# Tata Motors | BUY

## 4QFY18: JLR subdued; standalone gains traction

In 4QFY18, Tata Motors reported consol. EBITDA margin of 13.1% (-220bps YoY), impacted by subdued performance at JLR lead by higher marketing expense, and one-time charges for projects de-prioritized under "Fit for Future". Higher sales volumes in China, favourable mix and adoption of accrual accounting in China, partially blunted the impact from higher D&A and marketing expense. At the standalone level, EBITDA margin improved 250bps YoY to 6.9% due to positive operating leverage arising from 34% volume growth in CV sales. Also, strong growth in new models, helped improve the market share to 5.7% (+50bps YoY) in PVs. The Company's focused 'Impact' program ranging from plugging gaps in CV portfolio, reducing vehicle platforms in PVs and other cost reduction efforts also aided standalone business performance. Basis the current headwinds in major market like UK, Europe and to some extent US, we estimate 9% CAGR in JLR volumes over FY18-20E. During the same period, domestic PVs are likely to record 11%+ CAGR, driven by new models covering wider segments in PVs. We maintain BUY with a revised TP of INR 400. Higher-than-estimated stress in JLR volume / margin and adverse currency movements are key risks to our view.

- 4QFY18 standalone gains traction; JLR challenges remain: In 4QFY18, JLR reported revenues of GBP 7.6bn (+4%YoY) driven by wholesale volume growth of 2.4%YoY and realisation growth of 1.5%. JLR EBITDA margin stood at 12.2% (-210bps YoY). Consequently, JLR reported PAT (incl. China JV) stood at GBP 264mn. In the standalone business, net sales grew by 46%YoY to INR 198bn. Robust growth in MHCV led to positive operating leverage, leading to a sharp recovery in EBITDA margin to 6.9% (+250bps YoY). At the consol. level, company recorded EBIDTA of INR119bn with a 13.1% margin.
- Key con-call takeaways: In the JLR business, operating performance was subdued largely due to headwinds in UK and Europe markets, with respect to concerns of tax hike on diesel cars. This reflects in the FY18 retail sales for UK (-12.8% YoY) and Europe (-5.3% YoY), with majorly China (+20%) pulling up the overall sales. In China, CJLR EBITDA margin during the quarter improved to 36.7% (+930bps), due to adoption of accrual accounting for local market incentives in Q4. Under "Fit for Future" program the Company is selecting suitable projects based on affordability, while has resulted in onetime expense of INR 16.4bn at the consolidated level during 4QFY18. Vehicle incentives remain in the range of 6% of revenues. The new Slovakia plant will commence operations from end CY18. Standalone business is staging a good comeback. Domestic market, revenue growth was robust at +45% YoY, supported by improvement in both CV and PV segment. The Company has been able to arrest the fall in CV market share and improved share in PVs. Company's cost reduction program is also aiding standalone performance. Outlook for MHCV growth remains healthy. Going ahead, JLR has revised its dividend payout to 25% (from 20% earlier).
- Maintain BUY: Maintain BUY with a revised Mar'19 target price of INR 400 (standalone/JLR business valued at 10x/4x EV/EBIDTA).

Financial Summary					(INR mn)
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Net Sales	27,30,456	26,96,925	29,46,192	32,43,950	35,52,663
Sales Growth (%)	3.9	-1.2	9.2	10.1	9.5
EBITDA	4,17,763	3,69,124	3,69,730	3,80,870	4,35,154
EBITDA Margin (%)	15.3	13.7	12.5	11.7	12.2
Adjusted Net Profit	1,34,297	63,398	70,138	65,593	78,282
Diluted EPS (INR)	39.5	18.7	20.7	19.3	23.1
Diluted EPS Growth (%)	-14.4	-52.8	10.6	-6.5	19.3
ROIC (%)	20.4	11.5	6.2	6.5	6.8
ROE (%)	19.9	9.3	9.1	6.7	7.4
P/E (x)	7.8	16.6	15.0	16.0	13.4
P/B (x)	1.3	1.8	1.1	1.0	1.0
EV/EBITDA (x)	2.7	3.4	3.7	3.4	3.2
Dividend Yield (%)	0.1	0.0	0.3	0.3	0.3

