

Estimate change



TP change



Rating change



	JSW IN
Bloomberg Equity Shares (m)	1,640
M.Cap.(INRb)/(USD\$b)	66.8 / 0.9
52-Week Range (INR)	80 / 35
1, 6, 12 Rel. Per (%)	-4/-19/-19
12M Avg Val (INR M)	56

Financials & Valuations (INR b)

Y/E MARCH	2020	2021E	2022E
Sales	82.7	77.6	86.1
EBITDA	29.6	27.3	27.9
Adj. PAT	8.3	7.0	8.6
EBITDA Margin (%)	35.7	35.2	32.4
Cons. Adj. EPS (INR)	5.1	4.3	5.2
EPS Gr. (%)	20.0	-15.5	22.1
BV/Sh. (INR)	71.0	72.7	75.4

Ratios

Net D:E	0.8	0.7	0.6
RoE (%)	7.1	6.0	7.1
RoCE (%)	7.8	7.2	7.7
Payout (%)	39.3	46.5	38.1

Valuations

P/E (x)	8.0	9.5	7.8
P/BV (x)	0.6	0.6	0.5
EV/EBITDA(x)	5.6	5.5	4.8
Div. Yield (%)	2.5	6.1	6.1
FCF Yield (%)	29.4	36.6	38.1

Shareholding pattern (%)

As On	Mar-20	Dec-19	Mar-19
Promoter	37.2	36.2	33.0
DII	27.8	26.7	24.9
FII	18.6	21.0	26.6
Others	16.3	16.1	15.5

FII Includes depository receipts

CMP: INR41
TP: INR64 (+57%)
Buy

Healthy growth driven by better standalone perf

Kamalanga acquisition on hold; Sticking with cash in uncertain times

- JSW Energy (JSWE)'s results reflected an improved performance in the S/A business YoY, aided by lower interest costs on account of debt reduction. At a consol level, EBITDA rose 21% in 4QFY20.
- The acquisition of Kamalanga has been put on hold given the uncertainty surrounding recovery in power demand. While we see prudence in JSWE wanting to hold on to cash in the near term, if growth opportunities do not emerge or dividend payout is not increased, concerns may arise over capital allocation. Although, the recent fall in stock price implies the stock remains attractive. **Maintain Buy**

Healthy growth in S/A aided by debt reduction

- JSWE 4QFY20 EBITDA increased 21% YoY to INR5.8b (our est.: INR5.6b) on account of higher short-term sales and lower base of the previous year for S/A (due to the timing effect in coal prices and tariff, in our view). Short-term sales volume rose 30% YoY to 736MU. Interest cost declined 10% YoY to INR2.5b given the debt reduction. PBT came in at INR0.9b (v/s INR0.1b in 4QFY19). For FY20, EBITDA/Adj. PAT was up 4%/20% YoY at INR29.6b/8.3b respectively. FY20 PAT was aided by lower interest costs (INR1.4b decline).
- Hydro generation was up 8% YoY, but EBITDA remained flat YoY due to the impact of new CERC norms. EBITDA at Barmer was up 3% YoY to INR2.4b.
- Reported PAT for 4QFY20 stood at INR1.1b (4QFY19: INR0.04b), supported by lower taxes and interest costs, and was higher than our est. of INR0.2b
- Net debt (incl. acceptances) reduced to INR98.5b (v/s INR113.8b in FY19). Receivables, though, have stretched to 93 days (v/s 57 days in FY19).

Management commentary: Acquisition on hold

- Given the uncertain situation due to lockdown, JSWE has put the acquisition of the Kamalanga project on hold. As per mgmt., there is low visibility on whether the transaction would happen.
- JSWE is re-evaluating its plans for expansion in the Thermal Generation space. The company noted it may focus more on additions within Renewables instead.
- The co. is focused on improving collections during this lockdown period. JSWE noted its receivables have fallen ~15% from March levels.

