Federal Bank | BUY

Margins sustain; fee growth surprises

Federal Bank reported profit of INR 2.66bn in 2QFY19 (flat YoY, 2.7% above JMFe). While NII was broadly in-line with our estimates, a strong performance on core fees (+34% YoY) resulted in a PPoP beat of 19%. Provisions for the quarter were, however, elevated (specific credit cost at 0.9%) as gross slippages came at 2.1%. Slippages (INR 4.8bn) were elevated on account of the floods in Kerala (c.10% of slippage). Management disclosed that FB has an overall exposure of c.INR 2bn to the IL & FS Group (0.2% of loans), spread across 3 operational projects, where it does not expect significant stress. Management expects slippages on account of Kerala floods to be contained at INR 1.5bn in FY19. We now build slippages of INR 15.4bn (1.7% delinquency) in FY19, resulting in a cut in our PAT estimates by 3.4% for FY19. We believe FB can deliver RoA/ RoE of 1% / 13% in FY20E.

- Strong core fee growth drives PPoP: FB posted 14% YoY NII growth (on an unfavourable base, QoQ growth of 4.3%), as NIM expanded marginally to 3.15% (+3bps QoQ) and loan growth was strong at (+25% YoY). Core fees growth was strong (+34% YoY), driven by strong growth in loan processing charges (+51% YoY) and forex income (+49% YoY). Cost-to-income fell sharply on account of outperformance in fees (down 365bps QoQ to 48%), as opex growth was flattish QoQ. Management expects to maintain cost-to-income at this level for the rest of FY19E. Further, it expects NIMs to further expand to 3.2% by 4QFY19 driven by lower interest reversals and better asset mix. We build 3.1% / 3.15% NIMs over FY19E/ 20E with cost-to-income at 49% / 47%.
- Strong loan growth driven by corporate loans: Overall loan growth of 24% was driven by strong trends in the corporate (+33% YoY) and agri (+21% YoY) loan books. Retail loan growth was also strong at 20% YoY. Growth in retail loans was largely driven by housing loans (+35% YoY) and mortgages (+21% YoY). Management indicated that c.45% of loans for FB are MCLR-linked and expects margins to inch up further as MCLR-based loans get re-priced.
- Expects stress on Kerala loans to be contained: Management reiterated its guidance of INR 14.5bn gross slippages in FY19E. While gross slippages in 1HFY19 are already at 66% of this target, management expects slippages as a result of the Kerala floods to be contained at INR 1.5 bn for FY19. FB has an exposure of c.INR 15bn to the 12 flood affected districts of Kerala and expects c. INR 5 bn of these loans to be stressed. Against these stressed loans, FB has availed of the RBI dispensation for natural calamities to carve out and restructure INR 0.3bn of loans In 2QFY19. Management expects this to further reach c. INR 1bn by 3QFY19 (0.1% of loans). Management disclosed that FB has an overall exposure of INR 2bn to the IL & FS Group (0.2% of loans), spread across 3 operational projects, where it does not expect significant stress. Total stressed book for FB (Net NPLs + other stress) is now at 2% of loans (down 86bps YoY). We build specific credit costs of 0.75% / 0.65% over FY19E / FY20E.

JM	FINANCIAL

Sameer Bhise sameer.bhise@jmfl.com | Tel: (91 22) 66303489

S Parameswaran s.parameswaran@jmfl.com | Tel: (91 22) 66303075

Akshay Jain

akshay.jain@jmfl.com | Tel: (91 22) 66303099

Karan Singh CFA FRM

karan.uberoi@jmfl.com | Tel: (91 22) 66303082

Nikhil Walecha

nikhil.walecha@jmfl.com | Tel: (91 22) 66303027

Bunny Babjee

bunny.babjee@jmfl.com | Tel: (91 22) 66303263

Recommendation and Price Target	
Current Reco.	BUY
Previous Reco.	BUY
Current Price Target (12M)	120
Upside/(Downside)	47.0%
Previous Price Target	120
Change	0.0%

Key Data – FB IN	
Current Market Price	INR82
Market cap (bn)	INR161.8/US\$2.2
Free Float	88%
Shares in issue (mn)	1,972.1
Diluted share (mn)	
3-mon avg daily val (mn)	INR1,348.3/US\$18.4
52-week range	128/67
Sensex/Nifty	35,162/10,585
INR/US\$	73.5

