

Global Health | BUY

Strong growth in matured hospitals

Medanta continues to outperform JMFe / Street expectations. Occupancy levels of ~65% drove strong revenue growth of 24% YoY. Of this, developing hospitals' growth has been on expected lines but matured hospitals' 20% YoY growth, partly aided by price hikes, was a pleasant surprise. Brownfield bed additions in 2H in Patna and Lucknow may keep margins in check (c.24%). The Noida hospital remains on track for FY25-end commencement - if its trajectory turns out to be similar to that of Lucknow, we believe there could be an upside risk to our earnings estimate. After announcing assets in Indore and South Delhi, the management alluded to more hospital additions in North / Central India. Our recent note ([click here](#)) highlighted Medanta's expansion strategy for long-term sustainable growth. Undeterred by near-term valuations, we maintain BUY with a Dec'24 TP of INR 930.

- Mature hospitals' growth better-than-expected:** Matured hospitals grew 19.5%YoY with EBITDAM improving to 25.5% (vs. 22.9% YoY), partly aided by price hikes and much better than expected. ARPOB increased +7%YoY to INR 63,132 while occupancy levels increased to 65% (vs. 60% YoY). Medanta will increase capacity at Gurgaon by c. 100 beds achieved largely through internal reconfiguration and minimal capex. The company expected to incur INR 1bn capex for medical equipment and technology related upgrades. At Gurgaon, the medical Oncology and M&C department are scaling up and is expected to be operational by CY24. Revenue from international patients increased 20% YoY to INR 507mn driven by increased volumes and realisation.
- Strong Lucknow and Patna performance continues:** Developing hospitals grew 40.3%YoY with EBITDAM improving to 33.9% (vs. 29.7% YoY). ARPOB was flattish YoY to INR 57,082 while occupancy levels increased to 64% (vs. 57% YoY). Brownfield bed additions in 2H in Patna (50-70 beds) and Lucknow (100-125 beds) will keep margins in check. With further bed additions, we expect 26%/50% Revenue CAGR over FY23-26 for Lucknow/Patna, respectively. The management alluded to Patna ARPOB being 10-15% lower than Lucknow. The Noida hospital remains on track for FY25-end commencement - if its trajectory turns out to be similar to that of Lucknow, we believe there could be an upside risk to our earnings estimate. Longer term growth levers for Medanta are Indore hospital and DLF JV. We expect new hospital additions in North / Central India given the robust cash flow visibility.
- Key financials:** Revenue/EBITDA/PAT of INR 8.4bn/2.1bn/1.3bn grew 24%/36%/46% YoY and were +6%/+14%/+15% vs. our estimates. Gross margins were flat YoY to 77.1% (JMFe: 76.3%). EBITDA margins grew 210bps YoY at 25.2% (vs. 23% QoQ; JMFe: 23.5%). EPS was 4.7 (vs. 3.4 YoY). ARPOB for the quarter was INR 61,003 (vs. INR 63,148 QoQ; INR 58,203 YoY). Occupancy was 64.9% (vs. 58%QoQ; 59%YoY). OPD Pharmacy business continues to register strong growth - revenue increased by 39% from INR 215 million in 2Q23 to INR 298 million in 2Q24. ALOS was 3.19 vs. 3.24 YoY. Net cash surplus of INR 6bn as of Sep '23.



Jainil Shah

jainil.shah@jmfl.com | Tel: (91 22) 66303155

We acknowledge the support of Raghav Vedanarayanan in the preparation of this report

Recommendation and Price Target

Current Reco.	BUY
Previous Reco.	BUY
Current Price Target (12M)	930
Upside/(Downside)	3.0%
Previous Price Target	835
Change	11.4%

Key Data – MEDANTA IN

Current Market Price	INR903
Market cap (bn)	INR242.3/US\$2.9
Free Float	46%
Shares in issue (mn)	268.2
Diluted share (mn)	268.2
3-mon avg daily val (mn)	INR307.6/US\$3.7
52-week range	937/391
Sensex/Nifty	64,905/19,425
INR/US\$	83.3

