

4 June 2020

Heidelberg Cement

Strong operating performance continues; maintaining a Buy

On the firm pricing environment and efficient cost-optimisation, despite a 10% volume loss, Heidelberg's EBITDA and PAT grew ~9% each whereas revenue dipped ~4.7% y/y. Through debottlenecking, it expanded capacity to 6.26m tons in Q4. Its strong net-debt-free balance sheet, prudent working-capital control and strong operating-efficiency will continue to augur well. We retain our Buy recommendation, with a higher target of ₹207 (earlier ₹200).

Firm operating performance. The higher realisation (up 6% y/y) and cost saving from raw material/P&F/logistic cost/ton dipping 7.5%/15%/7% helped to a robust EBITDA/ton of ₹1,164 in Q4. EBITDA grew 9.2% y/y to ₹1.3bn despite a 10% volume loss, though revenue dipped only 4.7% y/y. We expect volumes to shrink 11% in FY21 and grow 9% in FY22 with EBITDA/ton of ₹916 and ₹1,034 respectively, aided by firm realisation.

Capacity expansion update. The company completed debottlenecking of Imlai (MP) and Jhansi (UP) by respectively 0.5m tons and 0.55m tons in Q4 FY20, leading to 6.26m ton capacity. In FY19, capacity utilisation at both plants was 94.5% and 99.6% respectively. Management talked of slow progress on the Gujarat expansion (~3m tons) to continue and debottlenecking of the clinker capacity.

Business outlook, Valuation. Management said prices would be firm on low volumes (a ₹10 price hike, post-lockdown). The company continues to operate at negative working capital. Besides NCDs of ₹1.25bn repaid in FY20, management spoke of repaying ₹1.25bn in FY21 and ₹1.2bn in FY22 from internal accruals. We expect a net D/E of -0.2x in FY21 (vs. -0x in FY20). Issues such as migrant labour, logistics, fly-ash availability, liquidity crunch, etc., would continue in the short run. We retain our Buy rating, at a higher target of ₹207 (9.2x FY22e EV/EBITDA). **Risks:** Higher petcoke and diesel prices, extension of the lockdown.

Key financials (YE Mar)	FY18	FY19	FY20	FY21e	FY22e
Sales (₹ m)	18,607	21,094	21,576	19,501	21,905
Net profit (₹ m)	1,332	2,207	2,681	1,804	2,655
EPS (₹)	5.9	9.7	11.8	8.0	11.7
PE (x)	24.2	18.6	12.0	20.7	14.1
EV / EBITDA (x)	10.9	9.3	6.1	9.5	7.2
EV / ton (\$)	88.5	104.3	64.2	74.5	69.0
RoE (%)	13.2	19.9	21.6	13.4	18.1
RoCE (%)	8.6	13.0	14.7	9.6	12.6
Dividend yield (%)	1.8	2.2	5.3	2.4	2.4
Net debt / equity (x)	0.4	0.2	-0.0	-0.1	-0.2

Source: Company, Anand Rath Research

Rating: **Buy**

Target Price: ₹207

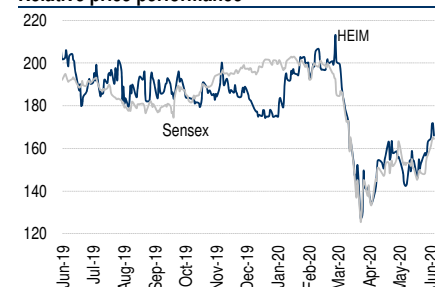
Share Price: ₹165

Key data	HEIM IN / HEID.BO
52-week high / low	₹218 / 120
Sensex / Nifty	33981 / 10029
3-m average volume	\$1.4m
Market cap	₹38bn / \$497.9m
Shares outstanding	227m

Shareholding pattern (%)	Mar-20	Dec-19	Sept-19
Promoters	69.4	69.4	69.4
- of which, Pledged	-	-	-
Free float	30.6	30.6	30.6
- Foreign institutions	10.4	9.9	10.2
- Domestic institutions	8.3	8.5	8.5
- Public	11.9	12.3	12.0

Estimates revision (%)	FY21e	FY22e
Sales	(1.6)	(0.4)
EBITDA	(0.0)	3.5
PAT	(7.3)	(0.8)

Relative price performance



Source: Bloomberg

Manish Valecha
Research Analyst

Vibha Jain
Research Associate

Anand Rath Share and Stock Brokers Limited (hereinafter "ARSSBL") is a full-service brokerage and equities-research firm and the views expressed therein are solely of ARSSBL and not of the companies which have been covered in the Research Report. This report is intended for the sole use of the Recipient. Disclosures and analyst certifications are present in the Appendix.

