

Laurus Labs

BSE SENSEX	S&P CNX
44,260	12,987



Bloomberg	LAURUS IN
Equity Shares (m)	532
M.Cap.(INRb)/(USDb)	156.6 / 2.1
52-Week Range (INR)	345 / 62
1, 6, 12 Rel. Per (%)	-18/176/325
12M Avg Val (INR M)	1086

Financials & Valuations (INR b)

Y/E MARCH	FY20	FY21E	FY22E
Sales	28.3	45.7	56.0
EBITDA	5.6	14.6	17.6
Adj. PAT	2.6	9.4	11.1
EBIT Margin (%)	13.3	27.3	26.6
Cons. Adj. EPS (INR)	4.8	17.6	20.8
EPS Gr. (%)	132.6	268.4	18.1
BV/Sh. (INR)	33.1	48.0	65.7

Ratios

Net D:E	0.6	0.4	0.3
RoE (%)	15.3	43.3	36.5
RoCE (%)	12.5	31.0	29.0
Payout (%)	15.1	15.1	15.1

Valuations

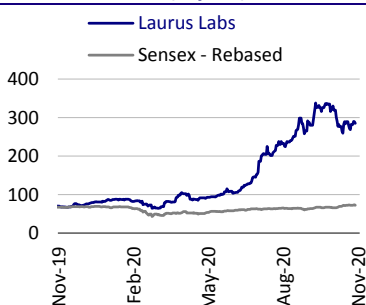
P/E (x)	66.4	18.0	15.3
EV/EBITDA (x)	31.8	12.3	10.2
Div. Yield (%)	0.2	0.7	0.8
FCF Yield (%)	0.6	1.4	1.5
EV/Sales (x)	6.3	3.9	3.2

Shareholding pattern (%)

As On	Sep-20	Jun-20	Sep-19
Promoter	32.1	32.1	32.7
DII	6.3	8.8	32.2
FII	20.7	16.1	12.5
Others	40.8	43.0	22.6

FII Includes depository receipts

Stock Performance (1-year)



CMP: INR292 TP: INR410 (+40%) Buy

Richcore acquisition - A step towards strategic diversification

Biotech ingredients/Enzymes/CDMO – additional areas for long-term growth

- Laurus Labs' (LAURUS) has acquired 73% stake in Richcore Lifesciences (RICH) for a cash consideration of INR2.5b. The acquisition is a step towards building a vertically integrated biotech segment and adds a new lever to growth.
- It particularly provides capabilities in high growth areas of Recombinant (Rh) Proteins, Enzymes and Biological Contract Development and Manufacturing Organization (CDMO).
- We raise our FY22E/FY23E EPS estimates by 3% to arrive at our target price of INR410/share, on 18x 12M forward earnings, to reflect benefits of this deal accruing to LAURUS. Considering the addition of technology-based high entry barriers/superior RoCE business, we expect the RICH-led CDMO business to result in a re-rating of LAURUS once it starts contributing meaningfully to earnings over the next 4-5 years. Maintain Buy.

RICH acquired at attractive valuations

- RICH recorded sales of INR291m and an EBITDA margin of 39% in 1HFY21. This is largely from its already commercialized facility at Bengaluru.
- The management guided at an overall revenue of INR1.4b and EBITDA margin to sustain at 39% for FY22E after the start of operations at the Tumkur facility. This translates to an attractive EV/EBITDA of 6.3x.
- RICH has large scale fermentation capabilities and manufactures animal origin free (AOF) Rh products.
- These products help vaccine, insulin, stem-cell based regenerative medicine and other biopharma customers to eliminate dependency on animal/human blood derived products, and thus ensures production of safer medicines.
- The current promoters led by Mr. Subramani Ramchandruppa will continue to be on the executive board and run the operations.
- Fermentation capacity at Bengaluru is 10,750 liters. A new plant with a fermentation capacity of 1,80,000l is being built in Tumkur, Karnataka and would be operational by 4QFY21.

Highlights from the conference call

- The acquisition would be largely funded via internal accruals.
- Its capex guidance of INR12b, excluding the RICH transaction, over the next two years remains intact.
- The gross block for the Bengaluru/Tumkur facility is ~INR380m/INR500m.
- RICH has a current debt of ~INR60m and would take on an additional debt of INR150m to fund its capex requirements.

