MANAGEMENT'S DISCUSSION AND ANALYSIS

Backed by a solid expansion drive and continued focus on innovation in sustainability and technology during the year, the Company saw a 16.4% increase in revenue on a y-o-y basis. Increase in demand for products and improved average realisation proved to be powerful drivers of growth, resulting in an 10.1% increase in the operating EBITDA y-o-y. The Company registered a net PAT of ₹206.96 crore for FY 2022-23.

ABOUT THE COMPANY

1.0

Established in 2009, JSW Cement is part of the diversified $23 billion JSW Group. With a current capacity of 16.6 MTPA, JSW Cement is India's leading green cement company. The Company's capacity is expected to reach 26 MTPA by FY2025-26. The Company's manufacturing plants are spread across Vijayanagar in Karnataka, Nandyal in Andhra Pradesh, Salboni in West Bengal, Jajpur in Odisha, Dolvi in Maharashtra and Salem, Tamil Nadu, among others.

The Company has a strong presence in the East, West and South India and is planning to enter markets in North and Central India in a big way. With this target, it has acquired a limestone mine from a subsidiary of India Cements in Madhya Pradesh. Even in Vijayanagar, the capacity will be enhanced from 6 MTPA to 10 MTPA through organic growth. The Company has secured clinker by increasing the clinkeration capacity Nandyal and Shiva Cement (Kutra, Sundargarh). The Company is also investing in waste heat recovery systems (WHRS) and solar energy capacity expansion.

JSW Cement caters to the diverse needs of the construction industry with premium, high quality, and eco-friendly products. It is present across the value-chain of building materials comprising cement, concrete, and construction chemicals. The Company has a dedicated research and development centre, and is pursuing collaborations with premier research institutions for developing products and solutions to promote safety and sustainability.

JSW Cement uses byproducts from the steel industry as raw material to manufacture green cement and cementitious materials, thereby promoting circularity and ensuring a more sustainable future for the next generations. Its marketing and service teams go the extra mile to meet customer expectations. The Company is also constantly leveraging digital tools, mobile tech, and conversational commerce interventions to improve efficiency.

16.6 MTPA
Current capacity

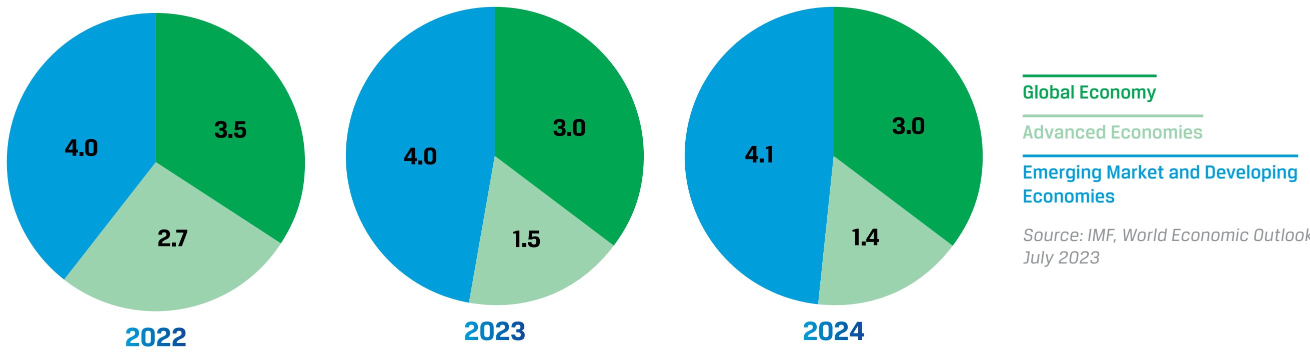
26 MTPA
Capacity to be reached by FY2025-26

GLOBAL ECONOMY

2.0

In 2022, the world economy faced multiple headwinds such as the Russia-Ukraine conflict, interest rate tightening by central banks across the world to counter inflationary pressures, and the pandemic-induced slowdown in China that further dampened global economic growth. Going ahead, global economic growth is projected to fall further from an estimated 3.5% in 2022 to 3.0% in 2023 and 2024. Advanced economies are expected to see an especially pronounced slowdown compared to the emerging market and developing economies. Interest rate hikes to fight inflation continues to weigh on economic activity. Global headline inflation is expected to fall from 8.7% in 2022 to 6.8% in 2023 and 5.2% in 2024.

Growth projections (%)



Source: IMF, World Economic Outlook July 2023

INDIAN ECONOMY

3.0

Amidst the global uncertainty, India proved to be an outlier, with a resounding 7.2% GDP growth during FY 2022-23 – the fastest among the major economies. This was aided by strong private consumption and growth-supportive macro policies, including continued government spending on infrastructure and logistics among others, notwithstanding a series of rate hikes by the Reserve Bank of India (RBI) to tame inflation. The RBI hiked rates by 250 bps in six tranches during the fiscal.

Long-term growth drivers such as the government's strong infrastructure push under the Pradhan Mantri Gati Shakti scheme, Production Linked Incentive (PLI) scheme for various sectors, and the ₹10 lakh crore capex announced in the Union Budget 2023-24 are bolstering the country's manufacturing capacities while also resulting in employment generation. High-frequency indicators like direct tax revenue collections, GST collections, PMI and others have also remained buoyant.

OUTLOOK

India's growth momentum in an evidently challenging macroeconomic environment is expected to continue. The RBI pegs the country's GDP growth at 6.5% in FY 2023-24 while global economic growth moderates further in CY 2023. The long-term growth drivers of the economy remain intact, backed by a large and fast-growing middle class driving consumer spending.