Quick Glance – Financials and Valuations

Fig 1 – Income statement (₹ m)

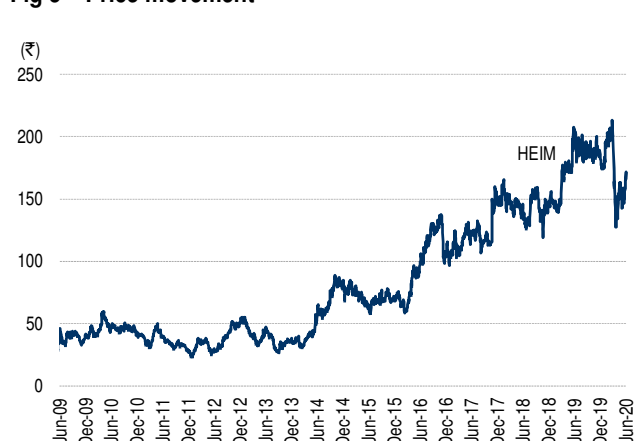
Year-end: Mar	FY18	FY19	FY20	FY21e	FY22e
Sales volumes (m tons)	4.65	4.90	4.71	4.18	4.55
Net revenues	18,607	21,094	21,576	19,501	21,905
Growth (%)	10.3	13.4	2.3	-9.6	12.3
Direct costs	10,977	11,992	11,502	10,407	11,530
SG&A	4,284	4,508	4,917	5,264	5,671
EBITDA	3,346	4,594	5,158	3,830	4,704
EBITDA margins (%)	18.0	21.8	23.9	19.6	21.5
- Depreciation	1,012	1,018	1,086	1,116	1,144
Other income	487	587	647	580	812
Interest expenses	745	748	739	561	349
PBT	2,077	3,416	3,981	2,733	4,023
Effective tax rate (%)	35.9	35.4	32.7	34.0	34.0
+ Associates / (minorities)	-	-	-	-	-
Net income	1,332	2,207	2,681	1,804	2,655
Adjusted income	1,332	2,207	2,681	1,804	2,655
WANS	227	227	227	227	227
FDEPS (₹ / sh)	5.9	9.7	11.8	8.0	11.7
FDEPS growth (%)	74.8	65.7	21.5	-32.7	47.2

Fig 3 – Cash-flow statement (₹ m)

Year-end: Mar	FY18	FY19	FY20	FY21e	FY22e
PBT	2,077	3,416	3,981	2,733	4,023
+ Non-cash items	1,012	1,018	1,086	1,116	1,144
Oper. prof. before WC	3,088	4,434	5,067	3,849	5,167
- Incr. / (decr.) in WC	-1,051	40	37	1,041	-444
Others incl. taxes	444	740	692	929	1,368
Operating cash-flow	3,695	3,654	4,338	1,879	4,244
- Capex (tang. + intang.)	319	417	635	584	450
Free cash-flow	3,376	3,237	3,702	1,295	3,794
Acquisitions	-	-	-	-	-
- Div. (incl. buyback & taxes)	682	1,093	2,049	1,093	1,093
+ Equity raised	-	-	-	-	-
+ Debt raised	-861	-1,024	-1,118	-1,500	-1,000
- Fin investments	-	-	-	-	-
- Misc. (CFI + CFF)	-149	-133	-794	-	-
Net cash-flow	1,982	1,253	1,330	-1,298	1,701

Source: Company, Anand Rathi Research

Fig 5 – Price movement



Source: Bloomberg

Fig 2 – Balance sheet (₹ m)

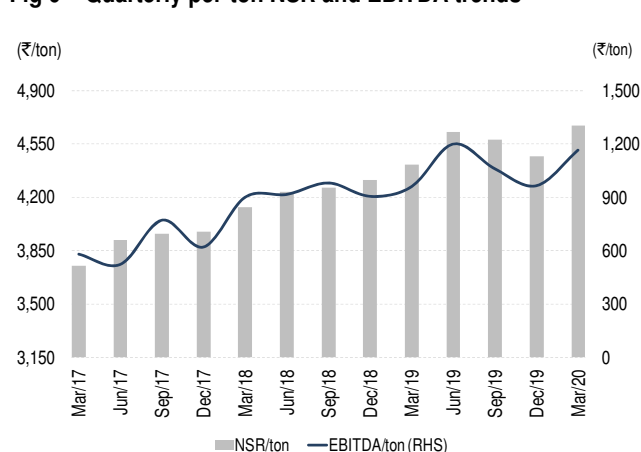
Year-end: Mar	FY18	FY19	FY20	FY21e	FY22e
Share capital	2,266	2,266	2,266	2,266	2,266
Net worth	10,464	11,712	13,146	13,858	15,420
Debt	6,192	5,168	4,051	2,551	1,551
Minority interest	-	-	-	-	-
DTL / (Assets)	835	1,303	1,903	1,903	1,903
Capital employed	17,491	18,183	19,100	18,311	18,873
Net tangible assets	18,044	17,363	16,928	16,456	15,812
Net Intangible assets	17	6	2	2	2
Goodwill	-	-	-	-	-
CWIP (tang. & intang.)	81	172	160	100	50
Investments (strategic)	-	-	-	-	-
Investments (financial)	-	-	-	-	-
Current assets (ex cash)	5,063	6,038	6,132	6,144	6,662
Cash	2,124	3,377	4,706	3,409	5,110
Current liabilities	7,837	8,772	8,829	7,801	8,762
Working capital	-2,774	-2,734	-2,697	-1,656	-2,100
Capital deployed	17,491	18,183	19,100	18,311	18,873
Contingent liabilities	361	537	-	-	-