Deal to add biotech capabilities, positive in the long run

- The deal adds another pillar to LAURUS' growing chemistry-led franchise. It reduces the typical 6-7 year gestation period required for making inroads into the biotechnology-based CDMO business. With 40% of global New

Research Analyst: Tushar Manudhane (Tushar.Manudhane@motilaloswal.com)

Hitakshi Chandrani (Hitakshi.Chandrani@MotilalOswal.com) / Bharat Hegde, CFA (Bharat.Hegde@motilaloswal.com)

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

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

Chemical Entities (NCEs) under development being biologics, we expect Biotech CDMO to be an attractive proposition in the future as clients increase outsourcing to reduce costs.

- The synergy benefit on account of: a) LAURUS' wide customer base, geographical footprint, strong chemistry skill set, and b) RICH's expertise in biotechnology and fermentation capacity would enable LAURUS to become a dominant player in the CDMO space. It would also enable LAURUS to considerably enhance its skillsets as well as capacity for monoclonal antibodies (MABs) and other biosimilars. We believe the real benefits will begin to accrue over FY23-25E.

Valuation and view

- We raise our FY22E/FY23E EPS estimate by 3%, factoring in additional business from RICH.
- We expect earnings to expand by 5x over FY20-23E, led by a sales CAGR of 50%/39%/22% in the FDF/Synthesis/API segment and ~1100bp margin expansion. We continue to value LAURUS at 18x 12M forward earnings to arrive at our target price of INR410/share.
- We remain positive on LAURUS on the back of: a) superior execution in the ARV segment, b) strong chemistry skillset driving the CDMO business and the addition of a new leg to the CDMO business, which vastly expands its total addressable market, c) the addition of new molecules in the other API segment, and d) cost efficiency aiding profitability. Reiterate **Buy**.

Exhibit 1: RICH's financial summary

Particulars (INR m)	FY20	1HFY21
Sales	414	291
Gross profit	173	203
Gross margin (%)	41.8	69.8
EBITDA	-16	113
EBITDA margin (%)	-3.9	38.8
PBT	-70	92

Source: MOSL, Company



Other highlights from the management commentary

- Capacity at the Tumkur facility is already contracted for two customers and hence there is visibility of commercialization in FY22.
- At present, revenue is split equally between Ingredient, Enzyme and CDMO. With the commercialization of the Tumkur facility, CDMO share in revenue would be higher.
- The management said its customer base at the Bengaluru facility is quite diversified. The majority of its customers are from the US and EU.
- The cost of production remains a critical factor in case of Enzymes, while the technology remains critical for Ingredient and the CDMO businesses.
- The change in product mix led to a sharp improvement in gross margin in 1HFY21 compared to FY20.

Industry background for fermentation and Enzymes

- *The fermentation CDMO sector is expected to clock ~6% CAGR till 2026 and cross the USD4b mark in size. The Enzymes industry is expected to grow at 6.7% CAGR over the*

next five years to reach ~USD15b while the probiotics space provides a huge opportunity with the industry expected to grow over 9% to reach ~USD70b by 2023.

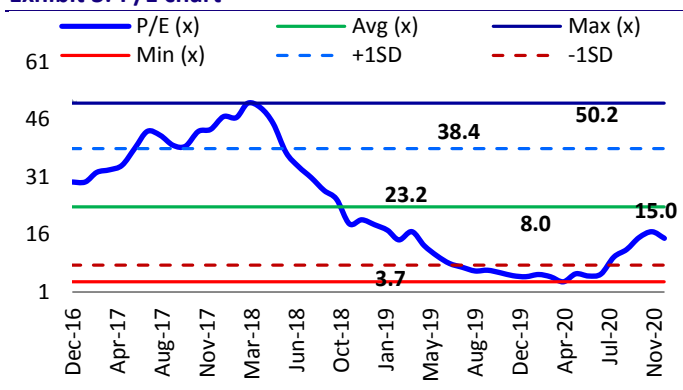
- Fermentation is the process of breaking down complex substances into simpler molecules with the help of microorganisms such as bacteria and yeast. Enzymes help in fastening this process by acting as catalysts (bio-catalysis). Through the fermentation process, microorganisms are grown in large quantities to produce many types of useful products.
- Fermentation involves four major steps:
 - A) **Strain selection and optimization** – Selection of the bacteria strain, virus, or fungus based on the product to be developed. This strain is then further optimized/processed by mutation and selection process.
 - B) **Medium and process development** – Identification and development of the medium of the cell cultures to be developed in. Different strains and products to be developed would require different mediums.
 - C) **Fermentation and scale-up** – Fermentation is carried out using one of the three main methods: batch fermentation, fed-batch fermentation and continuous fermentation. After identifying the method of fermentation, it is scaled up to increase batch sizes to commercial quantities.
 - D) **Downstream processing:** After completion of fermentation, recovery, purification, and characterization of the desired quality, the product is carried out through downstream processing.
- Microbial fermentation is used in the production of Enzymes, Amino acids, nutraceuticals, pharmaceuticals, APIs, vitamins, vaccines and cell cultures to be used in Biotech products. A growing use of fermentation is in the food industry.
- With artificial and lab-based meat products expected to revolutionize the food industry in the future, this segment is seen to be in a nascent stage of multi-year, multi-fold growth journey.