Source: Company data, JM Financial. Note: Valuations as of 23/May/2018



Vivek Kumar

vivek.kumar@jmfl.com | Tel: (91 22) 66303019

Vaikam Kumar S

vaikam.kumar@jmfl.com | Tel: (91 22) 66303018

Jayesh Chandra Gupta

jayesh.gupta@jmfl.com | Tel: (91 22) 66303054

Recommendation and Price Target	
Current Reco.	BUY
Previous Reco.	BUY
Current Price Target (12M)	400
Upside/(Downside)	29.3%
Previous Price Target	490
Change	-18.4%

Key Data – TTMT IN	
Current Market Price	INR309
Market cap (bn)	INR983.0/US\$14.4
Free Float	57%
Shares in issue (mn)	3,396.1
Diluted share (mn)	3,396.1
3-mon avg daily val (mn)	INR3,724.5/US\$54.4
52-week range	488/295
Sensex/Nifty	34,345/10,430
INR/US\$	68.4

Price Performance			
%	1M	6M	12M
Absolute	-7.4	-27.4	-31.3
Relative*	-7.1	-29.0	-39.3

\* To the BSE Sensex

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

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

Exhibit 1. Quarterly financia	Exhibit 1. Quarterly financial results – Consolidated				IR mn)
	4QFY18	4QFY17	% YoY	3QFY18	% QoQ
Net Sales	9,12,791	7,72,172	18.2	7,41,561	23.1
EBITDA*	1,19,252	1,17,875	1.2	94,671	26.0
EBITDA Margin (%)	13.1	15.3	-220bps	12.8	30bps
PAT (Adjusted, Post MI, before exceptionals)	34,098	43,315	-21.3	10,766	216.7

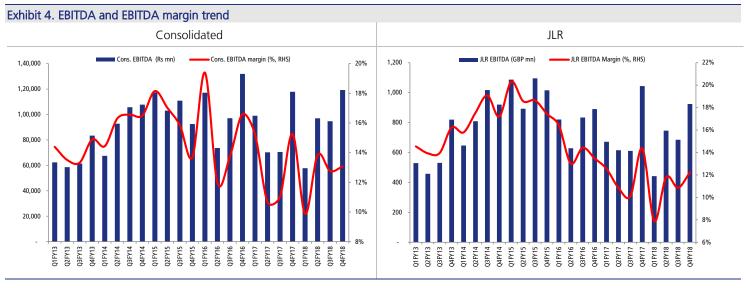
Source: Company, JM Financial

Exhibit 2. Quarterly financia	Exhibit 2. Quarterly financial results – JLR				BP mn)
	4QFY18	4QFY17	% YoY	3QFY18	% QoQ
Sales	7,555	7,268	3.9	6,310	19.7
EBITDA	924	1,044	-11.5	685	34.9
EBITDA Margin (%)	12.2	14.4	-213bps	10.9	137bps
Reported PAT	264	557	-52.6	89	196.6

Source: Company, JM Financial

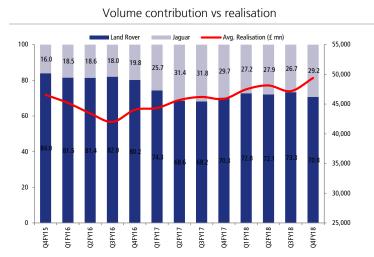
Exhibit 3. Quarterly financia	(1	NR mn)			
	4QFY18	4QFY17	% YoY	3QFY18	% QoQ
Net Sales	1,97,793	1,35,741	45.7	1,60,893	22.9
EBITDA	13,611	5,908	130.4	14,251	-4.5
EBITDA Margin (%)	6.9	4.4	253bps	8.9	-198bps
PAT (Adjusted)	5,574	-7,729	-1.7	730	663.7

Source: Company, JM Financial.