OVERVIEW OF INDIAN CEMENT INDUSTRY

4.0

In 2022, the size of the global cement market reached \$363.4 billion, and it is expected to grow at a CAGR of 5.4% between 2023 and 2028 to reach \$498.23 billion by 2028. Cement is one of the eight core industries in India. The country is the world's second-largest cement producer after China, accounting for over 7% of the global installed capacity for cement.

Cement production in India grew at 7% for FY 2022-23 (375 MnT) driven by strong demand from housing and infrastructure sectors. The housing sector accounts for the majority of India's cement consumption, followed by the infrastructure sector, and commercial and industrial building constructions. However, the Indian market, with a per capita cement consumption of 240-250 kg, is one of the most underpenetrated markets. Its per capita cement consumption is half the world average of 500-550 kg, and still far below that of Brazil and Indonesia.

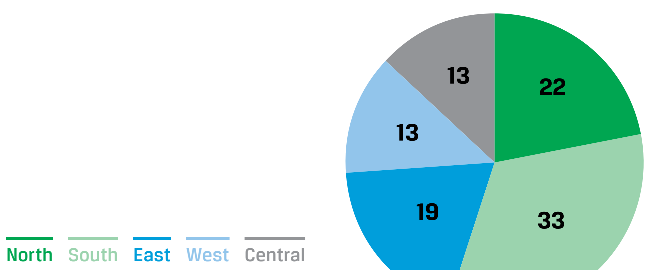
Planned capacity expansions

The domestic cement industry is passing through a phase of consolidation, where small players are gradually being acquired by major players. The past few years have seen a lot of mergers and acquisitions. In September 2022, the Adani Group bought the cement business of Swiss building materials major Holcim, which included Ambuja Cement and ACC, for \$6.4 billion.

All players, including mid-size players, have planned for capacity addition through greenfield or brownfield expansion and or by acquisition. After adding 30 MTPA capacity in FY 2022-23, the industry is expected to add another 30-32 MTPA in FY 2023-24. Between FY 2023-24 and FY 2027-28, the domestic cement industry is expected to add another 130-140 MTPA of capacity addition.

According to estimates of the National Council for Cement and Building Materials (NCCBM), India's cement industry is expected to add ~80 MnT capacity by 2025. The total capacity of the industry is estimated to be around 730-740 MTPA by FY 2027-28, with a demand growth of 4.5-5.5% CAGR.

Region-wise installed capacity (%)



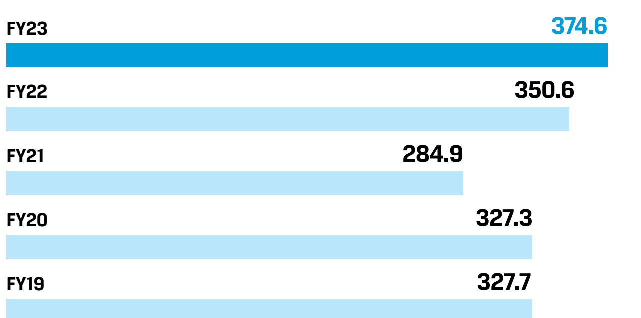
Source: CMIE, Infomerics Economic Research

Production and consumption of cement

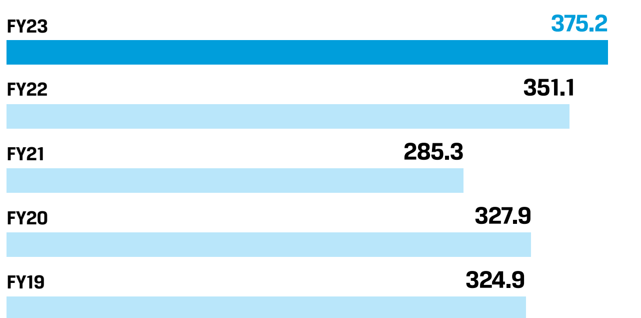
In India, cement manufacturers produce distinct types of cement, such as Portland Cement, Portland Pozzolana Cement (PPC), High Strength Cement, Marine Technology Cement, Blended Cement, Fly Ash Cement, Slag-based Cement, Silica-based Cement and High Alumina Cement.

Domestic cement industry growth

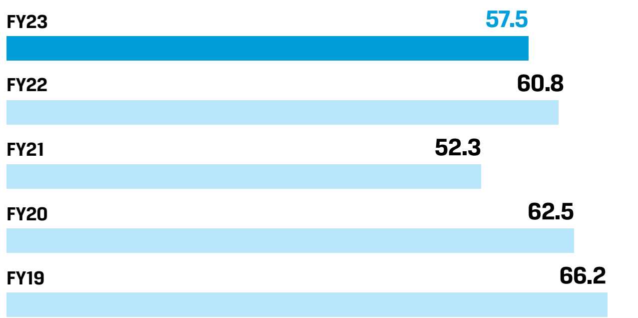
Production



Consumption (MT)



Capacity utilisation



Cement demand grew by a healthy 7% in FY 2022-23. In FY 2023-24, demand is expected to witness 7-9% growth, primarily led by the government's thrust to boost infrastructure and rural housing before the Lok Sabha elections in 2024.

Growth drivers

Impetus to the housing sector

As per Moody's investor services, the growing housing sector, which typically accounts for 60-65% of India's cement consumption, will remain a key demand driver. In the Union Budget 2023-24, the government has allocated \$1.8 billion for the creation of safe housing, clean drinking water, sanitation, and increasing road and telecom connectivity, among other initiatives. It also allocated \$9.6 billion to address urban housing shortages. The government has also increased budget outlay for affordable rural housing under the Pradhan Mantri Awas Yojana – Gramin (PMAY-G) by 12.5% for FY 2023-24.

