

Star Cement

DBS



Your success is our success

64.9 %

FY20E

Refer to important disclosures at the end of this report

Compelling valuations still make it an attractive play

CMP Target Price Rs 150 (▼) **Rs 91** as of (February 4, 2019) Rating **Upside**

BUY (■)

- Star Cement's Q3FY19 operating results came in above our estimates, with EBITDA at Rs1.2bn (est: Rs1.1bn) and EBITDA/ton at Rs1,864 (est: Rs1,600), mainly due to lowerthan-expected opex/ton. OPM stood at 29.3% vs. our estimate of 24.8%.
- Excluding clinker sales, cement sales volumes were up 13.5% yoy (total volumes were up 5.5% yoy). Sales in the North East markets were 77.6% of total volumes vs. 74.1% in Q3FY18. EBITDA/ton was Rs1,864 vs. Rs2,280/Rs1,236 in Q3FY18/Q2FY19.
- Management expects demand growth in the NE markets to remain strong and believes that smaller players are operating close to their peak utilization rates. Consequently, incremental volume growth in the region should benefit large players. The grinding unit in Siliguri, West Bengal is expected to get commissioned in Q3FY20.
- We maintain our FY19 EBITDA estimates, while reducing FY20/FY21 estimates by 4.4%/8.3%. We prefer Star Cement due to its higher profitability, return ratios, and its presence in a lucrative market. Valuation at 6.3x/5.6x FY20/FY21E EV/EBITDA appears to be attractive. Maintain Buy, with a revised TP of Rs150.

Strong volumes; higher opex drags profits down

Star Cement's results came in above our estimates, with EBITDA at Rs1.2bn vs. our estimate of Rs1.1bn and OPM at 29.3% vs. our estimate of 24.8%, supported by lower costs. Cement and clinker sales volumes stood at 0.65mt, up 5.5% yoy. Excluding clinker sales, cement sales volumes improved 13.5% yoy. Sales volume growth was primarily led by higher sales in the NE markets, up 18.9% yoy. Realization was up 4.6% yoy, but down 2.3% qoq. We believe that the sequential decline in realizations was led by: 1) higher clinker sales (0.015mt vs. 0.08mt in Q2FY19); and 2) lower trade sales of 79% vs. 83% in Q2FY19. Opex/ton rose 18.3% yoy due to higher RM costs (up 28.1% yoy), energy costs (up 17.5% yoy), and freight costs (up 26.3% yoy). Higher opex led to a 8.2pp yoy decline in OPM to 29.3%, while EBITDA/ton declined 18.2% yoy. EBITDA was down 13.8% yoy. The sequential improvement in profitability was driven by: 1) an absence of purchased clinker; 2) better efficiency in energy consumption; and 3) lower maintenance expenses. Profit was down 8.1% yoy.

Reduce FY20/21 estimates; valuations compelling

We maintain FY19 EBITDA estimates but cutting FY20/FY21 estimates by 4.4%/8.3% on energy costs. We prefer Star Cement due to its presence in the North East region that offers better growth opportunities, strong margin profile, and superior return ratios. The North East region is a lucrative market characterized by oligopolistic nature where just two players are controlling 50% of the total capacity. It has consistently delivered more than 2x EBITDA/ton vs. the average of others in our coverage universe. Valuations at 6.3x/5.6x FY20/21E EV/ EBITDA appear attractive. We maintain our Buy rating, with a target price of Rs150, valuing it at 10x FY21E EV/EBITDA. In the near term, the key risk is any adverse ruling by the Supreme Court regarding the coal mining ban in Meghalaya (hearing is scheduled on 19th

Feb). Financial Snapshot (Consolidated)

FY17	FY18	FY19E	FY20E	FY21E
15,278	16,227	18,847	21,583	23,710
3,962	5,295	4,625	5,267	5,674
25.9	32.6	24.5	24.4	23.9
1,826	3,388	3,107	3,792	3,850
4.4	8.1	7.4	9.0	9.2
35.7	85.5	(8.3)	22.1	1.5
16.6	25.8	19.3	20.1	17.7
20.8	11.2	12.3	10.0	9.9
11.6	8.0	8.2	6.3	5.6
3.3	2.6	2.2	1.9	1.7
	15,278 3,962 25.9 1,826 4.4 35.7 16.6 20.8 11.6	15,278 16,227 3,962 5,295 25.9 32.6 1,826 3,388 4.4 8.1 35.7 85.5 16.6 25.8 20.8 11.2 11.6 8.0	15,278 16,227 18,847 3,962 5,295 4,625 25.9 32.6 24.5 1,826 3,388 3,107 4.4 8.1 7.4 35.7 85.5 (8.3) 16.6 25.8 19.3 20.8 11.2 12.3 11.6 8.0 8.2	15,278 16,227 18,847 21,583 3,962 5,295 4,625 5,267 25.9 32.6 24.5 24.4 1,826 3,388 3,107 3,792 4.4 8.1 7.4 9.0 35.7 85.5 (8.3) 22.1 16.6 25.8 19.3 20.1 20.8 11.2 12.3 10.0 11.6 8.0 8.2 6.3

Source: Company, Emkay Research

<u> </u>						
Change in Estimates						
EPS Chg FY19E/FY20E (%)	4/(4)					
Target Price change (%)	(10.3)					
Target Period (Months)	12					
Previous Reco	BUY					
Emkay vs Consensus						
EPS Estimates						

