# Clean Science and Technology | BUY

JM FINANCIAL

Prices have largely stabilised; focus on new product launches

Clean Science's 3QFY24 earnings print was better than our and consensus expectations. During the guarter, reported EBITDA was ~6%/3% higher than JMFe and consensus on account of robust volume growth. Looking at the current quarter's performance, we believe that prices of most of Clean's products have largely stabilised. Hence, going forward, volume-led growth is likely to continue as there are a lot of new projects kicking in. In 4QFY24, we believe there could be higher one-time expenses for plant commercialisation. However, FY25 onwards, the company's growth trajectory looks promising as it expands its non-flagship product portfolio. We highlight that, in FY25, the company's capex of INR 3.6bn (~INR 3.3bn for HALS and INR 300mn for pharma intermediate) will start contributing to the topline along with recovery in volume in its existing products. For FY26, besides higher utilisation of the HALS unit, growth levers will be two pharma intermediates' capex of INR 1.0bn each (with likely commercialisation in Apr'25 and Aug'25). Factoring in 3QFY24 results and commentary, we have lowered our FY24E/FY25E/FY26E EBITDA and EPS estimates by ~1-2%. As a result, our Mar'25 TP is revised to INR 1,805 (from INR 1,830 earlier). We estimate that Clean will register 36% EPS CAGR over FY24E-26E. Any delay in new product approvals could be a downside risk to our estimates. We maintain BUY.

- EBITDA miss on account of higher other expenses: Clean Science's 3QFY24 consolidated gross profit was 2% ahead of JMFe at INR 1.3bn (up 9% QoQ while down 18% YoY) on account of higher-than-anticipated gross margin of 66.8% (vs. JMFe of 66.5% and 65.9% in 2QFY24) while revenue was largely in line at INR 1.9bn (up 8% QoQ while down 18% YoY). During the quarter, other expenses was lower at INR 319mn (vs. JMFe of INR 340mn and INR 326mn in 2QFY24). As a result, EBITDA came in 6% above JMFe at INR 866mn (up 16% QoQ while down 20% YoY) and PAT was 7% ahead of JMFe at INR 626mn (up 20% QoQ while down 25% YoY).
- Unit 4 commercialisation in Feb'24; INR 2.3bn worth pharma intermediates' capex on top of HALS: During the quarter, sequential revenue growth was on account of higher volumes. Moreover, despite higher contribution of newer products (~25% of overall sales) and domestic sales, the company was able to make better gross margin. For HALS 701, the company has received approvals from multinational company in the EU and has already started exporting to China and Korea. For 770, domestic acceptance is increasing. The company intends to take the run-rate of these products to ~200MT per month by end-FY25. Besides this, the company will be commercialising the remaining HALS series of products in Feb'24 under its subsidiary CFCL for which it has spent INR 3.35bn including the utilities. Further, the company intends to incur additional INR 2.3bn capex in FY25.
- Estimates lowered marginally; maintain BUY: Factoring in lower margins for new products getting launched in 4QFY24 and higher depreciation in FY25/26 due to higher capex, we lower our FY24E/FY25E/FY26E EBITDA and EPS estimates by ~1-2%. As a result, we maintain BUY with a revised Mar'25 TP of INR 1,805 (from INR 1,830 earlier).

Krishan Parwani

krishan.parwani@jmfl.com | Tel: (91 22) 66303073

Recommendation and Price Target	
Current Reco.	BUY
Previous Reco.	BUY
Current Price Target (12M)	1,805
Upside/(Downside)	23.5%
Previous Price Target	1,830
Change	-1.3%

Key Data – CLEAN IN	
Current Market Price	INR1,461
Market cap (bn)	INR155.3/US\$1.9
Free Float	25%
Shares in issue (mn)	106.2
Diluted share (mn)	106.2
3-mon avg daily val (mn)	INR272.4/US\$3.3
52-week range	1,622/1,227
Sensex/Nifty	72,086/21,854
INR/US\$	82.9

Price Performance			
%	1M	6M	12M
Absolute	-6.9	12.6	-1.9
Relative*	-7.0	2.7	-17.2

