSL has not received any compensation or other benefits from third party in connection with the research report
- 10 MOFSL has not engaged in market making activity for the subject company

The associates of MOFSL may have:

- financial interest in the subject company
- actual/beneficial ownership of 1% or more securities in the subject company
- received compensation/other benefits from the subject company in the past 12 months
- other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.
- acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies)
- received compensation from the subject company in the past 12 months for investment banking / merchant banking / brokerage services or from other than said services.

The associates of MOFSL has not received any compensation or other benefits from third party in connection with the research report

Above disclosures include beneficial holdings lying in demat account of MOFSL which are opened for proprietary investments only. While calculating beneficial holdings, It does not consider demat accounts which are opened in name of MOFSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOFSL also earns DP income from clients which are not considered in above disclosures.

Analyst Certification

The views expressed in this research report accurately 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.

Terms & Conditions:

This report has been prepared by MOFSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOFSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other 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. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOFSL will not treat recipients as customers by virtue of their receiving this report.

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, another derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alternations to this statement as may be required from time to time without any prior approval. MOFSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOFSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed 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, regulation or which would subject MOFSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, not its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOFSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOFSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOFSL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 71934200/ 022-71934263; Website www.motilaloswal.com.CIN no.: L67190MH2005PLC153397. Correspondence Office Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad(West), Mumbai- 400 064. Tel No: 022 7188 1000.

Registration Nos.: Motilal Oswal Financial Services Limited (MOFSL)*: INZ000158836(BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; Research Analyst: INH000000412. AMFI: ARN - 146822; Investment Adviser: INA000007100; Insurance Corporate Agent: CA0579;PMS:INP000006712. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP000000670); PMS and Mutual Funds are offered through MOAMC which is group company of MOFSL. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) is offered through MOWML, which is a group company of MOFSL. Motilal Oswal Financial Services Limited is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance Products and IPOs. Real Estate is offered through Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. which is a group company of MOFSL. Private Equity is offered through Motilal Oswal Private Equity Investment Advisors Pvt. Ltd which is a group company of MOFSL. Research & Advisory services is backed by proper research. Please read the Risk Disclosure Document prescribed by the Stock Exchanges carefully before investing. There is no assurance or guarantee of the returns. Investment in securities market is subject to market risk, read all the related documents carefully before investing. Details of Compliance Officer: Name: Neeraj Agarwal, Email ID: na@motilaloswal.com, Contact No.: 022-71881085.

* MOSL has been amalgamated with Motilal Oswal Financial Services Limited (MOFSL) w.e.f August 21, 2018 pursuant to order dated July 30, 2018 issued by Hon'ble National Company Law Tribunal, Mumbai Bench.