Fig 4 – Ratio analysis

Year-end: Mar	FY18	FY19	FY20	FY21e	FY22e
P/E (x)	24.2	18.6	12.0	20.7	14.1
EV / EBITDA (x)	10.9	9.3	6.1	9.5	7.2
EV / Sales (x)	2.0	2.0	1.5	1.9	1.5
P/B (x)	3.1	3.5	2.4	2.7	2.4
RoE (%)	13.2	19.9	21.6	13.4	18.1
RoCE (%) - after tax	8.6	13.0	14.7	9.6	12.6
DPS (₹ / sh)	2.5	4.0	7.5	4.0	4.0
Dividend payout (%) - incl. DDT	51.2	49.5	76.4	60.6	41.2
Net debt / equity (x)	0.4	0.2	-0.0	-0.1	-0.2
WC days	-54.4	-47.3	-45.6	-31.0	-35.0
EV / ton (\$)	88.5	104.3	64.2	74.5	69.0
NSR / ton (₹)	3,999	4,308	4,586	4,666	4,816
EBITDA / ton (₹)	719	938	1,096	916	1,034
Volumes (m tons)	4.65	4.90	4.71	4.18	4.55
CFO : PAT %	277.4	165.6	161.8	104.2	159.8

Source: Company, Anand Rathi Research

Fig 6 – Quarterly per-ton NSR and EBITDA trends



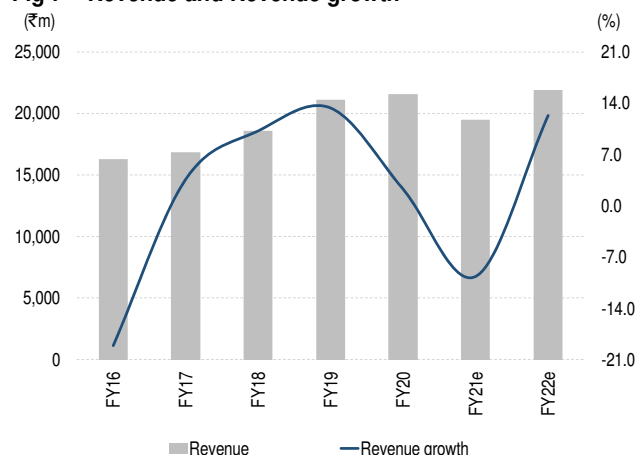
Source: Company, Anand Rathi Research

Other key highlights

Revenue growth

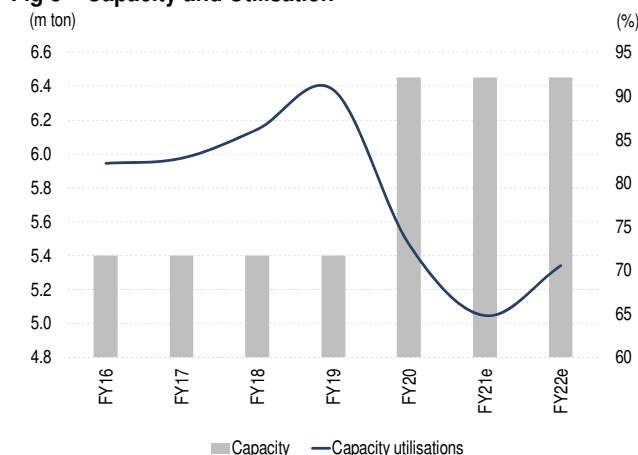
Heidelberg's Q4 revenue declined 4.7% y/y to ₹5.1bn. With no clinker sales and 10 days volumes lost due to the lockdown (~1-1.25 lakh tons), sales volumes declined 10% to 1.09m tons. However, realisations rose 5.8% y/y to ₹4,672/ton due to firm cement prices and higher premium-cement sales. The company continues to sell 100% blended cement.