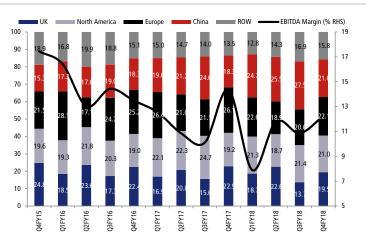


Source: Company, JM Financial





Geography wise mix (%) vs EBITDA margin



Source: Company, JM Financial;

Exhibit 6. Standalone volume-mix, EBIDTA and EBIDTA margin trend Volume-mix EBITDA and EBIDTA margin ■MHCV ■LCV ■PV Standalone EBITDA (Rs mn) EBITDA Margin (%, RHS) 18,000 12 10 15,000 80 12,000 9,000 60 6,000 3,000 40 (3,000) -4 20 (6,000) -6 (9,000) Q3FY16 Q4FY16 Q2FY17 Q4FY17 Q4FY14 Q3FY15 Q2FY16 Q1FY17 Q3FY17

Source: Company, JM Financial

## Company background

Tata Motors Limited is India's largest automobile company, with consolidated revenues of INR 2,700bn in 2016-17. While the company dominates the domestic CV segment, it has healthy presence in domestic PV segment. Tata Motors is also expanding its international footprint, established through exports since 1961. The company's commercial and passenger vehicles are already being marketed in several countries in Europe, Africa, the Middle East, South East Asia, South Asia, South America, CIS and Russia. It has franchisee/joint venture assembly operations in Bangladesh, Ukraine, and Senegal.

TTMT acquired Jaguar Land Rover (JLR) in 2008. JLR is UK's largest premium automotive manufacturer, representing two of the most iconic British motoring brands. While Jaguar Cars is one of the world's premier manufacturers of luxury sports saloons and sports cars, Land Rover is a world-renowned manufacturer of premium 4x4s. JLR operates three automotive manufacturing facilities in the United Kingdom and is setting up another facility in Slovakia. JLR also has two product development, design and engineering facilities at Gaydon and Whitley in the UK. JLR markets products in 178 countries, through a global network of 17 national sales companies (NSCs), 85 importers, 62 export partners and 2,500+ franchise sales dealers.

### **Investment Rationale**

- We remain positive on demand outlook for JLR in the long-term, supported by new launches, network expansion and capacity increase. Although, JLR growth in the near term would be subject to sales recovery in the US, their China JV has been witnessing strong volume growth. JLR margins would be supported by volume growth even as forex movements remain volatile.
- India business growth momentum is on track and would get better as the CV recovery in domestic market gains further traction.

## **Key Risks**

- Higher-than-estimated stress in JLR volume/margin
- Prolonged weakness in India profits
- Adverse currency movement (Brexit impact)

## Financial Tables (Consolidated)

Income Statement					(INR mn)
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Net Sales	27,30,456	26,96,925	29,46,192	32,43,950	35,52,663
Sales Growth	3.9%	-1.2%	9.2%	10.1%	9.5%
Other Operating Income	0	0	0	0	0
Total Revenue	27,30,456	26,96,925	29,46,192	32,43,950	35,52,663
Cost of Goods Sold/Op. Exp	16,33,830	16,58,942	18,58,500	20,49,659	22,45,003
Personnel Cost	2,88,809	2,83,329	3,03,001	3,23,256	3,49,999
Other Expenses	3,90,054	3,85,531	4,14,961	4,90,165	5,22,508
EBITDA	4,17,763	3,69,124	3,69,730	3,80,870	4,35,154
EBITDA Margin	15.3%	13.7%	12.5%	11.7%	12.2%
EBITDA Growth	-1.5%	-11.6%	0.2%	3.0%	14.3%
Depn. & Amort.	2,01,796	2,13,186	2,51,855	2,66,654	3,06,404
EBIT	2,15,967	1,55,938	1,17,875	1,14,216	1,28,750
Other Income	8,854	7,545	8,889	10,400	12,168
Finance Cost	48,891	42,380	46,818	41,824	39,733
PBT before Excep. & Forex	1,75,930	1,21,103	79,946	82,792	1,01,185
Excep. & Forex Inc./Loss(-)	-16,169	-39,101	11,853	0	0
PBT	1,59,761	82,002	91,799	82,792	1,01,185
Taxes	30,251	32,512	43,419	24,838	30,356
Extraordinary Inc./Loss(-)	-18,504	11,146	19,751	0	0
Assoc. Profit/Min. Int.(-)	-4,786	-13,908	-21,758	-7,638	-7,452
Reported Net Profit	1,15,793	74,544	89,889	65,593	78,282
Adjusted Net Profit	1,34,297	63,398	70,138	65,593	78,282
Net Margin	4.9%	2.4%	2.4%	2.0%	2.2%
Diluted Share Cap. (mn)	3,396.1	3,396.1	3,396.1	3,396.1	3,396.1
Diluted EPS (INR)	39.5	18.7	20.7	19.3	23.1
Diluted EPS Growth	-14.4%	-52.8%	10.6%	-6.5%	19.3%
Total Dividend + Tax	784	0	3,922	3,922	3,922
Dividend Per Share (INR)	0.2	0.0	1.0	1.0	1.0

