

Tata Power

BSE SENSEX S&P CNX 35,514 10,672

TATA POWER

Stock Info

Bloomberg	TPWR IN
Equity Shares (m)	2,705
M.Cap.(INRb)/(USDb)	200.6 / 2.9
52-Week Range (INR)	102 / 60
1, 6, 12 Rel. Per (%)	-8/4/-32
12M Avg Val (INR M)	535
Free float (%)	67.0
·	

Financials Snapshot (INR b)

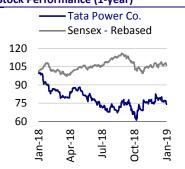
Y/E Mar	FY18	FY19E	FY20E
Net Sales	293.3	311.4	320.4
EBITDA	63.6	66.3	65.6
PAT	14.5	11.5	18.9
EPS (INR)	5.3	4.3	7.0
Gr. (%)	3.5	-20.4	64.5
BV/Sh (INR)	56.4	63.7	69.6
RoE (%)	10.7	7.1	10.5
RoCE (%)	6.3	6.3	5.9
P/E (x)	14.4	18.1	11.0
P/BV (x)	1.4	1.2	1.1

Shareholding pattern (%)

As On	Sep-18	Jun-18	Sep-17
Promoter	33.0	33.0	33.0
DII	24.6	24.6	24.6
FII	27.5	27.5	26.2
Others	15.0	15.0	16.2

FII Includes depository receipts

Stock Performance (1-year)



CMP: INR74 TP: INR72 (-3%)

Neutral

BEST extends Trombay 676MW PPA by five years

Maintain Neutral

BEST extends Trombay PPA by five years, removes uncertainty

After about a year-long competitive bidding process, BEST DISCOM found it economical to extend the existing PPA with Tata Power's Trombay and hydro power plants due to transmission constraints in Mumbai. Mumbai distribution circle relies heavily on embedded generation. There are limitations in sourcing power from outside Mumbai. The PPA (for ~676MW) is extended by five years to Mar'24. Tariff will continue to be based on regulatory norms in Maharashtra. The regulated equity in the plant is ~INR19b (~1,847MW).

Transmission constraints and cheaper hydro tilt equation in favor of Tata

The blended tariff of INR4.63/kWh under the existing PPA was lower than the competitively discovered price of INR4.72/kWh, which also shifted the balance in favor of Tata. The blended tariff under the existing PPA includes hydro assets of 227MW costing less than INR2.5/kWh and remaining coal/gas plants costing upward of INR4/kWh. BEST could have sliced and chosen the favorable portion from the existing PPA (i.e. hydro assets) and portions from the competitive bids to get a blended tariff lower than INR4.63/kWh. However, due to transmission limitation, requiring compulsory running of embedded generation, this option became unviable.

Other takeaways

BEST's total requirement was ~750MW. It will source another 100MW (~676MW is from Tata Trombay) from Manikaran Energy (to be supplied by Sai Wardha power plant) at INR3.94/kWh for five years.

We see two key takeaways for the sector from the BEST transaction.

- DISCOMs/regulators continue preferring structured power purchase contracts instead of relying on exchanges. Of BEST's requirement of 750MW, only 300MW is base load power.
- Medium-term contracts, instead of 25-year contracts, are likely to be the way forward. It was also noticed in the pilot scheme by PTC India for three-year PPA for 2,500MW.

Maintain Neutral

While we were already factoring in the continuation of the PPAs, the development removes uncertainty. The regulator has directed the implementing agency to monitor the progress of upcoming transmission lines in Mumbai and submit a quarterly progress report. It wants to ensure that such limitation does not arise again when the PPA comes up for renewal after five years. We maintain our **Neutral** rating on Tata Power with an SOTP-based TP of INR72/share.

Dhruv Muchhal - Research analyst (Dhruv.Muchhal@MotilalOswal.com); +91 22 6129 1549

Sanjay Jain - Research analyst (SanjayJain@MotilalOswal.com); +91 22 6129 1523

MOTILAL OSWAL Tata Power

Exhibit 1: Target price calculation (FY20E)

	Reg. Eq.	P/BV	EBITDA	Equity	TPW	R's share	Reg.	Enterprise	Remarks
				Value	(%)	Eq. Val.	Debt	Value (EV)	
	(a)	(b)		d=axb		(e)	(f)	(e+f)	
Mumbai & Jojobera (S/A)	42,993	1.5	18,894	66,386	100	66,386	58,162	124,548	RoE = 15.5%, g = 5%
Delhi	15,705	1.4	7,377	22,308	51	11,377	36,644	48,021	RoE = 15.5%, g = 3%
Maithon	16,982	1.4	9,590	24,466	74	18,105	20,637	38,742	RoE = 17%, g=0
Subtotal (A)			35,861					211,311	Ke=11.3%

