Crisil Intelligence

Assessment of steel industry in Bihar

Final report

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by S&P Global

Crisil Intelligence

Contents

1. Global macroeconomic overview

1.1 GDP trend

In 2024 and 2025, global gross domestic product (GDP) growth is projected to continue to trend below the historical annual average of 3.8% logged between 2000 and 2019, reflecting ongoing challenges such as geopolitical tensions, high inflation and tightening monetary policies[1].

Growth had contracted 2.7% in 2020 as the Covid-19 pandemic disrupted economic activity. However, the contraction was considerably lower than estimated by the International Monetary Fund (IMF), with a strong rebound in manufacturing, shift to new ways of working, and fiscal and policy support arresting a further slide.

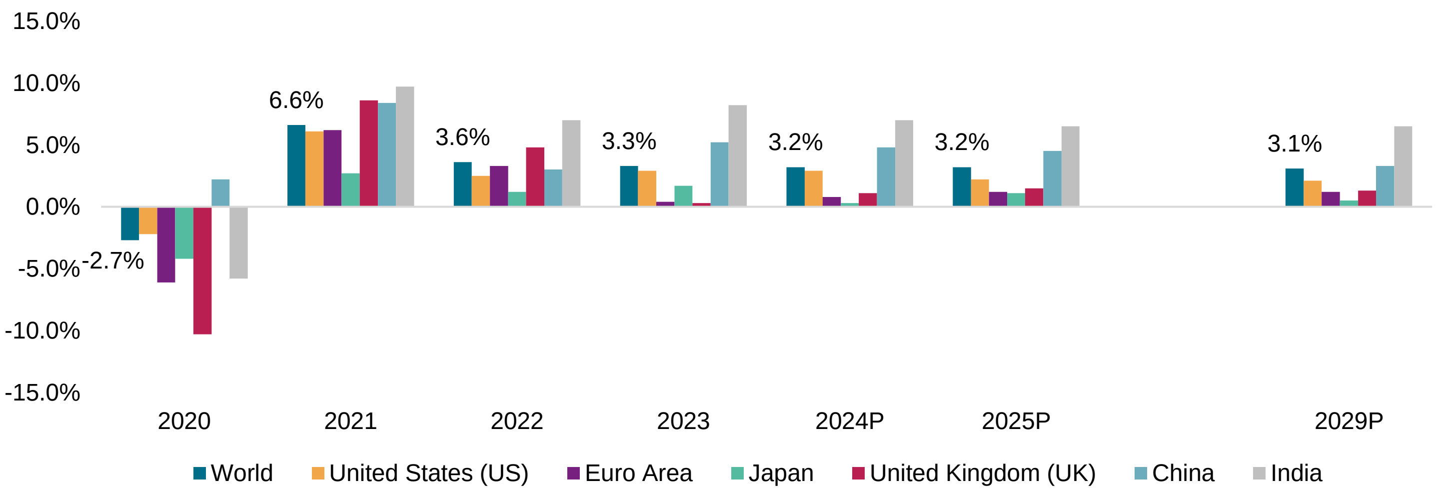
In 2021, global GDP growth rebounded to 6.6%, led by vaccine-powered normalisation and continued fiscal support. However, in 2022 and 2023, it slowed down to 3.6% and 3.3%, respectively, owing to challenges such as inflation driven by supply constraints, tightening financial conditions, long-term effects of the pandemic and geopolitical uncertainties.

Five-year historical data and growth forecast

The IMF estimates global GDP growth of 3.2% for both 2024 and 2025, considering geopolitical uncertainties and high debt. As inflation recedes, interest rates will gradually return to natural levels, compatible with output and inflation targets.

Regional outlooks have been revised owing to recent shocks and policies. The outlooks for the Middle East, Central Asia and sub-Saharan Africa have been revised downwards because of commodity production cuts, conflicts and unrest. In contrast, growth in emerging Asia has been stronger, driven by surging demand for semiconductors and electronics, fuelled by artificial intelligence (AI) investments.2

Economic review and outlook (growth rate)



P: Projected (years mentioned on the horizontal axis correspond to the calendar years)

Note: Unless mentioned otherwise, the years correspond to calendar years throughout the report, whereas India data is in fiscal years, 2020 being fiscal 2021 and so on.

Source: Crisil Intelligence, IMF, World Bank, S&P Global

[1] IMF – World Economic Outlook October 2024
[2] All outlooks as stated by IMF unless stated otherwise

1.2 Region-wise and country-wise economic review and outlook[3]

Real GDP (on-year growth)	2020	2021	2022	2023	2024P	2025P	2029P
World	-2.70%	6.60%	3.60%	3.30%	3.20%	3.20%	3.10%
Euro area*	-6.10%	6.20%	3.30%	0.40%	0.80%	1.20%	1.20%
Emerging and developing Asia	-0.50%	7.70%	4.40%	5.70%	5.30%	5.00%	4.50%
Emerging and developing Europe	-1.80%	7.10%	0.60%	3.30%	3.20%	2.20%	2.50%
Latin America and Caribbean	-6.90%	7.40%	4.20%	2.20%	2.10%	2.50%	2.60%
Middle East and Central Asia	-2.20%	4.40%	5.50%	2.10%	2.40%	3.90%	3.80%
Sub-Saharan Africa	-1.60%	4.80%	4.10%	3.60%	3.60%	4.30%	4.40%

**The euro area consists of member states of the European Union that have adopted the euro as their currency*

P: Projected (years mentioned on the horizontal axis correspond to the calendar years)

Source: Crisil Intelligence, Industry, IMF

Real GDP growth (on-year)	2020	2021	2022	2023	2024P	2025P	2029P
US	-2.20%	6.10%	2.50%	2.90%	2.80%	2.20%	2.10%
China	2.20%	8.40%	3.00%	5.20%	4.80%	4.50%	3.30%
Germany	-4.10%	3.70%	1.40%	-0.30%	0.00%	0.80%	0.70%
Japan	-4.20%	2.70%	1.20%	1.70%	0.30%	1.10%	0.50%
India	-5.80%	9.70%	7.00%	8.20%	7.00%	6.50%	6.50%
UK	-10.30%	8.60%	4.80%	0.30%	1.10%	1.50%	1.30%
France	-7.60%	6.80%	2.60%	1.10%	1.10%	1.10%	1.30%
Italy	-8.90%	8.90%	4.70%	0.70%	0.70%	0.80%	0.70%
Canada	-5.00%	5.30%	3.80%	1.20%	1.30%	2.40%	1.60%
Brazil	-3.30%	4.80%	3.00%	2.90%	3.00%	2.20%	2.50%

P: Projected (years mentioned on the horizontal axis correspond to the calendar years)

Source: Crisil Intelligence, Industry, IMF

The GDP trajectory varies for key economies and regions, as detailed below.

US

The country's GDP growth, which expanded from 2.5% in 2022 to only 2.9% in 2023, would have been higher if not for high inflation and, consequently, the hike in interest rates by the US Federal Reserve (Fed) to cool the print, which impacted spending. The 2024 growth forecast has been revised up to 2.8%4 because of strong consumption and non-residential investment, driven by rising real wages and wealth effects. However, growth is expected to slow to 2.2% in 2025 as fiscal policy tightens and the labour market cools, closing the output gap.

Euro area

The euro area growth slowed to 0.4% in 2023 owing to geopolitical issues, tighter financial conditions and high gas prices.

[3] All classifications according to IMF
[4] All forecasts are by the IMF unless otherwise stated

Growth is expected to recover to 0.8% in 2024 and 1.2% in 2025, driven by improved exports, rising real wages and looser monetary policy, despite persistent manufacturing weakness in Germany and Italy.

Japan

In 2023, Japan's economy grew at 1.7%, driven by pent-up demand, tourism and accommodative policies. However, growth is expected to slow to 0.3% in 2024 because of temporary supply disruptions and fading one-off factors. A rebound to 1.1% is predicted in 2025, driven by strengthening real wage growth and private consumption.

UK

The UK's growth slowed to 0.3% in 2023 owing to tight monetary policy and high energy prices but was supported by a 2022 fiscal package. Growth is expected to accelerate to 1.1% in 2024 and 1.5% in 2025, driven by falling inflation and interest rates, which will stimulate domestic demand.

China

China's GDP grew at 8.4% in 2021, driven by pent-up demand and strong exports. Despite a property market-driven downturn, growth is expected to slow gradually to 4.8% in 2024 and 4.5% in 2025, supported by better-than-expected net exports. Recent policy measures may provide upside risk to near-term growth.

India

After a 5.8% contraction in 2020, the country's GDP rebounded, growing at 9.7%, 7.0% and 8.2% in 2021, 2022 and 2023, respectively. Growth is expected to moderate to 7% in 2024 and 6.5% in 2025, as pent-up demand is exhausted and the economy returns to its potential.

Middle East and Central Asia

The Middle Eastern and Central Asian economy contracted 2.2% in 2020, then rebounded to grow at 4.4% and 5.5% in 2021 and 2022. Growth slowed to 2.1% in 2023 but is projected to pick up to 3.9% in 2025 as oil production and shipping disruptions fade. The 2024 projection was revised down to 2.4% owing to Saudi Arabia's oil production cuts and the ongoing conflict in Sudan.

Sub-Saharan Africa

Sub-Saharan Africa's GDP contracted 1.6% in 2020, then grew at 4.8% in 2021 and 4.1% in 2022. Growth slowed to 3.6% in 2023 and 2024 because of weather disruptions and supply constraints. However, growth is projected to increase to 4.2% in 2025 as weather shocks abate and supply constraints ease.

Latin America and the Caribbean

The Latin America and the Caribbean region is projected to grow at 2.1% in 2024, slower than 2.2% in 2023, before rebounding to 2.5% in 2025. Brazil's growth has been revised upwards to 3.0% in 2024, driven by strong private consumption and investment, but is expected to moderate to 2.2% in 2025 owing to a restrictive monetary policy and cooling labour market.

The GDP growth data reveals distinct patterns across major economies. India emerges as the standout performer, maintaining robust growth projections of 6.5% through 2029P despite the pandemic-related contraction of -5.8% in 2020. China's growth is strong but is projected to decelerate from 8.4% in 2021 to 3.3% by 2029P, reflecting its economic maturation. The divergence between emerging and developed economies is particularly striking in the recovery patterns. While emerging markets like India and China demonstrate a resilient growth momentum, developed nations show a clear trend toward lower growth rates in the latter half of the forecast period. This pattern suggests an accelerating shift in global economic gravity toward emerging markets, with India positioned to be a primary driver of global growth.

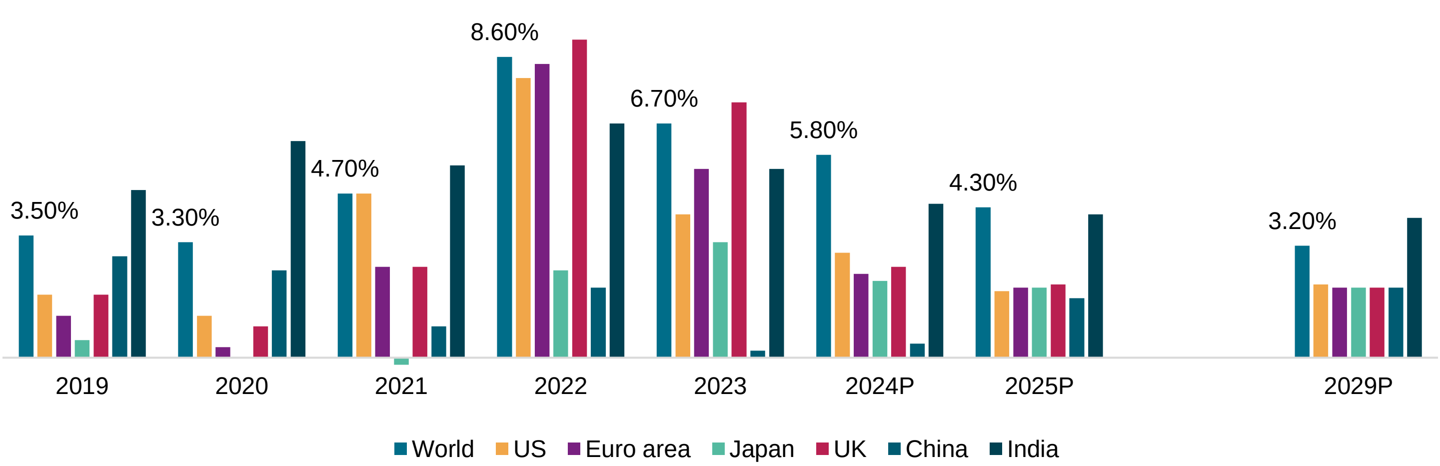
1.3 Inflation overview

Global consumer price inflation, after ranging 3-5% between 2019 and 2021, jumped to 8.6% in 2022 because of sharp increase in prices of oil, natural gas, fertilisers and other commodities in the wake of geopolitical conflicts early on in the year. Supply chain disruption exacerbated the situation. However, in CY 2023, global inflation slowed to 6.7% because of the resolution of supply-side issues in a few industries.

Five-year historical data and growth forecast

The IMF projects global inflation to decelerate to 5.8% in 2024 and 4.3% in 2025, driven by demand stabilization and a reduction in price-related pressures. The anticipated slowdown in inflation is attributed to a broad-based decline in global core inflation, influenced by the anticipation of tight monetary policies, a relative softening in labor markets, and a fading pass-through effect from previous price declines. In advanced economies, disinflation has come at a relatively low cost to employment, thanks to offsetting supply developments, including a faster-than-expected decline in energy prices and a surprising rebound in labor supply, bolstered by substantial immigration flows. The decline in global inflation in 2024 and 2025 reflects a broad-based decrease in core inflation, unlike the situation in 2023, when headline inflation fell mainly due to lower fuel prices. Core inflation is expected to drop by 1.3 percentage points in 2024, following a 0.1 percentage point decrease in the previous year, indicating a weakening of underlying inflation drivers and a more sustainable decline in inflationary pressures, ultimately leading to a more stable economic environment. This trend is expected to continue, supporting global economic growth.

Inflation review and outlook



Source: Crisil Intelligence, IMF, World Bank, S&P Global

P: Projected (years mentioned on the horizontal axis correspond to the calendar years)

Consumer prices (on-year growth)	2019	2020	2021	2022	2023	2024P	2025P	2029P
World	3.50%	3.20%	4.70%	8.70%	6.70%	5.80%	4.30%	3.40%

Consumer prices (on-year growth)	2019	2020	2021	2022	2023	2024P	2025P	2029P
US	1.80%	1.20%	4.70%	8.00%	4.10%	3.00%	1.90%	2.10%
Euro area	1.20%	0.30%	2.60%	8.40%	5.40%	2.40%	2.00%	2.00%
Japan	0.50%	0.00%	-0.20%	2.50%	3.30%	2.20%	2.00%	2.00%
UK	1.80%	0.90%	2.60%	9.10%	7.30%	2.60%	2.10%	2.00%
China	2.90%	2.50%	0.90%	2.00%	0.20%	0.40%	1.70%	2.00%
India	4.80%	6.20%	5.50%	6.70%	5.40%	4.40%	4.10%	4.00%
Emerging and developing Asia	3.30%	3.20%	2.30%	3.90%	2.40%	2.10%	2.70%	2.80%

P: Projected (years mentioned on the horizontal axis correspond to calendar years for the world and countries except India; for India year 2019 refers to fiscal 2020 and so on)

Source: Crisil Intelligence, Industry, IMF

The overall inflationary trends for major economies are detailed below.

US

The consumer price inflation eased from 8% in 2022 to 4.1% in 2023 and is expected to further fall to 3.0% in 2024. The on-year increase in consumer prices is projected to remain in the 2-2.1% range till 2029. The continuous fall in inflation from the high of 2022 is because of weakening economic growth and ongoing supply-side relief amid expectation of potential Fed interest rate cuts going forward.

Euro area

Consumer price inflation eased from 8.4% in 2022 to 5.4% in 2023, and is expected to further fall to 2.4%, 2.0% and 2.0% in 2024, 2025 and 2029, respectively. The expected fall in inflation in the 1.9-2.0% in the medium to long term is due to easing wage growth, lower energy prices and normalised commodity price expectations.

Japan

Inflation in Japan, which has traditionally remained below 1%, jumped to 2.5% in 2022 and 3.3% in 2023 due to a sharp increase in food prices and expensive imports because of weakening of yen. Going forward, inflation is expected to ease a bit but remains at 2.0-2.2% over the next 5 years due to high expectations of wage increments and depreciated yen.

UK

Inflation jumped sharply to 9.1% in 2022, before easing to 7.3% in 2023. Going forward, inflation is expected to ease to the pre-pandemic levels and reach 2% in 2029. This, as a result of steep fall in oil and gas prices and softening in core price and service price pressures.

China

Consumer price inflation eased from 2.5% in 2020 to 0.9% in 2021 due to the government's effective action to bolster production of daily necessities and smoothen the sharp fluctuation in commodity prices. In 2022, however, inflation increased to 2% because of an increase in pork prices. In 2023, inflation slipped again to 0.2% owing to weak domestic demand in the wake of a higher unemployment rate, slower income growth and the real estate market downturn. Going forward, inflation is expected to rise to 2% in medium to long term to reach near-optimum levels because of moderation in the demand-supply gap.

India

India's consumer price inflation rate fluctuated between 4.80% in 2019 and 6.7% in 2022 Inflation rose sharply in 2020 (6.2%) and peaked in 2022 (6.7%), primarily due to global supply chain disruptions, pandemic-induced uncertainties, and surging commodity prices. However, post-2023, inflation began to decline steadily, reaching 5.4% in 2023 and is projected to stabilize at 4.0% by 2029. This decline reflects India's improved fiscal policies, structural reforms, and effective monetary measures by the Reserve Bank of India (RBI). Stabilization is also attributed to easing global uncertainties and better management of supply chain dynamics. The projections for 2024 onwards indicate a return to moderate inflation levels, balancing economic growth with price stability.

