

# Indian Energy Exchange | ADD

## Coupling remains uncertain

The matter of CERC's *suo moto* instructions to implement market coupling beginning Jan'26 remains *sub judice*. During the two hearings at APTEL so far, appellant IEX has argued—citing ulterior motives for circular, incorrect methodology (regulations)—against 'so-called monopoly', adding that price benefits from coupling are negligible. We believe development of more exchanges is imperative for the success of new trading mechanisms such as derivatives, peer-to-peer trading and virtual PPAs, which are critical to the energy transition journey. That said, we reckon coupling is not likely before Dec'27 in light of the challenges to its implementation. Given IEX's technological prowess and organisational capabilities, we estimate its market share may taper from 75% in FY28E to 60% in FY30E. New initiatives can increase the share of short-term power from 7%+ presently to 10%+ by FY30E. All in all, given the likely volatility in near term, we maintain 'ADD' on IEX with a TP of INR 160 on a valuation rollover to FY30E discounted back by three years.

- **Power market coupling:** In Jul'25, the CERC issued *suo moto* instructions to implement market coupling of the Day-Ahead Market (DAM) of the power exchanges in a round-robin mode by Jan'26. Under the round-robin mode, power exchanges may act as the Market Coupling Operator (MCO) on a rotational basis, with Grid-India being the fourth MCO for backup and audit purposes ([HOLD on, it's not so soon, it's not so doom](#)).
- **Implementation process:** The Commission was to initiate the consultative process with Grid-India and power exchanges on various operational and procedural aspects for implementing coupling of DAM, and also propose the regulatory amendments thereof.
- **IEX appeals for review of order:** In Aug'25, IEX appealed to APTEL for a review. Meanwhile, SEBI issued an interim order in Oct'25 *prima facie* finding potential insider trading by certain entities and a few officials of the CERC pertaining to trade of IEX shares exploiting UPSI (decision on coupling). During the two hearings so far—28 Nov'25 and 6 Jan'26—the Appellant has argued three points:
  - The order was passed not as prelude to any regulation, but to affect the stock market.
  - The methodology (regulations) adopted to break IEX's monopoly is not correct. US antitrust laws to break corporate monopolies are used in different contexts.
  - The CERC [order](#) itself quoted the outcome of a study conducted by Grid India concluding "negligible impact on price [which is the objective of coupling]"
- **JM view:** The next hearing is on Friday, 9 Jan'26. Development of more exchanges is imperative for the success of new trading mechanisms such as derivatives, peer-to-peer trading and Virtual PPAs, which are important in the energy transition journey. However, we reckon that the coupling is not likely before Dec'27 in light of the implementation challenges. Given IEX's technological prowess and organisational capabilities, we estimate its market share may taper from 75% in FY28E to 60% in FY30E (not one-third as theoretically). New initiatives can increase the share of short-term power from 7%+ presently to 10%+ by FY30E. Given likely volatility in near term (exhibit 1: Scenarios), we maintain 'ADD' on IEX, valuing it at 35x FY30E EPS and then discount it back by three years, yielding our FY28E base case TP of INR 160.



**Sudhanshu Bansal**

sudhanshu.bansal@jmfl.com | Tel: (91 22) 66303128

**Krishnakant Phafat**

krishnakant.phafat@jmfl.com | Tel: (91 22) 66303563

### Recommendation and Price Target

|                            |      |
|----------------------------|------|
| Current Reco.              | ADD  |
| Previous Reco.             | ADD  |
| Current Price Target (12M) | 160  |
| Upside/(Downside)          | 7.6% |
| Previous Price Target      | 155  |
| Change                     | 3.3% |

### Key Data – IEX IN

|                          |                   |
|--------------------------|-------------------|
| Current Market Price     | INR149            |
| Market cap (bn)          | INR132.6/US\$1.5  |
| Free Float               | 83%               |
| Shares in issue (mn)     | 891.5             |
| Diluted share (mn)       | 891.5             |
| 3-mon avg daily val (mn) | INR971.2/US\$10.8 |
| 52-week range            | 215/130           |
| Sensex/Nifty             | 85,063/26,179     |
| INR/US\$                 | 90.2              |