CGPL (Mundra) and coal JVs

	EV/EBITDA	x) EBITDA	EV	Assumptions
	(g)	(h)	(g x h)	
DCF value of fixed charges		19,227	138,003	no under recoveries
Under recoveries in Var. cost	8	-17,836	-142,689	HBA Index USD85
PAT from coal JVs	10	13,107	131,067	HBA Index USD85
Subtotal (B)		14,497	126,381	

Other businesses

	EV/EBITDA(x) EBITDA	EV	Assumptions
	(j)	(k)	(j x k)	
Renewables	8.0	17,737	141,895	
Haldia, trading etc.	8.0	10,622	84,975	
PAT of other JVs and assoc.	10	4,723	47,227	
Subtotal (C)		28,359	274,097	

Consolidated			
Consolidated EV (A+B+C)	65,611	611,788	
Less: Debt		-421,849	
Investment unquoted	1	3,971	at book value
Investment quoted	0.8	803	20% discount to MTM
Net Equity value		194,713	
No. of shares		2,705	
Target Price (INR/share)		72	

Source: MOSL, Company

MOTILAL OSWAL

Financials and Valuations

Income Statement								IR Million
Y/E Mar	2013	2014	2015	2016	2017	2018	2019E	2020E
Net Sales	330,254	356,487	337,276	295,009	278,977	293,312	311,423	320,428
Change (%)	27.0	7.9	-5.4	-12.5	-5.4	5.1	6.2	2.9
EBITDA	64,447	68,478	69,405	61,718	52,372	59,471	60,823	65,611
EBITDA Margin (%)	19.5	19.2	18.7	24.2	21.0	21.7	21.3	20.5
Depreciation	20,517	27,296	21,742	16,487	19,886	23,981	24,190	25,452
EBIT	43,930	41,182	47,663	45,230	32,487	35,490	36,633	40,159
Interest	26,355	34,399	36,993	32,358	31,140	37,230	39,743	35,955
Other Income	3,692	2,273	4,167	913	2,022	4,327	4,600	4,600
Extraordinary items PBT	-8,500	0	14.937	-978	-6,515	10,308	16,371	5,179
	12,767	9,055	14,837	12,807	-3,145 -458	12,895	17,862	13,983
Tax Rate (%)	11,780 92.3	10,084	10,749 72.4	6,803 53.1	14.6	1,643 12.7	4,416 24.7	5,217 37.3
Reported PAT	- 854	-3,295	1,678	6,622	7,455	24,766	27,885	24,117
Adjusted PAT	7,646	-3,295	1,678	7,600	13,969	14,458	11,514	18,938
Change (%)	7.3	-143.1	-150.9	352.9	83.8	3.5	-20.4	64.5
Consolidated PAT	0	0	0	0	0	0	0	0 1.3
Change (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Balance Sheet							(IN	IR Million)
Y/E Mar	2013	2014	2015	2016	2017	2018	2019E	2020E
Share Capital	2,373	2,373	2,705	2,705	2,705	2,705	2,705	2,705
Reserves	105,012	104,733	122,716	113,629	115,090	149,897	169,609	185,462
Net Worth	107,385	107,106	125,421	116,334	117,795	152,602	172,314	188,167
Debt	393,823	416,725	423,419	403,486	503,154	500,892	466,121	460,811
Capital Cont. from cust.	0	0	0	0	0	0	0	0
Approp. to project cost	0	0	0	0	0	0	0	0
Deferred Tax	10,254	11,379	14,014	20,969	17,598	5,166	5,166	5,166
Total Capital Employed	532,108	557,943	587,779	558,286	657,237	678,813	665,148	677,217
Gross Fixed Assets	504,687	550,345	583,351	476,643	577,520	604,390	626,488	654,639
Less: Acc Depreciation	148,396	179,730	202,217	112,536	130,311	155,993	180,182	205,634
Net Fixed Assets						448,398	446,306	449,005
Net Fixed Assets Capital WIP	356,291 23,576	370,616 33,887	381,133 36,505	364,108 13,449	447,209 21,779	448,398 16,526	446,306 16,526	449,005 16,526
	356,291	370,616	381,133	364,108	447,209			
Capital WIP	356,291 23,576	370,616 33,887	381,133 36,505	364,108 13,449	447,209 21,779	16,526	16,526	16,526 124,992
Capital WIP Investments	356,291 23,576 26,427	370,616 33,887 26,787	381,133 36,505 27,326	364,108 13,449 114,468	447,209 21,779 108,592	16,526 119,928	16,526 121,929	16,526 124,992 216,903
Capital WIP Investments Current Assets	356,291 23,576 26,427 209,278	370,616 33,887 26,787 219,373	381,133 36,505 27,326 243,207	364,108 13,449 114,468 215,266	447,209 21,779 108,592 226,458	16,526 119,928 227,068	16,526 121,929 210,421	16,526 124,992 216,903 16,231
Capital WIP Investments Current Assets Inventory	356,291 23,576 26,427 209,278 20,265 33,050	370,616 33,887 26,787 219,373 20,733 45,426	381,133 36,505 27,326 243,207 18,442 55,640	364,108 13,449 114,468 215,266 13,734 35,402	447,209 21,779 108,592 226,458 15,996 38,321	16,526 119,928 227,068 16,231 27,889	16,526 121,929 210,421 16,231 30,952	16,526 124,992 216,903 16,231 31,363
Capital WIP Investments Current Assets Inventory Debtors	356,291 23,576 26,427 209,278 20,265	370,616 33,887 26,787 219,373 20,733	381,133 36,505 27,326 243,207 18,442	364,108 13,449 114,468 215,266 13,734	447,209 21,779 108,592 226,458 15,996	16,526 119,928 227,068 16,231	16,526 121,929 210,421 16,231	16,526 124,992 216,903 16,231 31,363 38,962
Capital WIP Investments Current Assets Inventory Debtors Cash & Bank	356,291 23,576 26,427 209,278 20,265 33,050 24,673	370,616 33,887 26,787 219,373 20,733 45,426 18,956	381,133 36,505 27,326 243,207 18,442 55,640 21,064	364,108 13,449 114,468 215,266 13,734 35,402 16,740	447,209 21,779 108,592 226,458 15,996 38,321 20,521	16,526 119,928 227,068 16,231 27,889 16,219	16,526 121,929 210,421 16,231 30,952 22,091	16,526 124,992 216,903 16,231 31,363 38,962 130,347
Capital WIP Investments Current Assets Inventory Debtors Cash & Bank Loans & Adv, Others	356,291 23,576 26,427 209,278 20,265 33,050 24,673 131,290	370,616 33,887 26,787 219,373 20,733 45,426 18,956 134,258	381,133 36,505 27,326 243,207 18,442 55,640 21,064 148,062	364,108 13,449 114,468 215,266 13,734 35,402 16,740 149,389	447,209 21,779 108,592 226,458 15,996 38,321 20,521 151,621	16,526 119,928 227,068 16,231 27,889 16,219 166,729	16,526 121,929 210,421 16,231 30,952 22,091 141,148	16,526