Price Performance

%	1M	6M	12M
Absolute	18.1	66.2	0.0
Relative*	20.6	58.8	0.0

* To the BSE Sensex

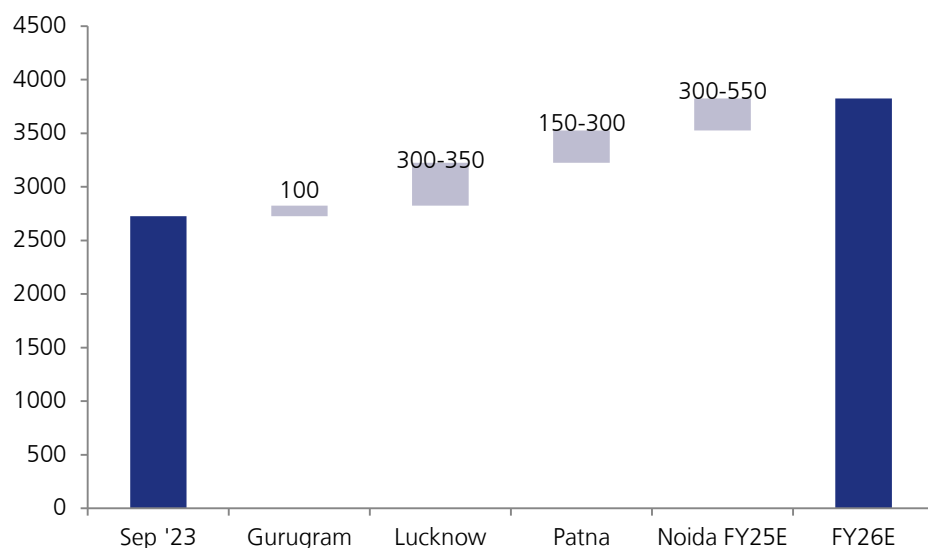
JM Financial Research is also available on:
Bloomberg - JMFR <GO>,
Thomson Publisher & Reuters,
S&P Capital IQ, FactSet and Visible Alpha

Please see Appendix I at the end of this report for Important Disclosures and Disclaimers and Research Analyst Certification.

Financial Summary					(INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Net Sales	21,540	26,942	32,730	38,636	44,792
Sales Growth (%)	50.7	25.1	21.5	18.0	15.9
EBITDA	4,505	6,460	7,922	9,231	10,911
EBITDA Margin (%)	20.8	23.7	24.1	23.8	24.3
Adjusted Net Profit	1,962	3,599	4,621	5,416	6,550
Diluted EPS (INR)	7.7	13.9	17.2	20.2	24.4
Diluted EPS Growth (%)	579.3	79.5	23.9	17.2	20.9
ROIC (%)	12.2	18.8	20.9	21.3	23.3
ROE (%)	13.1	17.8	17.4	17.4	18.1
P/E (x)	116.6	65.0	52.4	44.7	37.0
P/B (x)	14.2	9.6	8.4	7.2	6.3
EV/EBITDA (x)	54.4	36.8	29.8	25.4	21.2
Dividend Yield (%)	0.0	0.0	0.0	0.0	0.0

Source: Company data, JM Financial. Note: Valuations as of 10/Nov/2023

Exhibit 1. Aggressive bed expansion



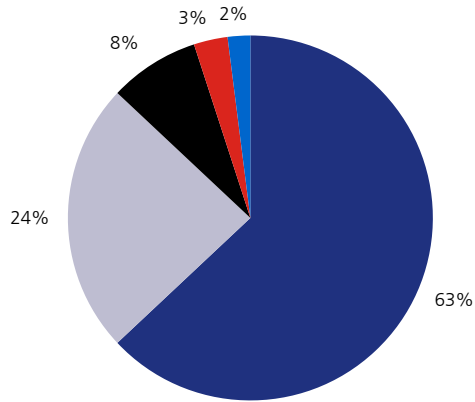
Source: Company, JM Financial

Exhibit 2. SOTP Valuation

Valuation	INR mn
Dec'25 EBITDA	10491
EV/EBITDA	23
Enterprise Value	241287
Less: Net Debt (excl. lease)	-7683
Equity Value	248970
No of shares	268
Dec'24 Price Target	928
Dec'24 Price Target (rounded off)	930
CMP	878
Upside	6%