\* To the BSE Sensex

Financial Summary					(INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Net Sales	6,849	9,358	7,685	11,120	14,862
Sales Growth (%)	33.7	36.6	-17.9	44.7	33.6
EBITDA	2,999	4,021	3,199	4,459	5,794
EBITDA Margin (%)	43.8	43.0	41.6	40.1	39.0
Adjusted Net Profit	2,285	2,952	2,299	3,191	4,280
Diluted EPS (INR)	21.5	27.8	21.6	30.0	40.3
Diluted EPS Growth (%)	15.2	29.2	-22.1	38.8	34.1
ROIC (%)	51.8	46.6	27.9	32.0	34.3
ROE (%)	34.9	33.2	20.5	23.0	24.4
P/E (x)	67.9	52.6	67.5	48.6	36.3
P/B (x)	20.2	15.4	12.6	10.0	7.9
EV/EBITDA (x)	50.8	37.7	47.1	33.6	25.5
Dividend Yield (%)	0.2	0.2	0.0	0.1	0.1

Source: Company data, JM Financial. Note: Valuations as of 02/Nov/2023

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.

# 3QFY24 Result Review

Consolidated (INR mn)	1QFY23	2QFY23	3QFY23	4QFY23	1QFY24	2QFY24	3QFY24	3QFY24E	% QoQ	% YoY	% difference
Net Sales	2,341	2,475	2,374	2,169	1,881	1,811	1,947	1,920	8%	-18%	1%
COGS	913	927	779	641	726	618	646	643	5%	-17%	
Gross Profit	1,427	1,548	1,595	1,528	1,155	1,193	1,301	1,277	9%	-18%	2%
Gross margin	61.0%	62.5%	67.2%	70.5%	61.4%	65.9%	66.8%	66.5%	92 bps	-38 bps	30 bps
Employee cost	100	106	118	128	117	119	116	120	-2%	-1%	
Employee cost as % of sales	4%	4%	5%	6%	6%	7%	6%	6%	-58 bps	100 bps	
Other expenditure	414	467	396	349	277	326	319	340	-2%	-19%	
Other expenditure as % of sales	18%	19%	17%	16%	15%	18%	16%	18%	-165 bps	-31 bps	
EBIDTA	913	975	1,081	1,051	761	748	866	817	16%	-20%	6%
EBITDA margin	39%	39%	46%	48%	40%	41%	44.5%	42.5%	316 bps	-107 bps	193 bps
Depreciation	85	87	89	101	108	111	113	115	2%	27%	
EBIT	829	888	992	950	653	637	753	702	18%	-24%	
Interest expense	0.0	0.0	0.6	1.3	0.5	2.5	0.5	3.0	-79%	-13%	
Other income	18	28	126	126	134	60	78	80	30%	-38%	
PBT	847	916	1,117	1,075	787	695	830	779	20%	-26%	
Tax	218	237	280	270	198	173	204	195	18%	-27%	
PAT	629	679	837	805	589	522	626	584	20%	-25%	7%
PAT margin	27%	27%	35%	37%	31%	29%	32.2%	30.4%	335 bps	-310 bps	174 bps
Basic EPS (INR)	5.92	6.40	7.88	7.58	5.55	4.91	5.90	5.50	20%	-25%	
Tax rate	25.7%	25.8%	25.1%	25.1%	25.1%	24.9%	24.6%	25.0%	-29 bps	-50 bps	

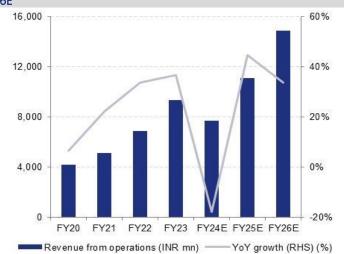
Source: Company, JM Financial

	2QFY23	3QFY23	4QFY23	1QFY24	2QFY24	3QFY24	3QFY24E	%QoQ	%YoY	% diff vs JMFe
	ZUF1Z3	3QF123	4QF123	TQFT24	ZQF1Z4	JUFT24	3QF124E	%Q0Q	%101	% aitt vs Jivi Fe
INR mn										
Performance chemicals	1,660	1,699	1,568	1,260	1,213	1,304	1,280	7%	-23%	2%
Pharma and agro intermediates	440	396	412	357	344	370	350	7%	-7%	6%
FMCG chemicals	300	261	239	245	272	216	290	-21%	-17%	-25%
Total	2,475	2,374	2,169	1,881	1,811	1,947	1,920	8%	-18%	1%
% of overall revenues										
Performance chemicals	67%	72%	72%	67%	67%	67%	67%	-2bps	-459bps	
Pharma and agro intermediates	18%	17%	19%	19%	19%	19%	18%	-1bps	231bps	
FMCG chemicals	12%	11%	11%	13%	15%	11%	15%	-394bps	11bps	
Total	100%	100%	100%	100%	100%	100%	100%	0bps	0bps	

