# Hindalco Industries | BUY



Novelis reported 4Q adj. EBITDA of USD514mn, higher than JMfe of USD503mn. The company achieved a record EBITDA/t of USD540 during 4Q vs USD499/t in 3Q, higher than stated guidance of USD525/t. Key takeaways from the call are – 1) Company remains committed towards its earlier stated EBITDA/t guidance of ~USD525/t 2) No update on IPO at this stage 3) progressing well on projects, spent USD700mn on Bay Minette project so far, out of USD4.1bn total capex outlined 4) FY25 capex to be USD1.8-2.1bn 5) Bay Minette commissioning timeline continues to be calendar 2HCY26 ~1.5 year ramp up period likely 6) Net debt/EBITDA improved to 2.3x in Q4 from 2.7x in Q3; endeavour to maintain sub ~2.5x; FCF of USD400mn + in 4Q 7) Paid USD 100mn as dividend to parent during the year; 8-10% of cash flow stated as dividend policy earlier. Hindalco, given ~70%+ steady/strong EBITDA being non-LME linked, remains our preferred play in the metal space. We upward revise our multiple/LME assumption to USD2.5k/t from USD2.4k/t earlier, leading to an upward revision in fair value. Maintain BUY.

- Higher shipments, lower realisation: : Net sales decreased 7% versus the prior year period to \$4.1 billion for the fourth quarter of fiscal year 2024, driven by lower average aluminum prices, partially offset by higher total shipments. Total flat rolled product shipments increased 2% to 951 kilotonnes in the fourth quarter of fiscal year 2024 versus the prior year period, due primarily to increased demand for beverage packaging sheet.
- Adjusted EBITDA up significantly higher than guidance: Net income attributable to common shareholder was up 6% versus the prior year to \$166 million in the fourth quarter of fiscal year 2024, due primarily to higher Adjusted EBITDA, partially offset by higher taxes and unfavorable timing of unrealized derivative losses. Adjusted EBITDA increased 28% versus the prior year to \$514 million in the fourth quarter of fiscal year 2024. This significant improvement was primarily driven by favorable metal benefit from recycling and lower operating costs than the prior year period.
- Full year FCF lower on high Capex: Adjusted Free Cash Flow was an outflow of \$75 million in fiscal year 2024 compared to a prior year period inflow of \$431 million, due primarily to a 73% year-over-year increase in capital expenditures, partially offset by higher cash flow from operating activities. Fiscal year 2024 capital expenditures total \$1.4 billion and reflect the planned increase in strategic, sustainability-focused, capital investment projects that support increased long-term customer demand.
- Leverage abiding by targets: The company had a net leverage ratio (Net Debt / trailing twelve months (TTM) Adjusted EBITDA) of 2.3x at the end of the fourth quarter of fiscal year 2024. Total liquidity stood at \$2.3 billion as of March 31, 2024, consisting of \$1.3 billion in cash and cash equivalents and \$1.0 billion in availability under committed credit facilities.

JM	<b>FINANCIAL</b>

Ashutosh Somani

ashutosh.somani@jmfl.com | Tel: (91 22) 66303083

Recommendation and Price Target	
Current Reco.	BUY
Previous Reco.	BUY
Current Price Target (12M)	750
Upside/(Downside)	17.3%
Previous Price Target	600
Change	25.0%

Key Data – HNDL IN	
Current Market Price	INR639
Market cap (bn)	INR1,435.5/US\$17.2
Free Float	64%
Shares in issue (mn)	2,223.9
Diluted share (mn)	2,223.9
3-mon avg daily val (mn)	INR5,164.3/US\$61.9
52-week range	662/398
Sensex/Nifty	73,896/22,443
INR/US\$	83.5

Price Performa	nce		
%	1M	6M	12M
Absolute	12.1	32.5	47.1
Relative*	12.6	16.5	21.5