### Price Performance

| %         | 1M  | 6M    | 12M   |
|-----------|-----|-------|-------|
| Absolute  | 2.3 | -24.8 | -14.4 |
| Relative* | 3.1 | -26.2 | -21.5 |

\* To the BSE Sensex

### Financial Summary

(INR mn)

| Y/E March              | FY24A | FY25A | FY26E | FY27E | FY28E |
|------------------------|-------|-------|-------|-------|-------|
| Net Sales              | 4,492 | 5,373 | 6,458 | 6,720 | 5,716 |
| Sales Growth (%)       | 12.0  | 19.6  | 20.2  | 4.0   | -14.9 |
| EBITDA                 | 3,769 | 4,537 | 5,431 | 5,655 | 4,815 |
| EBITDA Margin (%)      | 83.9  | 84.4  | 84.1  | 84.2  | 84.2  |
| Adjusted Net Profit    | 3,508 | 4,292 | 5,031 | 5,251 | 4,665 |
| Diluted EPS (INR)      | 3.9   | 4.8   | 5.6   | 5.9   | 5.2   |
| Diluted EPS Growth (%) | 14.7  | 22.3  | 17.2  | 4.4   | -11.2 |
| ROIC (%)               | 98.2  | 72.6  | 80.2  | 115.5 | 82.1  |
| ROE (%)                | 39.6  | 40.7  | 40.1  | 35.0  | 27.0  |
| P/E (x)                | 37.9  | 31.0  | 26.4  | 25.3  | 28.5  |
| P/B (x)                | 13.7  | 11.7  | 9.7   | 8.1   | 7.3   |
| EV/EBITDA (x)          | 34.8  | 29.1  | 23.5  | 22.0  | 25.9  |
| Dividend Yield (%)     | 1.3   | 2.0   | 2.0   | 2.0   | 2.0   |

Source: Company data, JM Financial. Note: Valuations as of 06/Jan/2026

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

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

**Exhibit 1. Bear, base and bull cases for IEX**

| Particulars                 | Bear case   | Base case   | Bull case  |
|-----------------------------|---|---|--|
| <b>Coupling</b>             | Implemented from FY28; mkt share reduces to 50%                             | Implemented from FY28; mkt share reduces to 67%     | Implementation remains uncertain; mkt share remains at 85% |
| <b>Trading margin</b>       | Trading margin cut by 25%. Avg realisation for IEX reduces to INR 0.026/kWh | Remains same; Avg realisation for IEX INR 0.034/kWh | No change in trading margin                                |
| <b>FY28 EBITDA (INR mn)</b> | 2,829   | 6,074   | 7,004  |
| <b>FY28 EPS (INR)</b>       | 3.56  | 5.23  | 7.07   |
| <b>1 year TP (INR)</b>      | 113   | 160   | 223  |