Fig 7 – Revenue and Revenue growth



Source: Company, Anand Rathi Research

Fig 8 – Capacity and Utilisation



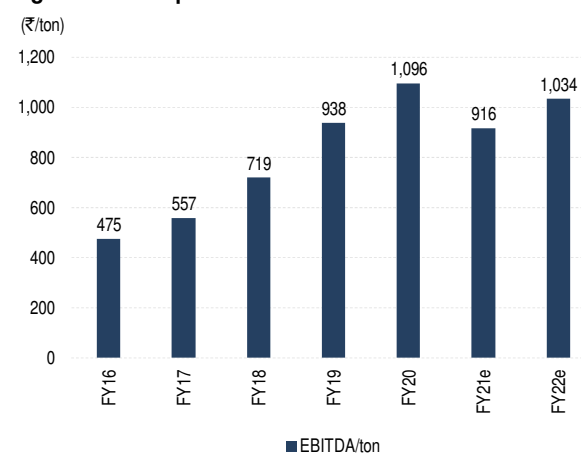
Source: Company, Anand Rathi Research

Operating performance

EBITDA increased 9.2% y/y to ₹1,269m mainly on better realisations and savings in cost. Increasing power generation at the WHRS and savings in power & fuel cost due to lower pet-coke prices optimised costs. The per-ton raw-material cost, power & fuel cost and freight cost declined respectively 7.5%, 15.3% and 7.3% y/y. Employee cost declined 5% whereas other expenditure increased 17% y/y on an absolute basis.

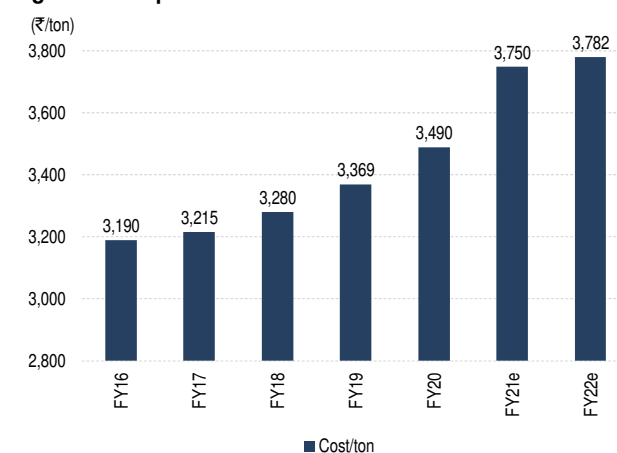
The company reported ₹663m PAT (up 9% y/y) due to firm operational profits partially offset by higher interest cost (up 1.4% y/y), depreciation cost (up 8.2% y/y) and lower other income (down 13.5% y/y)

Fig 9 – EBITDA-per-ton trend



Source: Company, Anand Rathi Research

Fig 10 – Cost-per-ton trend



Source: Company, Anand Rathi Research

Result Highlights

Fig 11 – Quarterly trend

(₹ m)	Q2 FY18	Q3 FY18	Q4 FY18	Q1 FY19	Q2 FY19	Q3 FY19	Q4 FY19	Q1 FY20	Q2 FY20	Q3 FY20	Q4 FY20	% Y/Y	% Q/Q
Sales	4,200	4,839	5,254	5,369	4,795	5,584	5,347	5,824	5,195	5,464	5,093	(4.7)	(6.8)
EBITDA	817	754	1,143	1,160	1,102	1,171	1,162	1,508	1,202	1,179	1,269	9.2	7.6
EBITDA margins (%)	19.5	15.6	21.7	21.6	23.0	21.0	21.7	25.9	23.1	21.6	24.9	318bps	333bps
EBITDA per ton (₹)	771	620	900	915	980	905	959	1,199	1,060	964	1,164	21.3	20.7
Interest	188	186	172	219	199	170	160	198	188	190	163	1.4	(14.3)
Depreciation	255	253	254	255	255	254	254	279	265	268	275	8.2	2.9
Other income	83	167	117	103	125	157	202	186	151	135	175	(13.5)	29.8
PBT	513	483	833	789	774	904	949	1,218	900	857	1,006	6.0	17.4
Tax	181	165	312	278	273	319	340	428	318	211	343	0.8	62.5
Adj. PAT	276	318	521	511	501	586	609	790	582	646	663	8.9	2.6

Source: Company, Anand Rath Research

Fig 12 – Per-ton analysis

(₹)	Q2 FY18	Q3 FY18	Q4 FY18	Q1 FY19	Q2 FY19	Q3 FY19	Q4 FY19	Q1 FY20	Q2 FY20	Q3 FY20	Q4 FY20	%Y/Y	%Q/Q
Realisations	3,962	3,976	4,137	4,237	4,262	4,316	4,415	4,630	4,581	4,468	4,672	5.8	4.6
EBITDA	771	620	900	915	980	905	959	1,199	1,060	964	1,164	21.3	20.7
Sales volumes (m tons)	1.06	1.22	1.27	1.27	1.13	1.29	1.21	1.26	1.13	1.22	1.09	(10.0)	(10.9)
Costs													
Raw material	768	760	776	777	782	769	872	840	795	817	806	(7.5)	(1.3)
Power & Fuel	1,023	829	1,027	932	1,068	928	1,211	966	1,010	1,028	1,026	(15.3)	(0.2)
Freight	578	605	679	654	592	586	682	633	579	602	633	(7.3)	5.1
Staff	276	237	258	241	277	206	294	250	274	284	311	6.0	9.7
Other expenditure	677	694	603	643	710	674	647	683	769	781	843	30.3	8.0