Source: JM Financial

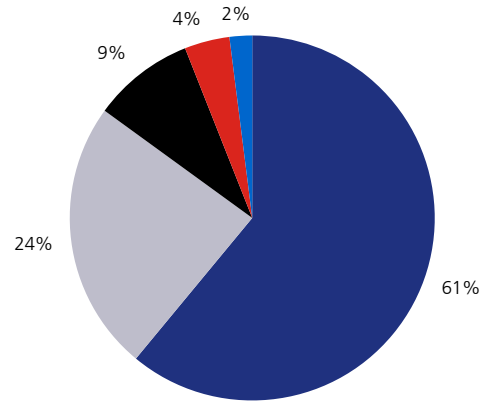
Exhibit 3. Payor mix – 2QFY23



■ Cash ■ TPA ■ CGHS/ECHS ■ PSU & Corporate ■ Others

Source: Company, JM Financial

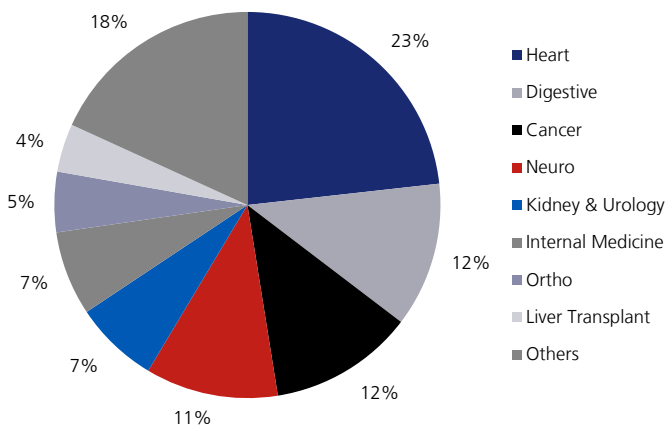
Exhibit 4. Payor mix – 2QFY24



■ Cash ■ TPA ■ CGHS/ECHS ■ PSU & Corporate ■ Others

Source: Company, JM Financial

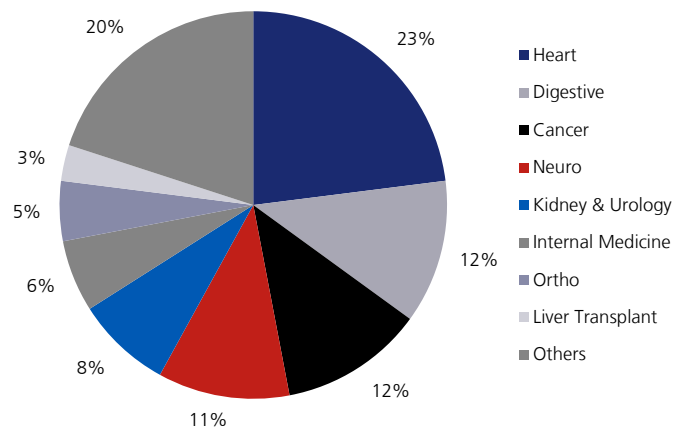
Exhibit 5. Therapy mix 2QFY23



■ Heart
 ■ Digestive
 ■ Cancer
 ■ Neuro
 ■ Kidney & Urology
 ■ Internal Medicine
 ■ Ortho
 ■ Liver Transplant
 ■ Others

Source: Company, JM Financial

Exhibit 6. Therapy mix 2QFY24



■ Heart
 ■ Digestive
 ■ Cancer
 ■ Neuro
 ■ Kidney & Urology
 ■ Internal Medicine
 ■ Ortho
 ■ Liver Transplant
 ■ Others