Healthy cash flow generation, with large tied-up capacity; Maintain Buy

- The Kamalanga acquisition has been put on hold given the uncertainty around recovery in power demand. Furthermore, there has been no progress on the Ind Barath acquisition. While we see prudence in JSWE wanting to hold on to cash, if growth opportunities do not emerge or dividend payout is not increased, concerns may arise over capital allocation. However, with the recent fall in stock prices, JSWE remains attractive (FY21: 0.6x P/BV; 9.5x P/E).
- We estimate 16% decline in PAT for FY21, building in lower merchant volumes/realizations. However, strong FCF generation would continue, aided by tied-up capacities. ~80% of JSWE's 4.4GW capacity is under long-term PPAs, which generate strong free cash flows. Furthermore, these tied-up PPAs contribute ~95% to the company's EBITDA. **Maintain Buy, with TP of INR64/sh.**

Quarterly performance (consolidated) – INR m

Y/E March	FY19				FY20				FY19	FY20	FY20	vs Est
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Net Sales	23,606	24,308	24,217	19,246	24,122	21,186	19,486	17,934	91,376	82,727	18,425	-3
YoY Change (%)	5.8	18.6	21.5	8.4	2.2	-12.8	-19.5	-6.8			-4.3	
Total Expenditure	15,843	15,694	16,830	14,478	16,029	11,838	13,106	12,186	62,845	53,159	12,937	-6
EBITDA	7,762	8,613	7,387	4,768	8,093	9,348	6,380	5,748	28,531	29,569	5,487	5
Margins (%)	32.9	35.4	30.5	24.8	33.5	44.1	32.7	32.1	31.2	35.7	29.8	
Depreciation	2,899	2,933	2,933	2,872	2,913	2,943	2,932	2,893	11,637	11,681	2,922	-1
Interest	3,130	3,083	2,948	2,764	2,698	2,722	2,611	2,480	11,924	10,511	2,773	-11
Other Income	673	1,370	701	936	518	1,133	676	542	3,680	2,870	473	15
PBT before EO expense	2,407	3,967	2,208	68	3,000	4,816	1,513	917	8,650	10,247	266	245
Extra-Ord expense	0	0	0	0	0	0	-2,656	0	0	-2,656	0	
PBT	2,407	3,967	2,208	68	3,000	4,816	4,170	917	8,650	12,904	266	245
Tax	236	1,125	638	126	883	1,338	125	26	2,124	2,372	53	
Rate (%)	9.8	28.3	28.9	185.6	29.4	27.8	3.0	2.8	24.6	18.4	19.8	
MI and Associates	-121	-317	109	-97	-327	-51	103	-193	-426	-468	60	
Reported PAT	2,292	3,160	1,461	39	2,444	3,530	3,941	1,084	6,951	10,999	152	611
Adj PAT	2,292	3,160	1,461	39	2,444	3,530	1,285	1,084	6,951	8,343	152	611
YoY Change (%)	5.5	6.4	211.8	-106.1	6.6	11.7	-12.1	2,702	40.2	20.0	294	

Source: MOFSL, Company

Key performance parameters – Volume and realization

		FY19				FY20				YoY	QoQ
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
Standalone											
Units	MU	2,992	2,464	2,971	2,442	2,616	2,482	2,555	2,298	-5.9	-10.1
Realization	INR/kWh	4.38	4.87	5.04	4.55	4.37	4.28	4.27	4.42	-2.8	3.5
Fuel cost	INR/kWh	3.51	3.85	3.70	3.53	3.14	3.12	3.16	2.93	-17.1	-7.4
Other cost	INR/kWh	0.27	0.33	0.29	0.44	0.29	0.37	0.29	0.45	3.6	55.9
EBITDA	INR/kWh	0.61	0.69	1.05	0.58	0.94	0.80	0.83	1.04	78.8	26.5
EBITDA	INR m	1,817	1,690	3,110	1,426	2,459	1,975	2,108	2,400	68.3	13.8
Barmer											
Units	MU	1,651	1,531	1,457	1,377	1,379	1,281	1,271	1,346	-2.3	5.9
Realization	INR/kWh	3.86	4.18	4.51	4.59	6.26	4.19	5.00	4.62	0.7	-7.7
EBITDA	INR/kWh	1.61	1.46	1.85	1.70	1.82	2.14	2.17	1.80	5.8	-17.2
EBITDA	INR m	2,650	2,240	2,700	2,340	2,510	2,740	2,760	2,420	3.4	-12.3
Hydro											
Units	MU	1,443	2,675	689	397	1,868	2,926	730	429	8.1	-41.2
Realization	INR/kWh	2.54	2.03	2.96	3.30	2.09	1.77	2.95	3.54	7.4	20.3
EBITDA	INR/kWh	2.34	1.86	2.41	2.57	1.79	1.66	2.33	2.38	-7.5	2.1
EBITDA	INR m	3,370	4,980	1,660	1,020	3,340	4,850	1,700	1,020	0.0	-40.0
Consolidated											
Realization	INR/kWh	3.88	3.64	4.73	4.56	4.11	3.16	4.28	4.40	-3.5	3.0
Fuel (ex-hydro)	INR/kWh	2.99	3.33	3.27	3.12	3.42	2.60	2.91	2.73	-12.3	-6.2