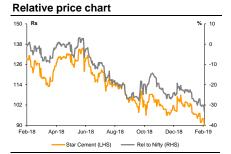
FY19E

Ешкау	7.4	9.0
Consensus	7.1	9.4
Mean Consensus TP (12M)		Rs 144
Stock Details		
Bloomberg Code	ST	RCEM IN
Face Value (Rs)		1
Shares outstanding (mn)		419
52 Week H/L		137 / 80
M Cap (Rs bn/USD bn)		38 / 0.53
Daily Avg Volume (nos.)		70,998
Daily Avg Turnover (US\$ mr	า)	0.1

10
68.9%
1.2%
8.7%
21.2%

Shareholding Pattern Dec '18

Price Performance										
(%)	1M	3M	6M	12M						
Absolute	(10)	(11)	(20)	(26)						
Rel. to Nifty	(12)	(15)	(17)	(27)						



Source: Bloomberg

This report is solely produced by Emkay Global. The following person(s) are responsible for the production of the recommendation:

Sanjeev Kumar Singh

sanjeev.singh@emkayglobal.com

+91 22 6612 1255

Gurpreet Kaur

gurpreet.kaur@emkayglobal.com +91 22 6612 1285

Exhibit 1: Actual vs. Estimates (Q3FY19)

(Rs mn)	Actual	Est	Estimate		riation	Comment
(1/2 11111)	Actual	Emkay	Consensus	Consensus Emkay Consensus Comment		Comment
Sales	4,164	4,359	4,308	-4.5	-3.3	Impacted by lower sales volume and realization
EBITDA	1,219	1,081	1,055	12.8	15.5	Impact of lower RM and other expenses
EBITDA margin (%)	29.3	24.8	24.5	447bps	478bps	
Adj. PAT	823	733	609	12.2	35.0	led by higher operating profit

Source: Company, Emkay Research, Bloomberg

Exhibit 2: Quarterly Results

Rs mn	Q3FY18	Q2FY19	Q3FY19	YoY (%)	QoQ (%)	YTDFY18	YTDFY19	YoY (%)
Revenue	3,774	3,623	4,164	10.3%	15.0%	10,871	12,966	19.3%
Expenditure	2,361	2,935	2,945	24.8%	0.3%	7,102	9,743	37.2%
as % of sales	63%	81%	71%					
Consumption of RM	382	930	515	35.1%	-44.6%	1,649	2,437	47.8%
as % of sales	10%	26%	12%					
Employee Expenses	275	321	300	9.3%	-6.4%	828	889	7.4%
as % of sales	7%	9%	7%					
Other Expenses	1,705	1,684	2,130	24.9%	26.4%	4,625	6,417	38.7%
as % of sales	45%	46%	51%					
EBITDA	1,413	687	1,219	-13.8%	77.4%	3,769	3,223	-14.5%
Depreciation	337	271	264	-21.4%	-2.5%	966	818	-15.2%
EBIT	1,077	416	955	-11.4%	129.5%	2,804	2,405	-14.2%
Other Income	2	7	10	323.0%	59.5%	15	20	34.8%
Interest	137	33	26	-81.0%	-20.6%	436	113	-74.1%
PBT	942	390	939	-0.3%	140.9%	2,383	2,312	-3.0%
Total Tax	28	8	102	259.4%	1161.3%	110	178	62.3%
Adjusted PAT	914	382	837	-8.4%	119.2%	2,273	2,134	-6.1%
Extra ordinary items	-	=	=			-	-	
Reported PAT	914	382	837	-8.4%	119.2%	2,273	2,134	-6.1%
(Profit)/loss from JV's/Ass/MI	18	18	14	-22.9%	-20.2%	46	44	-4.0%
PAT after MI	895	364	823	-8.1%	126.0%	2,227	2,090	-6.2%
Adjusted EPS	2.1	0.9	2.0	-8.1%	126.0%	5.3	5.0	-6.2%

Margins (%)				(bps)	(bps)			(bps)
EBIDTA	37.4	19.0	29.3	(818)	1,030	34.7	24.9	(981)
EBIT	28.5	11.5	22.9	(561)	1,144	25.8	18.5	(724)
EBT	25.0	10.8	22.6	(242)	1,179	21.9	17.8	(409)
PAT	24.2	10.5	20.1	(412)	956	20.9	16.5	(445)
Effective Tax rate	3.0	2.1	10.9	786	880	4.6	7.7	310

Source: Company, Emkay Research

Exhibit 3: Operating cost analysis on a per-ton basis

Rs	Q3FY18	Q2FY19	Q3FY19	YoY (%)	QoQ (%)	YTDFY18	YTDFY19	YoY (%)
Sales volume (mt)	0.62	0.56	0.65	5.5%	17.6%	1.80	2.02	12.1%
Raw Material	616	1,674	788	28.1%	-52.9%	2,850	3,690	29.5%
Employee Expense	443	577	459	3.6%	-20.4%	1,415	1,368	-3.3%
Other Expense	2,749	3,029	3,256	18.4%	7.5%	7,688	9,511	23.7%
Total Cost	3,808	5,280	4,504	18.3%	-14.7%	11,953	14,569	21.9%
Realization	6,088	6,516	6,367	4.6%	-2.3%	6,039	6,428	6.4%
EBIDTA	2,280	1,236	1,864	-18.2%	50.8%	2,094	1,598	-23.7%

Source: Company, Emkay Research

Emkay Research is also available on www.emkayglobal.com, Bloomberg EMKAY<60>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) Ple Ltd, its respective connected and associated corporations and affiliates are the distributors of the research reports, please refer to the last page of the report on Restrictions on Distribution. In Singapore, this research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

Changes in Estimates

We keep our FY19 EBITDA estimates intact but reduce FY20/21 EBITDA estimates by 4.4%/8.4% due to higher coal costs. Coal costs have increased by Rs500/ton and are expected to remain at similar levels in FY20. EPS estimates are being downgraded by 4.2%/8.3% for FY20/FY21E.