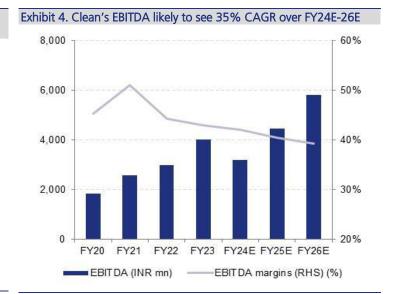
Source: Company, JM Financial

### **Assumptions and Estimates**

Exhibit 3. Clean's revenue likely to witness 39% CAGR over FY24E-26E

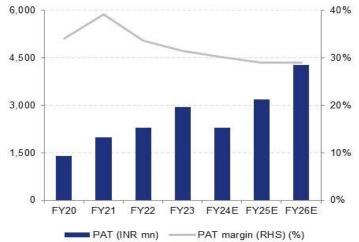


Source: Company, JM Financial

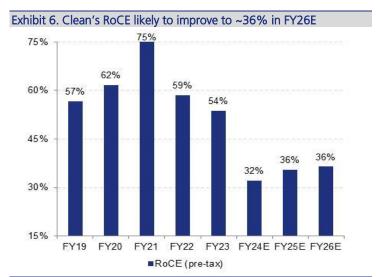


Source: Company, JM Financial





Source: Company, JM Financial

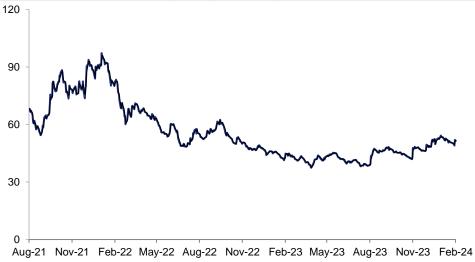


Source: Company, JM Financial

	New	Old	Change
Revenue (INR Mn)			
FY24	7,685	7,837	-1.9%
FY25	11,120	11,120	0.0%
FY26	14,862	14,862	0.0%
EBITDA (INR Mn)			
FY24	3,199	3,262	-1.9%
FY25	4,459	4,526	-1.5%
FY26	5,794	5,808	-0.3%
PAT (INR Mn)			
FY24	2,299	2,351	-2.2%
FY25	3,191	3,265	-2.2%
FY26	4,280	4,359	-1.8%
EPS (INR)			
FY24	21.6	22.1	-2.2%
FY25	30.0	30.7	-2.2%
FY26	40.3	41.0	-1.8%

### Valuation

Exhibit 8. Clean Science is currently trading at ~51x 1-year forward consensus P/E multiple