Emerging and developing Asia

Inflation in emerging Asia is projected to converge with advanced economies, at 2.1% in 2024 and 2.7% in 2025. Timely monetary tightening and price controls have contributed to this moderation. Energy prices have played a significant role in shaping inflation trends, with countries experiencing lower energy price inflation also seeing lower overall CPI inflation. The inflation outlook is expected to stabilize at around 2.7-2.8% by 2029.

The global economy witnessed a long-period average growth of 3.8% during 2000-2019[5] before the pandemic-induced lockdowns brought economic activity to a standstill, resulting in the global gross domestic product (GDP) contracting 2.8% in 2020. This contraction was much lower than initially estimated, driven by a stronger rebound in manufacturing activity, adaptation to newer ways of working and strong fiscal policy-driven support by larger economies. The vaccine-powered normalisation alongside continued fiscal support helped GDP growth to rebound to 6.3% in 2021. The global economy witnessed multiple challenges in 2022, including high inflation driven by supply constraints, tightening financial conditions in most regions and the Russia–Ukraine conflict, which resulted in a slowdown in global GDP growth to 3.5%. Global GDP grew by 3.1% in 2023.

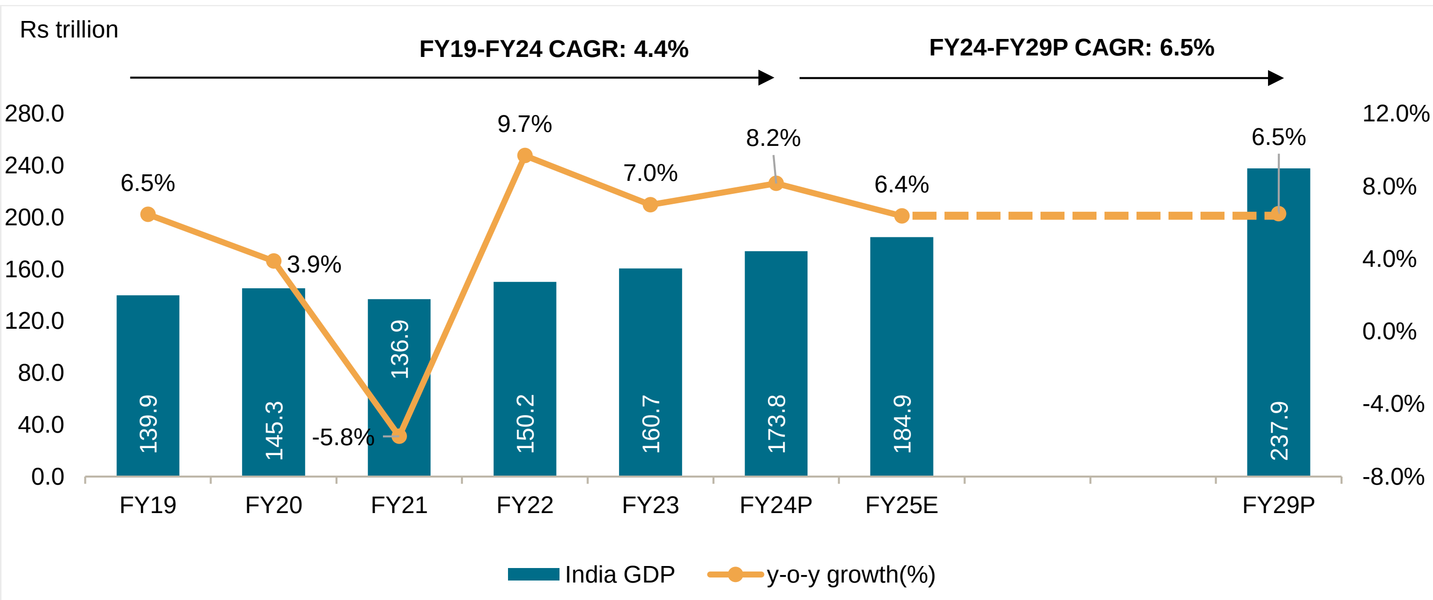
[5] IMF – World Economic Outlook Oct 2023

2. Indian macroeconomic overview

2.1 GDP trend and composition by sectors

India's GDP clocked a compound annual growth rate (CAGR) of 4.4% between fiscals 2019 and 2024 to Rs 173.8 trillion,[6] During this period, fiscal 2021 recorded an on-year decline of 5.8% because of pandemic-induced lockdowns. However, the post-pandemic period turned out to be positive, with GDP growing 9.7% and 7.0% on-year in fiscals 2022 and 2023, respectively, thanks largely to strong pent-up demand across sectors, primarily manufacturing and construction.

Real GDP trend (at constant 2011-2012 prices)



For FY24 P: Provisional For FY29 P: Projected; E: Estimated, FY: Fiscal year
Source: Central Statistical Office (CSO), Crisil Intelligence

India's real GDP is estimated to have grown 8.2% on-year in fiscal 2024 compared with 7.0% the previous fiscal. Although there will be support from the demand side on account of a normal monsoon and easing inflation, the first advance estimate has projected growth to slow to 6.4% in fiscal 2025. Manufacturing is projected to experience the sharpest decline, with growth estimates dropping from 9.9% to 5.3%. Other major contributors to GDP, such as trade and hotels, and financial services and real estate, are also likely to grow slower.

On-year demand-side real GDP growth (%)

At constant 2011-2012 prices	FY19	FY20	FY21	FY22	FY23	FY24P	FY25E
Private consumption	7.1%	5.2%	-5.3%	11.7%	6.8%	4.0%	7.3%
Government consumption	6.7%	3.9%	-0.8%	0.0%	9.0%	2.5%	4.1%
Gross fixed capital formation	11.2%	1.1%	-7.1%	17.5%	6.6%	9.0%	6.4%
Exports	11.9%	-3.4%	-7.0%	29.6%	13.4%	2.6%	5.9%
Imports	8.8%	-0.8%	-12.6%	22.1%	10.6%	10.9%	-1.3%

[6] Statistics from first advance estimates of gross domestic product 2024-25

Source: Crisil Intelligence, CSO

E: Estimated; FY: Fiscal year P: Provisional

India's economic growth in fiscal 2024 has been largely driven by private sector investments, which is estimated to have grown by approximately 9% year-on-year. The government's initiatives, such as "Make in India" and "Atmanirbhar Bharat", have played a crucial role in supporting private sector investments in both traditional and new-age sectors.

However, investment growth has slowed significantly in the current fiscal, due to a deceleration in government capital expenditure and sluggish private investments. As a result, gross fixed capital formation is expected to moderate to 6.4% year-on-year, down from 9.0% in the previous fiscal. On a positive note, consumption is expected to receive a boost in the this fiscal, with both government and private consumption anticipated to increase. Government consumption expenditure is projected to grow by 4.1% year-on-year, while private consumption expenditure is expected to rise by 7.3%, up from 4.0% in the previous fiscal.

On-year supply-side gross value added by economic activity

At basic prices	FY19	FY20	FY21	FY22	FY23	FY24E	FY25P
Agriculture and allied	2.1%	6.2%	4.0%	4.6%	4.7%	1.4%	3.8%
Industry*	3.1%	-0.5%	-6.3%	8.3%	5.7%	7.3%	5.0%
Manufacturing	5.4%	-3.0%	3.1%	10.0%	-2.2%	9.9%	5.3%
Construction	6.5%	1.6%	-4.6%	19.9%	9.4%	9.9%	8.6%
Services^	7.2%	6.4%	-8.4%	9.2%	10.0%	7.6%	7.2%

** Industry includes mining and quarrying, electricity, gas, water supply and other utilities*

^ Services related to trade, hotels, transport, communication, broadcasting, finance, real estate, public administration, defence and professional and others

E: Estimated; FY: Fiscal year P: Provisional

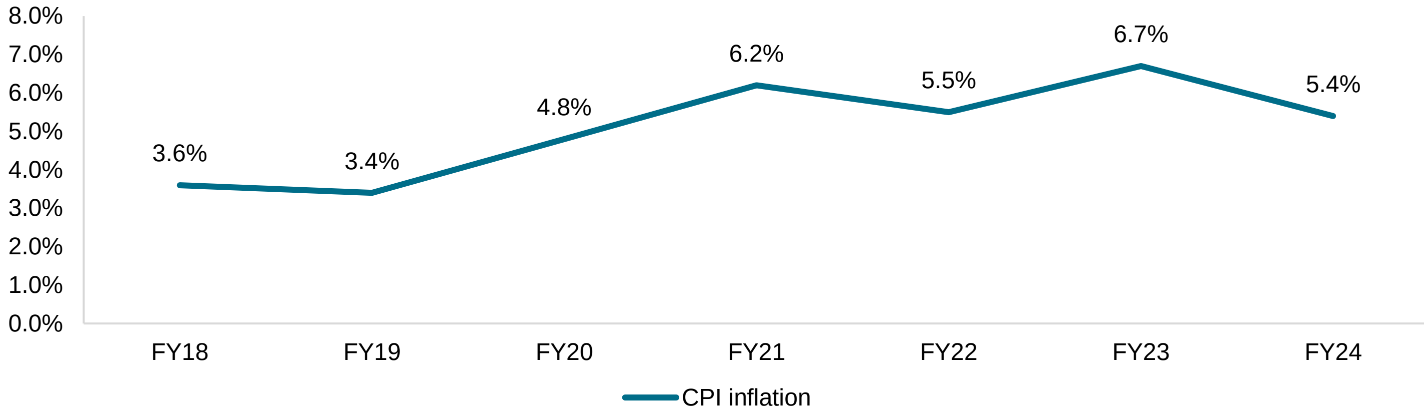
Source: Crisil Intelligence, CSO

On the supply side, India's GDP is estimated to have grown in fiscal 2024 owing to strong growth in construction, manufacturing, and services sectors, which benefitted from robust capital investments from the private sector.

2.2 Performance of key macroeconomic indicators

Consumer Price Index inflation trend

India's average Consumer Price Index (CPI) inflation rate remained ~4.70% between fiscals 2018 and 2022. However, in fiscal 2023, it increased to 6.70%, mainly led by surging food prices before moderating slightly to an average of 5.4% in fiscal 2024. Although core and fuel inflation numbers have remained low, the food inflation has been keeping CPI inflation above the Reserve Bank of India's medium-level target rate of 4%. For instance, according to the CPI figures for March 2024, food inflation stood at 8.5%, primarily due to strong accelerations in inflation in foodgrains, meat and fish and slower pace of deflation in edible oils during the month.

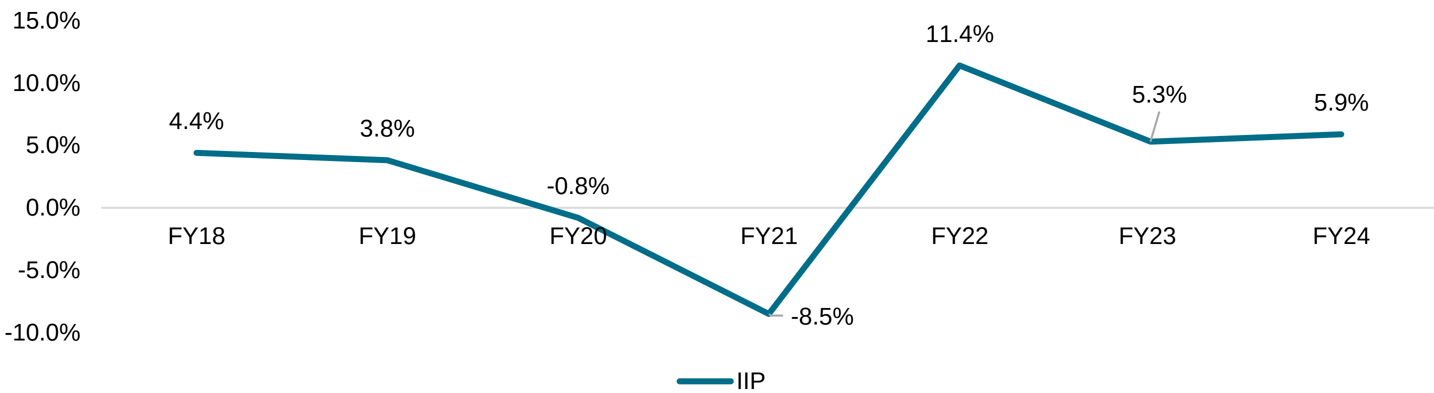


Source: National Statistical Office (NSO), Ministry of Industry and Commerce, Crisil Intelligence

P: Projected

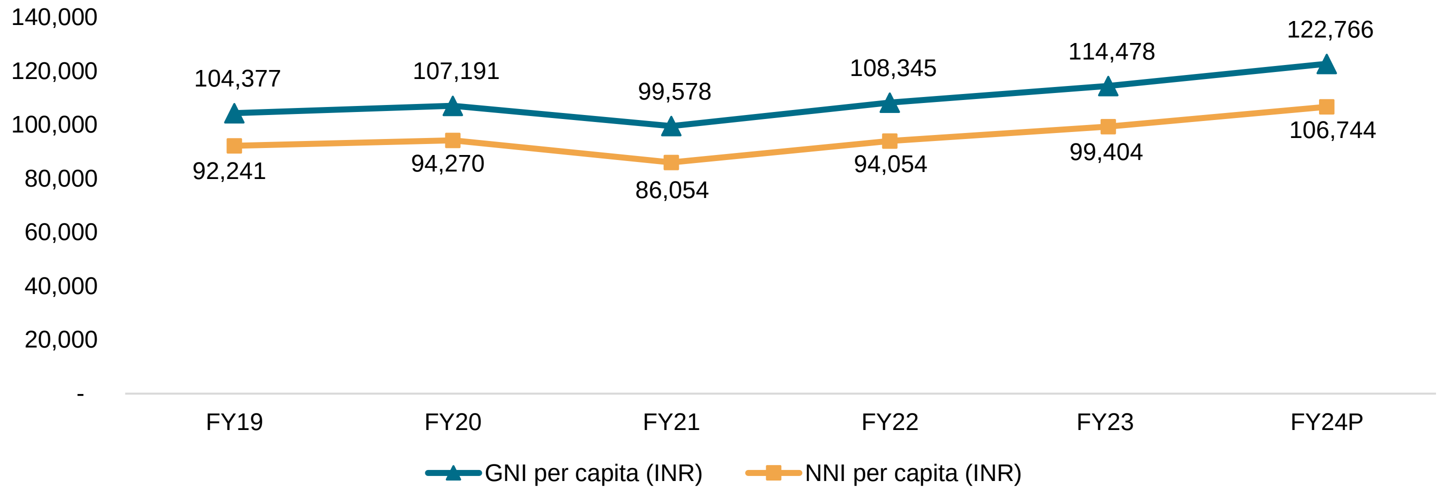
Index of Industrial Production growth trend

India's Index of Industrial Production (IIP) averaged 3.8% between fiscals 2018 and 2023 before surging to 5.9% in fiscal 2024. The uptick in the index was mainly led by strong pick-up in the manufacturing of electrical equipment and basic metals. Further, an uptick in consumer durables sector aided the IIP growth.



Source: NSO, Ministry of Industry and Commerce, Crisil Intelligence

Per capita GDP and income growth trend



Source: NSO, Ministry of Industry and Commerce, Ministry of Statistics and Programme Implementation, Crisil Intelligence

P: Provisional; FY: Fiscal year

A country's gross national income (GNI) is derived at by adding receipts from overseas to the GDP and subtracting the payments made overseas in the form of wages, salaries and property income. Net national income (NNI) is obtained by subtracting asset depreciation from GNI. The growth trend in both GNI per capita and NNI per capita has largely been positive except for fiscal 2021, when they declined 7% and 9%, respectively on-year. The decline was primarily due to dip in GDP during the fiscal. However, in fiscal 2022, GNI per capita and NNI per capita grew ~9% each on-year, owing to recovery of demand, labour market and consumer sentiments. The growth largely remained rangebound with both the indicators increasing 5-7% on-year in fiscals 2023 and 2024[7], on account of economic stabilisation and a positive growth outlook.

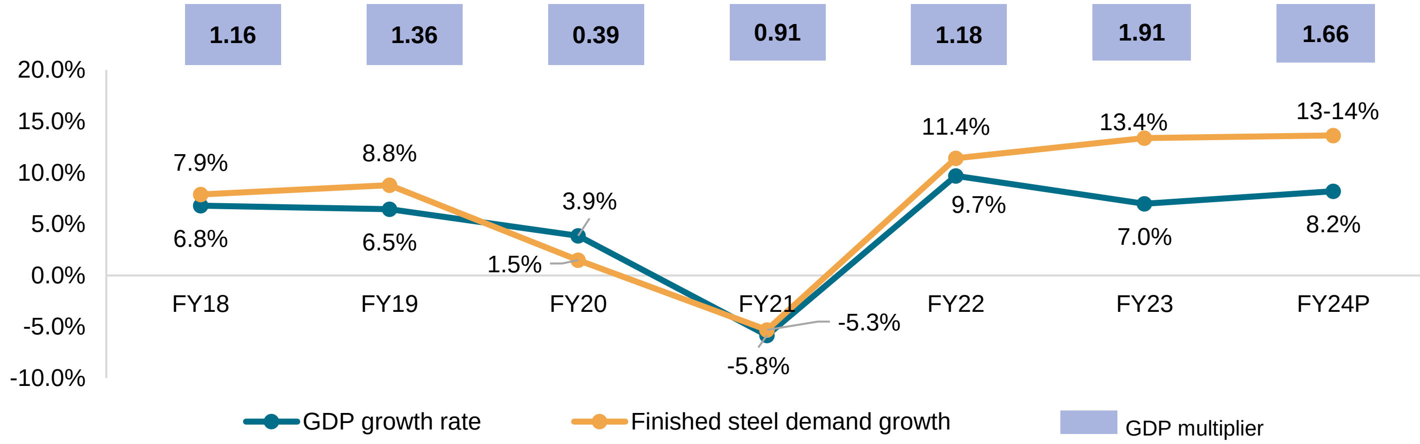
2.3 Correlation of rise in steel demand with GDP growth

Given the huge population and low per capita steel consumption in India, the steel industry has a huge potential to become one of the economic growth drivers of the country. A comparative analysis between the growth in steel demand and country's GDP shows that the former has majorly outpaced the latter between fiscals 2018 and 2023, except fiscals 2020 and 2021. While fiscal 2020 saw slowdowns in major steel consuming sectors of automobile, construction, and infrastructure, fiscal 2021 witnessed COVID-19 pandemic-induced lockdowns.