Infrastructure development

Continued bulk investments in roads and infrastructure projects is expected to fuel cement demand. It is anticipated that India's infrastructure will expand at 7% from 2022 to 2027. About 42% of the projects in the National Infrastructure Pipeline (NIP) are already under implementation. India built 12,000 km of highways in 2022 alone, and this momentum is likely to continue in FY 2023-24.

OUTLOOK

The outlook for the cement sector is favourable on account of the growth opportunities in the housing and infrastructure segments. Going forward, he industry is expected to see volume growth of 6-8%, likely to reach ~390-400 MnT. The sector is likely to face some headwinds in terms of rising input costs of coal, pet coke and gypsum. In FY 2022-23, prices of coal, pet coke, and diesel escalated by 106%, 32%, and 3%, respectively, on a y-o-y basis, resulting in higher input costs. The prices of coke and pet coke have declined substantially on a y-o-y basis, although diesel prices have largely remained at the same level.

REVIEW OF OPERATIONS

5.0

Highlights of FY 2022-23

- Achieved the highest consolidated sales volume of 10.55 MTPA, which includes cement, GGBS and clinker
- Commissioned clinkerisation facility and commenced trial operation at subsidiary Shiva Cement Limited at Sundargarh, Odisha
- Upgraded clinkerisation facility at Nandyal, Andhra Pradesh
- Acquired mining lease at Panna, Madhya Pradesh, via purchase of 100% share capital of Springway Mining Private Limited and NKJA Mining Private Limited
- Entered into job work arrangement with JSW Steel for manufacturing GGBS from Salem, Tamil Nadu; GGBS from Salem plant will cater to incremental demand from South Tamil Nadu and Kerala markets.

Way forward

- In line with the expansion at JSW Steel plant at Vijayanagar and Dolvi, the Company has started work to expand grinding capacity to 6 MTPA at Vijayanagar and to 4.5 MTPA at Dolvi
- Setting up WHRS at Shiva Cement Limited, Sundargarh, Odisha
- Planning to have all-India presence in the construction chemicals business

10.5 MTPA

Grinding capacity expansion undertaken collectively at Vijayanagar and Dolvi

FINANCIAL REVIEW

STANDALONE

6.0

Highlights of FY 2022-23

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Growth (%)
Net turnover (₹ crore)	4,770.74	4,099.22	16.4
Operating EBIDTA (₹ crore)	800.34	726.99	10.1
Operating EBIDTA margin (%)	16.8%	17.7%	(5.4)
Other income (₹ crore)	135.23	100.98	33.9
Depreciation & Amortisation (₹ crore)	232.29	169.95	36.7
Finance cost (₹ crore)	261.46	282.83	(7.6)
Profit before tax (₹ crore)	306.46	498.63	(38.5)
Tax expense (₹ crore)	99.50	174.24	(42.9)
Profit for the year (₹ crore)	206.96	324.39	(36.2)
Other comprehensive income (₹ crore)	(12.59)	35.66	(135.3)
Total comprehensive income (₹ crore)	194.37	360.05	(46.0)

The Company achieved a capacity utilisation of 57.50% in FY 2022-23 and production of 9.61 MT of cement and GGBS, recording a 9.1% growth y-o-y on a standalone basis.

During the year, the Company's revenue increased by 16.4% from ₹4,099.22 crore to ₹4,770.74 crore. The primary drivers of this performance were increase in demand and improved average realisation. This has helped the Company report an operating EBITDA of ₹800.34 crore for the year, an increase of 10.1% y-o-y. The Company's EBITDA margin for the year stood at 16.8% and it registered a net Profit After Tax of ₹206.96 crore.

Revenue analysis

During the year, the Company showed revenue growth of 16.4% over FY 2021-22, well supported by GGBS and cement sales volumes, which grew by 9%, reaching 9.61 MT in FY 2022-23 against the industry volume growth of 9-10%. Demand remained strong, backed by government spending and improved outlook for the real estate industry.

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Total manufactured finished goods	4,524.92	3,910.89	15.7
Traded	90.50	77.99	16.0
Total turnover	4,615.42	3,988.88	15.7
Other operating income	155.32	110.34	40.8
Gross revenue	**4,770.74**	**4,099.22**	**16.4**

Other income

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Interest income	107.44	77.81	38.1
Others	27.79	23.17	19.9
Total	**135.23**	**100.98**	**33.9**

Other income has increased by 33.9% to ₹135.23 crore from ₹100.98 crore in FY 2021-22, mainly due to increase in interest earned on loan and advances given to subsidiaries/Group companies.

Material cost

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Cost of materials consumed, including purchase of traded goods and change in inventories	1,142.05	1,012.40	12.8

The Company's expenditure on material consumption increased by 12.8% from ₹1,012.40 crore in FY 2021-22 to ₹1,142.05 crore in FY 2022-23. The increase is primarily due to increase in volumes, change in input cost in East and West zones, change in geography and product mix.

Employee benefits expense

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Employees' remuneration and benefits	264.81	217.53	21.7

The employee benefits expense increased by 21.7% from ₹217.53 crore in FY 2021-22 to ₹264.81 crore in FY 2022-23. The increase is mainly due to annual increments and increase in ESOP expenses charge due to fresh grants given under ESOP 2021 scheme.

Power and fuel cost

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Power and fuel cost	797.33	598.70	33.2

Power and fuel cost has increased by 33.2% mainly due to the steep increase in fuel cost.