MOTILAL OSWAL

Financials and Valuations

Ratios								
Y/E Mar	2013	2014	2015	2016	2017	2018	2019E	2020E
Basic (INR)								
EPS	3.2	-1.4	0.6	2.8	5.2	5.3	4.3	7.0
Fully Diluted Cons. EPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cash EPS	11.9	10.1	8.7	8.9	12.5	14.2	13.2	16.4
Book Value	45.3	45.1	46.4	43.0	43.5	56.4	63.7	69.6
DPS	1.2	1.3	1.3	1.3	0.0	0.0	1.3	1.3
Payout (incl. Div. Tax.)	35.7	-90.0	209.5	46.3	0.0	0.0	30.5	18.6
Valuation(x)	33.7	30.0	203.3	40.5	0.0	0.0	30.3	10.0
	20.0	C4.4	4242	22.0	110	444	40.4	44.0
P/E	28.9	-61.1	124.3	23.0	14.9	14.4	18.1	11.0
Price / Book Value	2.1	1.9	1.7	1.5	1.8	1.4	1.2	1.1
EV/Sales	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EV/EBITDA	9.5	9.1	10.1	8.2	12.1	11.2	10.2	9.9
Dividend Yield (%)	1.2	1.5	1.7	2.0	0.0	0.0	1.7	1.7
Profitability Ratios (%)								
RoE	7.0	-3.1	1.4	6.3	11.9	10.7	7.1	10.5
RoCE	7.0	6.1	6.1	8.6	6.8	6.3	6.3	5.9
RoIC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Turnover Ratios (%)								
Asset Turnover (x)	0.6	0.6	0.6	0.5	0.4	0.4	0.5	0.5
Debtors (No. of Days)	37	47	60	44	50	35	36	36
Inventory (No. of Days)	22	21	20	17	21	20	19	18
Leverage Ratios (%)				Τ,		20		10
Net Debt/Equity (x)	2.9	3.1	2.7	2.9	3.5	2.8	2.3	2.0
Net Debt/Equity (x)	2.5	3.1	2.7	2.3	3.3	2.0	2.3	2.0
Cash Flow Statement							(INI	R Million)
Y/E Mar	2013	2014	2015	2016	2017	2018	2019E	2020E
Adjusted EBITDA	64,447	68,478	69,405	61,718	52,372	59,471	60,823	65,611
Non cash opr. exp (inc)	2,694	5,861	4,101	19,625	1,686	602	5,475	0
(Inc)/Dec in Wkg. Cap.	-23,511	38	-5,611	20,488	21,843	9,584	-7,903	-236
Tax Paid	-10,833	-9,546	-8,085	-4,295	-6,323	-6,019	-4,416	-5,217
Other operating activities	0	0	0	0	0	0	0	0
CF from Op. Activity	32,796	64,831	59,809	97,536	69,578	63,639	53,979	60,157
(Inc)/Dec in FA & CWIP	-42,702	-43,361	-34,936	-39,864	-33,223	-35,604	-22,098	-28,151
Free cash flows (Pur)/Sale of Invt	- 9,906 0	21,469 0	24,873	57,672	36,356	28,035	31,881	32,006
Others	-4,771	5,467	-378	-13,065	-35,763	14,926	63,107	35,346
CF from Inv. Activity	-47,473	-37,894	-35,315	-52,929	-68,986	-20,677	41,009	7,195
Inc/(Dec) in Net Worth	2,858	259	20,692	149	9	2	0	0
Inc / (Dec) in Debt	28,779	7,234	-1,026	-13,037	49,608	4,370	-34,772	-5,309
Interest Paid	-29,912	-33,931	-33,842	-33,515	-32,704	-45,704	-39,743	-35,955
Divd Paid (incl Tax) & Others	-7,592	-6,216	-8,210	-9,277	-6,975	-5,930	-9,127	-9,217
CF from Fin. Activity	-5,867	-32,654	-22,386	-55,680	9,937	-47,263	-83,642	-50,481
Inc/(Dec) in Cash	-20,543	-5,717	2,109	-11,073	10,530	-4,301	11,346	16,871
Add: Opening Balance	45,216	24,673	18,956	21,064	9,991	20,521	16,219	22,091
Closing Balance	24,673	18,956	21,064	9,991	20,521	16,219	22,091	38,962