Exhibit 4: Changes in Estimates

Rs mn	FY19E				FY20E			FY21E		
K2 IIIII	Earlier	Revised	Chg (%)	Earlier	Revised	Chg (%)	Earlier	Introducing	Chg (%)	
Sales vol (mt)	2.9	2.9	0.0%	3.2	3.2	0.0%	3.39	3.39	0.0%	
Realization (Rs/tn)	6,520	6,520	0.0%	6,846	6,716	-1.9%	7,189	6,984	-2.8%	
Sales	18,847	18,847	0.0%	22,002	21,583	-1.9%	24,403	23,710	-2.8%	
EBIDTA	4,625	4,625	0.0%	5,510	5,267	-4.4%	6,196	5,674	-8.4%	
EBIDTA (%)	24.5	24.5	0	25.0	24.4	-64	25.4	23.9	-146	
Net Profit	2,994	3,107	3.8%	3,959	3,792	-4.2%	4,198	3,850	-8.3%	
EPS (Rs)	7.1	7.4	3.8%	9.4	9.0	-4.2%	10.0	9.2	-8.3%	

Source: Company, Emkay Research

Exhibit 5: Key Assumptions

Key Assumptions	FY17	FY18	FY19	FY20E	FY21E
Sales volume (mt)	2.8	2.6	2.9	3.2	3.4
Realization (Rs/tn)	5,425	6,210	6,520	6,716	6,984
Raw material (Rs/tn)	1,208	1,037	1,193	1,229	1,266
Employee cost (Rs/tn)	421	413	394	390	391
Freight cost (Rs/mt)	958	1,240	1,540	1,587	1,666
Other Expense (Rs/tn)	1,387	1,514	1,793	1,872	1,991
Opex (Rs/tn)	3,975	4,205	4,920	5,077	5,313
EBITDA (Rs/tn)	1,450	2,005	1,600	1,639	1,671

Source: Company, Emkay Research

Emkay Research is also available on www.emkayglobal.com, Bloomberg EMKAY<60>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) Ple Ltd, its respective connected and associated corporations and affiliates are the distributors of the research reports, please refer to the last page of the report on Restrictions on Distribution. In Singapore, this research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

Con-call highlights

- Volume details: Clinker production was 0.60mt vs. 0.59mt in Q3FY18. Cement production from own plants stood at 0.59mt vs. 0.51mt in Q3FY18. Cement/Clinker sales volumes stood at 0.64mt/0.015mt vs. 0.56mt/0.057mt in Q3FY18. Cement volumes in the North East market stood at 0.50mt vs. 0.42mt in Q3FY18. OPC/PPC/PSC mix stood at 22%/76%/2%.
- North East market dynamics: Demand in the North East market is expected to increase by about 10% yoy to 9mt in FY19E. Installed capacities in the region are 11-11.5mt. However, effective installed capacity is ~9-9.5mt as smaller plants do not have limestone capacities. Clinker capacity in the region is only 7.5mt, which can help achieve production of ~9-9.5mt; hence, demand-supply dynamics is expected to remain favorable. Management believes that smaller players in the region are operating near their peak utilization rates. As a result, incremental volume would benefit players like Star Cement and Dalmia Bharat who have surplus capacities.
- Update on Coal prices and Coal mining: Average coal price for the company has increased by Rs500/ton to Rs5,500/ton. Coal supply issues in Meghalaya have not yet affected Star substantially, as it is also sourcing coal from Nagaland and Eastern Coal Fields. Although management expects coal issues to normalize in the state, it believes that any adverse ruling by the Supreme Court may lead to a Rs100-150/ton increase in operating costs as coal from outside costs Rs8,000/ton.
- Outstanding subsidies: The company received Rs253mn in subsidies in Q2FY19, post which outstanding subsidies stand at ~Rs4bn. It expects to receive Rs1.5bn more in Q4FY19 and rest in FY20.
- Capex plans: The company will install a 2mt grinding unit in Siliguri, West Bengal, for which equipment has been ordered. This project is expected to get commissioned by Q3FY20 and the related capex is pegged at Rs2-2.5bn. This unit will be eligible for VAT subsidies (75% exemption) under West Bengal Industrial Policy. It has completed first phase of clinker debottlenecking post which clinker production capacity has increased to 2.8mt. The second phase of the clinker debottlenecking program will be completed in Q2FY20 which should further lead to a 0.2mt increase in clinker capacity. The company has applied for environmental clearance for the 2mt clinker capacity in Meghalaya.
- Trade: Non-Trade Mix: Trade sales volumes stood at 79% vs. 76% in Q3FY18 and 83% in Q2FY19.