\* To the BSE Sensex

Financial Summary					(INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Net Sales	19,50,590	22,32,020	19,80,023	20,55,137	21,50,572
Sales Growth (%)	47.8	14.4	-11.3	3.8	4.6
EBITDA	2,86,570	2,28,850	2,47,175	2,75,104	2,85,753
EBITDA Margin (%)	14.7	10.3	12.5	13.4	13.3
Adjusted Net Profit	1,39,290	1,02,750	1,06,635	1,18,501	1,18,086
Diluted EPS (INR)	62.6	46.2	47.9	53.3	53.1
Diluted EPS Growth (%)	140.7	-26.2	3.8	11.1	-0.3
ROIC (%)	14.3	10.2	9.7	9.8	9.2
ROE (%)	19.2	11.9	10.6	10.6	9.6
P/E (x)	10.2	13.8	13.3	12.0	12.0
P/B (x)	1.8	1.5	1.3	1.2	1.1
EV/EBITDA (x)	6.4	7.9	7.4	6.5	6.1
Dividend Yield (%)	0.6	0.2	0.3	0.3	0.3

Source: Company data, JM Financial. Note: Valuations as of 06/May/2024

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.

Exhibit 1. Financial summ	ary – con	solidated					(INR mn)
Y/E March	4QFY24	4QFY24E	% Var	4QFY23	YoY %	3QFY24	QoQ %
Net sales	4,077	4,300	(5.2)	4,397	(7.3)	3,935	3.6
Shipments ('000 tons)	951	960	(0.9)	936	1.6	910	4.5
Realisations (USD/ton)	4,287	4,479	(4.3)	4,698	(8.7)	4,324	(0.9)
LME (USD/t)	2,241	2,239	0.1	2,447	(8.4)	2,220	0.9
Premium (USD/t)	2,046	2,240	(8.7)	2,251	(9.1)	2,104	(2.8)
Total cost							
COGS (USD mn)	3,417	3,612	(5.4)	3,797	(10.0)	3,309	3.3
COGS as % of sales	83.8	84.0		86.4		84.1	
Adjusted EBITDA	514	503	2.2	403	27.5	454	13.2
EBITDA margins (%)	12.6	11.7		9.2		11.5	
EBITDA/ton (USD/ton)	540	524	3.2	431	25.5	499	8.3
Other income	(8)	1		-		(45)	
Depreciation	148	135		135	9.6	139	6.5
Interest	62	74		70	(11.4)	67	(7.5)
EO income/(expense)	(71)	-		(41)		(28)	
PBT	225	295		157		175	
Tax	59	52		1	NA	54	9.3
Reported PAT	166	243	(31.8)	156		121	
Adjusted PAT	237	243	(2.5)	197	20.3	149	59.1
Key monitorables							
Net Debt (USD bn)	4.3	-		4.1		4.7	
Capex	398	-		324		342	
FCF (from continuing ops.)	442	-		613		(217)	

Source: Company, JM Financial

Exhibit 2. Novelis quarterly segn	Exhibit 2. Novelis quarterly segmental performance							
Y/E March	4QFY24	4QFY23	YoY %	3QFY24	QoQ %			
North America								
Total Shipments ('000 tons)	391	363	7.7	362	8.0			
EBITDA (USD)	210	131	60.3	165	27.3			
EBITDA/ton (USD/ton)	537	361	48.8	456	17.8			
Europe								
Total Shipments ('000 tons)	246	248	-0.8	230	7.0			
EBITDA (USD)	74	91	-18.7	59	25.4			
EBITDA/ton (USD/ton)	301	367	-18.0	257	17.3			
Asia								
Total Shipments ('000 tons)	183	187	-2.1	176	4.0			
EBITDA (USD)	84	72	16.7	81	3.7			
EBITDA/ton (USD/ton)	459	385	19.2	460	-0.3			
South America								
Total Shipments ('000 tons)	164	144	13.9	176	-6.8			
EBITDA (USD)	145	115	26.1	150	-3.3			
EBITDA/ton (USD/ton)	884	799	10.7	852	3.7			

Source: Company, JM Financial

Exhibit 3. Hindalco - SOTP valuation	n		
	FY26 EBITDA (INR bn)	Multiple	Value (INR bn)
India Aluminium	90.17	6.0	541.036
India Copper	20.6	6.0	124.054
Novelis	174.9	7.0	1,224
Total EV			1,889
Net Debt			324
Implied Mcap			1,566
No. of shares (bn)			2,220
Value (INR/share)			705
Investments			48
Target price			750