Freight and handling expenses

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Freight and handling expense	1,122.95	967.70	16.0

During the reporting year, freight and handling expenses increased by 16.0% from ₹967.70 crore in FY 2021-22 to ₹1,122.95 crore in FY 2022-23. This is mainly on account of the increase in finished products handled, change in lead distance, geo-mix, busy season surcharge, incentives and port-handling charges for increased slag exports (which was ₹189 crore), partly offset by saving of ₹34 crore due to various logistics initiatives undertaken.

Manufacturing, marketing, administrative and other expenses

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Other expenses	646.67	580.99	11.3

Manufacturing, marketing, administrative and other expenses increased by 11.3% from ₹580.99 crore in FY 2021-22 to ₹646.67 crore in FY 2022-23. The increase was primarily due to job work arrangement at Salem plant for increment GGBS volumes, increased spend on travel, advertisement and publicity, higher commission and discounts offered to distribution network.

Finance cost

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Finance cost	261.46	282.83	(7.6)

Borrowing cost remained flat y-o-y, if we exclude the one-off borrowing cost incurred for raising CCPS in FY 2021-22. During the year, the Company refinanced part of its existing facilities at lower rates, re-negotiated rates with existing lenders, resulting in reduced interest cost despite increase in borrowing during FY 2022-23.

Depreciation and amortisation expenses

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Depreciation and amortisation expenses	232.29	169.95	36.7

Depreciation and amortisation expenses increased by 36.7% from ₹169.95 crore in FY 2021-22 to ₹232.29 crore in FY 2022-23. The increase of ₹62.34 crore is due to accelerated depreciation provided during the year for certain sections of the clinkerisation facility at Nandyal plant, and due to new capitalisation of the debottlenecking project at VIjayanagar and Salboni, and upgradation of the silo and clinker facility at Dolvi and Nandyal.

Fixed assets

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Tangible assets	3,643.67	3,227.78	415.89
Intangible assets	53.83	64.32	(10.49)
Capital work-in-progress	754.57	421.72	332.85
Total	**4,452.07**	**3,713.82**	**738.25**

The net block of property, plant and equipment and intangible assets has increased by ₹738.25 crore during the year to ₹3,643.67 crore. CWIP has increased by ₹332.85 crore due to expenses for Dolvi and Vijayanagar expansion project, and Waste Heat Recovery and Alternate Fuel Recovery plant at Nandyal. Increase of tangible asset is towards capitalisation of debottlenecking project at Vijayanagar and Dolvi, and silo and kiln upgradation at Dolvi and the clinkerisation facility at Nandyal.

Investments

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Investments in subsidiaries, associates and joint ventures	924.83	423.77	501.06
Other investments	540.37	581.04	(40.67)
Total	**1,465.20**	**1,004.81**	**460.39**

The increase in investment is mainly due to investment in subsidiary/Group companies.

Loans

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Long-term loans	575.34	317.19	258.15
Short-term loans	521.38	223.43	297.95
Total	**1,096.72**	**540.62**	**556.10**

The increase is due to additional loan given to subsidiaries/Group companies as per approved terms and conditions and within the limit approved by the Board.

Other financial assets

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Other non-current financial assets	79.15	60.18	18.97
Other current financial assets	505.01	405.79	99.22
Total financial assets	**584.16**	**465.97**	**118.19**

The increase in other financial assets is mainly due increase in receivable of government grant for West Bengal and Odisha, margin maintained with the bank and increase on interest income accrued on loans provided to subsidiaries/Group companies.

Other non-financial assets

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Other non-current assets	527.56	347.93	179.63
Other current assets	193.32	166.25	27.07
Total Other non-financial assets	**720.88**	**514.18**	**206.70**

The increase is due to advance given to project vendors, prepayments made to authorities for mine rights and coal block as per bid terms, increased accumulation of GST input tax credits.

Inventories

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Raw materials	97.75	78.94	18.81
Semi-finished goods	14.61	16.57	(1.96)
Finished goods	43.27	33.76	9.51
Traded goods	0.07	0.07	-
Stores and spares	156.69	144.62	12.07
Fuel	93.67	53.14	40.53
Total inventories	**406.06**	**327.10**	**78.96**

The increase is mainly due to an increase in raw material, finished goods, fuel and spares inventory. The average inventory holding in terms of days as on 31 March, 2023, is 49 days vis-à-vis 47 days as on 31 March, 2022.

Trade receivables

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Total debtors	705.03	722.73	(17.70)
Less: provision for doubtful debts	(1.34)	(1.50)	0.16
Trade receivables	**703.69**	**721.23**	**(17.54)**

The debtors in terms of average number of days sales as on 31 March, 2023 are 56 days vis-à-vis 57 days as on 31 March, 2022. (Adjusting the del credere finance received, the average days are 45 days and 48 days on 31 March, 2023 & 2022, respectively)

Borrowings

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Long-term borrowings	2,426.07	1,816.84	609.23
Other loans (CCPS net of fair valuation)	1,610.12	1,475.79	134.33
Short-term borrowings	274.56	88.20	186.36
Current maturity of long-term borrowings	495.58	435.20	60.38
Total borrowings	**4,806.33**	**3,816.03**	**990.30**

Overall borrowing has increased on account of drawing fresh long-term loans for business expansion activities, and short-term loan for availing additional working capital facility for increased scale of operation. The increase in CCPS liability is due to recognising the fair value loss of the instrument as per IND AS 109.

Trade payables

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Trade payables	1018.40	748.68	269.72
Total trade payables	**1018.40**	**748.68**	**269.72**

During the year, operational payable liabilities increased in line with increase in the scale of operation during FY 2022-23.