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 becomes inconsistent with the investment rating legend, the Research Analyst shall within 28 days of the inconsistency, 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 Securities Ltd. (MOSL)* is a SEBI Registered Research Analyst having registration no. INH000000412. MOSL, 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. MOSL is a subsidiary company of Motilal Oswal Financial Service Ltd. (MOFSL). MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. 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 (MCX) & National Commodity & Derivatives Exchange Ltd. (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) & National Securities Depository Limited (NSDL) and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products. Details of associate entities of Motilal Oswal Securities Limited are available on the website at http://onlinereports.motilaloswal.com/Dormant/documents/List%20of%20Associate%20companies.pdf

MOSL 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 MOSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report

MOSL 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 MOSL 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 Securities 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. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOSL 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 MOSL & 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 Securities Limited (MOSL) 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 MOSL 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 MOSL, 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., MOSL 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 MOSL, 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 MOSL, Research Analyst and/or his relatives do not have actual/beneficial ownership of 1% or more securities in the subject company
- 3 MOSL, Research Analyst and/or his relatives have not received compensation/other benefits from the subject company in the past 12 months
- 4 MOSL, 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 MOSL has not acted as a manager or co-manager of public offering of securities of the subject company in past 12 months
- 7 MOSL has not received compensation for investment banking/ merchant banking/brokerage services from the subject company in the past 12 months
- 8 MOSL has not received compensation for other than investment banking/brokerage services from the subject company in the past 12 months
- 9 MOSL has not received any compensation or other benefits from third party in connection with the research report
- 10 MOSL has not engaged in market making activity for the subject company

MOTILAL OSWAL Tata Power

The associates of MOSL 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 MOSL 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 MOSL 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 MOSL which are opened for proprietary investments only. While calculating beneficial holdings, it does not consider demat accounts which are opened in name of MOSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOSL 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 MOSL 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 MOSL. 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. MOSL 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. MOSL, 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 MOSL. 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 MOSL 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 MOSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOSL 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 Óswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022-3980 4263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai-400 064. Tel No: 022-3080 1000. Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No.:022-38281085.

Registration details: MOSL: SEBI Registration: INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412. AMFI: ARN 17397. Investment Adviser: INA000007100. Motilal Oswal Asset Management Company Ltd. (MOAMC): PMS (Registration No.: INP00000670) offers PMS and Mutual Funds products. Motilal Oswal Wealth Management Ltd. (MOWML): PMS (Registration No.: INP000004409) offers wealth management solutions. *Motilal Oswal Securities Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Bond, NCDs, Insurance and IPO products. *Motilal Oswal Real Estate Investment Advisors II Pvt. Ltd. offers Real Estate products. * Motilal Oswal Private Equity Investment Advisors Pvt. Ltd. offers Private Equity products.

* 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. The existing registration no(s) of MOSL would be used until receipt of new MOFSL registration numbers.