Exhibit 2: Growth expectations for the Enzymes Industry

	Estimated growth CAGR from 2019	Time period	Size at the end of the time period (USD b)
Global Enzymes market	6.7%	2025	14.7
Food Enzymes market	6.9%	2023	3.23
Industrial Enzymes market	6.5%	2026	8.7
Specialty Enzymes market	6.9%	2025	6.6
Probiotics market	7.0%	2023	69.3

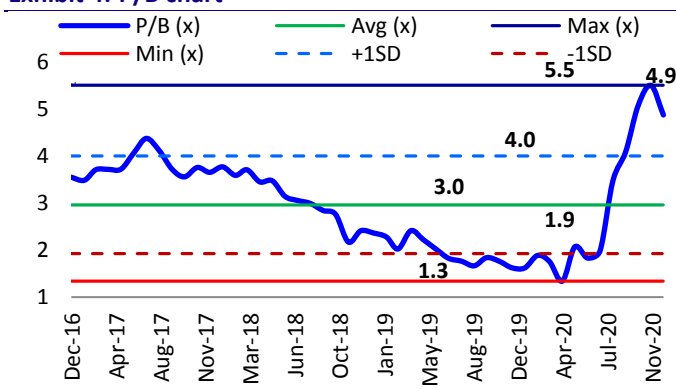
Source: MOFSL, Industry

Exhibit 3: P/E chart



Source: MOFSL, Company, Bloomberg

Exhibit 4: P/B chart



Source: MOFSL, Company, Bloomberg

Financials and Valuations

Consolidated - Income Statement

(INR m)

Y/E March	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
Total Income from Operations	11,597	13,266	17,776	19,046	20,690	22,919	28,317	45,716	55,976	66,038
Change (%)	61.4	14.4	34.0	7.1	8.6	10.8	23.6	61.4	22.4	18.0
Total Expenditure	9,509	11,264	14,154	14,970	16,557	19,155	22,672	31,133	38,399	45,633
% of Sales	82.0	84.9	79.6	78.6	80.0	83.6	80.1	68.1	68.6	69.1
EBITDA	2,089	2,002	3,622	4,076	4,133	3,764	5,645	14,583	17,576	20,406
Margin (%)	18.0	15.1	20.4	21.4	20.0	16.4	19.9	31.9	31.4	30.9
Depreciation	329	615	864	1,060	1,255	1,642	1,873	2,103	2,690	3,191
EBIT	1,760	1,387	2,758	3,016	2,879	2,122	3,773	12,480	14,887	17,215
Int. and Finance Charges	639	1,062	1,111	999	796	882	896	608	783	655
Other Income	88	341	44	334	292	162	59	183	224	264
PBT bef. EO Exp.	1,209	666	1,690	2,352	2,374	1,402	2,936	12,055	14,327	16,824
EO Items	0	0	0	0	0	-204	0	0	0	0
PBT after EO Exp.	1,209	666	1,690	2,352	2,374	1,198	2,936	12,055	14,327	16,824
Total Tax	236	-15	349	439	698	260	383	2,652	3,224	3,701
Tax Rate (%)	19.6	-2.3	20.6	18.7	29.4	21.7	13.1	22.0	22.5	22.0
Minority Interest	0	-2	4	11	0	0	0	0	0	0
Reported PAT	972	683	1,337	1,903	1,676	938	2,553	9,403	11,103	13,123
Adjusted PAT	972	683	1,337	1,903	1,676	1,097	2,553	9,403	11,103	13,123
Change (%)	10.2	-29.7	95.7	42.3	-11.9	-34.5	132.6	268.4	18.1	18.2
Margin (%)	8.4	5.2	7.5	10.0	8.1	4.8	9.0	20.6	19.8	19.9

Consolidated - Balance Sheet

(INR m)