Other financial liabilities

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Other current financial liability	695.82	428.23	267.59
Lease liabilities (current & non-current liabilities)	200.06	189.77	10.29
Other non-current financial liability	25.90	12.75	13.15
Total	**921.78**	**630.75**	**291.03**

The increase in other current financial liability is mainly due to increase in project creditors for the expansion and sales promoter finance received on non-trade sales. Increase in non-current financial liability is on account of liability recognised for additional guarantee given for loan availed by subsidiary and joint venture.

Other non-financial liabilities

(in ₹ crore)

Particulars	FY 2022-23	FY 2021-22	Change (%)
Provisions	74.37	77.22	(2.85)
Other current liability	78.23	106.04	(27.81)
Total	**152.60**	**183.26**	**(30.66)**

The reduction in provisions is mainly due to employee leave accrual liability on account of change in the policy of leave encashment. Reduction in other current liability is on account of reduction in GST payable liability at the end of the year.

Capital employed

The total capital employed increased by 20.8% from ₹6,090.58 crore as on 31 March, 2022, to ₹7,358.84 crore as on 31 March, 2023. The Company's average return on capital employed stood at 9.1 % vis-à-vis 10.3% in FY 2021-22.

Own funds

Net worth increased from ₹2,113.95 crore as on 31 March, 2022, to ₹2,341.52 crore as on 31 March, 2023. The book value per share was ₹22.93 as on 31 March, 2023, as against ₹20.96 as on 31 March, 2022.

₹2,341.52 CR

Net worth as on 31 March, 2023

Other key ratios

Other key financial indicators

Ratios	FY 2022-23	FY 2021-22	Change	Change (%)	Reason for variance
Inventory turnover (No. of days)	49	47	2	4.3	
Debtors turnover (No. of days	56	57	1	(1.8)	
Trade payable turnover ratio (No. of days	81	79	2	2.2	
Debt service coverage ratio	1.16	1.14	0.02	1.2%	
Current ratio	0.92	1.24	(0.32)	(26)%	Mainly due to increase in current liabilities and effective working capital management
Net debt equity ratio	2.05	1.81	0.24	13.7%	Due to increase in borrowing for expansion
Operating EBIDTA margin	16.8%	17.7%	(0.9)%	(5.4)%	
Return on equity ratio	9.29%	16.80%	(7.51)%	(44.7)%	Drop is mainly on account of impact of loss on fair valuation of financial instruments

7.0

CONSOLIDATED

The Company has reported consolidated revenue, EBIDTA and PAT of ₹5,836.72 crore, ₹906.85 crore, and ₹58.55 crore, respectively. The Company's consolidated financial statement includes the financial performance of the following subsidiaries and joint ventures:

SUBSIDIARIES

- JSW Cement FZE, Fujairah UAE (upto 21 March, 2023)
- Shiva Cement Limited, Rourkela, Odisha
- Utkarsh Transport Private Limited, Telangana
- JSW Green Cement Private Limited, Telangana
- Springway Mining Private Limited, Madhya Pradesh
- NKJA Mining Private Limited, Madhya Pradesh

JOINT VENTURES

- JSW One Platforms Limited
- JSW Cement FZC, Fujairah UAE (from 22 March, 2023)

STRATEGIC GROWTH AND EXPANSION PLANS 8.0

The Company is committed to establishing itself as an industry leader and gaining commanding market presence, leveraging innovation and expansion to achieve its goal. With an existing production capacity of ~16.6 MT, it has set itself a bold target of reaching 50 MT by 2030 through a strategic blend of organic and inorganic expansion. This strategy will ensure a robust and sustainable growth trajectory. The Company has already made significant inroads into southern, western, and eastern regions of India, and is now poised to capture the lucrative northern market, solidifying its pan-India presence.

Greenfield ventures and diversification

As part of its northward expansion, the Company has acquired limestone mines in Nagaur, Rajasthan, and Damoh, Madhya Pradesh. The move paves the way for setting up clinker and grinding units, coupled with WHRS systems, that will be needed for an increase in capacity. These greenfield projects are advancing, with the necessary land acquisitions and mandatory statutory approvals, and are expected to be operational in the next few years. Meanwhile, the Company is focusing on diversification into Ready Mix Concrete (RMC) and construction chemicals on a priority basis to capitalise on promising market opportunities.

Strategic acquisitions and brownfield expansion

To strengthen its foothold in the eastern market, the Company has acquired and transformed Shiva Cement in Odisha. It revamped the clinkerisation unit with a capacity of 4,000 TPD, which will boost clinker supply to the Company's key grinding plants at Salboni and Jajpur.

As part of its expansion plans, the Company has completed brownfield projects at Dolvi (enhancing grinding capacity by ~2 MT in FY 2023-24) and Nandyal units (enhancing clinkerisation from 6,500 TPD to 8,500 TPD FY 2022-23), and is adding a 2 MT grinding unit at Vijayanagar in FY 2023-24. There are plans to enhance Vijayanagar's grinding capacity to 10 MTPA. The joint venture unit at Fujairah is also ramping up its clinkerisation capacity from 1 MTPA to 2.36 MTPA.

In its pursuit for operational efficiency and environmental responsibility, the Company is implementing WHRS and Alternative Fuel and Raw Materials (AFR) systems at multiple units to optimise its processes. In addition, the Company is actively exploring opportunities for inorganic expansion in order to consolidate and strengthen its position in the domestic market.