Source: JM Financial

## Financial Tables (Consolidated)

Income Statement					(INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Net Sales	19,50,590	22,32,020	19,80,023	20,55,137	21,50,572
Sales Growth	47.8%	14.4%	-11.3%	3.8%	4.6%
Other Operating Income	0	0	0	0	0
Total Revenue	19,50,590	22,32,020	19,80,023	20,55,137	21,50,572
Cost of Goods Sold/Op. Exp	11,75,400	14,07,700	11,23,244	11,61,637	12,31,904
Personnel Cost	1,19,360	1,30,630	75,398	77,838	80,522
Other Expenses	3,69,260	4,64,840	5,34,206	5,40,559	5,52,393
EBITDA	2,86,570	2,28,850	2,47,175	2,75,104	2,85,753
EBITDA Margin	14.7%	10.3%	12.5%	13.4%	13.3%
EBITDA Growth	62.4%	-20.1%	8.0%	11.3%	3.9%
Depn. & Amort.	67,290	70,860	75,281	85,383	97,071
EBIT	2,19,280	1,57,990	1,71,893	1,89,721	1,88,681
Other Income	11,360	12,570	8,334	8,317	8,927
Finance Cost	37,680	36,460	36,116	36,116	36,116
PBT before Excep. & Forex	1,92,960	1,34,100	1,44,111	1,61,922	1,61,492
Excep. & Forex Inc./Loss(-)	0	0	0	0	0
PBT	1,92,960	1,34,100	1,44,111	1,61,922	1,61,492
Taxes	53,730	31,440	37,475	43,422	43,406
Extraordinary Inc./Loss(-)	-1,990	-1,780	0	0	0
Assoc. Profit/Min. Int.(-)	60	90	0	0	0
Reported Net Profit	1,37,300	1,00,970	1,06,635	1,18,501	1,18,086
Adjusted Net Profit	1,39,290	1,02,750	1,06,635	1,18,501	1,18,086
Net Margin	7.1%	4.6%	5.4%	5.8%	5.5%
Diluted Share Cap. (mn)	2,223.9	2,223.9	2,223.9	2,223.9	2,223.9
Diluted EPS (INR)	62.6	46.2	47.9	53.3	53.1
Diluted EPS Growth	140.7%	-26.2%	3.8%	11.1%	-0.3%
Total Dividend + Tax	10,444	2,600	5,201	5,201	5,201
Dividend Per Share (INR)	4.0	1.0	2.0	2.0	2.0

Balance Sheet					(INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Shareholders' Fund	7,81,910	9,48,060	10,54,695	11,73,196	12,91,282
Share Capital	2,224	2,220	2,220	2,220	2,220
Reserves & Surplus	7,79,686	9,45,840	10,52,475	11,70,976	12,89,062
Preference Share Capital	0	0	0	0	C
Minority Interest	110	110	573	573	573
Total Loans	6,44,860	6,02,910	7,11,990	7,05,990	6,99,990
Def. Tax Liab. / Assets (-)	44,240	86,500	86,500	86,500	86,500
Total - Equity & Liab.	14,71,120	16,37,580	18,53,758	19,66,259	20,78,344
Net Fixed Assets	11,18,190	11,83,260	13,02,151	14,27,568	15,33,097
Gross Fixed Assets	14,56,395	15,46,975	17,44,797	19,55,515	21,58,115
Intangible Assets	2,39,650	2,57,450	2,57,450	2,57,450	2,57,450
Less: Depn. & Amort.	6,27,305	6,98,165	7,73,446	8,58,829	9,55,900
Capital WIP	49,450	77,000	73,350	73,432	73,432
Investments	1,41,190	1,41,160	1,43,794	1,43,794	1,43,794
Current Assets	9,59,170	9,23,750	10,39,191	10,66,611	11,52,858
Inventories	4,44,830	4,29,580	4,09,146	4,17,550	4,33,430
Sundry Debtors	2,10,760	1,62,140	2,34,950	2,43,456	2,58,651
Cash & Bank Balances	1,73,920	1,53,680	2,52,300	2,64,864	3,14,904
Loans & Advances	1,29,660	1,78,350	1,42,796	1,40,741	1,45,873
Other Current Assets	0	0	0	0	C
Current Liab. & Prov.	7,47,430	6,10,590	6,31,377	6,71,715	7,51,404
Current Liabilities	6,50,540	5,83,960	5,37,387	5,77,725	6,57,414
Provisions & Others	96,890	26,630	93,990	93,990	93,990
Net Current Assets	2,11,740	3,13,160	4,07,813	3,94,897	4,01,454
Total – Assets	14,71,120	16,37,580	18,53,758	19,66,258	20,78,344