Source: Company, Anand Rath Research

Concall highlights & key updates

■ Input material prices and availability

Fly-ash availability has been hit as the power plants in the vicinity of cement grinding plants have been operating intermittently. For uninterrupted production, the company is sourcing fly-ash from other power plants situated at a distance.

HDPE bags, used to pack cement, are manufactured by labour-intensive units, now faced with a labour issue. So far, none of the company's vendors/contractors has expressed inability to fulfil contractual obligations besides some vendors requesting additional time to effect deliveries.

- **Logistics:** For FY20, the rail-road mix for the quarter was 54:46. /the current lead distance is ~368-370km. The company expects some constraints on availability of truck drivers, labour shortage at railway yards and delayed clearance of railway wagons. Its current level of dispatches are adequately met by trucks available in the market.

- **Sales and demand:** No clinker sales and 10 days sales lost (~100,000 to 125,000 tons) in March due to the lockdown brought overall volumes down 10% y/y to 1.09m tons. Many dealers are faced with a liquidity crunch and want to liquidate inventory before placing fresh orders.

Cement demand may be sluggish due to labour shortages in urban areas. However, areas where government spending is good, will see better demand.

The company is concentrating on increasing its share in the trade channel, with the trade-nontrade mix in FY20 at 85:15. Volumes of premium products increased to 13% of trade volumes, up 38% y/y.

- **Finance:** In FY20, the company repaid the first tranche of NCDs of ₹1.25bn. Management talked of repaying ₹1.25bn in FY21 and ₹1.2bn in FY22 from internal accruals. It has put in place additional internal controls and reporting systems to facilitate daily monitoring and review of the following aspects.

- Cash-flow including overdue outstandings from debtors;
- Inward and outward movements of materials;
- Availability of raw materials, semi-finished and finished goods at all locations.

- **Cost optimisation.** In FY20, the company's dependence on grid power dropped to 66% The pet coke-domestic coal ratio was 61:39. The company has an efficient process for changing its fuel mix within two days. The benefits of softening fuel prices will be seen in coming quarters.

Further, as a cost-optimisation measure, tenures of various annual maintenance and service contracts have been extended by two to three months without any extra costs. However, a cost rise can be seen due to the long lead distance.

■ Capacity expansion

During Q4 FY20, the company completed de-bottlenecking its cement grinding capacities in Imlai (Madhya Pradesh) and Jhansi (Uttar

Pradesh). On completion of the de-bottlenecking, total cement grinding capacity would be 6.26m tons. Management spoke of maintenance capex of ₹500m and further debottlenecking clinker capacity. It will continue to progress on the Gujarat plant (~3m tons). It has deferred some scheduled repairs, which it said will not impact manufacturing operations.

Fig 13 – Trade and Non-trade mix (FY20)

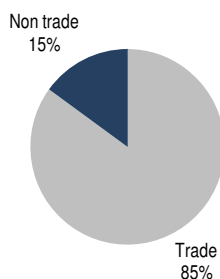


Fig 14 – Rail-Road mix (FY20)

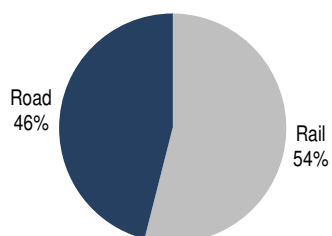
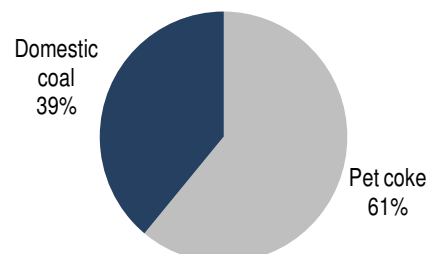


Fig 15 – Fuel mix (FY20)



Source: Company, Anand Rathi Research

Valuations

We like the Central region given its demand-supply dynamics with no major coming capacity additions. The concentrated measures to improve operational efficiencies, more power generated from the stabilised WHR plant, the increasing proportion of premium-cement volumes and greater utilisation would give the company's sound operating performance a good fillip. With GU capacity utilisation in Central India reaching 97%, the company in Q4 through de-bottlenecking expanded capacity to 6.26m tons. Its strong net-debt-free balance sheet, prudent working capital control and strong operating efficiency will continue to boost its prospects. The issues such as migrant labour, logistics, fly-ash availability, liquidity crunch, etc., would continue in the short run.