Source: Company, JM Financial

Cash Flow Statement					(INR mn)
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Profit before Tax	1,59,761	82,002	91,799	82,792	1,01,185
Depn. & Amort.	2,01,796	2,13,186	2,51,855	2,66,654	3,06,404
Net Interest Exp. / Inc. (-)	48,891	42,380	46,818	41,824	39,733
Inc (-) / Dec in WCap.	34,178	1,31,293	-1,56,065	1,78,420	-63,211
Others	-13,723	25,257	42,228	9,500	9,500
Taxes Paid	-30,251	-32,512	-43,419	-24,838	-30,356
Operating Cash Flow	4,00,653	4,61,606	2,33,216	5,54,352	3,63,255
Capex	-4,01,479	-1,78,972	-5,75,468	-4,34,305	-4,58,055
Free Cash Flow	-826	2,82,634	-3,42,252	1,20,047	-94,800
Inc (-) / Dec in Investments	-127	2,378	-5,000	154	0
Others	-48,891	-42,380	-46,818	-41,824	-39,733
Investing Cash Flow	-4,50,496	-2,18,975	-6,27,286	-4,75,975	-4,97,789
Inc / Dec (-) in Capital	354	0	0	0	0
Dividend + Tax thereon	-784	0	-3,922	-3,922	-3,922
Inc / Dec (-) in Loans	-1,29,381	1,25,280	35,052	-38,997	-37,047
Others	1,63,101	-3,11,736	2,93,262	0	0
Financing Cash Flow	33,290	-1,86,456	3,24,392	-42,920	-40,970
Inc / Dec (-) in Cash	-16,553	56,175	-69,678	35,457	-1,75,503
Opening Cash Balance	3,21,158	3,04,604	3,60,779	2,91,101	3,26,559
Closing Cash Balance	3,04,604	3,60,779	2,91,101	3,26,559	1,51,056

Source: Company, JM Financial

Balance Sheet					(INR mn)
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Shareholders' Fund	7,89,524	5,80,619	9,54,279	10,15,949	10,90,308
Share Capital	6,792	6,792	6,792	6,792	6,792
Reserves & Surplus	7,82,732	5,73,827	9,47,487	10,09,157	10,83,516
Preference Share Capital	0	0	0	0	0
Minority Interest	4,328	4,532	5,251	7,112	9,160
Total Loans	6,19,612	7,44,891	7,79,944	7,40,946	7,03,899
Def. Tax Liab. / Assets (-)	-1,713	-30,864	-30,864	-30,864	-30,864
Total - Equity & Liab.	14,11,752	12,99,177	17,08,609	17,33,143	17,72,503
Net Fixed Assets	13,23,909	12,89,696	16,13,309	17,80,960	19,32,612
Gross Fixed Assets	20,06,842	20,73,880	25,49,682	31,28,636	35,22,100
Intangible Assets	0	0	0	0	0
Less: Depn. & Amort.	9,42,123	11,21,172	13,36,708	15,66,680	18,36,035
Capital WIP	2,59,189	3,36,988	4,00,335	2,19,005	2,46,547
Investments	2,37,670	2,03,379	2,03,154	2,08,233	2,13,439
Current Assets	10,56,137	11,87,939	13,89,329	13,44,900	12,67,463
Inventories	3,26,557	3,50,853	4,21,376	3,99,939	4,38,000
Sundry Debtors	2,93,224	3,16,388	4,37,745	3,55,501	3,89,333
Cash & Bank Balances	3,04,604	3,60,779	2,91,101	3,26,559	1,51,056
Loans & Advances	1,24,153	1,53,185	2,37,942	2,61,736	2,87,910
Other Current Assets	7,598	6,733	1,165	1,165	1,165
Current Liab. & Prov.	12,05,964	13,81,836	14,97,183	16,00,949	16,41,010
Current Liabilities	0	0	0	0	0
Provisions & Others	12,05,964	13,81,836	14,97,183	16,00,949	16,41,010
Net Current Assets	-1,49,827	-1,93,897	-1,07,854	-2,56,049	-3,73,547
Total – Assets	14.11.752	12.99.177	17.08.609	17.33.143	17.72.503