Price Performa	nce		
%	1M	6M	12M
Absolute	4.9	-17.0	-34.6
Relative*	13.6	-19.0	-39.3

* To the BSE Sensex

Financial Summary					(INR mn)
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Net Profit	4,757	8,308	8,788	13,622	18,883
Net Profit (YoY) (%)	-52.7%	74.7%	5.8%	55.0%	38.6%
Assets (YoY) (%)	14.2%	21.6%	20.3%	19.7%	20.4%
ROA (%)	0.5%	0.8%	0.7%	0.9%	1.0%
ROE (%)	6.0%	9.8%	8.3%	10.7%	13.3%
EPS	2.8	4.8	4.5	6.9	9.6
EPS (YoY) (%)	-52.9%	74.1%	-7.5%	55.0%	38.6%
PE (x)	29.6	17.0	18.4	11.9	8.6
BV	47	52	62	68	76
BV (YoY) (%)	4.2%	10.2%	19.4%	9.4%	12.5%
P/BV (x)	1.74	1.58	1.32	1.21	1.08

Source: Company data, JM Financial. Note: Valuations as of 16/Oct/2018

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.

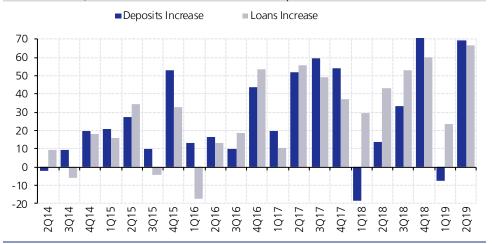
Federal Bank 2Q19: Key quarterly trends

Exhibit 1. FB 2Q19: Key quart	erly trends				
Earnings Table (Rs. mn.)	2Q'18	1Q'19	2Q'19	YoY (%)	QoQ (%)
NII	8,989	9,801	10,225	13.7%	4.3%
Fee based Income	1,540	1,600	2,000	29.9%	25.0%
P/L on Exchange Transactions	410	470	610	48.8%	29.8%
Trading Profits	750	490	510	-32.0%	4.1%
Recoveries of Advances W/O	170	140	110	-35.3%	-21.4%
Misc Income	2	9	-1	-150.0%	-112.8%
Non-Interest income	2,872	2,709	3,229	12.4%	19.2%
Total Income	11,861	12,509	13,454	13.4%	7.5%
Employee Cost	3,127	3,450	3,089	-1.2%	-10.5%
Other Operating Expenses	2,902	3,030	3,388	16.8%	11.8%
Total Operating Expenses	6,029	6,480	6,478	7.4%	0.0%
Operating Profit	5,832	6,029	6,976	19.6%	15.7%
Total Provisions	1,768	1,992	2,888	63.4%	45.0%
PBT	4,064	4,038	4,088	0.6%	1.2%
Tax	1,427	1,411	1,427	0.0%	1.2%
Reported Profit	2,637	2,627	2,660	0.9%	1.3%
Balance sheet (Rs. bn.)					
Deposits	972.1	1,112.4	1,181.8	21.6%	6.2%
Net Advances	806.5	943.0	1,009.4	25.2%	7.0%
Total Assets	1,217.6	1,366.8	1,444.1	18.6%	5.7%
Loan-Deposit ratio (%)	83.0%	84.8%	85.4%	2.5%	0.6%
Key Ratios					
Credit Quality					
Gross NPAs (Rs. mn.)	19,490	28,688	31,845	63.4%	11.0%
Net NPAs (Rs. mn.)	10,664	16,202	17,963	68.4%	10.9%
Gross NPA (%)	2.39%	3.00%	3.11%	0.72%	0.11%
Net NPA (%)	1.32%	1.72%	1.78%	0.46%	0.06%
Loan Loss Provisions (%)	0.88%	0.79%	1.01%	0.13%	0.22%
Coverage Ratio (%)	45.3%	43.5%	43.6%	-1.7%	0.1%
Capital Adequacy					
CAR (%)	14.63%	14.50%	13.29%	-1.34%	-1.21%
Du-pont Analysis					
NII / Assets (%)	3.02%	2.85%	2.91%	-0.11%	0.06%
Non-Interest Inc. / Assets (%)	0.96%	0.79%	0.92%	-0.05%	0.13%
Operating Cost / Assets (%)	2.02%	1.89%	1.84%	-0.18%	-0.04%
Operating Profits / Assets (%)	1.96%	1.75%	1.99%	0.03%	0.23%
Provisions / Assets (%)	0.59%	0.58%	0.82%	0.23%	0.24%
ROA (%)	0.89%	0.76%	0.76%	-0.13%	-0.01%