We maintain a Buy, with a higher target of ₹207, based on 9.2x FY22e EV/EBITDA; the EV/ton is \$89. At the CMP, the stock trades at an EV/EBITDA of 7x, an EV/ton of \$69 and a PE of 14x FY22e.

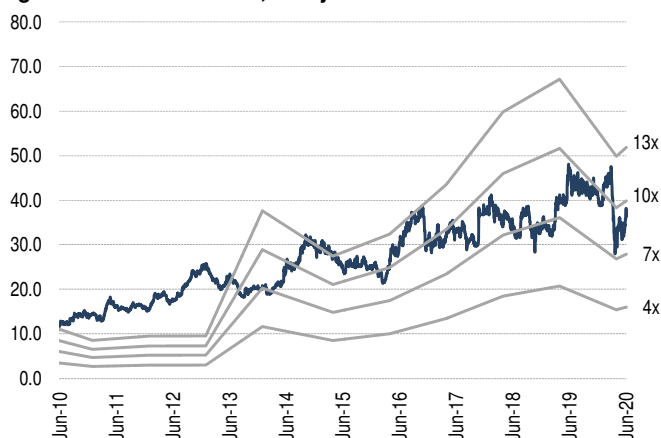
Change in estimates

Fig 16 – Change in estimates

(₹ m)	Old		New		Variance	
	FY21e	FY22e	FY21e	FY22e	% chg	% chg
Sales	19,810	21,986	19,501	21,905	(1.6)	(0.4)
EBITDA	3,830	4,545	3,830	4,704	(0.0)	3.5
PAT	1,945	2,677	1,804	2,655	(7.3)	(0.8)

Source: Anand Rathi Research

Fig 17 – EV/EBITDA band, one-year-forward



Source: Bloomberg, Anand Rathi Research

Fig 18 – EV/EBITDA: Standard deviation, one-year-forward



Source: Bloomberg, Anand Rathi Research

Risk

- Higher prices of pet-coke and freight
- Extension of the lockdown.

Fig 19 – Peer comparison – Valuations

	CMP (₹)	P/E (x)		EV / EBITDA (x)		EV / ton (\$)	
		FY21e	FY22e	FY21e	FY22e	FY21e	FY22e
Heidelberg Cement	165	20.7	14.1	9.5	7.2	75	69
Birla Corp.	514	16.2	11.6	7.5	6.2	56	47
Dalmia Bharat	562	NA	259.8	8.3	6.6	75	68
Deccan Cement	239	12.0	6.6	5.4	3.2	17	15
India Cement	131	NA	29.3	12.9	9.7	61	62
JK Cement	1,170	28.3	19.1	13.2	10.2	96	92
JK Lakshmi	239	40.2	11.9	9.4	5.3	43	37
Mangalam Cement	179	14.2	7.2	6.8	4.7	35	32
NCL Indus	64	9.7	5.1	4.9	3.3	24	20
Orient Cement	55	72.3	16.3	8.1	5.9	36	34
Ramco Cement	619	35.7	24.6	18.5	13.7	108	104
Sanghi Industries	17	NA	10.7	11.6	7.5	34	35
Prism Johnson	38	NA	23.2	9.7	7.0	46	43