Fiscal 2023 saw the growth rate ratio of steel demand to GDP reaching 1.9, owing to the recovery of economic activity from the lows of the pandemic and a strong pent-up demand from key steel consuming sectors. Despite a slight moderation to 1.7 in fiscal 2024, the said ratio/GDP multiplier has managed to remain higher than its pre-pandemic levels.

[7] Provisional estimates as provided by the National Statistical Office (NSO)

Finished steel demand vs GDP growth



Note: Figures in boxes represent multiplier of steel demand to GDP growth

Source: Crisil Intelligence, Industry; P: Provisional

2.4 Macroeconomic factors impacting the steel sector

Since the steel industry accounts for a significant share in India's manufacturing sector and economic development, its performance is influenced by macroeconomic factors, such as GDP growth, inflation, exchange rates and gross fixed capital formation (GFCF). The impact of the factors is analysed below:

GDP growth: Growth in the industry is closely linked to that of GDP. As GDP grows, the demand for steel products from the construction, infrastructure and other manufacturing sectors also increases. Having expanded 11.4% and 13.4% in fiscals 2022 and 2023, respectively, steel demand is estimated to have grown 13-14% on-year in fiscal 2024, backed by government infrastructure spending, strong demand from the automotive and consumer goods sectors.

Inflation: Rising inflation pushes up input costs associated with raw material, energy and transportation, which can impact the profitability of steel manufacturers. Additionally, it can lead to increased interest rates, which hike borrowing costs for businesses and consumers, thereby affecting demand for steel products.

Exchange rates: The exchange rate of the Indian rupee against other major currencies impacts the industry. A stronger rupee can lead to a decrease in the cost of imported raw material, which can reduce the cost of production for steel manufacturers and vice versa.

GFCF: It measures investment in fixed assets, such as machinery, buildings and infrastructure. In fiscal 2023, GFCF surged to ₹ 53.46 trillion from ₹ 40.83 trillion in fiscal 2018. It is estimated to have further increased to ₹ 58.27 trillion in fiscal 2024. Between fiscals 2018 and 2024, the Indian steel sector witnessed significant growth in production and capacity expansion, mainly driven by investments in capacity expansion, modernisation, and technology upgradation.

2.5 Key government schemes for end-use industries

National Steel Policy 2017

The National Steel Policy (NSP), approved in May 2017 by the Union Cabinet, seeks to boost domestic steel consumption, ensure high-quality steel production and create a technologically advanced and globally competitive steel industry.

NSP's vision for demand, supply and trade is:

- To increase steel consumption across the infrastructure, automotive and housing sectors, resulting in a potential rise in per capita steel consumption to 158 kg by fiscal 2030 from ~65 kg in fiscal 2017
- To achieve 300 million tonnes of steelmaking capacity by 2030 through additional investments of INR 10 trillion
- To produce steel domestically for high-end applications, such as electrical steel (cold-rolled grain-oriented), special steel and alloys for power equipment, aerospace, defence and nuclear applications
- To eliminate reliance on steel imports and increase exports to ~24 million tonnes by 2030

Indian steel industry: Historical trend and vision under NSP

Parameter (million tonnes)	NSP 2005 FY20 (Target)	NSP 2017 FY30 (Target)	FY23	FY24
Crude steel capacity		**300**	**161.30**	**179.51**
Crude steel production	110	255	127.20	144.30
Finished steel demand	90	230	119.89	136.29
Finished steel import	6	0	6.02	8.32
Finished steel export	26	24	6.72	7.49

Source: Crisil Intelligence, JPC report, NSP 2005, NSP 2017

Production Linked Incentive scheme

Keeping in view India's vision of becoming 'Atmanirbhar', an incentive outlay of ₹ 1.97 trillion (equivalent to over $26 billion) under the PLI scheme for 14 key sectors is underway to enhance the country's manufacturing capabilities and exports. The implementation of the scheme across the sectors aims to attract investments (domestic and foreign) in the areas of core competency and apply cutting-edge technology; ensure efficiencies; create economies of scale and boost exports to make India an integral part of the global value chain.

Particulars	Units	Amount
PLI scheme led investment	Rs trillion	1.46
PLI scheme production/sales	Rs trillion	12.50
PLI scheme led exports	Rs trillion	4.00
PLI led Employment generation	In million	0.95 (direct and indirect)

Note: All figures in the table are until August 2024

Benefits through PLI scheme

Large scale electronics manufacturing (LSEM) sector

- Manufacturing of various electronic components, such as batteries, chargers, printed circuit board (PCB), camera modules, passive components and certain mechanics have been localised in the country
- PLI beneficiaries account for only ~20% of the market share. However, they contributed to ~82% exports of mobile phones in fiscal 2023

- Production of mobile phones surged by more than 125% and exports increased ~4x since fiscal 2021
- Foreign direct investment increased ~254% since the inception of the PLI scheme for LSEM

Pharma sector

- India manufactures unique intermediate material and bulk drugs, including Penicillin-G, significantly reducing imports of raw material in the sector
- India has commenced the localised production of 39 medical devices, such as CT-scan, linear accelerator, rotational cobalt machine, C-arm, MRI, catheterisation laboratory, ultrasonography, dialysis machine, heart valves and stents, among others

Telecom and drone sectors

- India has achieved an import substitution of 60% in the telecom sector
- PLI beneficiary companies have achieved a 370% increase in sales of telecom and networking products in fiscal 2024 vis-a-vis base fiscal 2020.
- The drone industry has witnessed a significant increase in investment at a CAGR of 90.74% over the past three fiscals

Food processing sector

- There has been a significant increase in the sourcing of raw material from India, benefitting Indian farmers and small-scale industries
- Sales of organic products has increased, enhancing the visibility of Indian brands in the global market.
- The scheme has also led to increased millet procurement – which increased over five times between fiscals 2021 and 2023

Specialty steel sector

- Ministry of steel has kept a target of generating an investment of ₹ 29.5 billion, an additional capacity of 25 million tonnes for producing specialty steel grades and an additional employment to about 17,000 people between fiscals 2024 and 2028 through its PLI program
- In fiscal 2024 itself, an estimated investment of around ₹ 160 billion has been made. In fiscal 2025, an investment of another ₹ 10 billion is expected to be made into the sector through the PLI scheme
- As of Q4 2024, 5 of the selected manufacturing companies had started production

Production Linked Incentive scheme 1.1

The Indian government has introduced the PLI Scheme 1.1 to increase the production of specialty steel. This initiative focuses on five product categories: coated/plated steel products, high strength/wear resistant steel, specialty rails, alloy steel products and steel wires, and electrical steel.

The application window for the PLI Scheme 1.1 was open from January 6 to January 31, 2025, and investments made after January 6 will be eligible for the scheme. This version of the scheme will operate within the original allocation of Rs 6,322 crore for the steel sector's PLI Scheme. It aims to promote high-value steel manufacturing, reduce import dependence and strengthen India's position as a global steel powerhouse. The government also aims to attract investments and generate employment in the steel sector through this route.

2.6 Investment scenario in domestic steel manufacturing industry

India's crude steel capacity as of fiscal 2024 stands at around 179.5 million tonnes. With the growing demand from steel in the domestic end use industries such as infrastructure, automobile, etc., the domestic steel producers are planning to ramp up their production output by increasing their manufacturing capacities and improving their capacity utilization levels.

- Between fiscals 2024-2026, India is expected to add 25-30 million tonnes of crude steel manufacturing capacity. This expected volume of capacity addition in India holds high significance as it is higher than the planned capacity additions by the ASEAN [8]countries the middle east countries, which are also investing heavily in the steel sector. Notably, ASEAN and middle east countries are planning to add 15-20 million tonnes and 8-10 million tonnes of crude steel production capacities, respectively, during the same period
- Between fiscals 2024-2029, Indian steel makers are expected to add approximately 75 million tonnes of crude steel production capacity, which would take Indian steel manufacturing capacity to around 255 million tonnes in fiscal 2029

Current and planned crude steel manufacturing capacities at key Indian steel producers

Steel producer	Units	FY 2024 capacity	FY 2029 expected capacity
SAIL	Million tonnes per annum	20	26
RINL	Million tonnes per annum	7	7
Tata Steel Ltd.	Million tonnes per annum	21	34
AMNS	Million tonnes per annum	10	19
JSW Ltd.	Million tonnes per annum	28	49
JSPL	Million tonnes per annum	10	21
NMDC	Million tonnes per annum	3	3
Others	Million tonnes per annum	80	96
Total	**Million tonnes per annum**	**179**	**255**

Source: Crisil Intelligence, Industry
SAIL: Steel Authority of India Ltd., RINL: Rashtriya Ispat Nigam Ltd., JSPL: Jindal Steel and Power Ltd.
Note: Capacities of Tata Steel Ltd. include capacities of Bhushan Steel Ltd. (BSL) and Neelachal Ispat Nigam Ltd. (NINL); Capacities of JSW Ltd. include capacities of Bhushan Power & Steel Ltd. (BPSL) and Monnet Ispat & Energy Limited

2.7 Investment scenario in domestic infrastructure segment

The government's focus on infrastructure development was evident in the budget 2025-2026 allocations as:

- INR 11.2 trillion, which is 3.1% of GDP, allocated for capital expenditure for infrastructure sector.
- Effective budget for fiscal 2026 with grants-in-aid (GIA), is 17.4% higher from INR 13.2 trillion to INR 15.5 trillion for fiscal year 2026.
- The Ministry of Road, Transport and Highways (MoRTH) and Ministry of Railways have the highest capex budgetary allocation, 24.4% and 22.5% respectively.
- The Agricultural Infrastructure sees a 20% on year rise increasing to INR 900 crores, this fund will address structural issues faced by farmers.

[8] ASEAN: Association of Southeast Asian Nations comprising of 10 countries in the south-east Asia region

- To support states in infrastructure development, an outlay of INR 1.5 trillion is proposed for 50-year interest-free loans as capital expenditure and incentives for reforms.
- A plan to establish a Urban Challenge Fund with a corpus of 1 trillion is in works, to help in transforming cities into growth hubs.
- A maritime development fund of INR 25,000 crore will be set up to provide long-term financing to the maritime sector. This fund ensures substantial government support to the industry, which will help increase domestic production, whilst boosting international trade.

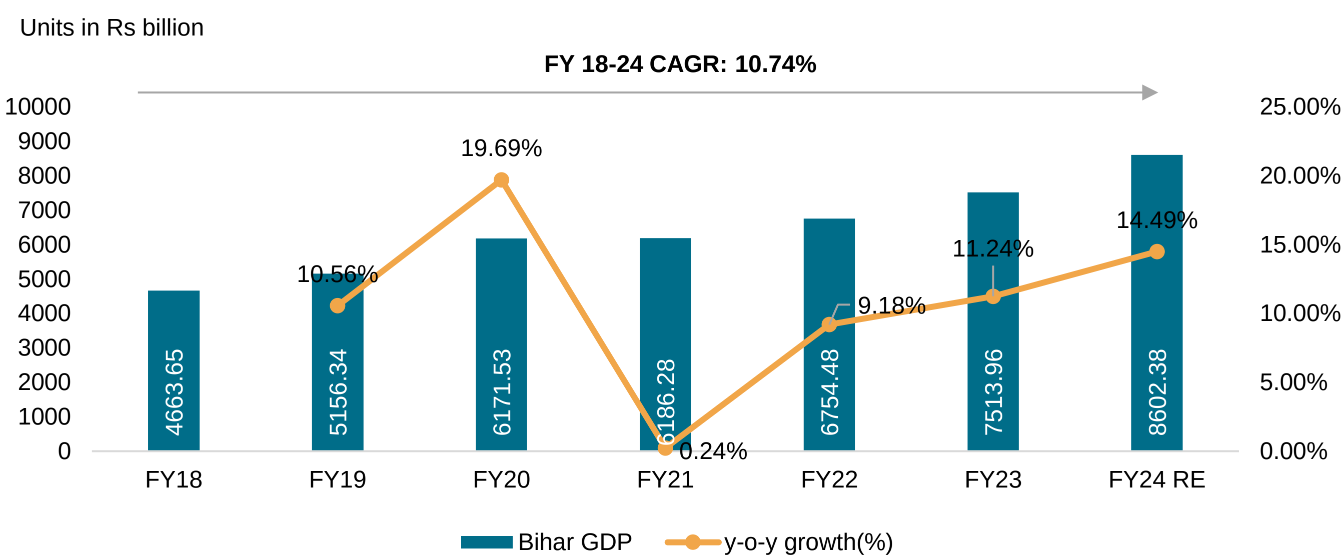
Note: Overall, the infrastructure segment accounts for ~28-30% of the aggregate finished steel demand. Within the segment, roads and highways, and the railways (including metros), account for 50-60% of steel demand. Other significant contributors include sectors, such as irrigation, dams, water supply and sanitation.

3. Bihar macroeconomic overview

Bihar's GDP rose 10.74% CAGR between fiscals 2018 and 2024 to Rs 8,602.38 billion. While pandemic-led lockdowns resulted in GDP contracting 0.24% in 2021, the post-pandemic scenario proved positive for India as well as for Bihar. GDP rose 9.18% on-year in fiscal 2022 and further 11.24% in 2023, with the manufacturing and construction sectors witnessing the most sizeable rebound.

Bihar's gross state domestic product (GSDP) for fiscal 2024 (at current prices) is projected to be Rs 8,602.38 billion, amounting to 14.49% growth in fiscal 2023 (Rs 7,513.96 billion).

Bihar's GDP trend



Source: Bihar Economic Survey, Crisil Intelligence
P: Projected, FY: Fiscal Year, RE: Revised estimates

Bihar stands out as a leading agricultural state, with a significant 80% of its population engaged in farming, surpassing the national average. The state is a major contributor to India's food production, ranking fourth in vegetable production and eighth in fruit production. Additionally, Bihar is experiencing rapid growth in industries such as food processing, dairy, sugar, manufacturing, and healthcare. To further drive development, the state is implementing initiatives to boost education, tourism, and other sectors, while also offering incentives to attract investments in IT and renewable energy projects.

In the Union Budget for 2025-26, Finance Minister Nirmala Sitharaman announced several initiatives aimed at bolstering Bihar's infrastructure, agriculture, and education sectors. Key announcements include:

1. Establishment of a National Institute of Food Technology, Entrepreneurship, and Management in Bihar:

This institute will enhance food processing activities in the eastern region, generating employment opportunities for the youth. The institute will focus on research and development, entrepreneurship, and management in the food processing sector, with a special emphasis on traditional Bihar cuisine and products. The government announced the establishment of this institute, which is expected to be operational by 2027.

2. Creation of a Makhana Board:

A dedicated board will focus on improving the production, processing, value addition, and marketing of makhana (fox nuts). Farmers engaged in makhana cultivation will be organized into Farmer Producer Organizations (FPOs) to receive training and support, ensuring they benefit from relevant government schemes. The government announced the creation of the Makhana Board, which will work closely with state governments, farmers, and industry stakeholders to promote makhana cultivation and processing.

3. Expansion of IIT Patna:

The government plans to develop additional infrastructure at five IITs, including the expansion of IIT Patna, to accommodate more students and enhance academic resources. The expansion will include the construction of new hostels, laboratories, and research facilities, with a focus on emerging areas such as artificial intelligence, data science, and cybersecurity.

4. Development of Greenfield Airports:

New greenfield airports will be established in Bihar, with the capacity of Patna Airport set to be expanded. Additionally, a brownfield airport will be developed at Bihta to improve air connectivity and support the state's growing economy.

5. Financial Support for the Western Kosi Canal Project:

The Western Kosi Canal ERM Project in the Mithilanchal region will receive financial assistance, benefiting farmers cultivating over 50,000 hectares of land by ensuring better water management and increased agricultural productivity. The project be implemented in partnership with the state government and other stakeholders.

6. Allocation for Bihar's Road Network:

The development of Bihar's road network will include the construction of new highways, bridges, and flyovers. The allocation will focus on improving connectivity between major cities and towns, as well as enhancing rural road infrastructure.

7. Support for Bihar's Agriculture Sector:

The government has announced several initiatives such as soil health cards, organic farming, and farm mechanization. The allocation will also support the state's efforts to increase crop productivity, improve irrigation systems, and enhance farmer incomes.

8. Enhancement of Digital Infrastructure:

The government has announced the enhancement of digital infrastructure in Bihar, including the expansion of broadband services, improvement of mobile connectivity, and development of digital payment systems. The allocation will focus on improving digital literacy, enhancing e-governance, and promoting digital entrepreneurship in the state.