Source: Company, JM Financial

## Financial Tables (Consolidated)

| Income Statement           |              |              |              |              | (INR mn)     |
|----------------------------|--------------|--------------|--------------|--------------|--------------|
| Y/E March                  | FY24A        | FY25A        | FY26E        | FY27E        | FY28E        |
| Net Sales                  | 4,492        | 5,373        | 6,458        | 6,720        | 5,716        |
| Sales Growth               | 12.0%        | 19.6%        | 20.2%        | 4.0%         | -14.9%       |
| Other Operating Income     | 0            | 0            | 0            | 0            | 0            |
| <b>Total Revenue</b>       | <b>4,492</b> | <b>5,373</b> | <b>6,458</b> | <b>6,720</b> | <b>5,716</b> |
| Cost of Goods Sold/Op. Exp | 0            | 0            | 0            | 0            | 0            |
| Personnel Cost             | 390          | 461          | 558          | 580          | 493          |
| Other Expenses             | 333          | 375          | 469          | 484          | 408          |
| <b>EBITDA</b>              | <b>3,769</b> | <b>4,537</b> | <b>5,431</b> | <b>5,655</b> | <b>4,815</b> |
| EBITDA Margin              | 83.9%        | 84.4%        | 84.1%        | 84.2%        | 84.2%        |
| EBITDA Growth              | 12.0%        | 20.4%        | 19.7%        | 4.1%         | -14.9%       |
| Depn. & Amort.             | 205          | 213          | 222          | 229          | 234          |
| EBIT                       | 3,564        | 4,324        | 5,210        | 5,426        | 4,582        |
| Other Income               | 1,017        | 1,201        | 1,356        | 1,422        | 1,493        |
| Finance Cost               | 28           | 26           | 27           | 29           | 30           |
| PBT before Excep. & Forex  | 4,552        | 5,499        | 6,538        | 6,819        | 6,044        |
| Excep. & Forex Inc/Loss(-) | 0            | 0            | 0            | 0            | 0            |
| PBT                        | 4,552        | 5,499        | 6,538        | 6,819        | 6,044        |
| Taxes                      | 1,154        | 1,354        | 1,634        | 1,705        | 1,511        |
| Extraordinary Inc./Loss(-) | 0            | 0            | 0            | 0            | 0            |
| Assoc. Profit/Min. Int.(-) | 109          | 146          | 128          | 137          | 132          |
| Reported Net Profit        | 3,508        | 4,292        | 5,031        | 5,251        | 4,665        |
| <b>Adjusted Net Profit</b> | <b>3,508</b> | <b>4,292</b> | <b>5,031</b> | <b>5,251</b> | <b>4,665</b> |
| Net Margin                 | 78.1%        | 79.9%        | 77.9%        | 78.2%        | 81.6%        |
| Diluted Share Cap. (mn)    | 891.5        | 891.5        | 891.5        | 891.5        | 891.5        |
| <b>Diluted EPS (INR)</b>   | <b>3.9</b>   | <b>4.8</b>   | <b>5.6</b>   | <b>5.9</b>   | <b>5.2</b>   |
| Diluted EPS Growth         | 14.7%        | 22.3%        | 17.2%        | 4.4%         | -11.2%       |
| Total Dividend + Tax       | 1,780        | 2,670        | 2,670        | 2,670        | 2,670        |
| Dividend Per Share (INR)   | 2.0          | 3.0          | 3.0          | 3.0          | 3.0          |

Source: Company, JM Financial

| Cash Flow Statement          |               |               |               |               | (INR mn)      |
|------------------------------|---------------|---------------|---------------|---------------|---------------|
| Y/E March                    | FY24A         | FY25A         | FY26E         | FY27E         | FY28E         |
| Profit before Tax            | 4,661         | 5,645         | 6,666         | 6,956         | 6,176         |
| Depn. & Amort.               | 205           | 213           | 222           | 229           | 234           |
| Net Interest Exp. / Inc. (-) | -431          | -1,175        | -1,328        | -1,393        | -1,462        |
| Inc (-) / Dec in WCap.       | 265           | 966           | 2,335         | 1,645         | -1,591        |
| Others                       | -655          | 0             | 0             | 0             | 0             |
| Taxes Paid                   | -1,061        | -1,354        | -1,634        | -1,705        | -1,511        |
| <b>Operating Cash Flow</b>   | <b>2,985</b>  | <b>4,296</b>  | <b>6,260</b>  | <b>5,732</b>  | <b>1,846</b>  |
| Capex                        | -146          | -109          | -50           | -50           | -50           |
| Free Cash Flow               | 2,839         | 4,187         | 6,210         | 5,682         | 1,796         |
| Inc (-) / Dec in Investments | -262          | -3,152        | -791          | -845          | -901          |
| Others                       | 163           | 1,201         | 1,356         | 1,422         | 1,493         |
| <b>Investing Cash Flow</b>   | <b>-245</b>   | <b>-2,060</b> | <b>514</b>    | <b>527</b>    | <b>541</b>    |
| Inc / Dec (-) in Capital     | 0             | 0             | 0             | 0             | 0             |
| Dividend + Tax thereon       | -1,780        | -2,670        | -2,670        | -2,670        | -2,670        |
| Inc / Dec (-) in Loans       | 0             | 0             | 0             | 0             | 0             |
| Others                       | -51           | 24            | 13            | 11            | 10            |
| <b>Financing Cash Flow</b>   | <b>-1,831</b> | <b>-2,646</b> | <b>-2,657</b> | <b>-2,659</b> | <b>-2,660</b> |
| <b>Inc / Dec (-) in Cash</b> | <b>909</b>    | <b>-410</b>   | <b>4,116</b>  | <b>3,601</b>  | <b>-273</b>   |
| Opening Cash Balance         | 570           | 1,479         | 1,069         | 5,186         | 8,786         |
| Closing Cash Balance         | 1,479         | 1,069         | 5,186         | 8,786         | 8,513         |