Source: Company, JM Financial

Exhibit 7. 2QFY24 review

Medanta - P&L (INR mn)	2Q23A	2Q24A	% YoY	2Q24E	% Delta vs. JMFe	2Q24E (cons)	% Delta vs. cons	1Q24A	% QoQ
Net Sales	6,791	8,439	24%	7,945				7,730	9%
Other op income	0	0		0				0	
Total Revenue	6,791	8,439	24%	7,945	6%	8,062	5%	7,730	9%
COGS	1,554	1,936	25%	1,883	3%			1,814	7%
Gross Profit	5,237	6,504	24%	6,062	7%			5,917	10%
Gross Profit %	77.1%	77.1%	-6 bps	76.3%	76 bps			76.5%	52 bps
Staff Cost	1,603	1,838	15%	1,804	2%			1,779	3%
Other expenses	2,054	2,481	21%	2,344	6%			2,294	8%
Impairment of Financial assets	14	56	296%	45				64	-13%
EBITDA	1,566	2,129	36%	1,870	14%	1,924	11%	1,779	20%
EBITDA margin (%)	23.1%	25.2%	216 bps	23.5%	169 bps	23.9%	136 bps	23.0%	221 bps
Other Income	155	208	34%	230	-10%			215	-3%
Finance Cost	182	201	10%	190				179	12%
Depreciation	371	429	16%	420				404	6%
PBT	1,167	1,706	46%	1,490	15%			1,410	21%
Exceptional Items	0	0		0				0	
Tax	310	454	46%	402				390	16%
Tax Rate (%)	26.6%	26.6%		27.0%				27.7%	
Minority Interest	0	0		0				0	
PAT (Reported)	857	1,252	46%	1,088	15%	1,104	13%	1,020	23%
PAT margin (%)	12.6%	14.8%		13.7%		13.7%		13.2%	
Diluted EPS (INR)	3.4	4.7	38%	4.1	15%			3.8	23%
Medanta - Cost margins	2Q23A	2Q24A	% YoY	2Q24E	% Delta vs. JMFe			1Q24A	% QoQ
COGS/sales	22.9%	22.9%	6 bps	23.7%	-76 bps			22.7%	19 bps
Staff cost/sales	23.6%	21.8%	-183 bps	22.7%	-92 bps			23.0%	-121 bps
Other expenditure/sales	30.2%	29.4%	-85 bps	29.5%	-10 bps			30.8%	-141 bps

Source: Company, JM Financial

Financial Tables (Consolidated)

Income Statement		(INR mn)				
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E	
Net Sales	21,540	26,942	32,730	38,636	44,792	
Sales Growth	50.7%	25.1%	21.5%	18.0%	15.9%	
Other Operating Income	126	338	140	150	200	
Total Revenue	21,666	27,281	32,870	38,786	44,992	
Cost of Goods Sold/Op. Exp	5,429	6,253	7,593	8,882	10,258	
Personnel Cost	5,680	6,343	7,363	8,998	10,438	
Other Expenses	6,052	8,224	9,992	11,675	13,385	
EBITDA	4,505	6,460	7,922	9,231	10,911	
EBITDA Margin	20.8%	23.7%	24.1%	23.8%	24.3%	
EBITDA Growth	135.3%	43.4%	22.6%	16.5%	18.2%	
Depn. & Amort.	1,297	1,499	1,764	2,111	2,348	
EBIT	3,208	4,961	6,157	7,121	8,562	
Other Income	392	649	876	964	1,109	
Finance Cost	795	779	747	716	760	
PBT before Excep. & Forex	2,805	4,831	6,287	7,368	8,911	
Excep. & Forex Inc./Loss(-)	0	0	0	0	0	
PBT	2,805	4,831	6,287	7,368	8,911	
Taxes	844	1,232	1,666	1,953	2,361	
Extraordinary Inc./Loss(-)	0	0	0	0	0	
Assoc. Profit/Min. Int.(-)	0	0	0	0	0	
Reported Net Profit	1,962	3,599	4,621	5,416	6,550	
Adjusted Net Profit	1,962	3,599	4,621	5,416	6,550	
Net Margin	9.1%	13.2%	14.1%	14.0%	14.6%	
Diluted Share Cap. (mn)	253.3	258.9	268.2	268.2	268.2	
Diluted EPS (INR)	7.7	13.9	17.2	20.2	24.4	
Diluted EPS Growth	579.3%	79.5%	23.9%	17.2%	20.9%	
Total Dividend + Tax	0	0	0	0	0	
Dividend Per Share (INR)	0.0	0.0	0.0	0.0	0.0	