9. Allocation for Bihar's Education Sector:

The government has announced the development of Bihar's education sector, including initiatives such as teacher training, infrastructure development, and scholarship programs. The allocation will focus on improving the quality of education, enhancing access to education, and promoting vocational training and skill development.

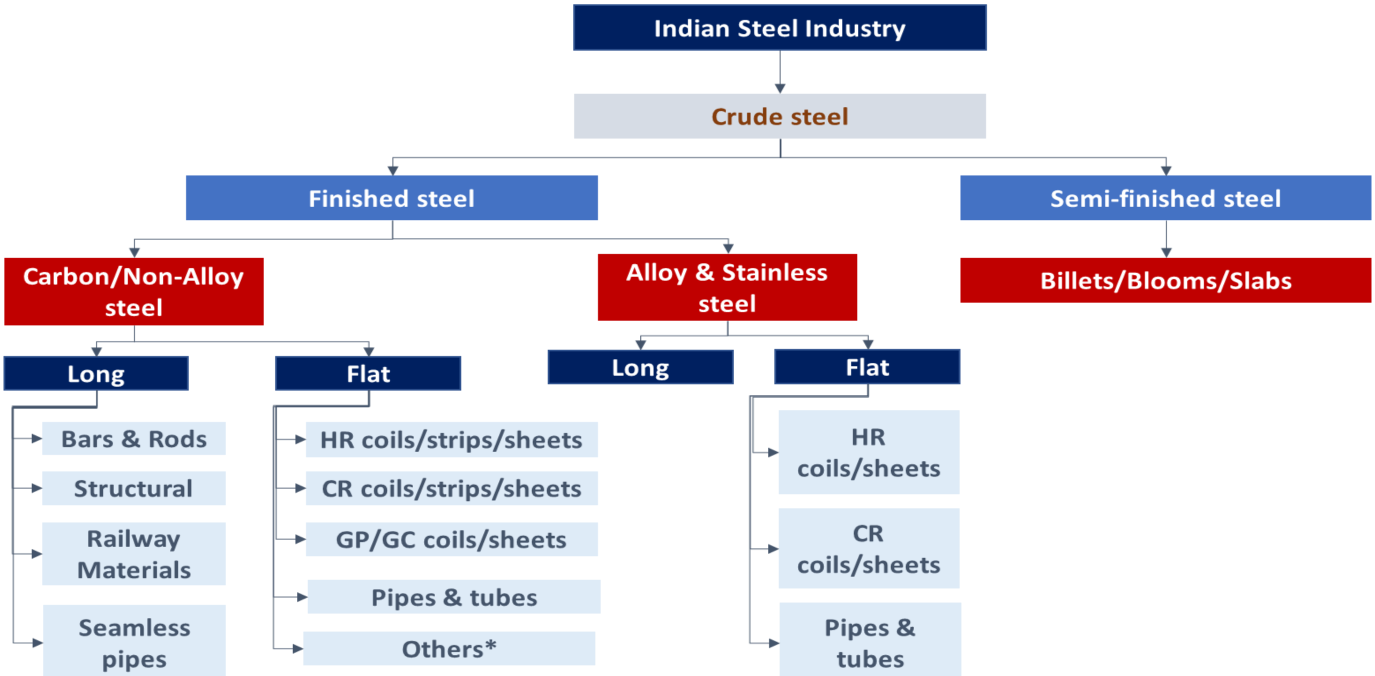
10. Support for Bihar's MSME Sector:

The government announced the development of Bihar's MSME sector, including initiatives such as credit support, technology upgradation, and marketing assistance. The allocation will focus on promoting entrepreneurship, enhancing competitiveness, and increasing employment opportunities in the state.

These initiatives are part of the government's efforts to stimulate balanced growth across all regions, with a particular focus on Bihar's development. The government aims to leverage these initiatives to improve the state's infrastructure, enhance its agricultural productivity, and promote its industrial and economic growth.

4. Indian steel industry overview

4.1 Structure of Indian steel industry



** Others include prime plate plates, hot strip mill plates, colour-coated coils/sheets, electrical coils/sheets, tin plates, tin-free steel, tin mill black plates, pipes, etc*

HR: hot rolled; CR: cold rolled

Source: Crisil Intelligence, Industry

Note: Pipes and tubes included under both flat carbon/non-alloy steel segment and flat alloy & stainless-steel segment include hollow section pipes and welded pipes. Further, seamless pipes under long segment also include hollow section.

Types/definition of steel

By product

Long products: Finished long steel products are typically produced by hot rolling/forging of bloom/billets/ingots into useable shape/sizes. These are normally supplied in straight length/cut length, except wire rods, which are supplied in wound coils. The different types of long products include bar and rods (thermo-mechanically treated (TMT) bars, wire rods, round bars, etc), structural steel (angles, channels, beams, fabricated sections, girders, etc), and railway materials.

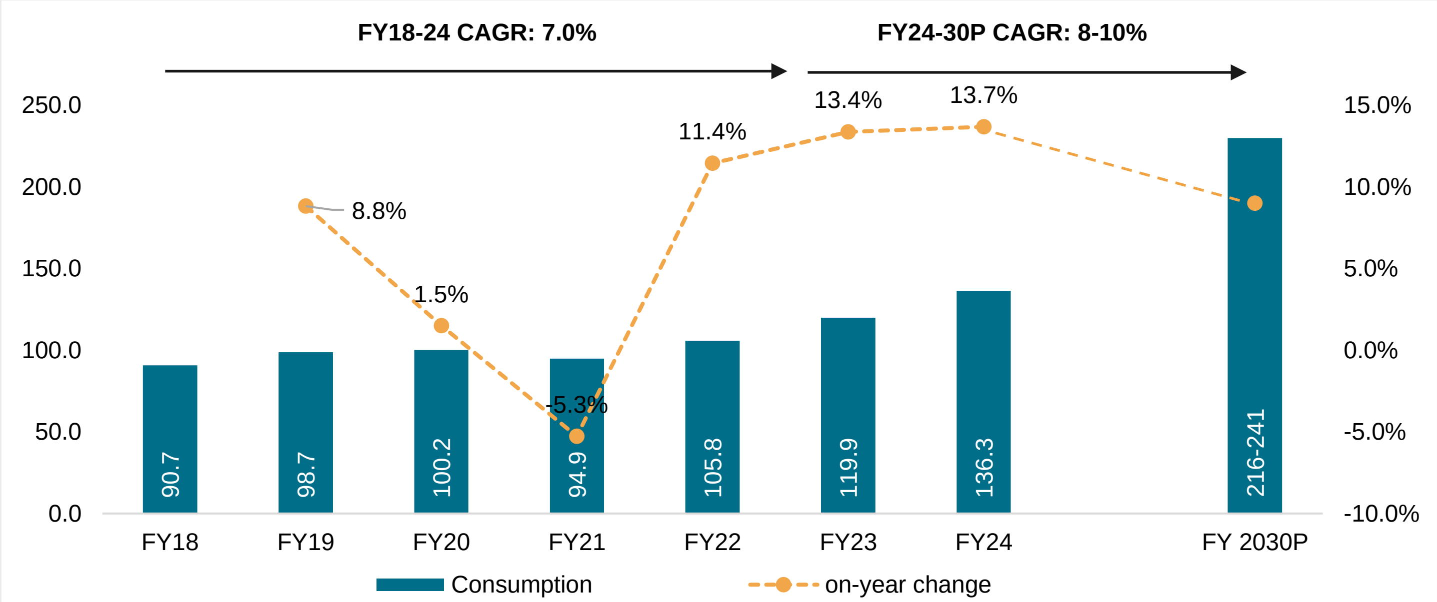
Flat products: Flat products are produced from slabs/thin slabs in rolling mills using flat rolls, and comprise hot rolled (HR) and cold rolled (CR) coils, coated products, etc. HR flat products are produced by re-rolling slabs/thin slabs at high temperature (above 1,000^{0}C) in plate mills or in hot strip mills. CR coils/strips are produced by cold rolling HR coils/strips in cold rolling mills (normally at room temperature). CR coils/strips/sheets are characterised by lower thickness, better/bright finish and specific mechanical/metallurgical properties.

4.2 Indian steel sector review and outlook

The domestic steel demand has logged a significant 7% CAGR between fiscals 2018 and 2024. In fiscal 2021, the industry saw a 5.3% on-year decline in demand due to the pandemic. Demand rebounded in fiscal 2022, growing 11.4% on-year, with a revival of industrial activities, release of pent-up demand and growth inducement in key end-use sectors.

Steel demand grew 13.4% to 136.3 MT in fiscal 2024 from 100.2 million tonne (MT) in fiscal 2020, owing to the aggregate effect of growth in the end-use sectors of steel — such as automobile, infrastructure and construction — and the market volatility faced during the pandemic. The increase in demand is expected to accelerate at a CAGR of ~8-10% by fiscal 2030, rising to 216-240 MT.

Domestic steel consumption (MT)

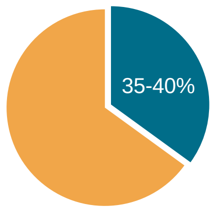
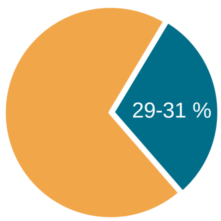
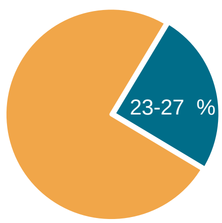
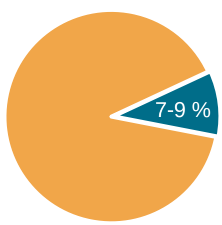


P: Projected

Source: Crisil Intelligence, industry, Joint Plant Committee (JPC)

Building and construction (B&C), infrastructure and engineering, and packaging sectors make up ~90% of the aggregate demand for finished steel; B&C has the largest share. Infrastructure projects, housing and construction sectors are expected to spearhead the growth in steel demand between fiscals 2025 and 2030. Projects such as the Pradhan Mantri Awas Yojana (PMAY) and the National Infrastructure Pipeline (NIP) will help sustain the growth momentum.

Steel consumption break-up by use

Segment	Share of consumption	Growth in FY20-24	Growth in FY25-30P	Demand drivers
Building and construction		5.4%	6–8%	• Affordable housing • Pick-up in rural housing (healthy rural sentiments) • Commercialisation of Tier III and IV cities
Infrastructure		8.8 %	10–12%	• Investment in developing 2,843 km of dedicated freight corridor; ~4,300 km more proposed • Investment of Rs 24.93 thousand crore for urban infrastructure like mass rapid transit system (MRTS)
Engineering and packaging		8%	8–10%	• Push for sustainability will lead to increased steel demand • Government initiatives like Atmanirbhar Bharat and PLI schemes increased domestic manufacturing
Automotive		3.8%	5-7%	• Automotive production expected to drive demand growth, with cars/utility vehicles growing 1-3% • Tractor production forecast to increase 6-8% in fiscal 2025 due to favourable weather and government measures • Two-wheeler production anticipated to grow 15-17% in fiscal 2025 due to rural market recovery and premiumisation

Note: This is not an exhaustive list. Others segments comprise industries such as capital goods and consumer durables, among others

Source: Crisil Intelligence, industry, Joint Plant Committee (JPC)

Infrastructure to drive steel demand

The infrastructure sector is poised to be a significant driver of domestic steel demand; it currently accounts for approximately 30% of the demand. Over the next five years, this sector is expected to log a CAGR of around 11%.

Key drivers of infrastructure growth:

Some initiatives that are expected to fuel the growth of the infrastructure sector:

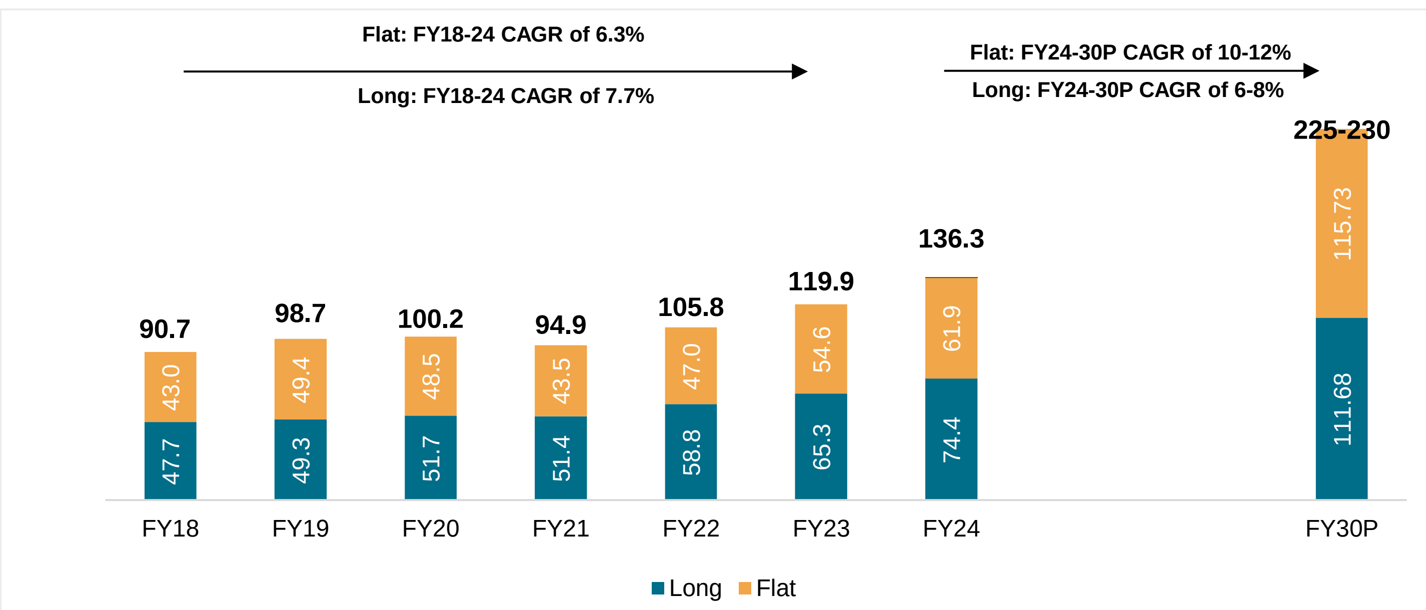
- Substantial budgetary allocation: The government has allocated Rs 630 thousand crore for road, railway and urban development, representing a 4% on-year increase. Although the increase is marginal, the capital expenditure (capex) allocation remains significant.
- Bharatmala Pariyojana: This scheme aims to improve efficiency in the road sector, with Phase I targeting the development of 34,800 km, including 24,800 km of various categories of roads and 10,000 km of residual National Highways Development Project (NHDP) work. Approximately 26,425 km of work has been awarded under the Rs 5.35 lakh crore project and 18,714 km completed as of October 2024.

Smart Cities project: The proposed investment of Rs 2.05 lakh crore into the National Smart Cities Mission is expected to boost infrastructure development, driving demand for steel.

4.3 Indian steel consumption by category (long vs flat products in million tonne per annum)

The Indian steel industry has witnessed a steady uptrend in demand, with consumption growing from approximately ~91 million tonnes (MT) in fiscal 2018 to around 136 MT in fiscal 2024. This translates to a compound annual growth rate (CAGR) of 7% over the four-year period. The key drivers of this growth are the automotive and infrastructure sectors, which are experiencing significant expansion and development.In line with this growth trajectory, the Government of India has set an ambitious target of increasing the country's steel production capacity to 300 million tonnes by 2030, as outlined in the National Steel Policy 2017. This policy initiative is expected to provide a supportive framework for the industry's continued growth, driven by increasing demand from core sectors such as construction, infrastructure, and automotive.

Consumption of long and flat products (MT)

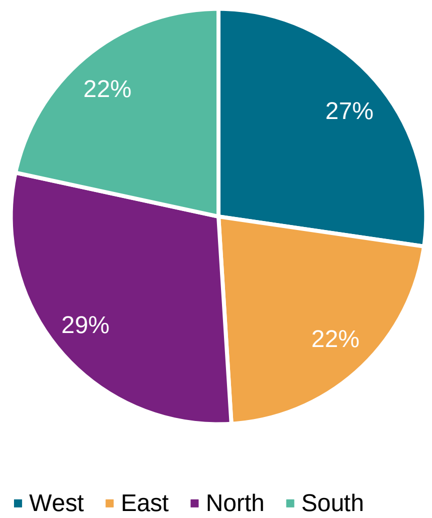


P: Projected
Source: Crisil Intelligence, industry, Joint Plant Committee (JPC)

Demand for long steel increased at 7.7% CAGR between fiscals 2018 and 2024, led by growth in infrastructure and in the building and construction sector. Demand for flat steel rose 6.3% CAGR. This increased the share of long steel in overall demand for finished steel to ~55% in fiscal 2024 from ~53% in fiscal 2018.

The resolution of the supply chain issues in the automobile segment and an increase in demand in construction and infrastructure segments are expected to give flat steel demand a CAGR of 10-12% between fiscals 2024 and 2030. This would outpace the demand growth of long steel, which is set to clock a CAGR of 6-8% in the period owing to positive sentiments in the private housing construction sector and the government's robust push for infrastructure development.