Source: Anand Rathi Research

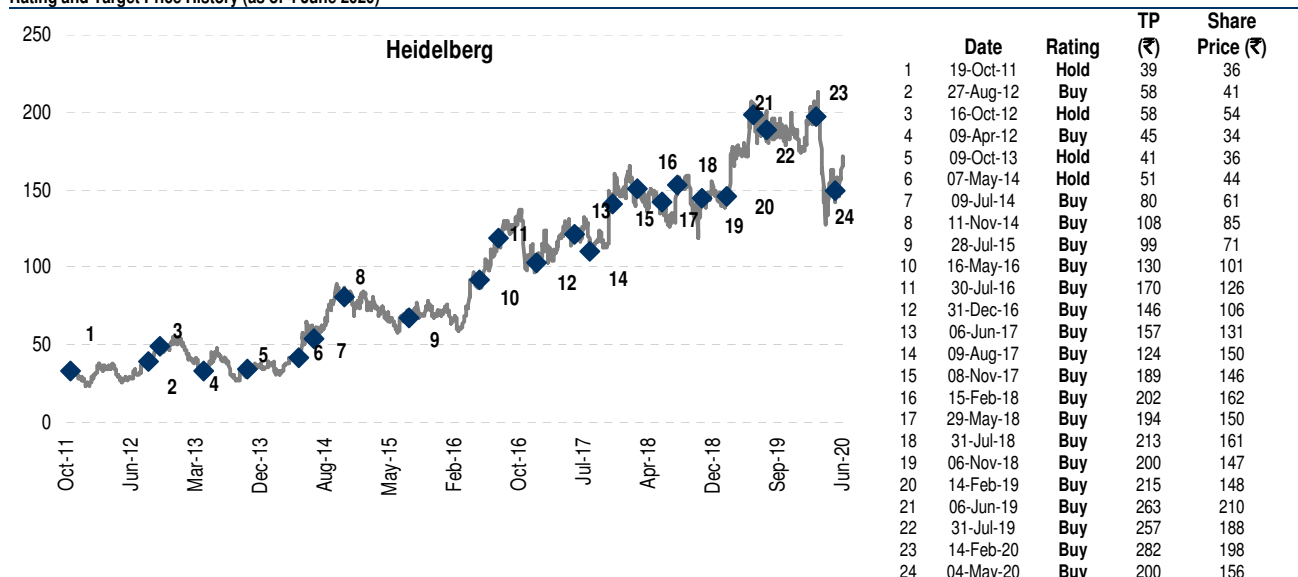
Appendix

Analyst Certification

The views expressed in this Research Report accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations or views expressed by the research analyst(s) in this report. The research analysts are bound by stringent internal regulations and also legal and statutory requirements of the Securities and Exchange Board of India (hereinafter "SEBI") and the analysts' compensation are completely delinked from all the other companies and/or entities of Anand Rathi, and have no bearing whatsoever on any recommendation that they have given in the Research Report.

Important Disclosures on subject companies

Rating and Target Price History (as of 4 June 2020)



Anand Rathi Ratings Definitions

Analysts' ratings and the corresponding expected returns take into account our definitions of Large Caps (>US\$1bn) and Mid/Small Caps (<US\$1bn) as described in the Ratings Table below:

Ratings Guide (12 months)

	Buy	Hold	Sell
Large Caps (>US\$1bn)	>15%	5-15%	<5%
Mid/Small Caps (<US\$1bn)	>25%	5-25%	<5%

Research Disclaimer and Disclosure inter-alia as required under Securities and Exchange Board of India (Research Analysts) Regulations, 2014

Anand Rathi Share and Stock Brokers Ltd. (hereinafter refer as ARSSBL) (Research Entity) is a subsidiary of Anand Rathi Financial Services Ltd. ARSSBL is a corporate trading and clearing member of Bombay Stock Exchange Ltd, National Stock Exchange of India Ltd. (NSEIL), Multi Stock Exchange of India Ltd (MCX-SX) and also depository participant with National Securities Depository Ltd (NSDL) and Central Depository Services Ltd. ARSSBL is engaged in the business of Stock Broking, Depository Participant and Mutual Fund distributor.

The research analysts, strategists, or research associates principally responsible for the preparation of Anand Rathi research have received compensation based upon various factors, including quality of research, investor client feedback, stock picking, competitive factors and firm revenues.

General Disclaimer: This Research Report (hereinafter called "Report") is meant solely for use by the recipient and is not for circulation. This Report does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of individual clients. The recommendations, if any, made herein are expression of views and/or opinions and should not be deemed or construed to be neither advice for the purpose of purchase or sale of any security, derivatives or any other security through ARSSBL nor any solicitation or offering of any investment /trading opportunity on behalf of the issuer(s) of the respective security (ies) referred to herein. These information / opinions / views are not meant to serve as a professional investment guide for the readers. No action is solicited based upon the information provided herein. Recipients of this Report should rely on information/data arising out of their own investigations. Readers are advised to seek independent professional advice and arrive at an informed trading/investment decision before executing any trades or making any investments. This Report has been prepared on the basis of publicly available information, internally developed data and other sources believed by ARSSBL to be reliable. ARSSBL or its directors, employees, affiliates or representatives do not assume any responsibility for, or warrant the accuracy, completeness, adequacy and reliability of such information / opinions / views. While due care has been taken to ensure that the disclosures and opinions given are fair and reasonable, none of the directors, employees, affiliates or representatives of ARSSBL shall be liable for any direct, indirect, special, incidental, consequential, punitive or exemplary damages, including lost profits arising in any way whatsoever from the information / opinions / views contained in this Report. The price and value of the investments referred to in this Report and the income from them may go down as well as up, and investors may realize losses on any investments. Past performance is not a guide for future performance. ARSSBL does not provide tax advice to its clients, and all investors are strongly advised to consult with their tax advisers regarding taxation aspects of any potential investment.

Opinions expressed are our current opinions as of the date appearing on this Research only. We do not undertake to advise you as to any change of our views expressed in this Report. Research Report may differ between ARSSBL's RAs and/ or ARSSBL's associate companies on account of differences in research methodology, personal judgment and difference in time horizons for which recommendations are made. User should keep this risk in mind and not hold ARSSBL, its employees and associates responsible for any losses, damages of any type whatsoever.