Source: Company, JM Financial

| Balance Sheet                     |               |               |               |               | (INR mn)      |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|
| Y/E March                         | FY24A         | FY25A         | FY26E         | FY27E         | FY28E         |
| Shareholders' Fund                | 9,722         | 11,363        | 13,724        | 16,306        | 18,301        |
| Share Capital                     | 891           | 891           | 891           | 891           | 891           |
| Reserves & Surplus                | 8,831         | 10,472        | 12,833        | 15,415        | 17,410        |
| Preference Share Capital          | 0             | 0             | 0             | 0             | 0             |
| Minority Interest                 | 0             | 0             | 0             | 0             | 0             |
| Total Loans                       | 79            | 51            | 91            | 131           | 171           |
| Def. Tax Liab. / Assets (-)       | 307           | 346           | 346           | 346           | 346           |
| <b>Total - Equity &amp; Liab.</b> | <b>10,108</b> | <b>11,761</b> | <b>14,162</b> | <b>16,783</b> | <b>18,818</b> |
| Net Fixed Assets                  | 965           | 861           | 690           | 511           | 327           |
| Gross Fixed Assets                | 1,770         | 1,879         | 1,929         | 1,979         | 2,029         |
| Intangible Assets                 | 0             | 0             | 0             | 0             | 0             |
| Less: Depn. & Amort.              | 847           | 1,060         | 1,281         | 1,510         | 1,744         |
| Capital WIP                       | 42            | 41            | 41            | 41            | 41            |
| Investments                       | 4,687         | 4,558         | 4,558         | 4,558         | 4,558         |
| Current Assets                    | 12,084        | 16,547        | 19,233        | 23,707        | 24,224        |
| Inventories                       | 0             | 0             | 0             | 0             | 0             |
| Sundry Debtors                    | 8             | 26            | 31            | 33            | 28            |
| Cash & Bank Balances              | 1,866         | 1,129         | 5,246         | 8,846         | 8,573         |
| Loans & Advances                  | 0             | 0             | 0             | 0             | 0             |
| Other Current Assets              | 10,210        | 15,392        | 13,955        | 14,827        | 15,623        |
| Current Liab. & Prov.             | 7,628         | 10,206        | 10,319        | 11,992        | 10,291        |
| Current Liabilities               | 47            | 57            | 59            | 60            | 55            |
| Provisions & Others               | 7,581         | 10,149        | 10,260        | 11,932        | 10,236        |
| Net Current Assets                | 4,456         | 6,341         | 8,914         | 11,714        | 13,933        |
| <b>Total - Assets</b>             | <b>10,108</b> | <b>11,761</b> | <b>14,162</b> | <b>16,783</b> | <b>18,818</b> |