4,000 TPD
Revamped clinkerisation capacity at Shiva Cement

SUSTAINABILITY AND ENVIRONMENTAL RESPONSIBILITY 9.0

Championing sustainability and innovation

Sustainability is deeply ingrained in the corporate DNA of the Company, driving operations towards a greener and circular future. The Company considers environmental stewardship as a guiding principle that underscores all facets of its business endeavours. By embracing the principles of circular economy and pursuing decarbonisation, the Company is not only elevating its business but also contributing to the creation of a resilient and environmentally conscious society. Although cement production is energy-intensive and contributes to GHG emissions, the Company has achieved the best environmental quotient by industry standards.

Emission intensity

220 kg/tonne FY 2021-22 → **173 kg/tonne FY 2022-23**

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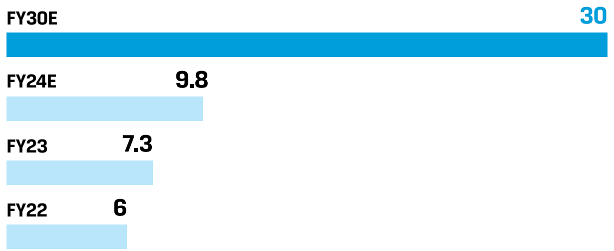
Global commitment and progressive practices

As an active member of the Global Cement and Concrete Association (GCCA), the Company wholeheartedly embraces the GCCA's roadmap for attaining Net Zero concrete emissions by 2050. Over the past eight years, the Company has quadrupled its production while halving emissions, primarily through high clinker substitution, notably with slag.

90%
Of product portfolio made from slag-based solutions

4X
Increase in production planned in 8 years while reducing emissions by 1/2

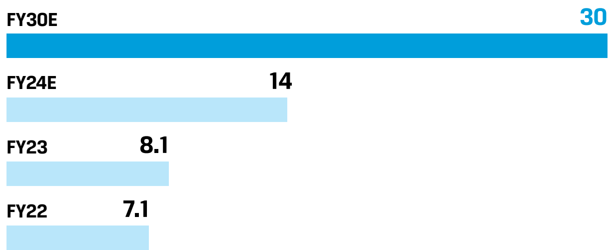
Roadmap for waste reuse (MT)



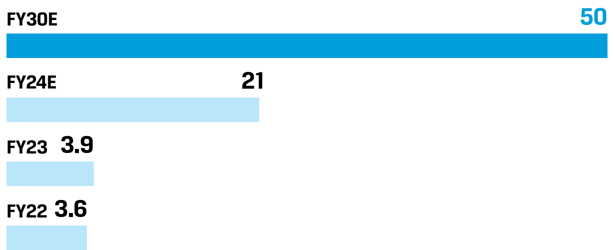
Pathway to Net Zero emissions

In order to fulfil its commitment to achieve Net Zero emissions, the Company employs strategies such as clinker substitution and incorporation of alternate fuels and raw materials while substantially expanding its clean energy portfolio. Additionally, the Company is progressively incorporating solar power plants, WHRS and renewable energy sources as part of its operations.

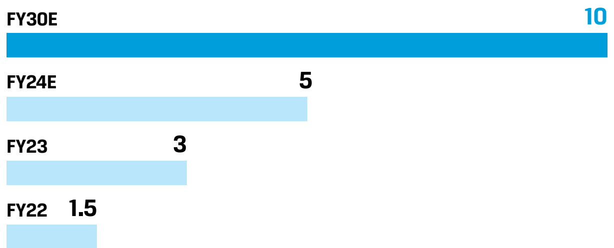
TSR (Thermal Substitution Rate) (%)



Clean energy portfolio (%)



Plastic Negative Index



Water sustainability and biodiversity

For the Company, the water sustainability is paramount. It has set a target to reduce freshwater withdrawal intensity by 15% and attain 5x water positivity by 2030, through water conservation measures and water stewardship initiatives. In FY 2022-23, the Company reduced its specific water consumption to 7.8 litre/tonne of cementitious material (vs 85.7 litre/tonne of cementitious material in FY 2021-22). It also reduced its specific fresh water withdrawal to 63 litre/tonne of cementitious material from 65 litre/tonne of cementitious material in FY 2021-22.

The Company is equally steadfast in its efforts to conserve biodiversity and minimise its ecological footprint, adhering to a biodiversity management policy that ensures minimal disruption. It has set itself the target of achieving 'No Net Loss' on biodiversity by 2030.

Emission management, waste handling and social responsibility

Through rigorous monitoring and efficient management, the Company maintains air quality, surpassing regulatory standards. Its waste management policy is guided by the principles of reduce-reuse-recycle, addressing the disposal of both hazardous and non-hazardous waste responsibly. To safeguard water bodies, the Company prohibits wastewater discharge beyond its facilities. Further, as part of its commitment to prioritising social sustainability, the Company empowers local communities, upholds human rights, fosters fair labour practices, enhances living conditions and champions health, safety, wellness and diversity within its workforce.

RESEARCH & DEVELOPMENT FOR INNOVATION

10.0

Dedicated research for decarbonisation

The Company is already the World's #1 eco-friendly cement company and its low-carbon products are setting new benchmarks in sustainable construction in India and across the globe. With an emission intensity of 173 kg/tonne that is 30% of the global average (~585 kg/tonne), and 32% of the national average (~539 kg/tonne), the Company has already positioned itself as a leader in the decarbonisation journey. Central to its decarbonisation commitment is the Company's dedicated R&D wing, focused on pioneering products with minimal carbon footprints.