Source: Company, MOFSL

Exhibit 1: Key performance parameters – Generation and PLF

		FY19				FY20				YoY	QoQ
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
Ratnagiri	MU	2,032	1,559	1,969	1,793	1,954	1,781	1,753	1,705	-4.9	-2.7
Deemed PLF	%	85.0	64.0	83.7	80.0	81.7	73.7	80.8	64.9		
Vijaynagar	MU	960	905	1,002	649	662	701	802	593	-8.6	-26.1
Deemed PLF	%	55.0	52.0	57.0	37.0	38.2	40.1	45.9	31.5		
Barmer	MU	1,651	1,531	1,457	1,377	1,379	1,281	1,271	1,346	-2.3	5.9
Deemed PLF	%	86.0	85.0	79.5	86.0	80.8	60.0	82.3	56.9		
Hydro	MU	1,443	2,675	689	397	1,868	2,926	730	429	8.1	-41.2
Deemed PLF	%	50.7	94.0	24.2	14.0	66.3	102.7	25.6	15.1		
Total		6,086	6,670	5,117	4,216	5,867	6,701	4,556	4,073	-3.4	-10.6

Source: MOFSL, Company

Conference call takeaways

- **Kamalanga acquisition:** Given the ongoing uncertainty due to lockdown, the acquisition of the GMR Kamalanga project has been put on hold. With the growth trajectory seemingly bleak, there is low visibility on whether the transaction would happen. Furthermore, the company is re-evaluating its expansion plans within Thermal Generation. JSWE did not provide for advances/guarantees, and no break fee was in place.
- **Ind Barath acquisition:** Due to lockdown, there has been no progress on the Ind Barath acquisition. The proposal to the acquisition has been submitted to NCLT.
- Lower O&M costs and better fuel costs have helped the company achieve better profitability. This is the third consecutive year of decrease in O&M costs by the company.
- Net debt (incl. acceptances) for JSWE stood at INR89.5b for FY20. The company expects a reset in interest rates may reduce its interest cost by 1%.
- JSWE estimates capex for plant maintenance to be <INR1b. The company is concentrating on reducing capex and O&M costs.
- JSWE is re-evaluating its plans for expansion in the Thermal Generation space. The company noted it may focus more on additions within Renewables instead.
- The majority of its dues are from the Jodhpur DISCOM. However, JSWE is focused on improving collections during the lockdown period. The co. noted its overall receivables were down ~15%, with the overdues amount down ~25% from March levels.

Exhibit 2: JSWE's portfolio of assets

S.N.	Asset	Location		Fuel	Capacity (MW)	LT. PPA (MW)			Open (MW)	PLF (%)			
		State	Region			free	PPA	Total		FY18	FY19	FY20	FY21E
1	Vijaynagar	K'taka	SR	Imp. coal	860		316	316	544	53.3	50.5	39.5	38.0
2	Ratnagiri	Maha.	WR	Imp. coal	1,200		873	873	328	64.0	76.3	75.3	72.0
3	RajWest	Raj.	NR	Lignite	1,080		1,080	1,080		72.5	70.8	61.9	60.0
4	Baspa-II	HP	NR	Hydro	300	36	264	300		50.9	50.0	60.0	55.0
5	K. Wangtoo	HP	NR	Hydro	1,000	120	880	1,000		52.2	52.0	60.2	53.0
					4,440	156	3,413	3,569	872	56.1	56.6	54.4	51.2

Source: MOFSL, Company

Valuation and view

- The Kamalanga acquisition has been put on hold given the uncertainty around recovery in power demand. Furthermore, there has been no progress on the Ind Barath acquisition. While we see prudence in JSWE wanting to hold on to cash, if growth opportunities do not emerge or dividend payout is not increased, concerns may arise over capital allocation. However, with the recent fall in stock price, JSWE remains attractive (FY21: 0.6x P/BV; 9.5x P/E).
- We estimate 16% decline in PAT for FY21, building in lower merchant volumes/realizations. However, strong FCF generation would continue, aided by tied-up capacities. ~80% of JSWE's 4.4GW capacity is under long-term PPAs, which generate strong free cash flows. Furthermore, these tied-up PPAs contribute ~95% to the company's EBITDA. **Maintain Buy, with TP of INR64/sh.**