Source: Company, JM Financial

Balance Sheet		(INR mn)				
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E	
Shareholders' Fund	16,160	24,282	28,903	33,514	38,722	
Share Capital	506	536	536	536	536	
Reserves & Surplus	15,654	23,746	28,366	32,977	38,186	
Preference Share Capital	0	0	0	0	0	
Minority Interest	0	0	0	0	0	
Total Loans	8,379	8,422	4,672	3,172	1,672	
Def. Tax Liab. / Assets (-)	-278	-69	-69	-69	-69	
Total - Equity & Liab.	24,261	32,635	33,506	36,617	40,325	
Net Fixed Assets	22,151	23,771	26,506	28,895	31,047	
Gross Fixed Assets	24,006	28,279	32,779	38,548	41,248	
Intangible Assets	63	52	52	52	52	
Less: Depn. & Amort.	6,310	7,830	9,594	11,705	14,053	
Capital WIP	4,393	3,270	3,270	2,000	3,800	
Investments	3,924	5,109	5,109	5,109	5,109	
Current Assets	5,102	12,023	10,462	11,695	13,695	
Inventories	534	604	810	956	1,109	
Sundry Debtors	1,802	1,942	2,702	3,188	3,698	
Cash & Bank Balances	1,194	7,672	5,146	5,747	7,082	
Loans & Advances	0	0	0	0	0	
Other Current Assets	1,572	1,805	1,805	1,805	1,805	
Current Liab. & Prov.	6,916	8,267	8,572	9,083	9,525	
Current Liabilities	4,256	4,999	5,304	5,815	6,257	
Provisions & Others	2,660	3,268	3,268	3,268	3,268	
Net Current Assets	-1,815	3,756	1,891	2,612	4,169	
Total - Assets	24,261	32,635	33,506	36,617	40,325	

Source: Company, JM Financial

Cash Flow Statement		(INR mn)				
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E	
Profit before Tax	2,805	4,493	6,287	7,368	8,911	
Depn. & Amort.	1,297	1,499	1,764	2,111	2,348	
Net Interest Exp. / Inc. (-)	0	0	0	0	0	
Inc (-) / Dec in WCcap.	-668	1,028	-662	-121	-221	
Others	658	486	-129	-248	-349	
Taxes Paid	-980	-1,061	-1,666	-1,953	-2,361	
Operating Cash Flow	3,112	6,445	5,594	7,158	8,328	
Capex	-2,745	-2,360	-4,500	-4,500	-4,500	
Free Cash Flow	368	4,085	1,094	2,658	3,828	
Inc (-) / Dec in Investments	-1,642	-1,416	0	0	0	
Others	178	353	876	964	1,109	
Investing Cash Flow	-4,209	-3,423	-3,624	-3,536	-3,391	
Inc / Dec (-) in Capital	380	4,785	0	0	0	
Dividend + Tax thereon	0	0	0	-805	-1,341	
Inc / Dec (-) in Loans	2,152	-276	-3,750	-1,500	-1,500	
Others	-936	-1,053	-747	-716	-760	
Financing Cash Flow	1,596	3,456	-4,497	-3,021	-3,601	
Inc / Dec (-) in Cash	499	6,478	-2,527	601	1,336	
Opening Cash Balance	695	1,194	7,672	5,146	5,747	
Closing Cash Balance	1,194	7,672	5,146	5,747	7,082	

Source: Company, JM Financial

Dupont Analysis		FY22A	FY23A	FY24E	FY25E	FY26E
Net Margin		9.1%	13.2%	14.1%	14.0%	14.6%
Asset Turnover (x)		0.8	0.8	0.9	1.0	1.1
Leverage Factor (x)		1.7	1.6	1.4	1.2	1.2
RoE		13.1%	17.8%	17.4%	17.4%	18.1%