Y/E March	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
Equity Share Capital	154	155	158	1,058	1,060	1,064	1,069	1,069	1,069	1,069
Preference Capital	625	666	666	0	0	0	0	0	0	0
Total Reserves	2,806	6,419	7,744	12,247	13,766	14,520	16,629	24,616	34,047	45,193
Net Worth	3,584	7,241	8,568	13,304	14,826	15,584	17,698	25,685	35,116	46,262
Total Loans	5,428	8,211	10,277	8,417	9,649	10,030	10,123	10,143	9,943	6,443
Deferred Tax Liabilities	118	113	-549	-699	-529	-534	-739	-739	-739	-739
Capital Employed	9,131	15,565	18,296	21,023	23,946	25,081	27,081	35,088	44,319	51,966
Gross Block	6,230	9,865	11,063	14,088	17,851	20,976	23,821	26,859	32,916	39,598
Less: Accum. Deprn.	1,240	1,855	853	1,886	3,141	4,783	6,655	8,758	11,448	14,639
Net Fixed Assets	4,989	8,010	10,210	12,202	14,711	16,193	17,166	18,100	21,468	24,959
Goodwill on Consolidation	3	0	0	97	97	97	97	97	97	97
Capital WIP	1,161	1,097	696	1,433	1,632	1,096	672	2,634	4,477	3,996
Total Investments	0	74	70	34	34	34	34	34	34	34
Curr. Assets, Loans & Adv.	6,578	9,757	10,710	12,069	13,165	15,357	18,589	28,037	34,907	42,251
Inventory	3,281	4,755	4,871	5,090	5,848	6,819	9,052	12,686	15,963	19,345
Account Receivables	1,949	2,851	4,449	5,676	5,706	7,099	7,914	12,276	15,182	18,455
Cash and Bank Balance	232	589	288	41	31	30	17	484	589	708
Loans and Advances	1,117	1,562	1,103	1,262	1,580	1,408	1,605	2,591	3,172	3,743
Curr. Liability & Prov.	3,601	3,373	3,390	4,812	5,692	7,697	9,477	13,815	16,664	19,372
Account Payables	2,275	2,308	2,476	2,631	3,123	4,883	6,156	8,453	10,100	11,627
Other Current Liabilities	1,218	922	770	1,988	2,316	2,449	2,753	4,445	5,442	6,420
Provisions	109	143	144	193	253	365	568	917	1,123	1,324
Net Current Assets	2,977	6,383	7,320	7,257	7,473	7,660	9,112	14,222	18,243	22,879
Appl. of Funds	9,131	15,565	18,296	21,023	23,946	25,081	27,081	35,088	44,319	51,966

Financials and Valuations

Ratios

Y/E March	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
Basic (INR)										
EPS	1.8	1.3	2.5	3.5	3.1	2.1	4.8	17.6	20.8	24.5
Cash EPS	2.4	2.4	4.1	5.5	5.5	5.1	8.3	21.5	25.8	30.5
BV/Share	6.7	13.5	16.0	24.9	27.7	29.2	33.1	48.0	65.7	86.5
DPS	0.0	0.0	0.1	0.3	0.0	0.3	0.6	2.2	2.6	3.1
Payout (%)	0.0	0.0	4.4	10.0	0.0	20.4	15.1	15.1	15.1	15.1
Valuation (x)										
P/E	174.3	247.9	128.8	90.1	101.1	154.4	66.4	18.0	15.3	12.9
Cash P/E	130.3	130.5	77.7	57.6	57.8	61.9	38.3	14.7	12.3	10.4
P/BV	47.3	23.4	19.8	12.7	11.4	10.9	9.6	6.6	4.8	3.7
EV/Sales	15.1	13.3	10.1	9.3	8.7	7.8	6.3	3.9	3.2	2.7
EV/EBITDA	83.6	88.5	49.5	43.6	43.3	47.7	31.8	12.3	10.2	8.6
Dividend Yield (%)	0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.7	0.8	1.0
FCF per share	-3.5	-8.4	-2.7	1.0	-1.0	0.7	2.0	4.3	4.7	11.2
Return Ratios (%)										
RoE	31.5	12.6	16.9	17.4	11.9	7.2	15.3	43.3	36.5	32.3
RoCE	20.5	14.4	13.0	13.4	9.7	7.1	12.5	31.0	29.0	27.9
RoIC	25.4	14.0	14.6	13.5	9.7	7.2	13.0	33.4	32.4	31.1
Working Capital Ratios										
Inventory (Days)	103	131	100	98	103	109	117	101	104	107
Debtor (Days)	61	78	91	109	101	113	102	98	99	102
Creditor (Days)	72	64	51	50	55	78	79	67	66	64
Leverage Ratio (x)										
Current Ratio	1.8	2.9	3.2	2.5	2.3	2.0	2.0	2.0	2.1	2.2
Interest Cover Ratio	2.8	1.3	2.5	3.0	3.6	2.4	4.2	20.5	19.0	26.3
Net Debt/Equity	1.4	1.0	1.2	0.6	0.6	0.6	0.6	0.4	0.3	0.1