Innovative products for a green future

The Company's commitment to innovation is validated by a growing portfolio of patents for slag-based cementitious products. Through rigorous research, the R&D team is harnessing various hazardous slag materials to formulate building products characterised by exceptional strength, durability, corrosion resistance, and significantly reduced carbon emissions. The Company's eco-friendly brands, such as Concreel HD, Power Pro, Portland Slag Cement, and Compcem bear testimony to its environmental responsibility. Further breakthroughs in the pipeline include LC3 cement, Super Sulphated Cement and other innovative slag utilisation techniques. Substituting Al-laterite mineral with ladle furnace slag is a notable achievement in promoting circularity, curbing emissions and yielding valuable alumina for clinkerisation.

Another notable innovative addition to the Company's product line-up is Slag Sand, a revolutionary substitute for natural river sand, which is extensively used in concrete production. This innovative solution not only offers superior performance but also serves as a proven eco-friendly alternative. Further, by conserving river sand, the Company contributes towards reducing the ecological impact cause by river sand mining. Research is also underway for producing eco-friendly and biodegradable cement bags and synthetic gypsum as a substitute for natural gypsum.

In line with its commitment to eco-friendly practices, the Company's construction chemicals portfolio is being developed using industrial wastes, ensuring that the products align with its sustainable principles.

Strategic collaborations for progress

Strategic collaborations with esteemed institutions worldwide, such as FEhS Building Materials Institute and Eco Mister, empower the Company's R&D centre with cutting-edge technology. Indigenous partnerships with renowned institutes like IIT Delhi, IIT Bombay, IIT Guwahati, IIT Chennai, and IISc Bangalore drive the development of eco-friendly products and innovative sustainability interventions.

Acknowledgements and accolades

The Company's relentless pursuit of a clean and green environment has been recognised through numerous awards and honours. Recently, the JSW Group was honoured by the Ministry of Steel for its pioneering role in decarbonisation within the steel and cement sectors. These accolades further fuel the Company's determination to continue driving positive change, ensuring a cleaner and healthier world.

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COMMITMENT TO QUALITY AND CONSISTENCY 11.0

Quality assurance and cutting-edge research

The Company's R&D centre at Vijayanagar stands as a testament to its unwavering commitment to maintaining exceptional quality standards. The centre, alongside its Plant Quality Control Laboratories, boasts state-of-the-art equipment that include the Robo Lab, X-Ray fluorescence and diffraction machines, optical microscope, compressive strength testing machine, isothermal calorimetry, on-Line control systems, and advanced wet classical chemistry instruments. These advanced tools play a vital role in overseeing the entire process value chain, from raw material sourcing to finished product production.

Stringent raw material specifications and monitoring

To deliver products of consistent quality, the Company meticulously sets and monitors the specifications for various input raw materials such as limestone, laterite, red mud, steel slag, flue dust, BF slag, fly ash, and gypsum. Rigorous sampling and chemistry determination techniques are employed to effectively control raw material quality. The assessments include determining glass content in slag to ensure BIS compliance and microscopic analysis of clinker phases to assess quality and quantity.

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Comprehensive product evaluation

Beyond assessing their mineralogical and chemical characterisation, the Company thoroughly evaluates final clinker-based OPC and slag cement products. Properties such as setting time, normal consistency, expansion, Blaine fineness, and compressive strength are meticulously assessed. These evaluations align finished products with the specifications outlined by BIS codes for respective cement grades.

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Rigorous quality control measures

The Company's commitment to excellence is reinforced by the implementation of Standard Operating Procedures (SOPs) across various quality assurance stages. These SOPs encompass critical elements such as sampling points, frequency, production batch identification, sample retention, traceability, analysis time, and the calibration of measuring and monitoring instruments. These protocols ensure consistency and reliability throughout the Company's quality control processes.

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External verification and compliance

The Company subjects its clinker and finished products to periodic checks by both third-party organisations and BIS, the regulatory body. These external assessments are pivotal in confirming that products consistently meet established standards, validating the Company's commitment to delivering exceptional quality.

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DIGITAL TRANSFORMATION: SUSTAINING EXCELLENCE 12.0

The digital landscape has fostered a new breed of digitally-engaged and data-conscious customers. Their expectations have evolved, leading to the demand for personalised solutions that will be seamlessly integrated into their daily lives and be available on demand. Digitalisation has been pivotal in forging new platforms that amplify engagement with customers and stakeholders alike, bolstering agility and unlocking operational efficiencies. The Company's overarching goal has been to empower its workforce to make informed decisions swiftly by converting data into a readily accessible and reusable assets.

Pervasive digitalisation across value chain

Embracing change, the Company has embarked on a digitalisation journey across every level of its value chain. From sourcing raw materials to production, logistics to customer engagement, and extending further to internal operations, technology's transformative power has reshaped the Company.

Over the past couple of years, the Company has introduced a noteworthy array of over 12 Apps and spearheaded more than 20 business process engineering initiatives, underscoring its steadfast commitment to digital advancement. The introduction of transformative initiatives such as JSW Aikyam, Saathi App, DGO App, and NonTrade App, complemented by the deployment of a state-of-the-art logistics control tower, has revolutionised the Company's business operations.

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Empowering sales through digital facilitation

The revolutionary Smart JSW Saathi App has emerged as a formidable catalyst, significantly influencing JSW sales promoters' preferences and deepening engagement. This platform has granted sales promoters the tool to place orders, monitor order status, track dispatches in real-time, execute online payments, settle outstanding balances, gain financial insights, collaborate seamlessly with JSW departments, and access essential documents necessary for their day-to-day operations. The Company's most recent initiative – the Influencer Loyalty Program (ILP) – integrated digitally through an App has received a resounding response. The digital initiative caters specifically to stakeholders who influence the buying behaviour of the end customer and tries to bring them on board through a well-designed incentive scheme.