Indian steel consumption by region for fiscal 2024



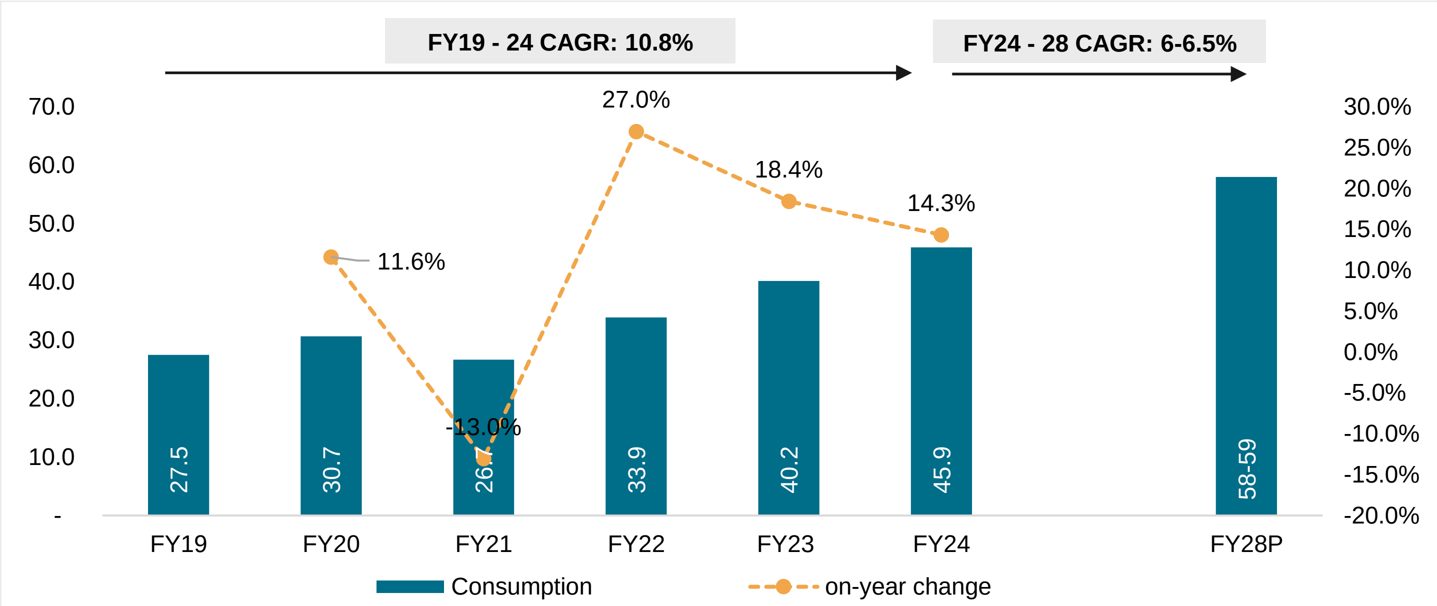
Source: JPC, Industry, Crisil Intelligence

In fiscal 2024, the west and north zones together accounted for ~57% of the overall steel demand. West zone's demand improved significantly from 22.4 MT in fiscal 2018 to 37.5 MT in fiscal 2024, logging a CAGR of 10.8%. This was led by increased infrastructure development activities, including construction of national highways, bridges, high-rises, statues, dams, metro and railway networks in the west zone states, such as Gujarat and Maharashtra. Steel demand in the east zone grew from 22.1 MT in fiscal 2018 to 29.8 MT in fiscal 2024, clocking a CAGR of 6.2%, mainly supported by government infrastructure development initiatives such as PM Gati Shakti and a high rate of housing construction in states such as Bihar and Jharkhand, owing to the mass return of laborers following pandemic-led lockdowns.

4.4 Domestic TMT bar demand review and outlook

Demand for TMT reinforcement bars rose from 27.5 MT in fiscal 2019 to 45.9 MT in 2024, owing to an uptick in housing and infrastructure development in the country. It is further expected to rise to 58-59 MT by fiscal 2028, on account of increasing private house construction, which is boosted by improved disposable incomes of individuals after the pandemic and increasing infrastructure budget allocation by the Centre and states.

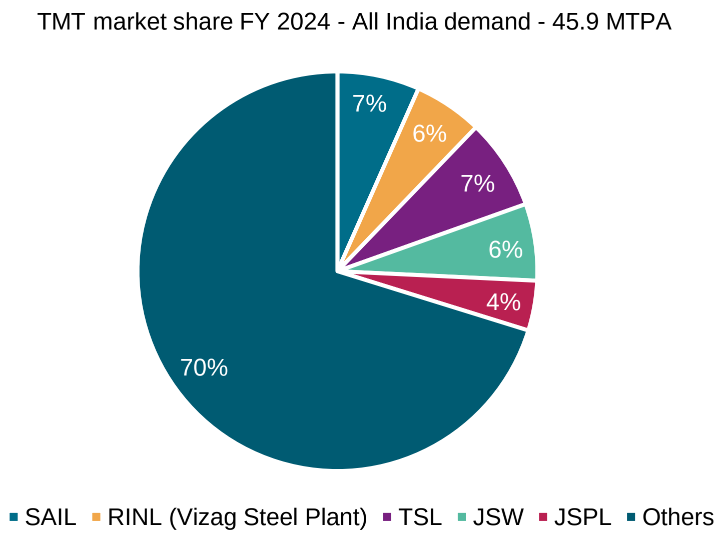
Trend in TMT reinforcement bar demand growth (million metric tonne per annum)



E: Estimated
P: Projected
Source: Crisil Intelligence

Though the demand for TMT reinforcement bar logged 10.8% CAGR between fiscals 2019 and 2024, the growth is expected to see a slight moderation over the next five fiscals but maintain a healthy 6.0-6.5% CAGR.

Player-wise market share of TMT reinforcement bars

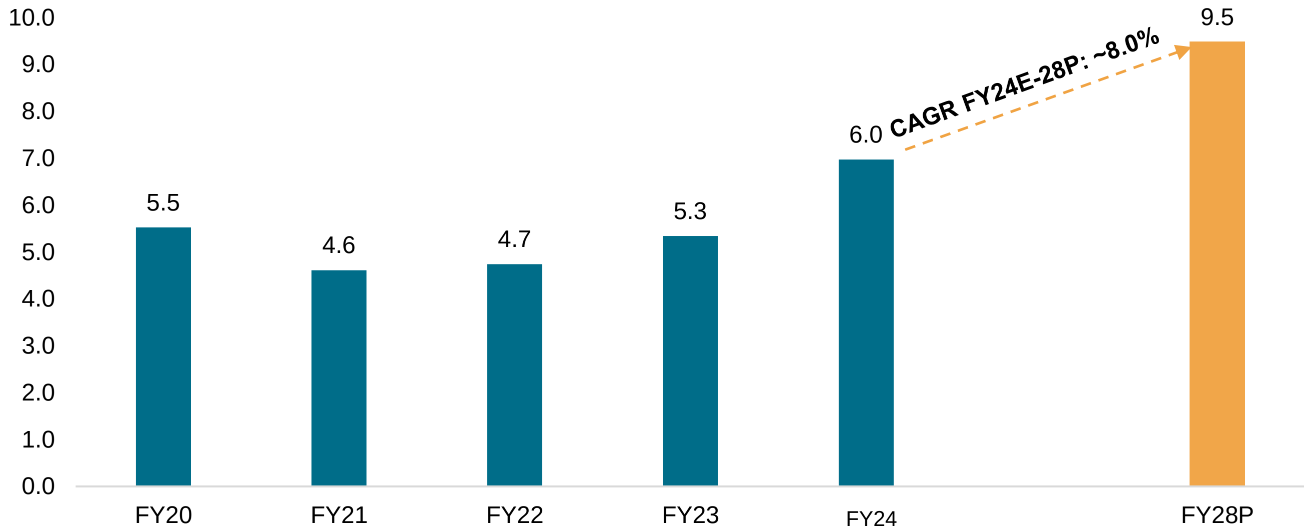


JSWL: JSW Ltd; TSL: Tata Steel Ltd; RINL: Rashtriya Ispat Nigam Ltd; SAIL: Steel Authority of India Ltd; JSPL: Jindal Steel and Power Ltd
Source: Joint Plant Committee (JPC), Crisil Intelligence

Among the major steel players, Tata Steel (TSL) and Steel Authority of India (SAIL) are market leaders (based on production) of TMT reinforcement bars in fiscal 2024, individually accounting for ~7% of the total market share.

4.5 Domestic GC sheets demand review and outlook

Demand review and outlook of galvanised corrugated (GC) sheets (in MTPA) – India

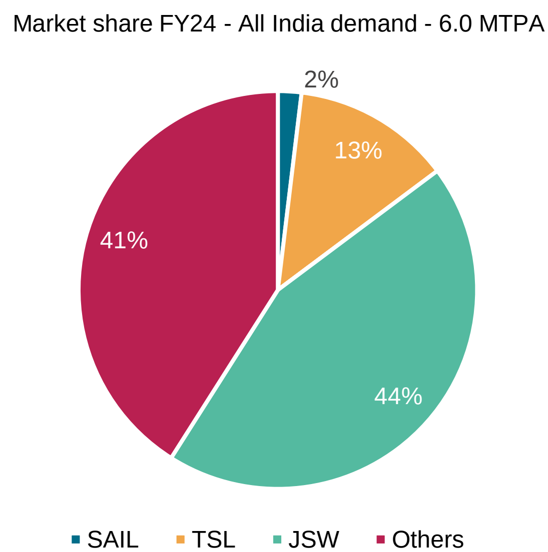


E: Estimated
P: Projected
Source: Joint Plant Committee (JPC), Crisil Intelligence

Domestic demand for GC sheets dipped more than 16% on-year in fiscal 2021, owing to pandemic-led disruptions. The demand, however, showed an improvement in the following fiscals from 4.6 MT in fiscal 2021 to 4.7 MT in 2022 and 6.0 MT in 2024, a 12% increase on-year.

Between fiscals 2024 and 2028, the demand for GC sheets is expected to plummet at a CAGR of ~8% to 9.5 MT, owing to the anticipated demand led by end use segments such as agriculture warehousing and construction.

Player-wise market share of GC sheets based on production (All India demand)

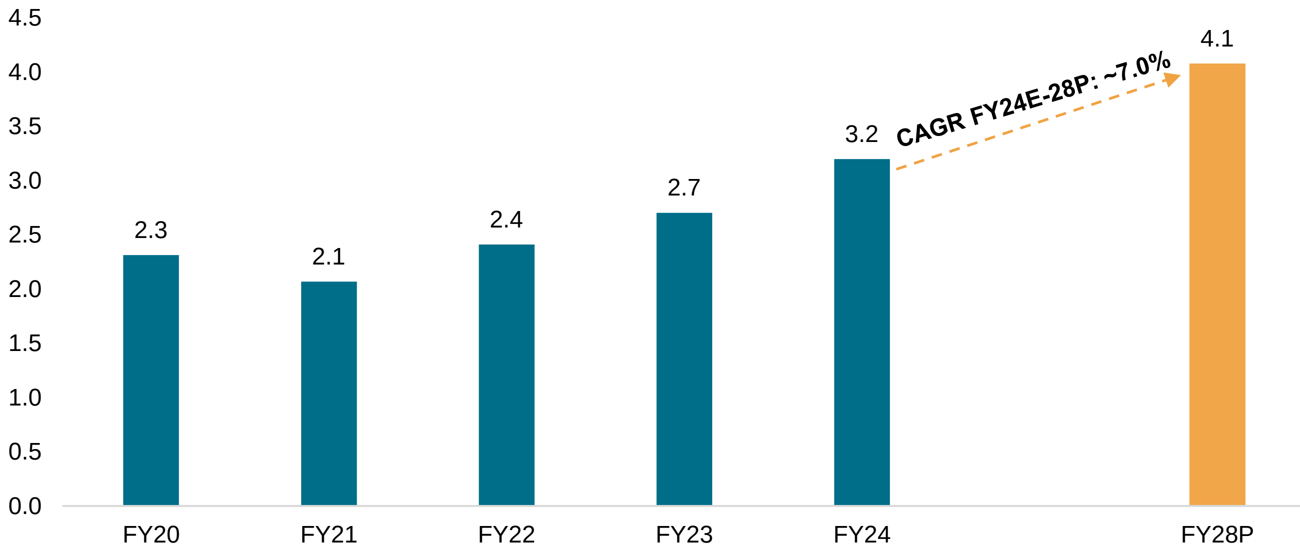


JSW: JSW Ltd; TSL: Tata Steel Ltd; SAIL: Steel Authority of India Ltd
Source: Joint Plant Committee (JPC), Crisil Intelligence

Among major steel players, JSW was the single largest producer of GC sheets in fiscal 2024, followed by TSL.

4.6 Domestic coloured roofing sheets demand review and outlook

Demand review and outlook for coloured roofing sheets (in MTPA)

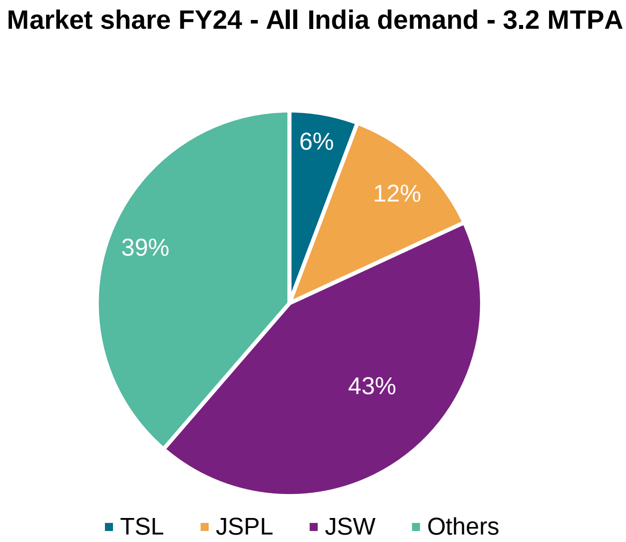


E: Estimated
P: Projected
Source: Joint Plant Committee (JPC), Crisil Intelligence

Demand for coloured roofing sheets saw an on-year dip of over 10.0% in fiscal 2021, due to the pandemic-led disruptions. However, it rebounded by over 16.0% from 2.1 million tonne in fiscal 2021 to 2.4 million tonne in fiscal 2022, because of improved sentiment, as more people started constructing houses and commercial properties led by increased disposable incomes after the pandemic. Demand increased 19.0% on year to 3.2 million tonne in fiscal 2024.

Demand for coloured roofing sheets is expected to remain stable over fiscals 2024 to 2028 as well, growing at a ~ 7.0% CAGR to 4.1 million tonne in fiscal 2028, as more consumers start installing these sheets due to increased product awareness.

Player-wise market share based on production (coloured roofing sheets – all India)



JSW: JSW Limited; AM/NS: ArcelorMittal and Nippon Steel; TSL: Tata Steel Limited
Source: Joint Plant Committee (JPC), Crisil Intelligence

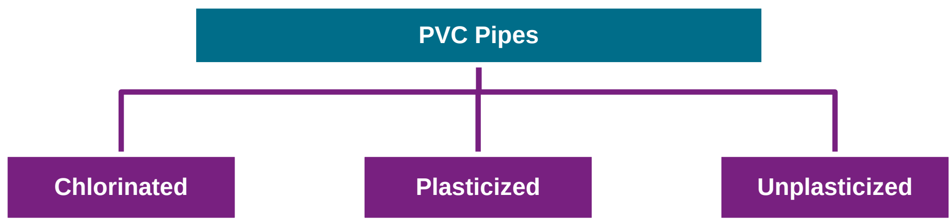
Among major steel players, JSW was the largest player in the coloured roofing sheets segment (based on production) in fiscal 2024, followed by JSPL and TSL.

5. Indian PVC pipe industry overview

5.1 Domestic PVC pipes overview & outlook

PVC (Polyvinyl Chloride) pipes are a type of plastic piping widely used in various applications in India. They are durable, corrosion-resistant, and easy to install, making them a preferred choice for plumbing, water supply, and sewage systems. In India, PVC pipes are extensively used in residential, commercial, and industrial construction projects, as well as in agricultural and infrastructure development. The growing demand for PVC pipes in India is driven by rapid urbanization, increasing infrastructure development, and government initiatives such as "Housing for All" and "Smart Cities Mission". Additionally, the need for efficient water management and sanitation systems in rural areas also contributes to the rising demand.

Types of PVC pipes

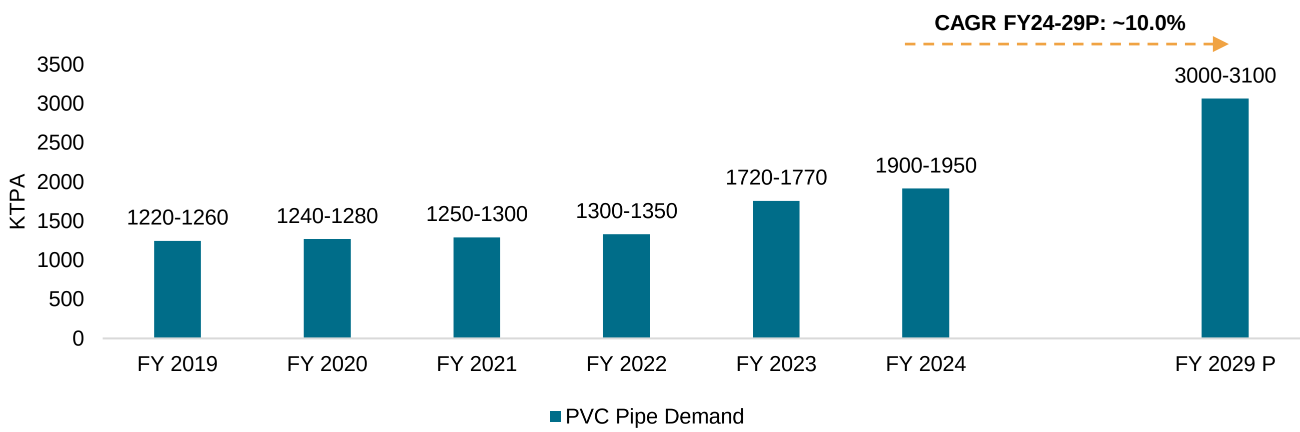


Chlorinated PVC (CPVC) pipes are enhanced PVC pipes treated with chlorine, making them more resistant to heat and chemicals, ideal for hot water distribution and industrial applications.