Source: Company, JM Financial

Cash Flow Statement					(INR mn)
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Profit before Tax	1,93,020	1,34,190	1,44,111	1,61,922	1,61,492
Depn. & Amort.	67,290	70,860	75,281	85,383	97,071
Net Interest Exp. / Inc. (-)	0	0	0	0	0
Inc (-) / Dec in WCap.	1,910	-1,21,660	3,966	25,481	43,482
Others	6,130	40,390	0	0	0
Taxes Paid	-53,730	-31,440	-37,475	-43,422	-43,406
Operating Cash Flow	2,14,620	92,340	1,85,883	2,29,365	2,58,640
Capex	-54,290	-1,18,130	-1,94,172	-2,10,800	-2,02,600
Free Cash Flow	1,60,330	-25,790	-8,289	18,565	56,040
Inc (-) / Dec in Investments	30,140	30	-2,634	0	0
Others	-43,224	49,694	4,440	4,440	4,440
Investing Cash Flow	-67,374	-68,406	-1,92,366	-2,06,360	-1,98,160
Inc / Dec (-) in Capital	0	-4	0	0	0
Dividend + Tax thereon	-8,916	-2,220	-4,440	-4,440	-4,440
Inc / Dec (-) in Loans	-52,510	-41,950	1,09,080	-6,000	-6,000
Others	10	0	463	0	0
Financing Cash Flow	-61,416	-44,174	1,05,103	-10,440	-10,440
Inc / Dec (-) in Cash	85,830	-20,240	98,620	12,565	50,040
Opening Cash Balance	88,090	1,73,920	1,53,680	2,52,300	2,64,864
Closing Cash Balance	1,73,920	1,53,680	2,52,300	2,64,864	3,14,904

Dupont Analysis					
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
Net Margin	7.1%	4.6%	5.4%	5.8%	5.5%
Asset Turnover (x)	1.4	1.4	1.1	1.1	1.1
Leverage Factor (x)	2.0	1.8	1.7	1.7	1.6
RoE	19.2%	11.9%	10.6%	10.6%	9.6%

Key Ratios					
Y/E March	FY22A	FY23A	FY24E	FY25E	FY26E
BV/Share (INR)	351.6	426.3	474.3	527.5	580.6
ROIC	14.3%	10.2%	9.7%	9.8%	9.2%
ROE	19.2%	11.9%	10.6%	10.6%	9.6%
Net Debt/Equity (x)	0.5	0.4	0.4	0.3	0.3
P/E (x)	10.2	13.8	13.3	12.0	12.0
P/B (x)	1.8	1.5	1.3	1.2	1.1
EV/EBITDA (x)	6.4	7.9	7.4	6.5	6.1
EV/Sales (x)	0.9	0.8	0.9	0.9	0.8
Debtor days	39	27	43	43	44
Inventory days	83	70	75	74	74
Creditor days	143	106	113	118	129

Source: Company, JM Financial

Source: Company, JM Financial

Date	Recommendation	Target Price	% Chg.
26-May-22	Buy	550	
20-Jun-22	Buy	515	-6.4
3-Aug-22	Buy	515	0.0
10-Aug-22	Buy	520	1.0
3-Sep-22	Buy	525	0.9
3-Nov-22	Buy	525	0.0
11-Nov-22	Buy	525	0.0
22-Dec-22	Buy	530	1.0
5-Feb-23	Buy	530	0.0
9-Feb-23	Buy	530	0.0
9-Mar-23	Buy	530	0.0
4-Apr-23	Buy	530	0.0
10-May-23	Buy	530	0.0
24-May-23	Buy	535	0.9
3-Aug-23	Buy	540	0.9
3-Aug-23	Buy	550	1.9
7-Nov-23	Buy	600	9.1
10-Nov-23	Buy	600	0.0
12-Feb-24	Buy	610	1.7
13-Feb-24	Buy	600	-1.6

### 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.			

<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