ARSSBL and its associates or employees may; (a) from time to time, have long or short positions in, and buy or sell the investments in/ security of company (ies) mentioned herein or (b) be engaged in any other transaction involving such investments/ securities of company (ies) discussed herein or act as advisor or lender / borrower to such company (ies) these and other activities of ARSSBL and its associates or employees may not be construed as potential conflict of interest with respect to any recommendation and related information and opinions. Without limiting any of the foregoing, in no event shall ARSSBL and its associates or employees or any third party involved in, or related to computing or compiling the information have any liability for any damages of any kind.

Details of Associates of ARSSBL and Brief History of Disciplinary action by regulatory authorities & its associates are available on our website i.e. www.rathionline.com

Disclaimers in respect of jurisdiction: 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 ARSSBL to any registration or licensing requirement within such jurisdiction(s). No action has been or will be taken by ARSSBL in any jurisdiction (other than India), where any action for such purpose(s) is required. Accordingly, this Report shall not be possessed, circulated and/or distributed in any such country or jurisdiction unless such action is in compliance with all applicable laws and regulations of such country or jurisdiction. ARSSBL requires such recipient to inform himself about and to observe any restrictions at his own expense, without any liability to ARSSBL. Any dispute arising out of this Report shall be subject to the exclusive jurisdiction of the Courts in India.

Statements on ownership and material conflicts of interest, compensation - ARSSBL and Associates

Answers to the Best of the knowledge and belief of ARSSBL/ its Associates/ Research Analyst who is preparing this report

Research analyst or research entity or his associate or his relative has any financial interest in the subject company and the nature of such financial interest.	No
ARSSBL/its Associates/ Research Analyst/ his Relative have actual/beneficial ownership of one per cent or more securities of the subject company, at the end of the month immediately preceding the date of publication of the research report?	No
ARSSBL/its Associates/ Research Analyst/ his Relative have actual/beneficial ownership of one per cent or more securities of the subject company	No
ARSSBL/its Associates/ Research Analyst/ his Relative have any other material conflict of interest at the time of publication of the research report?	No
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation from the subject company in the past twelve months	No
ARSSBL/its Associates/ Research Analyst/ his Relative have managed or co-managed public offering of securities for the subject company in the past twelve months	No
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation for investment banking or merchant banking or brokerage services from the subject company in the past twelve months	No
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company in the past twelve months	No
ARSSBL/its Associates/ Research Analyst/ his Relative have received any compensation or other benefits from the subject company or third party in connection with the research report	No
ARSSBL/its Associates/ Research Analyst/ his Relative have served as an officer, director or employee of the subject company.	No

Other Disclosures pertaining to distribution of research in the United States of America

This research report is a product of ARSSBL, 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 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 by ARSSBL only 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, ARSSBL has entered into an agreement with a U.S. registered broker-dealer, Cabrera Capital Markets. ("Cabrera"). Transactions in securities discussed in this research report should be effected through Cabrera or another U.S. registered broker dealer.

1. ARSSBL or its Affiliates may or may not have been beneficial owners of the securities mentioned in this report.
2. ARSSBL or its affiliates may have or not managed or co-managed a public offering of the securities mentioned in the report in the past 12 months.
3. ARSSBL or its affiliates may have or not received compensation for investment banking services from the issuer of these securities in the past 12 months and do not expect to receive compensation for investment banking services from the issuer of these securities within the next three months.
4. However, one or more of ARSSBL or its Affiliates may, from time to time, have a long or short position in any of the securities mentioned herein and may buy or sell those securities or options thereon, either on their own account or on behalf of their clients.
5. As of the publication of this report, ARSSBL does not make a market in the subject securities.
6. ARSSBL or its Affiliates may or may not, to the extent permitted by law, act upon or use the above material or the conclusions stated above, or the research or analysis on which they are based before the material is published to recipients and from time to time, provide investment banking, investment management or other services for or solicit to seek to obtain investment banking, or other securities business from, any entity referred to in this report.

© 2019. This report is strictly confidential and is being furnished to you solely for your information. All material presented in this report, unless specifically indicated otherwise, is under copyright to ARSSBL. None of the material, its content, or any copy of such material or content, may be altered in any way, transmitted, copied or reproduced (in whole or in part) or redistributed in any form to any other party, without the prior express written permission of ARSSBL. All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service marks of ARSSBL or its affiliates, unless specifically mentioned otherwise.

Additional information on recommended securities/instruments is available on request.

ARSSBL registered address: Express Zone, A Wing, 9th Floor, Western Express Highway, Diagonally Opposite Oberoi Mall, Malad (E), Mumbai – 400097.
Tel No: +91 22 6281 7000 | Fax No: +91 22 4001 3770 | CIN: U67120MH1991PLC064106.