Exhibit 3: SOTP Valuation

	MW	FY20E	FY21E
NPV of PPAs	3,569	153,194	146,206
Merchant capacity	872	30,503	30,503
Jaigarh Power Transco		3,268	3,268
JSW Steel		9,587	9,587
Total value		196,551	189,564
Less: Net Debt		98,450	84,703
Add: Advance to JSPL		3,310	3,310
Equity value		101,411	104,860
No. of shares (mn)		1,640	1,640
Value per share (INR/sh)			64

Source: MOFSL, Company

Financials and Valuations

Income statement							(INR m)	
Y/E Mar	2015	2016	2017	2018	2019	2020	2021E	2022E
Net Sales	93,802	98,245	82,634	80,490	91,376	82,727	77,578	86,139
Change (%)	7.8	4.7	-15.9	-2.6	13.5	-9.5	-6.2	11.0
EBITDA	36,234	40,261	33,244	27,625	28,531	29,569	27,334	27,903
EBITDA Margin (%)	38.6	41.0	40.2	34.3	31.2	35.7	35.2	32.4
Depreciation	7,898	8,543	9,692	9,661	11,637	11,681	11,753	11,825
EBIT	28,337	31,719	23,552	17,965	16,894	17,888	15,582	16,079
Interest	11,375	14,981	16,848	14,559	11,924	10,511	9,318	8,141
Other Income	2,301	2,351	2,170	4,650	3,680	2,870	2,745	3,120
Extraordinary items	-342	1,500	0	-4,179	0	-2,656	0	0
PBT	18,921	20,589	8,875	3,876	8,650	12,904	9,009	11,058
Tax	5,150	5,563	2,690	2,532	2,124	2,372	2,162	2,654
Tax Rate (%)	27.2	27.0	30.3	65.3	24.6	18.4	24.0	24.0
Min. Int. & Assoc. Share	276	553	-106	564	-426	-468	-200	-200
Reported PAT	13,771	15,026	6,185	1,344	6,526	10,531	6,847	8,404
Adjusted PAT	13,837	12,974	6,290	4,959	6,951	8,343	7,047	8,604
Change (%)	22.2	-6.2	-51.5	-21.2	40.2	20.0	-15.5	22.1
Balance sheet							(INR m)	
Y/E Mar	2015	2016	2017	2018	2019	2020	2021E	2022E
Share Capital	16,401	16,268	16,280	16,401	16,409	16,419	16,419	16,419
Reserves	58,780	80,773	87,405	94,697	101,814	100,037	102,884	107,288
Net Worth	75,180	97,041	103,685	111,097	118,222	116,456	119,303	123,707
Debt	105,127	166,607	158,803	136,452	119,225	107,898	97,898	81,898
Deferred Tax	2,930	4,341	5,801	4,280	4,561	3,705	4,245	4,909
Total Capital Employed	183,784	268,002	268,312	251,789	241,888	227,821	221,108	210,075
Gross Fixed Assets	169,858	204,963	206,625	210,352	211,303	211,866	213,666	215,466
Less: Acc Depreciation	38,047	8,443	18,167	27,977	39,456	51,137	62,889	74,714
Net Fixed Assets	131,810	196,520	188,457	182,376	171,847	160,729	150,777	140,752
Capital WIP	4,536	3,206	5,269	2,935	4,000	3,913	3,613	3,613
Investments	2,327	9,369	13,599	20,782	21,083	10,990	10,990	10,990
Current Assets	55,430	69,834	72,115	54,718	55,933	69,088	71,976	70,491
Inventory	5,483	6,358	5,967	5,355	4,547	6,396	6,376	5,900
Debtors	11,723	29,063	21,828	11,512	14,278	21,032	20,192	18,880
Cash & Bank	17,376	4,327	10,032	6,479	5,458	9,448	13,195	13,499
Loans & Adv, Others	20,849	30,086	34,288	31,372	31,650	32,213	32,213	32,213
Curr Liabs & Provns	10,416	17,386	17,577	15,420	17,373	23,298	22,645	22,169
Curr. Liabilities	6,062	16,874	17,015	14,107	16,360	22,321	21,668	21,192
Provisions	4,353	513	562	1,313	1,014	977	1,014	1,014
Net Current Assets	45,014	52,448	54,538	39,298	38,560	45,791	49,330	48,322
Total Assets	183,784	268,001	268,312	251,789	241,888	227,821	221,108	210,075