Emkay Research is also available on www.emkayglobal.com, Bloomberg EMKAY<GO>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd,its respective connected and associated corporations and affiliates are the distributors of the research reports, please refer to the last page of the report on Restrictions on Distribution. In Singapore, this research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

Key Financials (Consolidated)

Income Statement

Y/E Mar (Rs mn)	FY17	FY18	FY19E	FY20E	FY21E
Revenue	15,278	16,227	18,847	21,583	23,710
Expenditure	11,316	10,932	14,222	16,316	18,036
EBITDA	3,962	5,295	4,625	5,267	5,674
Depreciation	1,179	1,207	1,107	1,158	1,383
EBIT	2,783	4,088	3,517	4,108	4,291
Other Income	24	44	48	68	81
Interest expenses	781	525	139	13	6
PBT	2,027	3,608	3,426	4,163	4,367
Tax	139	164	240	291	437
Extraordinary Items	0	0	0	0	0
Minority Int./Income from Assoc.	(62)	(55)	(80)	(80)	(80)
Reported Net Income	1,826	3,388	3,107	3,792	3,850
Adjusted PAT	1,826	3,388	3,107	3,792	3,850

Balance Sheet

Y/E Mar (Rs mn)	FY17	FY18	FY19E	FY20E	FY21E
Equity share capital	419	419	419	419	419
Reserves & surplus	11,040	14,344	16,957	20,008	22,625
Net worth	11,459	14,763	17,376	20,428	23,044
Minority Interest	566	621	701	781	861
Loan Funds	8,007	4,324	317	103	83
Net deferred tax liability	(1,765)	(2,329)	(2,898)	(3,466)	(4,035)
Total Liabilities	18,267	17,379	15,497	17,846	19,953
Net block	8,632	7,847	7,340	6,582	9,199
Investment	15	14	14	14	14
Current Assets	13,842	14,509	11,813	13,937	15,849
Cash & bank balance	201	198	409	4,870	6,125
Other Current Assets	0	0	0	0	0
Current liabilities & Provision	4,770	5,349	6,028	6,687	7,109
Net current assets	9,072	9,160	5,785	7,250	8,739
Misc. exp	0	0	0	0	0
Total Assets	18,267	17,379	15,497	17,846	19,953

Cash Flow

Y/E Mar (Rs mn)	FY17	FY18	FY19E	FY20E	FY21E
PBT (Ex-Other income) (NI+Dep)	2,148	3,526	3,426	4,163	4,367
Other Non-Cash items	701	527	139	13	6
Chg in working cap	(722)	(345)	3,586	2,997	(235)
Operating Cashflow	3,000	4,206	7,402	7,403	4,434
Capital expenditure	(890)	(324)	(2,600)	(2,043)	(2,000)
Free Cash Flow	2,110	3,882	4,802	5,361	2,434
Investments	(30)	26	0	0	0
Other Investing Cash Flow	0	0	0	0	0
Investing Cashflow	(894)	(253)	(2,552)	(1,975)	(1,919)
Equity Capital Raised	0	0	0	0	0
Loans Taken / (Repaid)	(1,402)	(3,407)	(4,007)	(214)	(21)
Dividend paid (incl tax)	0	0	(493)	(740)	(1,234)
Other Financing Cash Flow	0	0	0	0	0
Financing Cashflow	(2,181)	(3,929)	(4,640)	(967)	(1,260)
Net chg in cash	(75)	24	211	4,462	1,255
Opening cash position	245	201	198	409	4,870
Closing cash position	170	224	409	4,870	6,125

Source: Company, Emkay Research

Emikay Research is also available on www.emikayglobal.com, Bloomberg EMIKAY<GO>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) Ple Ltd, its respective connected and associated corporations and affiliates are the distributors of the research reports, please refer to the last page of the report on Restrictions on Distribution. In Singapore, this research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

Key Ratios

Profitability (%)	FY17	FY18	FY19E	FY20E	FY21E
EBITDA Margin	25.9	32.6	24.5	24.4	23.9
EBIT Margin	18.2	25.2	18.7	19.0	18.1
Effective Tax Rate	6.9	4.5	7.0	7.0	10.0
Net Margin	12.4	21.2	16.9	17.9	16.6
ROCE	14.4	23.2	21.7	25.0	23.1
ROE	16.6	25.8	19.3	20.1	17.7
RoIC	14.9	23.8	23.8	37.9	41.3

Per Share Data (Rs)	FY17	FY18	FY19E	FY20E	FY21E
EPS	4.4	8.1	7.4	9.0	9.2
CEPS	7.2	11.0	10.1	11.8	12.5
BVPS	27.3	35.2	41.4	48.7	55.0
DPS	0.0	0.0	1.0	1.5	2.5

Valuations (x)	FY17	FY18	FY19E	FY20E	FY21E
PER	20.8	11.2	12.3	10.0	9.9
P/CEPS	12.7	8.3	9.0	7.7	7.3
P/BV	3.3	2.6	2.2	1.9	1.7
EV / Sales	3.0	2.6	2.0	1.5	1.4
EV / EBITDA	11.6	8.0	8.2	6.3	5.6
Dividend Yield (%)	0.0	0.0	1.1	1.7	2.8

Gearing Ratio (x)	FY17	FY18	FY19E	FY20E	FY21E
Net Debt/ Equity	0.7	0.3	0.0	(0.2)	(0.3)
Net Debt/EBIDTA	2.0	0.8	0.0	(0.9)	(1.1)
Working Cap Cycle (days)	211.9	201.6	104.1	40.2	40.2

Growth (%)	FY17	FY18	FY19E	FY20E	FY21E
Revenue	(10.9)	6.2	16.1	14.5	9.9
EBITDA	(8.0)	33.6	(12.7)	13.9	7.7
EBIT	22.1	46.9	(14.0)	16.8	4.5
PAT	36.3	85.5	(8.3)	22.1	1.5