Plasticized PVC (also known as flexible PVC) pipes contain added plasticizers to make the material more flexible and softer. These pipes are used in applications like medical tubing, flexible hoses, and cable insulation.

Unplasticized PVC (uPVC) pipes, also known as rigid PVC, have no added plasticizers, making them strong, durable, and resistant to chemical corrosion. uPVC pipes are widely used in plumbing, sewage, and drainage systems due to their rigidity and long lifespan.

PVC pipes demand in India (KTPA)

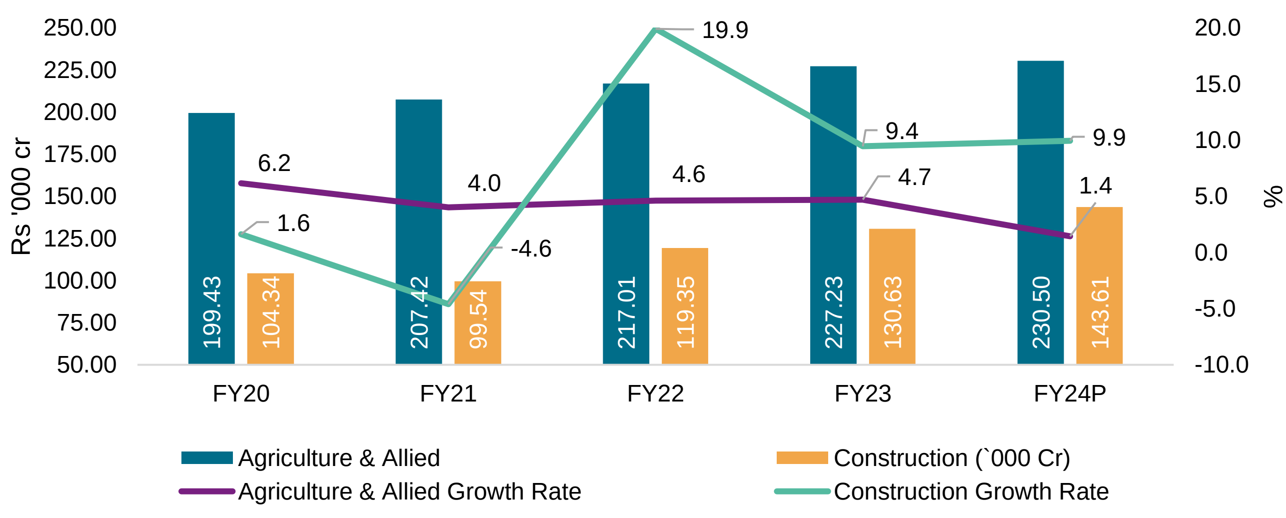


Source: Crisil Intelligence, Industry
Note: P-projected
The demand for PVC pipes has been assumed to be 50% of total PVC demand based on in

The demand for PVC pipes in India is on a strong upward trajectory, reflecting robust growth in infrastructure and agricultural development. From fiscal 2024 to fiscal 2029, the demand is projected to rise significantly from ~1,900 KTPA to ~3,000 KTPA, representing a compound annual growth rate (CAGR) of 9.9%. This substantial increase signals a major expansion in the sector, driven by heightened infrastructure projects and agricultural advancements. The data highlights a sharp surge in demand between fiscal 2022 and fiscal 2023, with a rise from ~1,300 KTPA to ~1,750 KTPA, indicating a rebound from the pandemic's economic impact and an acceleration in infrastructure development. By fiscal 2029, the demand for PVC pipes is expected to be nearly 2.5 times the level observed in fiscal 2019, underscoring a positive market outlook. This growth is largely fueled by government initiatives such as the "Jal Jeevan Mission", aimed at enhancing rural water supply, as well as extensive urban and agricultural projects and "Har Ghar Jal Yojna". The resilience of the PVC pipe sector, evident even during fiscal 2020-2021 period, underscores its critical role in India's development. As investments in water management, sanitation, and construction continue, the PVC pipe industry is set to benefit from increased demand and potential advancements in technology to meet the expanding needs.

For the budget 2024-25, an allocation of ₹11,11,111 crore for capital expenditure, which is 3.4 percent of GDP, has been made. For irrigation and flood mitigation in Bihar, the government will provide financial support for projects with an estimated cost of ₹11,500 crore through the Accelerated Irrigation Benefit Programme and other sources. The strong fiscal support for infrastructure is expected to have a positive impact on the economy, particularly in terms of boosting demand. Moreover, the focus on irrigation and flood mitigation projects in Bihar is expected to have a positive impact on the agricultural sector, which is a significant contributor to PVC pipes demand. Overall, the outlook for the India PVC pipes market is positive, driven by government support, policy initiatives, and a focus on self-reliance.

Gross value added (GVA) by agriculture & construction sectors



Source: National Statistical Office (NSO), Crisil Intelligence
Note: P- projected

The chart shows the Gross Value Added (GVA) and growth rates for the Agriculture & Allied and Construction sectors in India from FY20 to FY24P. This growth in both sectors is likely to drive up demand for PVC pipes. In agriculture, increased investment often leads to expanded irrigation systems, where PVC pipes are extensively used. An increase in agricultural GVA could potentially translate to an increase in PVC pipe demand for irrigation purposes. In construction, PVC pipes are crucial for plumbing and drainage systems. The sector's strong recovery, with a projected 9.9% growth in FY24, could lead to a corresponding increase in PVC pipe demand for construction applications. Government initiatives like the Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) for irrigation and the Housing for All scheme are likely to further boost demand. The push for micro-irrigation systems could increase PVC pipe usage in agriculture by 7-10% over the next five years. Similarly, the construction of 20 million urban houses under the Housing for All scheme could drive up PVC pipe demand in the construction sector by 20-25%. In conclusion, the positive growth trends in agriculture and construction, coupled with supportive government initiatives, indicate a strong potential for increased PVC pipe demand in India, possibly growing at a CAGR of 7-10% in the coming years.

Application landscape

These are some applications of PVC pipes:

Agriculture	Irrigation system piping Water supply pipes
Construction	Plumbing in domestic and commercial buildings Drainage system pipes Sewer system
Infrastructure	Water supply network pipes Stormwater pipes Wastewater treatment pipes Fire sprinklers pipes Borewell tubing Electrical conduit for electrical cables
Industrial	Chemical handling Gas distribution system Ventilation system Cooling systems
Renewable Energy	Tubes for solar water heating systems Tubes for use in biogas plants
Medical	Tubing for IV, catheter system and dialysis machine Tubing for respiratory equipment such as ventilators and oxygen delivery systems

5.2 Key players

Product Offering

Looking at the product offerings and can see that all 5 producers have a similar product offering, which cater to the all the industries which drive demand for PVC pipes.

S.no	Offerings	Supreme	Astral	Finolex	Ashirvad	Prince
1	Agriculture & Borewell pipes	✓	✓	✓	✓	✓
2	Plumbing & Drainage pipes	✓	✓	✓	✓	✓
3	Rainwater & Stormwater pipes	✓	✓	✓	✓	✓
4	Industrial pipes		✓	✓	✓	✓
5	Fire protection pipes	✓	✓		✓	
6	Electrical conduit	✓	✓			
7	Renewable energy piping			✓		✓
8	Ventilation system pipes		✓	✓	✓	✓
9	Chemical transportation pipes		✓			
10	Process industry piping		✓			

Source: Company websites, Crisil Intelligence
Note: Agriculture & borewell pipes refer to irrigation system, water supply, tube well and borewell piping
Plumbing & drainage pipes refer to domestic & commercial plumbing, sewage systems and wastewater piping

The table is a comparison of product offerings by key PVC pipe producers in India: Supreme, Astral Pipes, Finolex, Ashirvad, and Prince. Analyzing the offerings, it's clear that most companies focus heavily on core segments like Plumbing & Drainage Pipes, Rainwater & Stormwater Pipes, and Agriculture & Borewell Pipes. These segments are fundamental to the Indian market, driven by both rural and urban infrastructure needs. Astral Pipes has an extensive product portfolio that covers nearly all segments, indicating a strategy aimed at market penetration across various industries. They seem to cater not only to general construction and water management needs but also to specialized areas like Industrial Pipes and Chemical Transportation Pipes, suggesting a focus on industrial needs as well.

Renewable Energy Piping, an emerging segment, is offered by companies like Finolex and Prince. This suggests a growing recognition of the importance of this market, likely driven by the increasing emphasis on sustainable infrastructure in India. The table also reflects the competitive nature of the Indian PVC market, where most players offer similar core products but differentiate themselves through niche segments. The data indicates a well-established market where most key players offer comprehensive product ranges, especially in high-demand segments like Plumbing & Drainage and Agriculture & Borewell Pipes.

Performance overview

Particulars	Unit	Supreme	Astral	Finolex	Prince	Ashirvad
Production Volume	MT	5,01,001	2,20,230	3,33,311	1,72,793	
Installed Capacity	MTPA	7,40,000	3,34,040	4,70,000	2,61,204*	2,00,000
Utilization	%	67.70	65.93	70.92	66.15	
Revenue from pipes	(% of total sales)		~73%	~64%		

Source: Company website, Annual reports, Crisil Intelligence
Note:
1. Supreme production & capacity is total pipe production, Astral, Finolex & Prince capacity & production is for all pipes, fitting and water tanks, Ashirvad capacity is as of FY18
*2. *Production capacity*

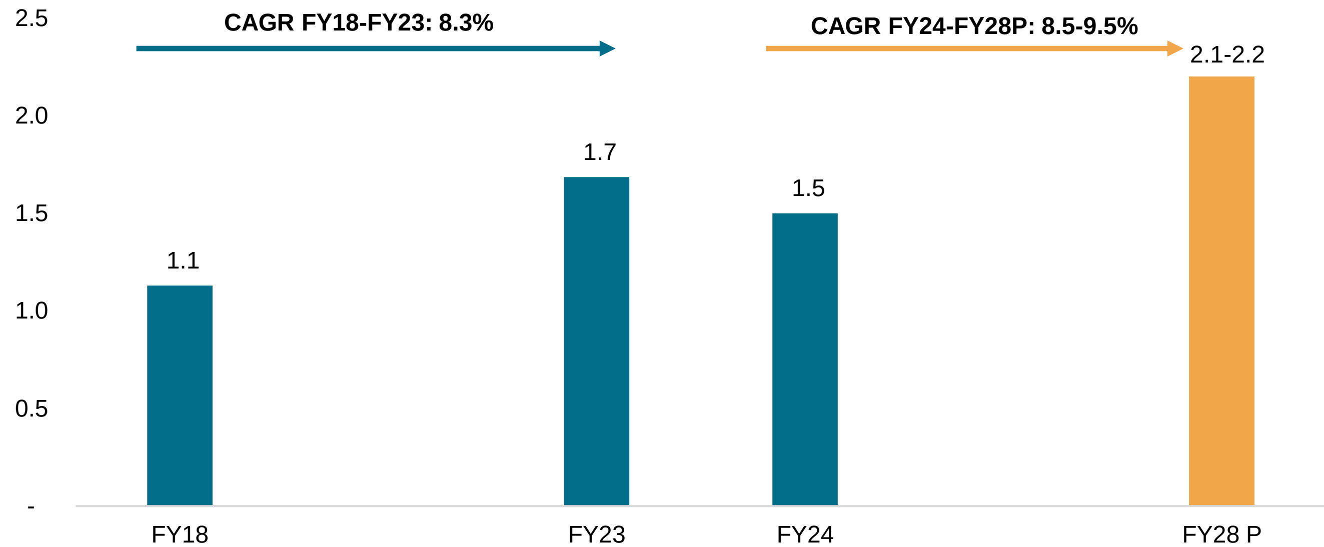
These five manufacturers are chosen for comparison because they are all leading players in the Indian PVC pipe industry, with a strong presence in the domestic market. They are known for their high-quality products, innovative solutions, and strong distribution networks.

The table provides a performance overview of major PVC pipe manufacturers in India, offering insights into their production volumes, installed capacities, utilization rates, and revenue contributions from pipes. Supreme emerges as the market leader with the highest production volume 501,001 MT and installed capacity 740,000 MTPA. It also maintains a healthy utilization rate of 67.70%. Finolex follows as the second-largest producer with 333,311 MT production and 470,000 MTPA capacity, boasting the highest utilization rate at 70.92%. Astral, while having a lower production volume 220,230 MT, shows strong performance with a 65.93% utilization rate and the highest revenue contribution from pipes at ~73% of total sales. Prince and Ashirvad have comparatively lower production volumes and capacities, but Prince maintains a competitive utilization rate of 66.15%. The varying utilization rates (65.93% to 70.92%) suggest a competitive market with room for growth. The significant revenue contributions from pipes for Astral (~73%) and Finolex (~64%) indicate their strong focus on this product segment. These figures imply a mature yet growing PVC pipe industry in India, with established leaders and emerging players.

6. Bihar steel industry

6.1 Steel products market overview

Steel demand review and outlook in Bihar (MTPA)

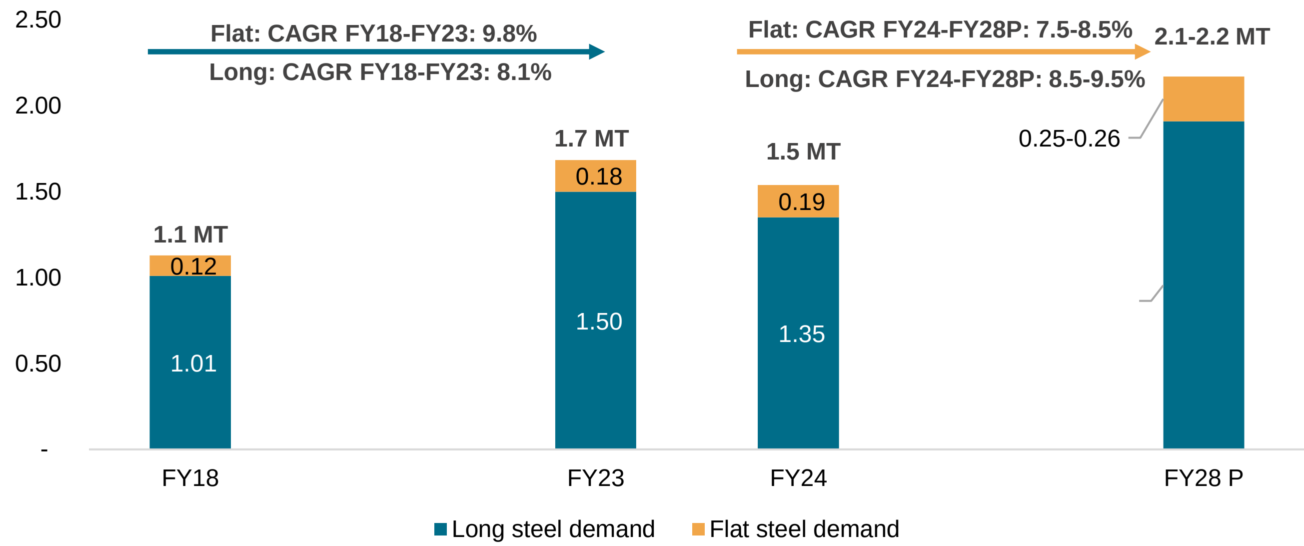


P: Projected
Source: Joint Plant Committee (JPC), Industry, Crisil Intelligence

Steel demand in Bihar grew at a CAGR of 8.3% over fiscals 2018-23 to 1.7 million tonne because of a strong post-pandemic recovery in infrastructure and house construction sectors. In fiscal 2024, Bihar's steel demand stood at 1.5 million tonnes, an on-year decline in growth of 8.6%, because of poor sales of steel products and a decline in overall construction activity due to extreme weather conditions.

Demand is expected to grow at a steady CAGR of 8.5-9.5% to 2.1-2.2 million tonne per annum over fiscals 2024-28, driven by increased focus on infrastructure development in the state in view of the Central government's schemes, such as PM Gati Shakti for eastern regions and Pradhan Mantri Gram Sadak Yojana.

Steel consumption in Bihar, by product (long vs flat) – MTPA



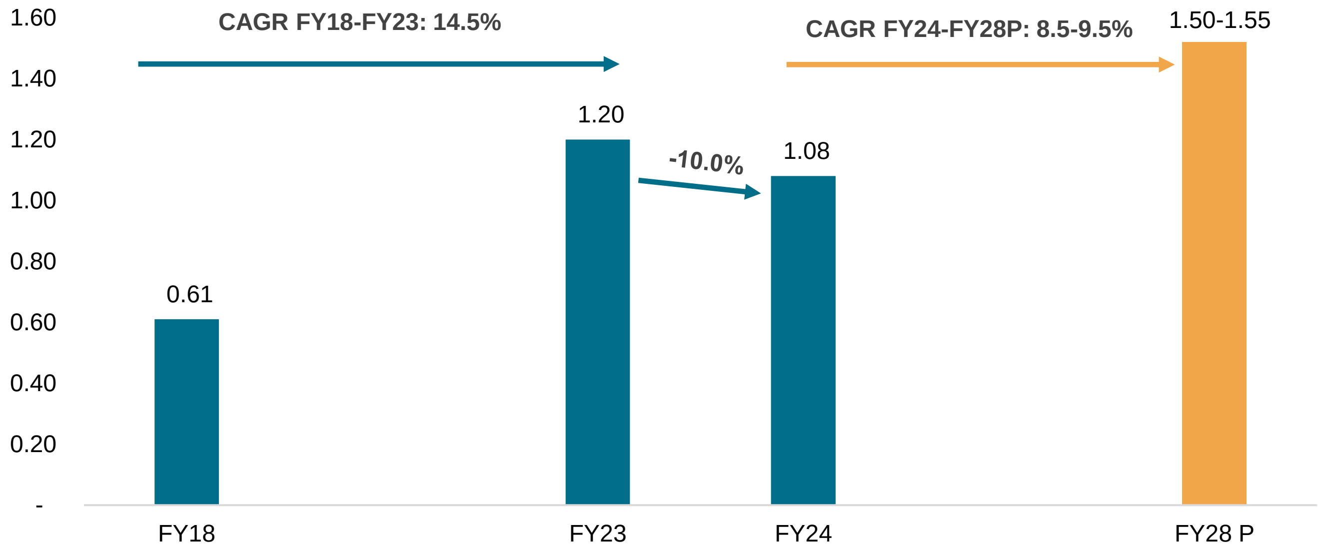
P: Projected
Source: JPC, Industry, Crisil Intelligence

Long steel accounted for over ~90% of the overall steel demand in Bihar over fiscals 2018-23, and the trend is expected to continue over the next five years. Demand for long steel increased at a CAGR of 8.1% to 1.50 MTPA in fiscal 2023 from 1.01 MTPA in fiscal 2018, driven by the government's push to develop infrastructure in the state. Demand for flat steel rose at a strong CAGR of 9.8% to 0.18 MT in fiscal 2023 from 0.12 MT in fiscal 2018.