Exhibit 2. FB 2Q19: Deposits of	composition				
Deposits Composition (Rs bn)	2Q'18	1Q'19	2Q'19	YoY (%)	QoQ (%)
Current	49	56	66	34.6%	17.8%
Saving	272	317	329	21.2%	3.9%
CASA	320	372	395	23.2%	6.0%
Time	652	740	787	20.8%	6.4%
Total Deposits	972	1,112	1,182	21.6%	6.2%
Mix(%)					
Current	5.0%	5.0%	5.5%	0.5%	0.5%
Saving	27.9%	28.5%	27.8%	-0.1%	-0.6%
CASA	32.9%	33.5%	33.4%	0.5%	-0.1%
Time	67.1%	66.5%	66.6%	-0.5%	0.1%
Total Domestic Deposits	100%	100%	100%		

Source: Company, JM Financial

Exhibit 3. FB 2Q19: Trends in accretion to loans and deposits



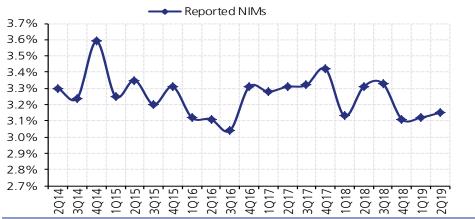
Source: Company, JM Financial

Exhibit 4. FB 2Q19: Loan mix	and growth				
Advances Break-up (Rs bn)	2Q'18	1Q'19	2Q'19	YoY (%)	QoQ (%)
Corporate	347.8	428.7	462.4	33.0%	7.9%
SME	176.5	186.8	195.2	10.6%	4.5%
Agri	84.2	97.0	101.8	20.9%	4.9%
Retail	232.6	261.3	278.1	19.6%	6.4%
Total Gross Advances	841.0	973.8	1,037.6	23.4%	6.5%
Mix(%)					
Corporate	41.4%	44.0%	44.6%	3.2%	0.5%
SME	21.0%	19.2%	18.8%	-2.2%	-0.4%
Agri	10.0%	10.0%	9.8%	-0.2%	-0.2%
Retail	27.7%	26.8%	26.8%	-0.8%	0.0%
Total Gross Advances	100%	100%	100%		

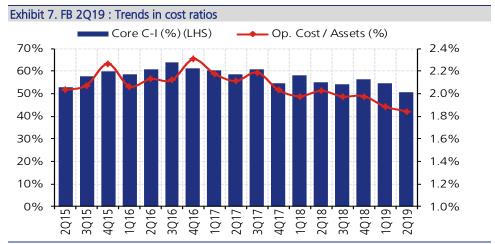
Exhibit 5. FB 2Q19: Retail loar	ns mix and growt	h			
Retail loans Break-up (Rs bn)	2Q'18	1Q'19	2Q'19	YoY (%)	QoQ (%)
Housing loans	100.8	122.1	135.8	34.7%	11.2%
Mortgage loans	42.2	48.6	51.1	21.1%	5.1%
Gold loans	19.2	18.3	17.3	-9.7%	-5.3%
Others	70.4	72.3	73.9	5.0%	2.2%
Total gross retail advances	232.6	261.3	278.1	19.6%	6.4%
Mix(%)					
Housing loans	43%	47%	49%	5.5%	2.1%
Mortgage loans	18%	19%	18%	0.2%	-0.2%
Gold loans	8%	7%	6%	-2.0%	-0.8%
Others	30%	28%	27%	-3.7%	-1.1%
Total gross retail advances	100%	100%	100%		