Quarterly (Rs mn)	Q3FY18	Q4FY18	Q1FY19	Q2FY19	Q3FY19
Revenue	3,774	5,274	5,179	3,623	4,164
EBITDA	1,413	1,444	1,317	687	1,219
EBITDA Margin (%)	37.4	27.4	25.4	19.0	29.3
PAT	895	1,079	903	364	823
EPS (Rs)	2.1	2.6	2.2	0.9	2.0

Source: Company, Emkay Research

Shareholding Pattern (%)	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
Promoters	73.3	68.9	68.9	68.9	68.9
FIIs	2.0	1.9	2.2	1.0	1.2
DIIs	2.7	7.3	7.3	8.4	8.7
Public and Others	22.1	21.9	21.6	21.7	21.2

Source: Capitaline

Emkay Research is also available on www.emkayglobal.com, Bloomberg EMKAY<GO>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) Pte Ltd, its respective connected and associated corporations and affiliates are the distributors of the research reports, please refer to the last page of the report on Restrictions on Distribution. In Singapore, this research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

RECOMMENDATION HISTORY TABLE

Date	Closing Price	TP	Period (months)	Rating	Analyst
7-Jan-19	103	167	12m	Buy	Sanjeev Kumar Singh
13-Nov-18	100	156	12m	Buy	Sanjeev Kumar Singh
27-Jul-18	114	168	12m	Buy	Sanjeev Kumar Singh
18-May-18	128	171	12m	Buy	Sanjeev Kumar Singh
5-Apr-18	124	171	12m	Buy	Sanjeev Kumar Singh
5-Feb-18	122	170	12m	Buy	Sanjeev Kumar Singh

Source: Company, Emkay Research

RECOMMENDATION HISTORY CHART



Source: Bloomberg, Company, Emkay Research

February 5, 2019 | 8

Emkay Rating Distribution

BUY

Expected total return (%) (Stock price appreciation and dividend yield) of over 25% within the next 12-18 months.

Expected total return (%) (Stock price appreciation and dividend yield) of over 10% within the next 12-18 months.

Expected total return (%) (Stock price appreciation and dividend yield) of upto 10% within the next 12-18 months.

Expected total return (%) (Stock price appreciation) of upto (-) 10% within the next 12-18 months.

SELL The stock is believed to underperform the broad market indices or its related universe within the next 12-18 months.

Completed Date: 06 Feb 2019 01:06:22 (SGT) Dissemination Date: 06 Feb 2019 01:07:22 (SGT)

Sources for all charts and tables are Emkay Research unless otherwise specified.

GENERAL DISCLOSURE/DISCLAIMER BY EMKAY GLOBAL FINANCIAL SERVICES LIMITED (EGFSL):

Emkay Global Financial Services Limited (CIN-L67120MH1995PLC084899) and its affiliates are a full-service, brokerage, investment banking, investment management and financing group. Emkay Global Financial Services Limited (EGFSL) along with its affiliates are participants in virtually all securities trading markets in India. EGFSL was established in 1995 and is one of India's leading brokerage and distribution house. EGFSL is a corporate trading member of Bombay Stock Exchange Limited (BSE), National Stock Exchange of India Limited (NSE), MCX Stock Exchange Limited (MCX-SX). EGFSL along with its subsidiaries offers the most comprehensive avenues for investments and is engaged in the businesses including stock broking (Institutional and retail), merchant banking, commodity broking, depository participant, portfolio management, insurance broking and services rendered in connection with distribution of primary market issues and financial products like mutual funds, fixed deposits. Details of associates are available on our website i.e. www.emkayqlobal.com

EGFSL is registered as Research Analyst with SEBI bearing registration Number INH000000354 as per SEBI (Research Analysts) Regulations, 2014. EGFSL hereby declares that it has not defaulted with any stock exchange nor its activities were suspended by any stock exchange with whom it is registered in last five years, except that NSE had disabled EGFSL from trading on October 05, October 08 and October 09, 2012 for a manifest error resulting into a bonafide erroneous trade on October 05, 2012. However, SEBI and Stock Exchanges have conducted the routine inspection and based on their observations have issued advice letters or levied minor penalty on EGFSL for certain operational deviations in ordinary/routine course of business. EGFSL has not been debarred from doing business by any Stock Exchange / SEBI or any other authorities; nor has its certificate of registration been cancelled by SEBI at any point of time.

EGFSL offers research services to clients as well as prospects. The analyst for this report certifies that all of the views expressed in this report accurately reflect his or her personal views about the subject company or companies and its or their securities, and no part of his or her compensation was, is or will be, directly or indirectly related to specific recommendations or views expressed in this report.

Other disclosures by Emkay Global Financial Services Limited (Research Entity) and its Research Analyst under SEBI (Research Analyst) Regulations, 2014 with reference to the subject company(s) covered in this report

EGFSL and/or its affiliates may seek investment banking or other business from the company or companies that are the subject of this material. Our salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies to our clients that reflect opinions that are contrary to the opinions expressed herein, and our proprietary trading and investing businesses may make investment decisions that may be inconsistent with the recommendations expressed herein. In reviewing these materials, you should be aware that any or all of the foregoing, among other things, may give rise to real or potential conflicts of interest including but not limited to those stated herein. Additionally, other important information regarding our relationships with the company or companies that are the subject of this material is provided herein. This report is not directed to, 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 or regulation or which would subject EGFSL or its group companies to any registration or licensing requirement within such jurisdiction. Specifically, this document does not constitute an offer to or solicitation to any U.S. person for the purchase or sale of any financial instrument or as an official confirmation of any transaction to any U.S. person. Unless otherwise stated, this message should not be construed as official confirmation of any transaction. No part of this document may be used by private customers in United Kingdom. All material presented in this report, unless specifically indicated otherwise, is under copyright to Emkay. None of the material, nor its content, nor any copy of it, may be altered in any way, transmitted to, copied or distributed to any other party, without the prior express written permission of EGFSL. All trademarks, service marks and logos used in this report are trademarks or registered trademarks of EGFSL or its Group Companies. The information contained herein is not intended for publication or distribution or circulation in any manner whatsoever and any unauthorized reading, dissemination, distribution or copying of this communication is prohibited unless otherwise expressly authorized. Please ensure that you have read "Risk Disclosure Document for Capital Market and Derivatives Segments" as prescribed by Securities and Exchange Board of India before investing in Indian Securities Market. In so far as this report includes current or historic information, it is believed to be reliable, although its accuracy and completeness cannot be guaranteed.