While demand for long steel is expected to expand at a CAGR of 8.5-9.5% to 1.87-1.94 MTPA in fiscal 2028, that for flat steel is expected to log a moderate CAGR of 7.5-8.5% to 0.25-0.26 MT in fiscal 2028. The government's schemes such as PM Gati Shakti for the eastern regions, Pradhan Mantri Gram Sadak Yojana and Bharatmala and an improving sentiment in the house construction segment, led by an increase in disposable income, are expected to drive robust demand growth in the long-steel segment over the next five years.

6.2 Assessment of the TMT reinforcement bars industry

Demand for TMT reinforcement bars in Bihar – review and outlook (MTPA)

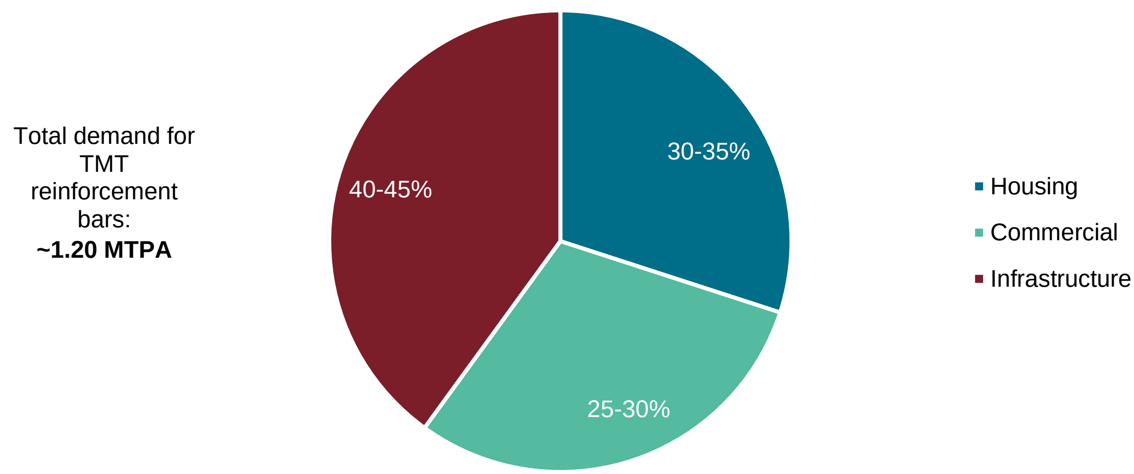


E: Estimated
P: Projected
Source: Industry, Crisil Intelligence

The TMT reinforcement bars industry in Bihar expanded at a robust CAGR of 14.5% over fiscals 2018-23 to 1.20 MT. The growth was driven by infrastructure development and increased building construction activities, led by the return of natives to Bihar after the announcement of lockdowns. However, demand for TMT reinforcement bars declined to 1.08 MT in fiscal 2024, due to a decline in construction activity this fiscal and low sales for the product.

Demand for TMT reinforcement bars is expected to increase at a CAGR of 8.5-9.5% over fiscals 2024-28. The expected improvement in infrastructure development in light of various government schemes, such as PM Gati Shakti for easter regions, Pradhan Mantri Gram Sadak Yojana, and Bharatmala, is likely to be the major driver of growth in the segment.

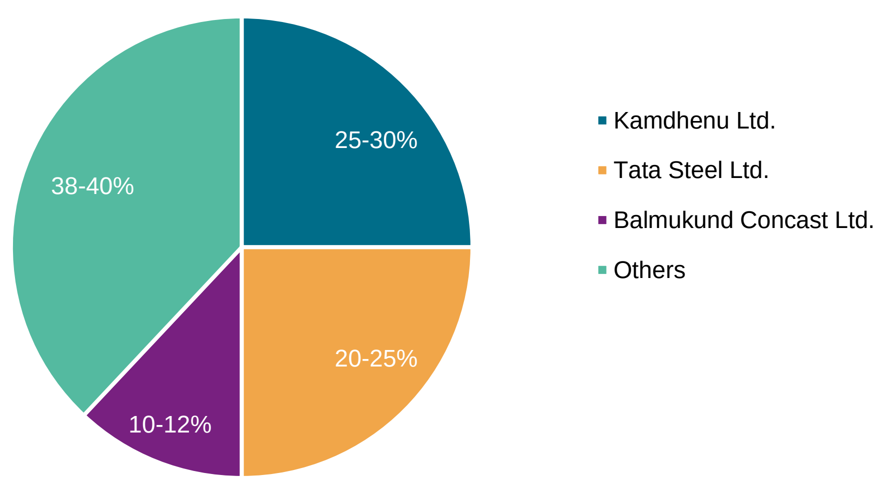
Demand for TMT reinforcement bars in Bihar, by end-use (Fiscal 2024)



Source: Industry, Crisil Intelligence

In fiscal 2024, government-led infrastructure development projects accounted for 40-45% of total demand for TMT reinforcement bars in Bihar. The house construction and commercial property construction segments together constituted 55-65%.

Player-wise market share (TMT reinforcement bars – Bihar Fiscal 2024)

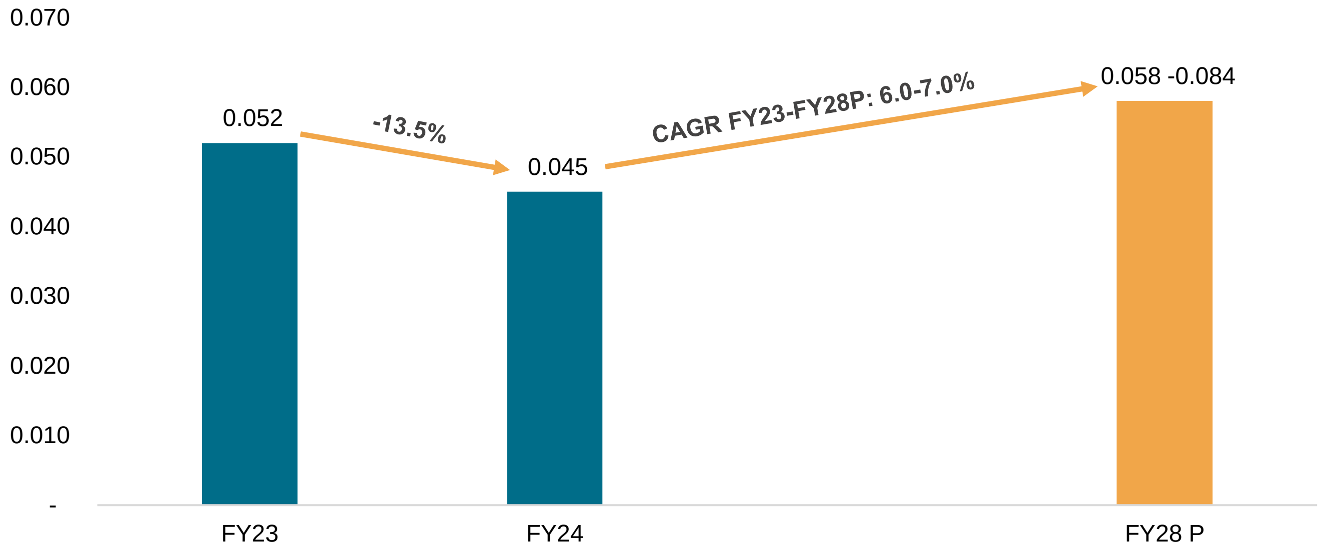


Note: 'Others' includes JSW Ltd, Steel Authority of India Ltd, Shyam Metalics and other regional players like Magadh, Mahaveer etc.
Source: Industry, Crisil Intelligence

In fiscal 2024, Kamdhenu led the TMT reinforcement bar market in Bihar with over 30% share, followed closely by Tata Steel (20-25%).

6.3 Assessment of the GC sheets industry

GC sheets demand in Bihar – review and outlook (MTPA)



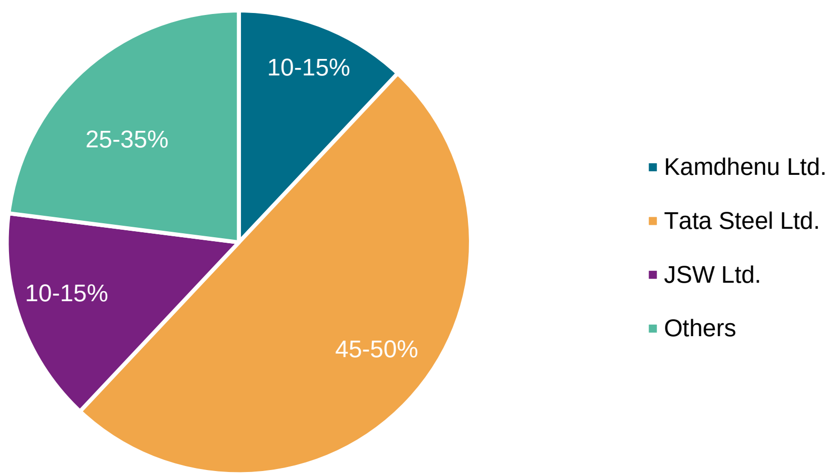
E: Estimated
P: Projected
Source: Industry, Crisil Intelligence

The GC sheets industry in Bihar expanded at a CAGR of 10.8% over fiscals 2018-23 to 0.052 MT, driven by increased building construction activities, led by the return of the native people to Bihar after the announcement of lockdowns. Further, government-run subsidy programmes, such as Gramin Bhandaran Yojana and NABARD Warehouse, which encouraged the construction of warehouses for keeping agricultural produce supported the demand growth of GC sheets in Bihar over the past 3-4 years.

In fiscal 2024, demand for GC sheets declined by 13.5% to ~0.045 MT, due to low sales and a shift in customer's preference from GC sheets to colour-roofing sheets for house-roofing purposes.

The government's continued focus on developing agricultural warehouses in Bihar and an improved sentiment in the construction sector are expected to lead to a CAGR of 6.0-7.0% in GC sheets demand over the next five years, to reach somewhere between 0.058-0.084 MT by fiscal 2028.

Player-wise market share (GC sheets – Bihar FY23/24)

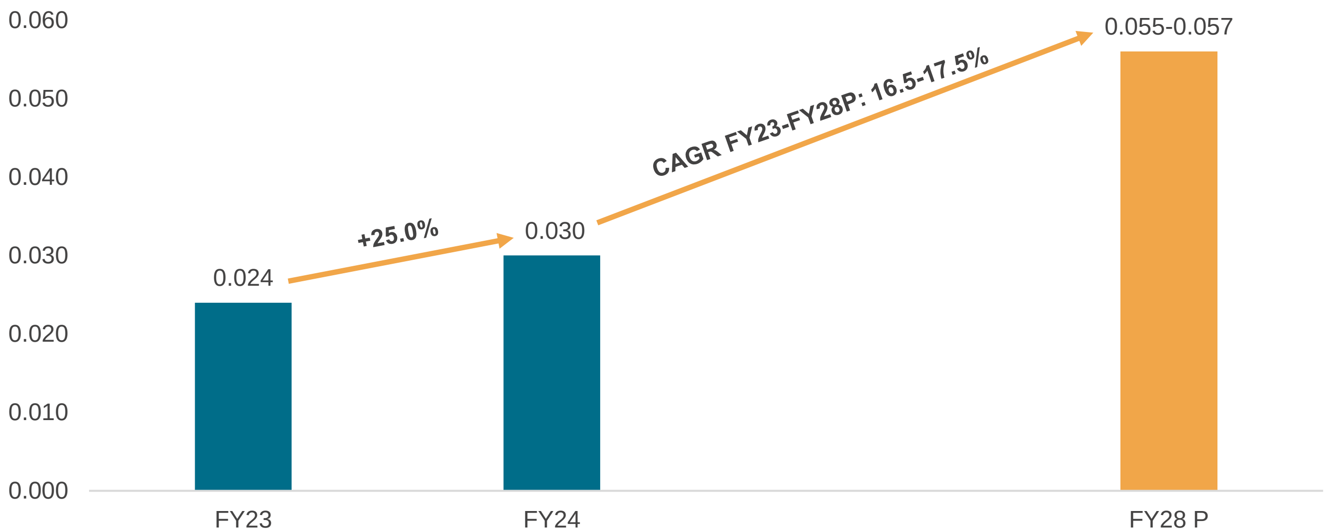


Note: 'Others' includes established players such as Steel Authority of India Ltd and Kamdhenu Ltd, and local players such as Surya Steel and Aarti Steels
Source: Industry, Crisil Intelligence

In fiscal 2024, Tata Steel Ltd was the single-largest seller of GC sheets in Bihar, with a market share of 45-50%, followed by JSW Ltd and Kamdhenu Ltd, with an individual share of ~10-15%.

6.4 Assessment of the coloured-roofing sheets industry

Coloured-roofing sheets demand in Bihar – review and outlook (MTPA)

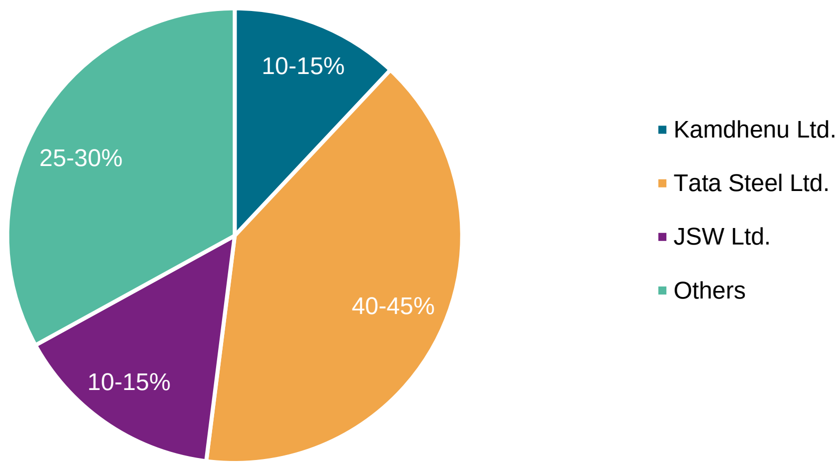


E: Estimated
P: Projected
Source: Industry, Crisil Intelligence

The coloured-roofing sheets industry in Bihar expanded at a CAGR of 14-15% over fiscals 2018-23 to 0.024 MT, driven by growing consumer preference to install coloured roofing sheets at homes and warehouses. The extra layer of colour in these sheets adds to looks and aesthetics. Moreover, it contributes to better protection and corrosion resistance, making it a preferred choice over GC sheets.Further, an uptick in building construction in Bihar, caused by a mass exodus of people to their hometowns in Bihar from other states after the announcement of lockdowns also contributed to growth in demand for coloured roofing sheets during the period. Demand for coloured roofing sheets stood ~0.030 MT for fiscal 2024, an on-year increase in growth by 25.0%.

Coloured roofing sheets are expected to continue to log a healthy CAGR of 16.5-17.5% over fiscals 2024-28. An expected increase in the number of warehouses in Bihar over the next few fiscals will also contribute to demand growth of coloured roofing sheets in the state.