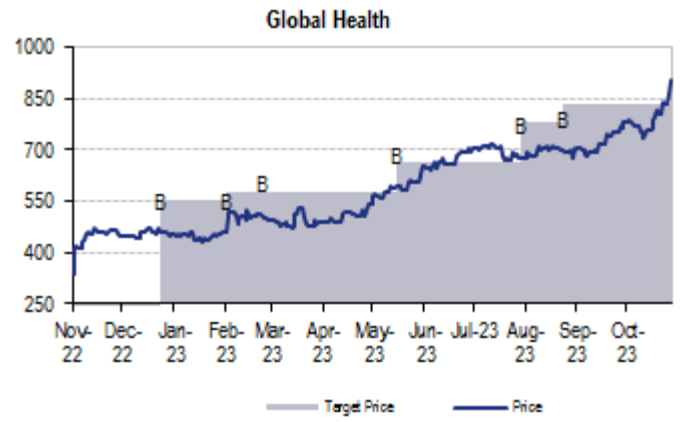
Key Ratios		FY22A	FY23A	FY24E	FY25E	FY26E
BV/Share (INR)		63.8	93.8	107.8	125.0	144.4
ROIC		12.2%	18.8%	20.9%	21.3%	23.3%
ROE		13.1%	17.8%	17.4%	17.4%	18.1%
Net Debt/Equity (x)		0.2	-0.2	-0.2	-0.2	-0.3
P/E (x)		116.6	65.0	52.4	44.7	37.0
P/B (x)		14.2	9.6	8.4	7.2	6.3
EV/EBITDA (x)		54.4	36.8	29.8	25.4	21.2
EV/Sales (x)		11.3	8.7	7.2	6.0	5.1
Debtor days		30	26	30	30	30
Inventory days		9	8	9	9	9
Creditor days		29	34	33	34	34

Source: Company, JM Financial

History of Recommendation and Target Price

Date	Recommendation	Target Price	% Chg.
7-Jan-23	Buy	550	
15-Feb-23	Buy	575	4.5
9-Mar-23	Buy	575	0.0
29-May-23	Buy	665	15.7
12-Aug-23	Buy	780	17.3
6-Sep-23	Buy	835	7.1

Recommendation History



APPENDIX I

JM Financial Institutional Securities Limited

Corporate Identity Number: U67100MH2017PLC296081

Member of BSE Ltd. and National Stock Exchange of India Ltd.

SEBI Registration Nos.: Stock Broker - INZ000163434, Research Analyst - INH000000610

Registered Office: 7th Floor, Cnergy, Appasaheb Marathe Marg, Prabhadevi, Mumbai 400 025, India.

Board: +91 22 6630 3030 | Fax: +91 22 6630 3488 | Email: jmfinancial.research@jmfl.com | www.jmfl.com

Compliance Officer: Mr. Sahil Salastekar | Tel: +91 22 6224 1073 | Email: sahil.salastekar@jmfl.com

Grievance officer: Mr. Sahil Salastekar | Tel: +91 22 6224 1073 | Email: instcompliance@jmfl.com

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Definition of ratings	
Rating	Meaning
Buy	Total expected returns of more than 10% for stocks with market capitalisation in excess of INR 200 billion and REITs* and more than 15% for all other stocks, over the next twelve months. Total expected return includes dividend yields.
Hold	Price expected to move in the range of 10% downside to 10% upside from the current market price for stocks with market capitalisation in excess of INR 200 billion and REITs* and in the range of 10% downside to 15% upside from the current market price for all other stocks, over the next twelve months.
Sell	Price expected to move downwards by more than 10% from the current market price over the next twelve months.

* REITs refers to Real Estate Investment Trusts.

Research Analyst(s) Certification

The Research Analyst(s), with respect to each issuer and its securities covered by them in this research report, certify that:

All of the views expressed in this research report accurately reflect his or her or their personal views about all of the issuers and their securities; and

No part of his or her or their compensation was, is, or will be directly or indirectly related to the specific recommendations or views expressed in this research report.