- This publication has not been reviewed or authorized by any regulatory authority. There is no planned schedule or frequency for updating research publication relating to any issuer.
- Please contact the primary analyst for valuation methodologies and assumptions associated with the covered companies or price targets

Disclaimer for U.S. persons only: This research report is a product of Emkay Global Financial Services Limited (Emkay), which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S. regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of Financial Institutions Regulatory Authority (FINRA) or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances and trading securities held by a research analyst account. This report is intended for distribution to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a 6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this report and return the same to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any U.S. person, which is not the Major Institutional Investor. In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors.

Emikay Research is also available on www.emkayglobal.com, Bloomberg EMKAY<GO>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) Ple Ltd, its respective connected and associated corporations and affiliates are the distributors of the research report or research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

GENERAL DISCLOSURE/DISCLAIMER BY DBS BANK LTD AS DISTRIBUTOR OF THE RESEARCH REPORT

This report is solely intended for the clients of DBS Bank Ltd,its respective connected and associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBS Bank Ltd.

The research set out in this report is based on information obtained from sources believed to be reliable, but we (which collectively refers to DBS Bank Ltd, its respective connected and associated corporations, affiliates and their respective directors, officers, employees and agents (collectively, the "DBS Group") have not conducted due diligence on any of the companies, verified any information or sources or taken into account any other factors which we may consider to be relevant or appropriate in preparing the research. Accordingly, we do not make any representation or warranty as to the accuracy, completeness or correctness of the research set out in this report. Opinions expressed are subject to change without notice. This research is prepared for general circulation. Any recommendation contained in this document does not have regard to the specific investment objectives, financial situation and the particular needs of any specific addressee. This document is for the information of addressees only and is not to be taken in substitution for the exercise of judgement by addressees, who should obtain separate independent legal or financial advice. The DBS Group accepts no liability whatsoever for any direct, indirect and/or consequential loss (including any claims for loss of profit) arising from any use of and/or reliance upon this document and/or further communication given in relation to this document. This document is not to be construed as an offer or a solicitation of an offer to buy or sell any securities. The DBS Group, along with its affiliates and/or persons associated with any of them may from time to time have interests in the securities mentioned in this document. The DBS Group, may have positions in, and may effect transactions in securities mentioned herein and may also perform or seek to perform broking, investment banking and other banking services for these companies. Any valuations, opinions, estimates, forecasts, ratings or risk assessments herein constitutes a judgment as of the date of this report, and there can be no assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments. The information in this document is subject to change without notice, its accuracy is not guaranteed, it may be incomplete or condensed, it may not contain all material information concerning the company (or companies) referred to in this report and the DBS Group is under no obligation to update the information in this report. This publication has not been reviewed or authorized by any regulatory authority in Singapore, Hong Kong or elsewhere. There is no planned schedule or frequency for updating research publication relating to any issuer.

The valuations, opinions, estimates, forecasts, ratings or risk assessments described in this report were based upon a number of estimates and assumptions and are inherently subject to significant uncertainties and contingencies. It can be expected that one or more of the estimates on which the valuations, opinions, estimates, forecasts, ratings or risk assessments were based will not materialize or will vary significantly from actual results. Therefore, the inclusion of the valuations, opinions, estimates, forecasts, ratings or risk assessments described herein IS NOT TO BE RELIED UPON as a representation and/or warranty by the DBS Group (and/or any persons associated with the aforesaid entities), that: (a) such valuations, opinions, estimates, forecasts, ratings or risk assessments or their underlying assumptions will be achieved, and (b) there is any assurance that future results or events will be consistent with any such valuations, opinions, estimates, forecasts, ratings or risk assessments stated therein. Please contact the primary analyst for valuation methodologies and assumptions associated with the covered companies or price targets. Any assumptions made in this report that refers to commodities, are for the purposes of making forecasts for the company (or companies) mentioned herein. They are not to be construed as recommendations to trade in the physical commodity or in the futures contract relating to the commodity referred to in this report.

DBSVUSA, a US-registered broker-dealer, does not have its own investment banking or research department, has not participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months and does not engage in market-making.