Financials and Valuations

Ratios

Y/E Mar	2015	2016	2017	2018	2019	2020	2021E	2022E
Basic (INR)								
EPS	8.4	7.9	3.8	3.0	4.2	5.1	4.3	5.2
Cash EPS	13.3	13.1	9.7	8.9	11.3	12.2	11.5	12.5
Book Value	45.8	59.2	63.2	67.7	72.1	71.0	72.7	75.4
DPS	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Payout (incl. Div. Tax.)	23.7	25.3	52.1	66.1	47.2	39.3	46.5	38.1
Valuation(x)								
P/E	14.1	8.8	10.6	13.5	9.6	8.0	9.5	7.8
Cash P/E	9.0	5.3	4.2	4.6	3.6	3.3	3.6	3.3
Price / Book Value	2.6	1.2	0.6	0.6	0.6	0.6	0.6	0.5
EV/EBITDA	7.8	6.9	6.5	7.1	6.3	5.6	5.5	4.8
Dividend Yield (%)	1.7	2.9	4.9	4.9	4.9	4.9	4.9	4.9
Profitability Ratios (%)								
RoE	19.6	15.1	6.3	4.6	6.1	7.1	6.0	7.1
RoCE	13.9	12.6	8.6	7.7	7.5	7.8	7.2	7.7
Turnover Ratios (%)								
Asset Turnover (x)	0.5	0.4	0.3	0.3	0.4	0.4	0.4	0.4
Debtors (No. of Days)	45.6	108.0	96.4	52.2	57.0	93	95	80
Inventory (No. of Days)	21.3	23.6	26.4	24.3	18.2	28	30	25
Leverage Ratios (%)								
Net Debt/Equity (x)	1.2	1.7	1.4	1.2	1.0	0.8	0.7	0.6

Cash flow statement

Y/E Mar	2015	2016	2017	2018	2019	2020	2021E	2022E
(INR m)								
EBITDA	36,234	40,261	33,244	27,625	28,531	29,569	27,334	27,903
FX gain/loss	-46	0	0	0	-9	0	0	0
WC	1,322	-4,902	6,929	11,796	-3,266	-7,743	207	1,312
Others	907	3,006	740	1,472	1,395	746	0	0
Direct taxes (net)	-4,489	-2,989	-2,387	-1,556	-2,007	-1,751	-1,622	-1,990
CF from Op. Activity	33,929	35,376	38,526	39,338	24,644	20,820	25,920	27,225
Capex	-6,772	-349	-3,715	-1,208	-2,335	-1,210	-1,500	-1,800
FCFF	27,156	35,027	34,811	38,131	22,310	19,611	24,420	25,425
Interest income	647	883	810	2,701	2,338	0	0	0
Investments in subs/assoc.	-47	-35,206	0	0	0	0	0	0
Others	876	2,472	-3,966	-4,709	-494	4,223	2,745	3,120
CF from Inv. Activity	-5,297	-32,201	-6,871	-3,216	-491	3,013	1,245	1,320
Borrowings	-8,124	2,768	-5,289	-24,906	-13,503	-7,070	-10,000	-16,000
Finance cost	-11,328	-14,891	-16,796	-14,318	-11,453	-10,511	-9,318	-8,141
Dividend	-3,820	-4,102	-3,927	-1,185	-43	-1,968	-4,100	-4,100
Others	0	0	0	0	0	-67	0	0
CF from Fin. Activity	-23,272	-16,224	-25,949	-39,676	-24,948	-19,616	-23,418	-28,241
(Inc)/Dec in Cash	5,359	-13,049	5,706	-3,553	-794	4,217	3,747	304
Opening balance	12,016	17,376	4,327	10,032	6,479	5,458	9,448	13,195
Closing balance (as per B/S)	17,376	4,327	10,033	6,479	5,685	9,676	13,195	13,499

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.: INP00000670); 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.