Important Disclosures

This research report has been prepared by JM Financial Institutional Securities Limited (JM Financial Institutional Securities) to provide information about the company(ies) and sector(s), if any, covered in the report and may be distributed by it and/or its associates solely for the purpose of information of the select recipient of this report. This report and/or any part thereof, may not be duplicated in any form and/or reproduced or redistributed without the prior written consent of JM Financial Institutional Securities. This report has been prepared independent of the companies covered herein.

JM Financial Institutional Securities is registered with the Securities and Exchange Board of India (SEBI) as a Research Analyst and a Stock Broker having trading memberships of the BSE Ltd. (BSE) and National Stock Exchange of India Ltd. (NSE). No material disciplinary action has been taken by SEBI against JM Financial Institutional Securities in the past two financial years which may impact the investment decision making of the investor. Registration granted by SEBI and certification from the National Institute of Securities Market (NISM) in no way guarantee performance of JM Financial Institutional Securities or provide any assurance of returns to investors.

JM Financial Institutional Securities renders stock broking services primarily to institutional investors and provides the research services to its institutional clients/investors. JM Financial Institutional Securities and its associates are part of a multi-service, integrated investment banking, investment management, brokerage and financing group. JM Financial Institutional Securities and/or its associates might have provided or may provide services in respect of managing offerings of securities, corporate finance, investment banking, mergers & acquisitions, broking, financing or any other advisory services to the company(ies) covered herein. JM Financial Institutional Securities and/or its associates might have received during the past twelve months or may receive compensation from the company(ies) mentioned in this report for rendering any of the above services.

JM Financial Institutional Securities and/or its associates, their directors and employees may; (a) from time to time, have a long or short position in, and buy or sell the securities of the company(ies) mentioned herein or (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) covered under this report or (c) act as an advisor or lender/borrower to, or may have any financial interest in, such company(ies) or (d) considering the nature of business/activities that JM Financial Institutional Securities is engaged in, it may have potential conflict of interest at the time of publication of this report on the subject company(ies).

Neither JM Financial Institutional Securities nor its associates or the Research Analyst(s) named in this report or his/her relatives individually own one per cent or more securities of the company(ies) covered under this report, at the relevant date as specified in the SEBI (Research Analysts) Regulations, 2014.

The Research Analyst(s) principally responsible for the preparation of this research report and their immediate relatives are prohibited from buying or selling debt or equity securities, including but not limited to any option, right, warrant, future, long or short position issued by company(ies) covered under this report. The Research Analyst(s) principally responsible for the preparation of this research report or their immediate relatives (as defined under SEBI (Research Analysts) Regulations, 2014); (a) do not have any financial interest in the company(ies) covered under this report or (b) did not receive any compensation from the company(ies) covered under this report, or from any third party, in connection with this report or (c) do not have any other material conflict of interest at the time of publication of this report. Research Analyst(s) are not serving as an officer, director or employee of the company(ies) covered under this report.

While reasonable care has been taken in the preparation of this report, it does not purport to be a complete description of the securities, markets or developments referred to herein, and JM Financial Institutional Securities does not warrant its accuracy or completeness. JM Financial Institutional Securities may not be in any way responsible for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. This report is provided for information only and is not an investment advice and must not alone be taken as the basis for an investment decision.

This research report is based on the fundamental research/analysis conducted by the Research Analyst(s) named herein. Accordingly, this report has been prepared by studying/focusing on the fundamentals of the company(ies) covered in this report and other macro-economic factors. JM Financial Institutional Securities may have also issued or may issue, research reports and/or recommendations based on the technical/quantitative analysis of the company(ies) covered in this report by studying and using charts of the stock's price movement, trading volume and/or other volatility parameters. As a result, the views/recommendations expressed in such technical research reports could be inconsistent or even contrary to the views contained in this report.

The investment discussed or views expressed or recommendations/opinions given herein may not be suitable for all investors. The user assumes the entire risk of any use made of this information. The information contained herein may be changed without notice and JM Financial Institutional Securities reserves the right to make modifications and alterations to this statement as they may deem fit from time to time.

This report is neither an offer nor solicitation of an offer to buy and/or sell any securities mentioned herein and/or not an official confirmation of any transaction.