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Revolutionising logistics through comprehensive digitisation

Through comprehensive digitisation, the Company has transformed its logistics operations across all manufacturing units, helping it attain a holistic view of the entire supply chain. The integration of RFID technology has enabled unobstructed visibility into truck movements within yards, facilitating scheduling of loading and unloading processes to meet rigorous turnaround time targets. Meticulous cost optimisation and strategic truck-route planning have enabled seamless traffic navigation, safeguarding driver well-being through continuous tracking and timely communication with transport partners.

The logistics control tower operates round-the-clock, harnessing advanced technologies such as RFID, GPS, ERP, ticketing, and business intelligence tools. It serves as a central nexus, overseeing operations from order initiation to final delivery, proactively mitigating bottlenecks, optimising logistics expenditures, and securing on-time deliveries. Leveraging the amassed data, the Company is empowered to offer bespoke solutions, culminating in a seamless customer journey and propelling logistics operations into the digital frontier.

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Digitalisation for manufacturing excellence

The Company's commitment to digitalisation is further evident from its integration into manufacturing units, where the Company has instated flexible and scalable digital solutions to bolster responsiveness. These strategic endeavours, spanning multiple years, have included the harnessing of cutting-edge technologies like artificial intelligence, predictive analytics and collaborative robotics. This transformational journey has yielded impressive advancements in factory automation and end-of-line customisation. These have fundamentally altered for the better critical facets such as preheater performance, kiln efficiency, clinker cooker operations, moisture content control, raw material planning, product quality prediction, power cost forecasting, and augmented reality-based equipment inspections.

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REVOLUTIONISING LOGISTICS FOR ENHANCED EFFICIENCY 13.0

The logistics operations of the Company have undergone a ground-breaking digital transformation, given its commitment to elevating service standards and master cost management. This innovative approach rests on three pivotal pillars: Process Monitoring, Movement Control and Cost Optimisation, all of which converge to achieve unprecedented outcomes.

Holistic oversight through advanced technologies

To ensure end-to-end oversight, beginning from order receipt to customer delivery, the Company employs a digital command centre known as the logistics control tower (LCT). Utilising cutting-edge technologies like RFID and GPS, the LCT harnesses analytics to meticulously analyse the wealth of data collected.

Streamlining yard operations for efficiency

The Yard Management System (YMS) expertly aligns sales orders with available trucks within the parking yard, strategically organising their sequencing through various stages, from gate-in to invoicing.

Precision control within manufacturing plant

For seamless movement within the manufacturing plant, both inbound and outbound, RFID tags and sensors are employed. The Plant Logistics Management System (PLMS) helps to closely monitor internal truck movement, ensuring streamlined control and averting congestion. This facilitates timely truck loading.

Optimised external movement with GPS

External movement from our manufacturing plant to customers and vice versa, is meticulously tracked through GPS. This real-time monitoring of truck movement and stoppages is pivotal. In case of abnormal stoppages during outbound movement, the LCT promptly alerts relevant stakeholders. This critical function is integral to the Track N Trace system, effectively minimising truck stoppages.

Achieving cost optimisation through analytics

Cost optimisation is achieved through the meticulous tracking of various logistics KPIs using an advanced analytics layer. Data integration from PLMS, Track N Trace system, and ERP is channelled into a dynamic Business Intelligence platform. This platform consistently provides feedback to the LCT team, facilitating timely course corrections. The reduction of order-to-delivery time and order-execution time amplifies the number of trips per truck, a pivotal factor in fostering favourable negotiations with transporters. The continual refinement of routes yields the most optimal paths, culminating in scientifically precise freight rates. Moreover, meticulous matching of truck fleet size to routes and timing dispatch strategically help the Company achieve economy of scale.

EMPOWERING COMMUNITIES: COMMITMENT TO SOCIAL RESPONSIBILITY 14.0

Driving positive change through CSR initiatives

The Company's Corporate Social Responsibility (CSR) approach is deeply rooted in investing in programmes that deliver tangible and sustainable changes in the lives of individuals and communities. In FY 2022-23, the CSR initiatives have centred around pivotal areas such as fostering sustainable livelihoods, advancing education, promoting health and rural development, and enhancing sanitation. By directing efforts towards initiatives that bring about meaningful betterment, the Company aims to contribute to the holistic well-being of society.

2,22,500
Total lives touched through CSR initiatives

1,35,700
People benefited through health and sanitation initiatives

Catalysing sustainable livelihoods

A focal point in the Company's efforts has been the creation of sustainable livelihood opportunities. This objective has been furthered through diverse initiatives such as promotion of natural farming, mushroom cultivation, fishing, tailoring, and jute product manufacturing. The impact of these initiatives has been profound, empowering individuals to achieve sustained income and attain financial independence.

Education stands at the forefront of the Company's societal commitment. It actively engages with educational institutions and promotes various educational initiatives. The Company aims to be a beacon of hope for students and contribute to their holistic development. Its focus extends beyond academic learning, and seeks to promote the embracing of values and skills that ensure a bright future for the younger generation.

7,850
Marginalised farmers, women and youth benefitted

14,900
Students reached through educational interventions

FORWARD-LOOKING AND CAUTIONARY STATEMENTS

The Directors' Report and the Management Discussion and Analysis describe the Company's objectives, expectations or predictions, which involve a number of risks and uncertainties. Actual results may differ materially from those expressed in the statement. Important risks and uncertainties that could influence the Company's operations include domestic demand and supply, conditions affecting selling prices, new capacity additions, availability of critical materials and their cost, changes in government policies and tax laws, economic development of the country and other factors that are material to the business operations of the Company.