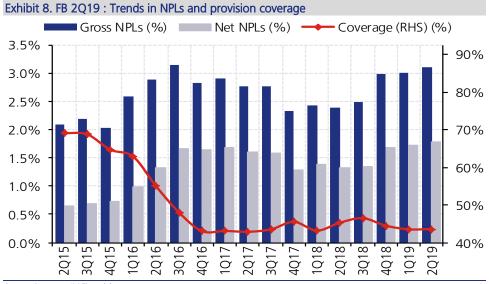
Source: Company, JM Financial

Exhibit 6. FB 2Q19: Margin trends



Source: Company, JM Financial





Source: Company, JM Financial



Federal Fwd. P/E (x) SD+1 SD-1 Average 30 25 20 15 10

Oct-12

Oct-11

Oct-13

0at-14

Oct-15

Oct-16

0at-10

Source: JM Financial, Company

Oct-08

Oct-09

0

Oct-07

Exhibit 10. FB: One-year forward P/E

Valuation

We value Federal Bank using 2-stage Gordon Growth model. Our assumptions and target price are given below:

Fair value (rounded off)	120
Target P / Fully Adj BV (x)	1.7x
Fully adjusted FY20E BVPS (Rs)	72.5
K2	8.76
K1	1.98
Perpetual payout ratio (%)	77.0%
Perpetual growth rate (%)	3.6%
Payout ratio for the first 10 years (%)	20.0%
Growth rate for the first 10 years (%)	12.4%
Initial no of years	10
Exhibit 11. Federal Bank : Valuation Summary	

Source: Company, JM Financial

Oct-18

0d-17

Financial Tables (Standalone)

Profit & Loss					(INR mn)
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Net Interest Income	25,042	30,526	35,828	45,157	55,959
Profit on Investments	1,275	3,087	2,389	2,200	2,000
Exchange Income	1,305	1,277	1,695	2,203	2,864
Fee & Other Income	5,284	6,455	7,507	9,318	11,131
Non-Interest Income	7,864	10,818	11,591	13,721	15,995
Total Income	32,906	41,344	47,419	58,877	71,954
Operating Expenses	18,668	22,095	24,509	28,711	33,832
Pre-provisioning Profits	14,238	19,249	22,910	30,167	38,123
Loan-Loss Provisions	5,848	4,836	7,951	8,774	9,511
Provisions on Investments	802	296	1,729	800	0
Others Provisions	392	1,052	-209	0	0
Total Provisions	7,041	6,184	9,472	9,574	9,511
PBT	7,197	13,065	13,439	20,593	28,611
Tax	2,440	4,757	4,650	6,971	9,728
PAT (Pre-Extraordinaries)	4,757	8,308	8,788	13,622	18,883
Extra ordinaries (Net of Tax)	0	0	0	0	0
Reported Profits	4,757	8,308	8,788	13,622	18,883
Dividend paid	1,450	1,864	2,377	2,169	2,169
Retained Profits	3,306	6,443	6,411	11,452	16,714

Balance Sheet					(INR mn)
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Equity Capital	3,438	3,448	3,944	3,944	3,944
Reserves & Surplus	77,424	85,926	1,18,108	1,29,560	1,46,274
Deposits	7,91,717	9,76,646	11,19,925	13,32,711	15,72,598
Borrowings	51,146	58,973	1,15,335	1,62,702	2,42,553
Other Liabilities	22,039	24,727	25,777	27,066	28,420
Total Liabilities	9,45,764	11,49,719	13,83,089	16,55,984	19,93,790
Investments	2,51,555	2,81,961	3,07,811	3,62,435	4,33,650
Net Advances	5,80,901	7,33,363	9,19,575	11,40,273	14,02,535
Cash & Equivalents	54,198	74,522	92,034	1,00,180	1,22,607
Fixed Assets	5,150	4,845	4,524	7,526	8,464
Other Assets	53,959	55,029	59,146	45,570	26,534
Total Assets	9,45,764	11,49,719	13,83,089	16,55,984	19,93,790