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 JM Financial Institutional Securities and/or its affiliated company(ies) 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 a certain category of investors. Persons in whose possession this report may come, are required to inform themselves of and to observe such restrictions.

Additional disclosure only for U.S. persons: JM Financial Institutional Securities has entered into an agreement with JM Financial Securities, Inc. ("JM Financial Securities"), a U.S. registered broker-dealer and member of the Financial Industry Regulatory Authority ("FINRA") in order to conduct certain business in the United States in reliance on the exemption from U.S. broker-dealer registration provided by Rule 15a-6, promulgated under the U.S. Securities Exchange Act of 1934 (the "Exchange Act"), as amended, and as interpreted by the staff of the U.S. Securities and Exchange Commission ("SEC") (together "Rule 15a-6").

This research report is distributed in the United States by JM Financial Securities in compliance with Rule 15a-6, and as a "third party research report" for purposes of FINRA Rule 2241. In compliance with Rule 15a-6(a)(3) this research report is distributed only to "major U.S. institutional investors" as defined in Rule 15a-6 and is not intended for use by any person or entity that is not a major U.S. institutional investor. If you have received a copy of this research report and are not a major U.S. institutional investor, you are instructed not to read, rely on, or reproduce the contents hereof, and to destroy this research or return it to JM Financial Institutional Securities or to JM Financial Securities.

This research report is a product of JM Financial Institutional Securities, which is the employer of the research analyst(s) solely responsible for its content. The research analyst(s) preparing this research report is/are resident outside the United States and are not associated persons or employees of any U.S. registered broker-dealer. Therefore, the analyst(s) are not subject to supervision by a U.S. broker-dealer, or otherwise required to satisfy the regulatory licensing requirements of FINRA and may not be subject to the Rule 2241 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Any U.S. person who is recipient of this report that wishes further information regarding, or to effect any transaction in, any of the securities discussed in this report, must contact, and deal directly through a U.S. registered representative affiliated with a broker-dealer registered with the SEC and a member of FINRA. In the U.S., JM Financial Institutional Securities has an affiliate, JM Financial Securities, Inc. located at 1325 Avenue of the Americas, 28th Floor, Office No. 2821, New York, New York 10019. Telephone +1 (332) 900 4958 which is registered with the SEC and is a member of FINRA and SIPC.

Additional disclosure only for U.K. persons: Neither JM Financial Institutional Securities nor any of its affiliates is authorised in the United Kingdom (U.K.) by the Financial Conduct Authority. As a result, this report is for distribution only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended, the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000) in connection with the matters to which this report relates may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This report is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this report relates is available only to relevant persons and will be engaged in only with relevant persons.

Additional disclosure only for Canadian persons: This report is not, and under no circumstances is to be construed as, an advertisement or a public offering of the securities described herein in Canada or any province or territory thereof. Under no circumstances is this report to be construed as an offer to sell securities or as a solicitation of an offer to buy securities in any jurisdiction of Canada. Any offer or sale of the securities described herein in Canada will be made only under an exemption from the requirements to file a prospectus with the relevant Canadian securities regulators and only by a dealer properly registered under applicable securities laws or, alternatively, pursuant to an exemption from the registration requirement in the relevant province or territory of Canada in which such offer or sale is made. This report is not, and under no circumstances is it to be construed as, a prospectus or an offering memorandum. No securities commission or similar regulatory authority in Canada has reviewed or in any way passed upon these materials, the information contained herein or the merits of the securities described herein and any representation to the contrary is an offence. If you are located in Canada, this report has been made available to you based on your representation that you are an "accredited investor" as such term is defined in National Instrument 45-106 Prospectus Exemptions and a "permitted client" as such term is defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Under no circumstances is the information contained herein to be construed as investment advice in any province or territory of Canada nor should it be construed as being tailored to the needs of the recipient. Canadian recipients are advised that JM Financial Securities, Inc., JM Financial Institutional Securities Limited, their affiliates and authorized agents are not responsible for, nor do they accept, any liability whatsoever for any direct or consequential loss arising from any use of this research report or the information contained herein.