Source: Bloomberg, JM Financial

Exhibit 9. Chemical companies peer valuation																			
Commonia	Datina	CMP (INR)	TP (INR)		P/	/E(x)			P/	B (x)			EV/EE	BITDA (x)			RO	E(%)	
Company	Rating	CIVIP (INK)	IP (INK)	FY23	FY24E	FY25E	FY26E	FY23	FY24E	FY25E	FY26E	FY23	FY24E	FY25E	FY26E	FY23	FY24E	FY25E	FY26E
SRF	BUY	2,319	2,665	31.8	56.2	36.6	27.1	6.7	6.0	5.3	4.5	20.4	28.2	21.0	16.2	22.9	11.3	15.3	17.9
UPL	BUY	533	650	11.0	NM	21.5	14.3	1.4	1.4	1.3	1.2	6.1	12.9	8.4	7.2	13.6	-1.5	6.3	9.0
Pl Industries	HOLD	3,376	3,710	42.0	33.6	30.6	26.9	7.1	5.9	4.9	4.2	31.2	24.7	21.3	18.4	18.4	19.2	17.5	16.8
Deepak Nitrite	BUY	2,250	2,565	36.9	43.6	29.9	24.8	7.7	6.5	5.4	4.4	24.1	27.1	19.0	15.9	22.9	16.2	19.7	19.6
Clean Science	BUY	1,461	1,805	52.6	67.5	48.6	36.3	15.4	12.6	10.0	7.9	37.7	47.2	33.6	25.6	33.2	20.5	23.0	24.4
Navin Fluorine	BUY	3,325	4,730	43.9	49.5	34.4	24.9	7.5	6.7	5.8	4.9	31.1	33.8	24.9	19.6	18.6	14.4	18.2	21.5
Fine Organics	SELL	4,668	3,220	24.2	42.0	45.4	43.5	9.4	8.0	7.0	6.2	17.7	29.0	29.1	27.2	47.6	20.6	16.5	15.2
Galaxy Surfactants	HOLD	2,623	2,605	24.4	31.5	28.7	26.7	4.9	4.3	3.7	3.3	16.4	18.5	16.9	15.3	22.0	14.5	13.9	13.0
PCBL Ltd.	BUY	320	355	27.3	22.5	21.1	18.0	4.3	3.6	3.1	2.6	17.7	13.3	11.9	10.4	16.2	17.3	15.7	15.7
Aether Industries	BUY	846	1,095	80.8	87.8	52.1	38.3	8.5	5.3	4.8	4.3	56.0	57.6	33.2	24.8	16.0	7.6	9.7	11.8
Anupam Rasayan	HOLD	950	990	56.3	67.8	42.9	29.3	4.3	3.5	3.2	2.9	22.8	24.3	18.2	14.3	8.8	5.8	7.7	10.3
Archean Chemicals	BUY	619	700	17.9	22.0	14.1	11.1	4.8	4.3	3.3	2.5	11.7	14.2	8.9	6.4	45.2	21.6	26.3	25.8
Tatva Chintan Pharma Chem	HOLD	1,331	1,310	63.4	94.6	45.7	32.1	6.0	4.3	4.0	3.6	53.5	37.4	24.6	19.4	9.9	5.3	9.0	11.7

Source: Companies, JM Financial

# Financial Tables (Consolidated)

Income Statement				(	INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Net Sales	6,849	9,358	7,685	11,120	14,862
Sales Growth	33.7%	36.6%	-17.9%	44.7%	33.6%
Other Operating Income	0	0	0	0	0
Total Revenue	6,849	9,358	7,685	11,120	14,862
Cost of Goods Sold/Op. Exp	2,247	3,260	2,728	4,504	6,093
Personnel Cost	345	452	434	540	722
Other Expenses	1,258	1,625	1,325	1,617	2,253
EBITDA	2,999	4,021	3,199	4,459	5,794
EBITDA Margin	43.8%	43.0%	41.6%	40.1%	39.0%
EBITDA Growth	15.8%	34.1%	-20.5%	39.4%	29.9%
Depn. & Amort.	249	361	459	610	771
EBIT	2,750	3,660	2,739	3,849	5,023
Other Income	300	298	343	350	465
Finance Cost	1	2	0	0	0
PBT before Excep. & Forex	3,048	3,957	3,082	4,199	5,488
Excep. & Forex Inc./Loss(-)	0	0	0	0	0
PBT	3,048	3,957	3,082	4,199	5,488
Taxes	763	1,005	783	1,008	1,207
Extraordinary Inc./Loss(-)	0	0	0	0	0
Assoc. Profit/Min. Int.(-)	0	0	0	0	0
Reported Net Profit	2,285	2,952	2,299	3,191	4,280
Adjusted Net Profit	2,285	2,952	2,299	3,191	4,280
Net Margin	33.4%	31.5%	29.9%	28.7%	28.8%
Diluted Share Cap. (mn)	106.2	106.2	106.2	106.2	106.2
Diluted EPS (INR)	21.5	27.8	21.6	30.0	40.3
Diluted EPS Growth	15.2%	29.2%	-22.1%	38.8%	34.1%
Total Dividend + Tax	345	319	62	84	110
Dividend Per Share (INR)	3.3	3.0	0.6	0.8	1.0