Source: Company, JM Financial

Source: Company,	JM	Finar	ncia
------------------	----	-------	------

Key Ratios					
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Growth (YoY) (%)					
Deposits	11.8%	23.4%	14.7%	19.0%	18.0%
Advances	13.3%	26.2%	25.4%	24.0%	23.0%
Total Assets	14.2%	21.6%	20.3%	19.7%	20.4%
NII	5.2%	21.9%	17.4%	26.0%	23.9%
Non-interest Income	-10.5%	37.6%	7.1%	18.4%	16.6%
Operating Expenses	14.5%	18.4%	10.9%	17.1%	17.8%
Operating Profits	-12.5%	35.2%	19.0%	31.7%	26.4%
Core Operating profit	-5.5%	24.7%	27.0%	36.3%	29.2%
Provisions	559.7%	-12.2%	53.2%	1.1%	-0.7%
Reported PAT	-52.7%	74.7%	5.8%	55.0%	38.6%
Yields / Margins (%)					
Interest Spread	2.50%	2.79%	2.66%	2.73%	2.76%
NIM	2.96%	3.09%	2.97%	3.09%	3.14%
Profitability (%)					
Non-IR to Income	23.9%	26.2%	24.4%	23.3%	22.2%
Cost to Income	56.7%	53.4%	51.7%	48.8%	47.0%
ROA	0.54%	0.79%	0.69%	0.90%	1.03%
ROE	6.0%	9.8%	8.3%	10.7%	13.3%
Assets Quality (%)					
Slippages	3.72%	1.88%	3.04%	1.70%	1.30%
Gross NPA	2.84%	2.33%	3.00%	2.90%	2.63%
Net NPAs	1.64%	1.28%	1.69%	1.54%	1.23%
Provision Coverage	43.0%	45.5%	44.5%	47.6%	54.0%
Specific LLP	1.02%	0.62%	0.91%	0.75%	0.65%
Net NPAs / Networth	11.7%	10.5%	12.7%	13.2%	11.4%
Capital Adequacy (%)					
Tier I	13.36%	11.81%	14.18%	12.54%	11.65%
CAR	13.93%	12.39%	14.70%	13.43%	12.54%

Dupont Analysis					
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
NII / Assets	2.82%	2.91%	2.83%	2.97%	3.07%
Other Income / Assets	0.89%	1.03%	0.92%	0.90%	0.88%
Total Income / Assets	3.71%	3.95%	3.74%	3.87%	3.94%
Cost / Assets	2.10%	2.11%	1.94%	1.89%	1.85%
PBP / Assets	1.60%	1.84%	1.81%	1.99%	2.09%
Provisions / Assets	0.79%	0.59%	0.75%	0.63%	0.52%
PBT / Assets	0.81%	1.25%	1.06%	1.36%	1.57%
Tax rate	33.9%	36.4%	34.6%	33.9%	34.0%
ROA	0.54%	0.79%	0.69%	0.90%	1.03%
RoRWAs	0.87%	1.27%	1.13%	1.45%	1.63%
Leverage	11.7	12.9	11.3	12.4	13.3
ROE	6.0%	9.8%	8.3%	10.7%	13.3%

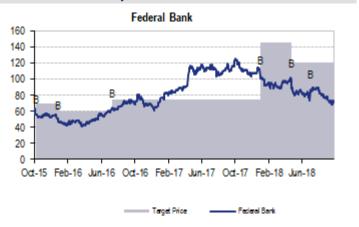
Source: Company, JM Financial

Valuations					
Y/E March	FY16A	FY17A	FY18A	FY19E	FY20E
Shares in Issue	1,718.9	1,724.0	1,972.1	1,972.1	1,972.1
EPS (INR)	2.8	4.8	4.5	6.9	9.6
EPS (YoY) (%)	-52.9%	74.1%	-7.5%	55.0%	38.6%
PER (x)	29.6	17.0	18.4	11.9	8.6
BV (INR)	47	52	62	68	76
BV (YoY) (%)	4.2%	10.2%	19.4%	9.4%	12.5%
ABV (INR)	44	50	58	63	72
ABV (YoY) (%)	-0.7%	11.6%	16.7%	9.4%	14.3%
P/BV (x)	1.74	1.58	1.32	1.21	1.08
P/ABV (x)	1.84	1.65	1.42	1.29	1.13
DPS (INR)	0.8	1.1	1.2	1.1	1.1
Div. yield (%)	1.0%	1.3%	1.5%	1.3%	1.3%

Source: Company, JM Financial

History of Earn	ings Estimate and Ta	arget Price	
Date	Recommendation	Target Price	% Chg.
23-Oct-15	Buy	70	
13-Jan-16	Buy	60	-14.3
28-Jul-16	Buy	75	25.0
16-Jan-18	Buy	145	93.3
9-May-18	Buy	120	-17.2
17-Jul-18	Buy	120	0.0

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@imfl.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