Consolidated - Cash Flow Statement

Y/E March	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21E	FY22E	FY23E
OP/(Loss) before Tax	1,209	666	1,690	2,352	2,374	1,198	2,936	12,055	14,327	16,824
Depreciation	329	615	864	1,060	1,255	1,642	1,873	2,103	2,690	3,191
Interest & Finance Charges	515	862	1,038	931	505	720	837	425	559	391
Direct Taxes Paid	-234	-168	-333	-501	-698	-260	-383	-2,652	-3,224	-3,701
(Inc)/Dec in WC	-593	-2,507	-1,544	-525	-226	-187	-1,465	-4,644	-3,915	-4,517
CF from Operations	1,225	-531	1,716	3,317	3,209	3,113	3,797	7,287	10,437	12,188
Others	-13	-116	103	3	216	-136	-323	0	0	0
CF from Operating incl EO	1,212	-647	1,820	3,320	3,425	2,977	3,474	7,287	10,437	12,188
(Inc)/Dec in FA	-3,058	-3,821	-3,262	-2,774	-3,962	-2,589	-2,421	-5,000	-7,900	-6,201
Free Cash Flow	-1,846	-4,469	-1,443	546	-537	387	1,053	2,287	2,537	5,987
(Pur)/Sale of Investments	-60	-148	140	-113	0	0	0	0	0	0
Others	-1	0	0	0	120	60	210	183	224	264
CF from Investments	-3,120	-3,970	-3,122	-2,887	-3,842	-2,529	-2,211	-4,817	-7,676	-5,937
Issue of Shares	1	2,944	3	2,860	3	4	5	0	0	0
Inc/(Dec) in Debt	2,503	2,745	2,063	-2,387	1,278	429	139	20	-200	-3,500
Interest Paid	-474	-828	-1,033	-950	-796	-882	-896	-608	-783	-655
Dividend Paid	0	0	0	-59	0	-191	-384	-1,416	-1,672	-1,976
Others	0	0	0	0	-62	193	-140	0	0	0
CF from Fin. Activity	2,030	4,861	1,033	-536	422	-448	-1,277	-2,004	-2,656	-6,132
Inc/Dec of Cash	123	244	-269	-103	6	0	-14	466	106	119
Opening Balance	27	150	394	127	23	29	28	15	482	587
Closing balance	150	394	127	23	29	28	15	482	587	706
Bank balance	82	195	161	18	2	2	2	2	2	2
Total Cash and Cash equivalent	232	589	288	41	31	30	17	484	589	708

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. INH00000412. 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/Associate%20Details.pdf>

Details of pending Enquiry Proceedings of Motilal Oswal Financial Services Limited are available on the website at <https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx>

MOFSL, its associates, Research Analyst or their relative may have any financial interest in the subject company. MOFSL and/or its associates and/or Research Analyst may have actual/beneficial ownership of 1% or more securities in the past 12 months. 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. Research Analyst may have served as director/officer, etc. in the subject company in the past 12 months. MOFSL and/or its associates may have received any compensation from the subject company in the past 12 months.

In the past 12 months, MOFSL or any of its associates may have:

- managed or co-managed public offering of securities from subject company of this research report,
- received compensation for investment banking or merchant banking or brokerage services from subject company of this research report,
- received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company of this research report.
- Subject Company may have been a client of MOFSL or its associates in the past 12 months.

MOFSL and its associates have not received any compensation or other benefits from the subject company or third party in connection with the research report. To enhance transparency, MOFSL has incorporated a Disclosure of Interest Statement in this document. This should, however, not be treated as endorsement of the views expressed in the 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. 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.

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.

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.

Disclosure of Interest Statement

Laurus Labs

Analyst ownership of the stock

No

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 Financial Services Limited (SEBI Reg No. INH00000412) 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.

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 alterations 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, nor 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, Rahimullah 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: INH00000412. AMFI: ARN - 146822; Investment Adviser: INA000007100; Insurance Corporate Agent: CA0579; PMS:INP00006712. 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.: INP00004409) 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 Honble National Company Law Tribunal, Mumbai Bench.