Balance Sheet					(INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Shareholders' Fund	7,684	10,100	12,338	15,445	19,616
Share Capital	106	106	106	106	106
Reserves & Surplus	7,578	9,994	12,232	15,339	19,510
Preference Share Capital	0	0	0	0	0
Minority Interest	0	0	0	0	0
Total Loans	3	1	0	0	0
Def. Tax Liab. / Assets (-)	209	257	257	257	257
Total - Equity & Liab.	7,897	10,358	12,595	15,703	19,873
Net Fixed Assets	3,399	4,806	6,347	8,038	9,568
Gross Fixed Assets	3,909	5,561	7,561	9,861	12,161
Intangible Assets	10	13	14	14	15
Less: Depn. & Amort.	991	1,345	1,805	2,414	3,185
Capital WIP	441	205	205	205	205
Investments	2,079	3,276	3,776	4,276	5,376
Current Assets	3,769	3,436	3,423	4,632	6,492
Inventories	881	1,088	885	1,281	1,713
Sundry Debtors	1,535	1,462	1,189	1,722	2,301
Cash & Bank Balances	579	125	587	868	1,716
Loans & Advances	0	0	0	0	0
Other Current Assets	773	761	761	761	761
Current Liab. & Prov.	1,350	1,160	951	1,244	1,564
Current Liabilities	1,021	805	655	948	1,267
Provisions & Others	329	355	296	296	296
Net Current Assets	2,419	2,276	2,471	3,388	4,928
Total – Assets	7,897	10,358	12,595	15,703	19,873

Source: Company, JM Financial

Dupont Analysis Y/E March

Net Margin

Asset Turnover (x)

Source: Company, JM Financial

Cash Flow Statement				(	INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Profit before Tax	3,048	3,957	3,082	4,199	5,488
Depn. & Amort.	249	361	459	610	771
Net Interest Exp. / Inc. (-)	-20	-3	-5	-5	-5
Inc (-) / Dec in WCap.	-1,210	-428	266	-635	-692
Others	-104	-148	0	0	0
Taxes Paid	-691	-945	-783	-1,008	-1,207
Operating Cash Flow	1,272	2,794	3,020	3,161	4,354
Capex	-1,397	-1,834	-2,001	-2,301	-2,301
Free Cash Flow	-124	960	1,019	860	2,053
Inc (-) / Dec in Investments	532	-1,410	-500	-500	-1,100
Others	79	546	5	5	5
Investing Cash Flow	-786	-2,698	-2,496	-2,796	-3,396
Inc / Dec (-) in Capital	0	-1	0	0	0
Dividend + Tax thereon	0	0	0	0	0
Inc / Dec (-) in Loans	0	0	-1	0	0
Others	-1	-549	-62	-84	-110
Financing Cash Flow	-1	-550	-62	-84	-110
Inc / Dec (-) in Cash	485	-455	462	281	849
Opening Cash Balance	94	579	124	586	868
Closing Cash Balance	579	124	586	867	1,716

Leverage Factor (x)	1.0	1.0	1.0	1.0	1.0
RoE	34.9%	33.2%	20.5%	23.0%	24.4%
Key Ratios					
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
BV/Share (INR)	72.3	95.1	116.2	145.4	184.7
ROIC	51.8%	46.6%	27.9%	32.0%	34.3%

FY23A

31.5%

FY24E

29.9%

0.7

FY25E

28.7%

FY26E

28.8%

FY22A

33.4%

Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
BV/Share (INR)	72.3	95.1	116.2	145.4	184.7
ROIC	51.8%	46.6%	27.9%	32.0%	34.3%
ROE	34.9%	33.2%	20.5%	23.0%	24.4%
Net Debt/Equity (x)	-0.3	-0.3	-0.4	-0.3	-0.4
P/E (x)	67.9	52.6	67.5	48.6	36.3
P/B (x)	20.2	15.4	12.6	10.0	7.9
EV/EBITDA (x)	50.8	37.7	47.1	33.6	25.5
EV/Sales (x)	22.2	16.2	19.6	13.5	9.9
Debtor days	82	57	56	57	57
Inventory days	47	42	42	42	42
Creditor days	97	55	53	52	51

Source: Company, JM Financial

Source: Company, JM Financial

History of Recommendation and Target Price					
Thistory of Nec	offilitieridation and 18	_			
Date	Recommendation	Target Price	% Chg.		
1-Sep-21	Buy	1,820			
11-Nov-21	Buy	2,195	20.6		
7-Feb-22	Buy	2,500	13.9		
30-May-22	Buy	2,425	-3.0		
7-Jun-22	Buy	2,425	0.0		
27-Jul-22	Buy	2,485	2.5		
20-Oct-22	Buy	2,485	0.0		
11-Apr-23	Buy	2,255	-9.2		
18-May-23	Buy	2,325	3.1		
4-Aug-23	Buy	1,995	-14.2		
2-Nov-23	Buy	1,790	-10.3		



#### 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.			

<sup>\*</sup> 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 lo