Source: Company, JM Financial

Demant Analysis					
Dupont Analysis					
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Net Margin	4.9%	2.4%	2.4%	2.0%	2.2%
Asset Turnover (x)	2.0	2.0	1.9	1.9	2.0
Leverage Factor (x)	2.0	2.0	2.0	1.8	1.7
RoE	19.9%	9.3%	9.1%	6.7%	7.4%
Key Ratios					
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
BV/Share (INR)	232.5	171.0	281.0	299.2	321.0
ROIC	20.4%	11.5%	6.2%	6.5%	6.8%
ROE	19.9%	9.3%	9.1%	6.7%	7.4%
Net Debt/Equity (x)	0.1	0.3	0.3	0.2	0.3
P/E (x)	7.8	16.6	15.0	16.0	13.4
P/B (x)	1.3	1.8	1.1	1.0	1.0
EV/EBITDA (x)	2.7	3.4	3.7	3.4	3.2
EV/Sales (x)	0.4	0.5	0.5	0.4	0.4
Debtor days	39	43	54	40	40
Inventory days	44	47	52	45	45
Creditor days	0	0	0	0	0

Source: Company, JM Financial

 Tata Motors
 24 May 2018

History of Earnings Estimate and Target Price							
Date	Recommendation	Target Price	% Chg.				
27-May-15	Buy	600					
11-Aug-15	Buy	535	-10.8				
9-Nov-15	Buy	510	-4.7				
14-Feb-16	Buy	465	-8.8				
1-Jun-16	Buy	520	11.8				
15-Feb-17	Buy	600	15.4				
24-May-17	Buy	600	0.0				
11-Aug-17	Buy	550	-8.3				
10-Nov-17	Buy	550	0.0				
6-Feb-18	Buy	490	-10.9				

## Recommendation History



#### APPENDIX I

#### JM Financial Institutional Securities Limited

(formerly known as JM Financial Securities Limited)

Corporate Identity Number: U67100MH2017PLC296081

Member of BSE Ltd., National Stock Exchange of India Ltd. and Metropolitan 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: +9122 6630 3030 | Fax: +91 22 6630 3488 | Email: jmfinancial.research@jmfl.com | www.jmfl.com Compliance Officer: Mr. Sunny Shah | Tel: +91 22 6630 3383 | Email: sunny.shah@jmfl.com

Definition of ratings	
Rating	Meaning
Buy	Total expected returns of more than 15%. Total expected return includes dividend yields.
Hold	Price expected to move in the range of 10% downside to 15% upside from the current market price.
Sell	Price expected to move downwards by more than 10%

#### 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), National Stock Exchange of India Ltd. (NSE) and Metropolitan Stock Exchange of India Ltd. (MSEI). 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.

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 members of their household 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 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.

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.

Persons who receive this report from JM Financial Singapore Pte Ltd may contact Mr. Ruchir Jhunjhunwala (ruchir.jhunjhunwala@jmfl.com) on +65 6422 1888 in respect of any matters arising from, or in connection with, this report.

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.

JM Financial Institutional Securities only accepts orders from major U.S. institutional investors. Pursuant to its agreement with JM Financial Institutional Securities, JM Financial Securities effects the transactions for major U.S. institutional investors. Major U.S. institutional investors may place orders with JM Financial Institutional Securities directly, or through JM Financial Securities, in the securities discussed in this research report.

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