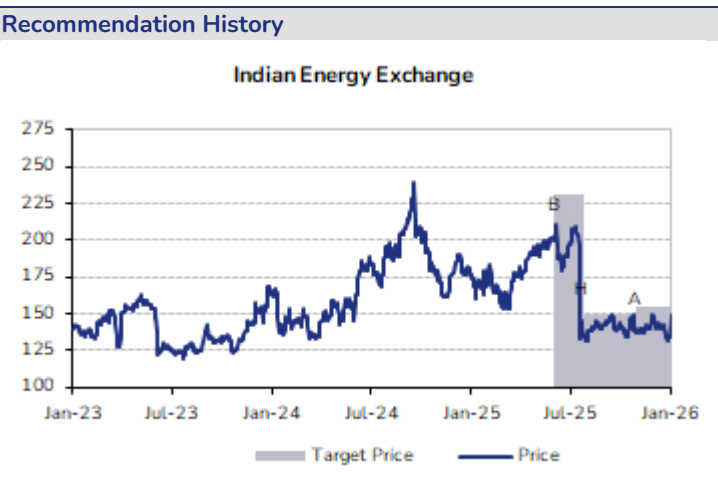
Source: Company, JM Financial

| Dupont Analysis     |       |       |       |       |       |
|---------------------|-------|-------|-------|-------|-------|
| Y/E March           | FY24A | FY25A | FY26E | FY27E | FY28E |
| Net Margin          | 78.1% | 79.9% | 77.9% | 78.2% | 81.6% |
| Asset Turnover (x)  | 0.3   | 0.3   | 0.3   | 0.3   | 0.2   |
| Leverage Factor (x) | 1.8   | 1.9   | 1.9   | 1.8   | 1.7   |
| RoE                 | 39.6% | 40.7% | 40.1% | 35.0% | 27.0% |

| Key Ratios          |       |       |       |        |       |
|---------------------|-------|-------|-------|--------|-------|
| Y/E March           | FY24A | FY25A | FY26E | FY27E  | FY28E |
| BV/Share (INR)      | 10.9  | 12.7  | 15.4  | 18.3   | 20.5  |
| ROIC                | 98.2% | 72.6% | 80.2% | 115.5% | 82.1% |
| ROE                 | 39.6% | 40.7% | 40.1% | 35.0%  | 27.0% |
| Net Debt/Equity (x) | -0.2  | -0.1  | -0.4  | -0.5   | -0.5  |
| P/E (x)             | 37.9  | 31.0  | 26.4  | 25.3   | 28.5  |
| P/B (x)             | 13.7  | 11.7  | 9.7   | 8.1    | 7.3   |
| EV/EBITDA (x)       | 34.8  | 29.1  | 23.5  | 22.0   | 25.9  |
| EV/Sales (x)        | 29.2  | 24.5  | 19.8  | 18.5   | 21.8  |
| Debtor days         | 1     | 2     | 2     | 2      | 2     |
| Inventory days      | 0     | 0     | 0     | 0      | 0     |
| Creditor days       | 13    | 15    | 13    | 13     | 13    |

Source: Company, JM Financial

| History of Recommendation and Target Price |                |              |        |
|--|----------------|--------------|--------|
| Date                                       | Recommendation | Target Price | % Chg. |
| 7-Jun-25                                   | Buy            | 231          |        |
| 27-Jul-25                                  | Hold           | 149          | -35.5  |
| 2-Nov-25                                   | Add            | 155          | 4.0    |



## 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: jmfinaancial.research@jmfl.com | www.jmfl.com

Compliance Officer: Ms. Ashley Johnson | Tel: +91 22 6224 1862 | Email: ashley.johnson@jmfl.com

Grievance Officer: Ms. Ashley Johnson | Tel: +91 22 6224 1862 | Email: instcompliance@jmfl.com

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

| New Rating System: Definition of ratings |   |
|--|---|
| Rating                                   | Meaning   |
| BUY                                      | Expected return $\geq$ 15% over the next twelve months.             |
| ADD                                      | Expected return $\geq$ 5% and $<$ 15% over the next twelve months.  |
| REDUCE                                   | Expected return $\geq$ -10% and $<$ 5% over the next twelve months. |
| SELL                                     | Expected return $<$ -10% over the next twelve months.               |

Note: For REITs (Real Estate Investment Trust) and InvIT (Infrastructure Investment Trust) total expected returns include dividends or DPU (distribution per unit)

| Previous Rating System: 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. Please click [here](#) to access our detailed Terms and Conditions, including the Most Important Terms and Conditions.

**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, 27th Floor, Office No. 2715, 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.