ANALYST CERTIFICATION BY EMKAY GLOBAL FINANCIAL SERVICES LIMITED (EGFSL)

The research analyst(s) primarily responsible for the content of this research report, in part or in whole, certifies that the views about the companies and their securities expressed in this report accurately reflect his/her personal views. The analyst(s) also certifies that no part of his/her compensation was, is, or will be, directly or indirectly, related to specific recommendations or views expressed in the report. The research analyst (s) primarily responsible of the content of this research report, in part or in whole, certifies that he or his associate does not serve as an officer, director or employee of the issuer or the new listing applicant (which includes in the case of a real estate investment trust, an officer of the management company of the real estate investment trust; and in the case of any other entity, an officer or its equivalent counterparty of the entity who is responsible for the management of the issuer or the new listing applicant). The research analyst(s) primarily responsible for the content of this research report or his associate does not have financial interests in relation to an issuer or a new listing applicant that the analyst reviews. EGFSL has procedures in place to eliminate, avoid and manage any potential conflicts of interests that may arise in connection with the production of research reports. The research analyst(s) responsible for this report operates as part of a separate and independent team to the investment banking function of the EGFSL and procedures are in place to ensure that confidential information held by either the research or investment banking function is handled appropriately. There is no direct link of EGFSL compensation to any specific investment banking function of the EGFSL.

Emkay Research is also available on www.emkayglobal.com, Bloomberg EMKAY<GO>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) PIe Ltd, its respective connected and associated corporations and affiliates are the distributors of the research reports, please refer to the last page of the report on Restrictions on Distribution. In Singapore, this research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

ED: ANISH MATHEW SA: DHANANJAY SINHA

¹ An associate is defined as (i) the spouse, or any minor child (natural or adopted) or minor step-child, of the analyst; (ii) the trustee of a trust of which the analyst, his spouse, minor child (natural or adopted) or minor step-child, is a beneficiary or discretionary object; or (iii) another person accustomed or obliged to act in accordance with the directions or instructions of the analyst.

² Financial interest is defined as interest that are commonly known financial interest, such as investment in the securities in respect of an issuer or a new listing applicant, or financial accommodation arrangement between the issuer or the new listing applicant and the firm or analysis. This term does not include commercial lending conducted at the arm's length, or investments in any collective investment scheme other than an issuer or new listing applicant notwithstanding the fact that the scheme has investments in securities in respect of an issuer or a new listing applicant.

COMPANY-SPECIFIC / REGULATORY DISCLOSURES BY EMKAY GLOBAL FINANCIAL SERVICES LIMITED (EGFSL):

Disclosures by Emkay Global Financial Services Limited (Research Entity) and its Research Analyst under SEBI (Research Analyst) Regulations, 2014 with reference to the subject company(s) covered in this report-:

- 1. EGFSL, its subsidiaries and/or other affiliates do not have a proprietary position in the securities recommended in this report as of February 5, 2019
- 2. EGFSL, and/or Research Analyst does not market make in equity securities of the issuer(s) or company(ies) mentioned in this Research Report Disclosure of previous investment recommendation produced:
- 3. EGFSL may have published other investment recommendations in respect of the same securities / instruments recommended in this research report during the preceding 12 months. Please contact the primary analyst listed in the first page of this report to view previous investment recommendations published by EGFSL in the preceding 12 months.
- 4. EGFSL, its subsidiaries and/or other affiliates and Research Analyst or his/her relative's does not have any material conflict of interest in the securities recommended in this report as of February 5, 2019.
- 5. EGFSL, its subsidiaries and/or other affiliates and Research Analyst or his/her relative's does not have actual/beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the February 5, 2019
- 6. EGFSL, its subsidiaries and/or other affiliates and Research Analyst have not received any compensation in whatever form including compensation for investment banking or merchant banking or brokerage services or for products or services other than investment banking or merchant banking or brokerage services from securities recommended in this report (subject company) in the past 12 months.
- EGFSL, its subsidiaries and/or other affiliates and/or and Research Analyst have not received any compensation or other benefits from securities
 recommended in this report (subject company) or third party in connection with the research report.
- Securities recommended in this report (Subject Company) has not been client of EGFSL, its subsidiaries and/or other affiliates and/or and Research Analyst during twelve months preceding the February 5, 2019

Emkay Research is also available on www.emkayglobal.com, Bloomberg EMKAY<GO>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) Ple Ltd, its respective connected and associated corporations and affiliates are the distributors of the research report or least page of the report on Restrictions on Distribution. In Singapore, this research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

COMPANY-SPECIFIC / REGULATORY DISCLOSURES BY DBS BANK LTD AS DISTRIBUTOR OF THE RESEARCH REPORT

- 1. DBS Bank Ltd., DBS HK, DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS") or their subsidiaries and/or other affiliates do not have a proprietary position in the securities recommended in this report as of 30 Apr 2018.
- 2. Neither DBS Bank Ltd nor DBS HK market makes in equity securities of the issuer(s) or company(ies) mentioned in this Research Report.

Compensation for investment banking services:

3. DBSVUSA, does not have its own investment banking or research department, nor has it participated in any public offering of securities as a manager or co-manager or in any other investment banking transaction in the past twelve months. Any US persons wishing to obtain further information, including any clarification on disclosures in this disclaimer, or to effect a transaction in any security discussed in this document should contact DBSVUSA exclusively.

Disclosure of previous investment recommendation produced:

4. DBS Bank Ltd. DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"), their subsidiaries and/or other affiliates may have published other investment recommendations in respect of the same securities / instruments recommended in this research report during the preceding 12 months. Please contact the primary analyst listed in the first page of this report to view previous investment recommendations published by DBS Bank Ltd. DBS Vickers Securities (Singapore) Pte Ltd ("DBSVS"), their subsidiaries and/or other affiliates in the preceding 12 months.

RESTRICTIONS ON DISTRIBUTION

General	This report is not directed to, 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 or regulation.
Australia	This report is not for distribution into Australia.
Hong Kong	This report is not for distribution into Hong Kong.
Indonesia	This report is being distributed in Indonesia by PT DBS Vickers Sekuritas Indonesia.
Malaysia	This report is not for distribution into Malaysia.
Singapore	This report is distributed in Singapore by DBS Bank Ltd (Company Regn. No. 16800306E) or DBSVS (Company Regn. No. 1860024G) both of which are Exempt Financial Advisers as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. DBS Bank Ltd and/or DBSVS, may distribute reports produced by its respective foreign entities, affiliates or other foreign research houses pursuant to an agreement under Regulation 32C of the financial Advisers Regulations. Singapore recipients should contact DBS Bank Ltd at 6327 2288 for matters arising from, or in connection with the report.
Thailand	This report is being distributed in Thailand by DBS Vickers Securities (Thailand) Co Ltd.
	This report is disseminated in the United Kingdom by DBS Vickers Securities (UK) Ltd, ("DBSVUK"). DBSVUK is authorised and regulated by the Financial Conduct Authority in the United Kingdom. In respect of the United Kingdom, this report is solely intended for the clients of DBSVUK, its respective connected and
United Kingdom	associated corporations and affiliates only and no part of this document may be (i) copied, photocopied or duplicated in any form or by any means or (ii) redistributed without the prior written consent of DBSVUK. This communication is directed at persons having professional experience in matters relating to investments. Any investment activity following from this communication will only be engaged in with such persons. Persons who do not have professional experience in matters relating to investments should not rely on this communication.
Dubai International Financial Centre	This research report is being distributed by DBS Bank Ltd., (DIFC Branch) having its office at units 608-610, 6th Floor, Gate Precinct Building 5, PO Box 506538, Dubai International Financial Centre (DIFC), Dubai, United Arab Emirates. DBS Bank Ltd., (DIFC Branch) is regulated by The Dubai Financial Services Authority. This research report is intended only for professional clients (as defined in the DFSA rulebook) and no other person may act upon it.
United Arab Emirates	This report is provided by DBS Bank Ltd (Company Regn. No. 196800306E) which is an Exempt Financial Adviser as defined in the Financial Advisers Act and regulated by the Monetary Authority of Singapore. This report is for information purposes only and should not be relied upon or acted on by the recipient or considered as a solicitation or inducement to buy or sell any financial product. It does not constitute a personal recommendation or take into account the particular investment objectives, financial situation, or needs of individual clients. You should contact your relationship manager or investment adviser if you need advice on the merits of buying, selling or holding a particular investment. You should note that the information in this report may be out of date and it is not represented or warranted to be accurate, timely or complete. This report or any portion thereof may not be reprinted, sold or redistributed without our written consent.
United States	DBSVUSA did not participate in its preparation. The research analyst(s) named on this report are not registered as research analysts with FINRA and are not associated persons of DBSVUSA. The research analyst(s) are not subject to FINRA Rule 2241 restrictions on analyst compensation, communications with a subject company, public appearances and trading securities held by a research analyst. This report is being distributed in the United States by DBSVUSA, which accepts responsibility for its contents. This report may only be distributed to Major U.S. Institutional Investors (as defined in SEC Rule 15a-6) and to such other institutional investors and qualified persons as DBSVUSA may authorize. Any U.S. person receiving this report who wishes to effect transactions in any securities referred to herein should contact DBSVUSA directly and not its affiliate.
Other jurisdictions	In any other jurisdictions, except if otherwise restricted by laws or regulations, this report is intended only for qualified, professional, institutional or sophisticated investors as defined in the laws and regulations of such jurisdictions.

Emkay Global Financial Services Ltd.

CIN - L67120MH1995PLC084899

7th Floor, The Ruby, Senapati Bapat Marg, Dadar - West, Mumbai - 400028. India Tel: +91 22 66121212 Fax: +91 22 66121299 Web: www.emkayglobal.com

Emkay Research is also available on www.emkayglobal.com, Bloomberg EMKAY<GO>, Reuters and DOWJONES. DBS Bank Ltd, DBS Vickers Securities (Singapore) Pie Ltd its respective connected and associated corporations and affiliates are the distributors of the research reports, please refer to the last page of the report on Restrictions on Distribution. In Singapore, this research report or research analyses may only be distributed to Institutional Investors, Expert Investors or Accredited Investors as defined in the Securities and Futures Act, Chapter 289 of Singapore

SINGAPORE

DBS Bank Ltd

Contact: Janice Chua

12 Marina Boulevard, Marina Bay Financial Centre Tower 3

Singapore 018982 Tel. 65-6878 8888 Fax: 65 65353 418

e-mail: equityresearch@dbs.com Company Regn. No. 196800306E

THAILAND

DBS Vickers Securities (Thailand) Co Ltd

Contact: Chanpen Sirithanarattanakul 989 Siam Piwat Tower Building,

9th, 14th-15th Floor

Rama 1 Road, Pathumwan, Nagkok Thailand 10330 Tel. 66 2 857 7831 Fax: 66 2 658 1269

e-mail: research@th.dbs.com

Company Regn. No 0105539127012

Securities and Exchange Commission, Thailand

INDONESIA

PT DBS Vickers Sekuritas (Indonesia)

Contact: Maynard Priajaya Arif

DBS Bank Tower Ciputra World 1, 32/F Jl. Prof. Dr. Satrio Kav. 3-5 Jakarta 12940, Indonesia Tel. 62 21 3003 4900

Fax: 62 21 3003 4943

e-mail: research@id.dbsvickers.com

skrigs

Sanjeev Kumar Singh, MBA sanjeev.singh@emkayglobal.com +91 22 6612 1255