Player-wise market share (coloured roofing sheets – Bihar Fiscal 2024)

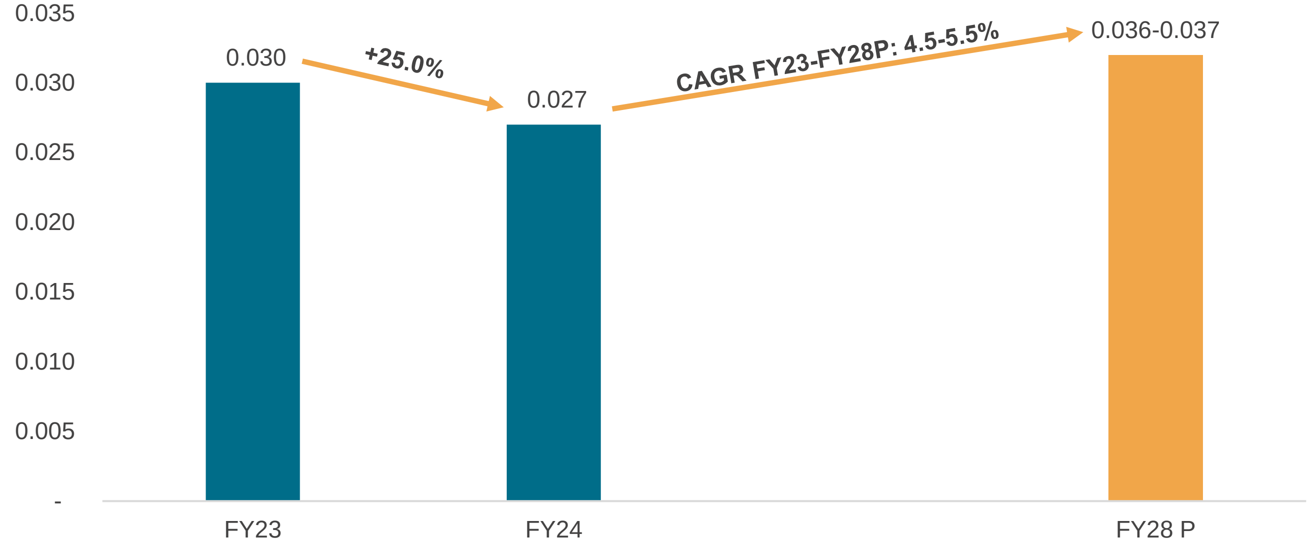


Note: 'Others' includes established players such as Steel Authority of India Ltd, and local players such as Surya Steel and Aarti Steels
Source: Industry, Crisil Intelligence

In fiscal 2024, Tata Steel Ltd was the single-largest seller of coloured roofing sheets in Bihar, with a market share of 40-45%, followed by JSW Ltd (10-15%) and Kamdhenu Ltd (10-15%).

6.5 Assessment of galvanised plain sheets industry

GP sheets demand review and outlook in Bihar (MTPA)

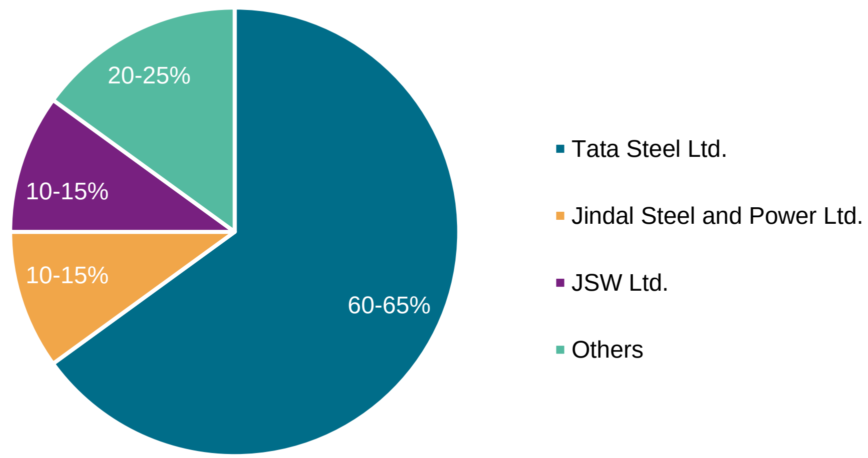


E: Estimated
P: Projected
Source: Industry, Crisil Intelligence

The galvanised plain (GP) sheets industry stood at 0.030 MT in fiscal 2023. Demand for GP sheets in Bihar declined by 10% in fiscal 2024 and stood at 0.030MT as the overall market for steel products was down and the production of storage tanks and cans used for beverages declined due to change is consumer preferences.

GP sheets are expected to grow at a CAGR of 4.5-5.5% over fiscals 2024-2028 to reach ~0.036-0.037 MT, driven by improved sentiment of construction, agricultural equipment and automobile sector in Bihar.

Player-wise market share (GP sheets – Bihar Fiscal 2024)

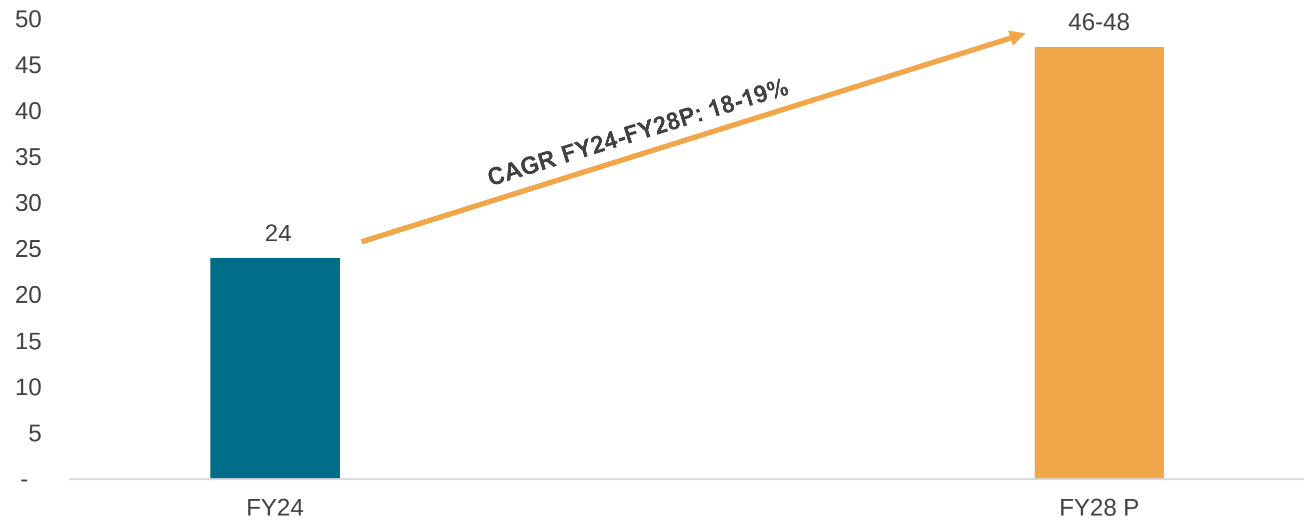


Note: 'Others' includes established players, such as Steel Authority of India Ltd, and local players, such as Surya Steel and Aarti Steels
Source: Industry, Crisil Intelligence

In fiscal 2022, Tata Steel Ltd was the single-largest seller of GP sheets in Bihar, with a market share of 60-65%, followed by JSW Ltd (10-15%) and JSPL (10-15%).

6.6 Assessment of prefabricated engineered buildings (PEB) industry

PEB demand outlook in Bihar (000's)



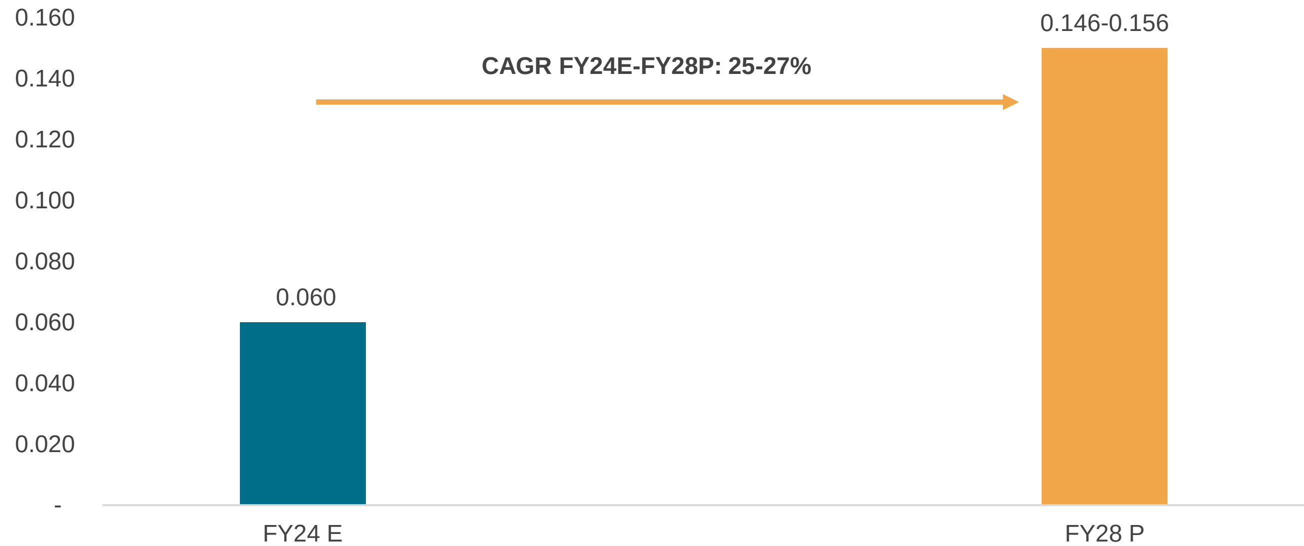
E: Estimated
P: Projected
Source: Industry, Crisil Intelligence

Demand for prefabricated engineered buildings in Bihar stood at 24 thousand units for fiscal 2024. This demand is expected to grow significantly at a CAGR of 18-19% to 46-48 thousand units in fiscal 2028, driven by an increase in demand for warehousing facilities and factory sheds in Bihar.

Farm produce is sold throughout the country and throughout the year. Warehousing facilities protect the crop from environmental and pest-related damage, thus acting as a catalyst for demand for prefabricated shed, currently being met from other states such as Punjab, Uttar Pradesh and Gujarat.

6.7 Assessment of the steel girders industry

Steel girders demand outlook in Bihar (MTPA)



E: Estimated
P: Projected
Source: Industry, Crisil Intelligence

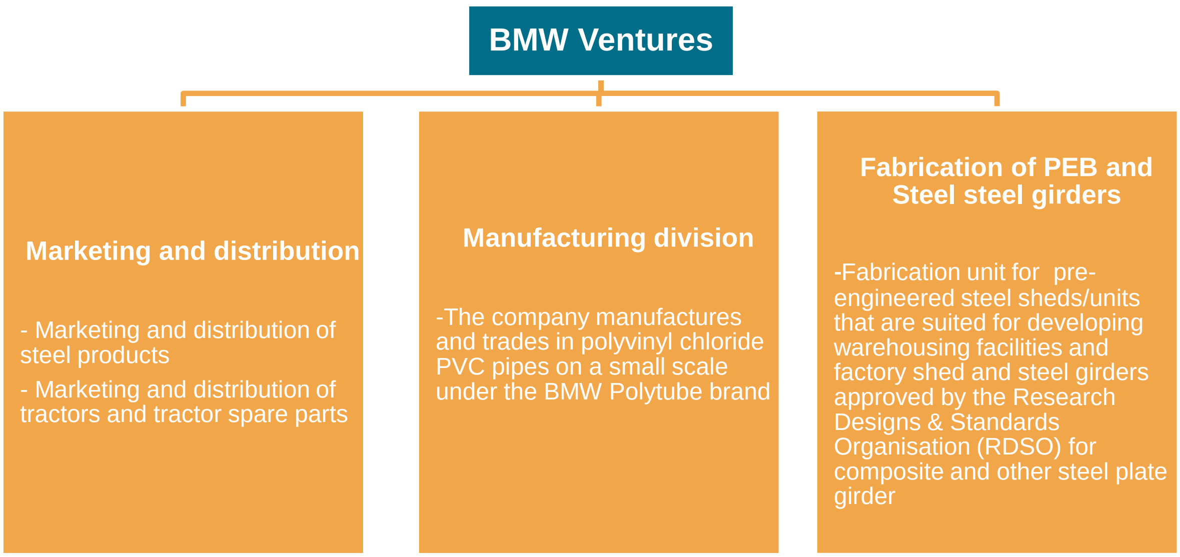
Demand for the steel girders industry is estimated at 0.060 MT in fiscal 2024 and is projected to increase at a CAGR of ~25-27% over fiscals 2024-2028 to ~0.146-0.156 MT in fiscal 2028.

The projected demand for 2028 is majorly driven by overall construction and infrastructure development in Eastern India, especially in Bihar due to higher spending on the projects in railways, including the construction of new railway bridges, overpasses, and other structures.

7. Company profile: BMW Ventures Ltd

Incorporated as a public limited company in Bihar, BMW Ventures Ltd obtained the certificate of commencement of business on October 19, 1994. It is promoted by Bijay Kumar Kishorepuria, Nitin Kishorepuria, Sabita Devi Kishorepuria and Rachna Kishorepuria.

Business segments



Source: Industry, BMW Ventures

7.1.1 Business segments

1. Marketing and distribution

Steel products: The company is the authorized distributor of long and flat steel products in over 29 districts (of 38 districts) in Bihar. It has established a strong marketing and sales network of over 1,250+ dealers (both exclusive and non-exclusive) in the state over the years. Steel products in the company's portfolio include TMT reinforced bars, GC sheets, hot-rolled (HR) sheets, cold-rolled (CR) sheets, galvanised plain (GP) sheets, steel wires, steel hollow pipes, farm tools and equipment, and steel doors and windows. Its primary supplier is one of the leading steel and allied products manufacturers globally.

The company has also set up a processing unit at its stockyard, where stirrups, GP and HR sheets are cut to custom lengths and distributed to the dealers.

Note: The processing unit has been set up in line with the requirements of the company's principal supplier.

Tractor Engines: The company procures tractor engines from John Deere India Pvt Ltd and markets, distributes and sells in Bihar.

2. Manufacturing of PVC pipes

The company manufactures and trades in PVC pipes on a small scale under the BMW Polytube brand.

3. Fabrication Business

BMW Ventures' fabrication division specializes in the fabrication of Pre-Engineered Buildings (PEBs) and Steel Bridge Girders, both of which play a crucial role in the construction industry. This division operates from our Purnea unit, which spans a total area of 5,44,600 sq. ft., with 1,76,560 sq. ft. dedicated to fabrication activities.

Of this, 88,280 sq. ft. has received approval from the Research Designs and Standards Organization (RDSO) for the fabrication of composite and other steel structures, including steel girders.

Pre-Engineered Buildings (PEB): In response to the surging demand for warehousing infrastructure in Bihar, the company ventured into offering comprehensive turnkey solutions and delving into the manufacturing of Pre-Engineered Steel buildings. The company's manufacturing initiative is centered on producing pre-engineered steel sheds and units tailored specifically for warehousing facilities and factory sheds. The trial phase began in November 2022, and commercial production officially commenced in April 2023. The company's PEB unit in Purnea has a fabrication capacity of 12,000 MT per annum, enabling us to meet the increasing market demand efficiently.

The primary raw materials utilized in this manufacturing process include HR Plates, GI Coils, and Colour Coating Coils. The strategic focus on Bihar stems from the fact that the prevailing demand for Prefabricated Sheds/Units in the state is predominantly met by suppliers from other states, notably Punjab, Uttar Pradesh, and Gujarat.

Bihar, as the second most populous state in India, represents a significant market for such initiatives. With over 80.00% of the state's populace engaged in agricultural activities, there exists considerable potential for the development of high-quality and secure warehousing facilities. Given Bihar's pivotal role as a major producer of fruits and vegetables distributed nationwide, the imperative for warehousing facilities to safeguard crops from environmental and pest-related risks is pronounced. This dynamic significantly propels the escalating demand for Prefabricated Sheds in the region.

Moreover, beyond merely providing storage for agricultural produce, BMW Ventures' warehousing facility addresses the broader requisites of industrial output. It encompasses essential services such as sorting, packaging, order processing, and distribution, aligning seamlessly with the multifaceted needs of both the agricultural and industrial sectors in Bihar.

Steel Girders: The steel girder business encompasses the process of manufacturing, supplying, and occasionally installing steel girders, an integral structural element utilized in construction to bear loads, such as supporting beams in a bridge or framing in a building. Steel girders serve as essential horizontal supports, providing pivotal strength and stability to diverse structures. Capitalizing on the robust growth in construction and infrastructure development, particularly in Eastern India and specifically in Bihar, the company has established a dedicated Steel Girder unit in Purnea. the Steel Girder fabrication unit at Purnea, Bihar, has a fabrication capacity of 12,000 MT per annum.

Recognizing the surge in expansion projects within the railway sector, encompassing the construction of new railway bridges, overpasses, and various structures, BMW Ventures' unit has obtained approval from the Research Designs and Standards Organization (RDSO). This approval positions us as the sole and inaugural vendor authorized by the Indian Railways in Bihar, underscoring our commitment to quality and compliance. The principal raw material for our steel girder manufacturing process is HR Plate, emphasizing our dedication to utilizing high-quality materials in the production process. This strategic positioning aligns with our objective to contribute effectively to the construction landscape and infrastructure growth in Bihar and the broader Eastern India region.

7.1.2 Management Profile

A. Promoters/directors

1. Nitin Kishorepuria

Nitin Kishorepuria is the Promoter and Managing Director of our Company. He holds a Postgraduate Diploma in Business Management with a focus on marketing and systems from the International School of Business & Media in Pune. He is presently responsible for overseeing the company's sales and marketing strategies. With approximately 20 years of experience in the trading of iron and steel products, he has been associated with the company since 2003.

2. Bijay Kumar Kishorepuria

Bijay Kumar Kishorepuria, is the Promoter, Chairman & Whole-Time Director of the Company. He completed his Matriculation from Patna University. He has been associated with our Company since its inception. With nearly three decades of experience in the trading of iron and steel products.

3. Sabita Devi Kishorepuria

Sabita Devi Kishorepuria is the Non-Executive Director of the Company. She completed her Matriculation from Patna University. Since October 1994, she has been an integral part of the company's board. She is overseeing projects related to Corporate Social Responsibility. Additionally, she also looks after the woman safety and the prevention of sexual harassment at our office and facilities.

4. Rachna Kishorepuria

Rachna Kishorepuria is a Promoter and Whole-Time Director of the Company. She holds a Bachelor's Degree in Arts from Patna University. She has been a member of the company's board since November 2006, she is primarily responsible for overseeing the Human Resource department.

B. Independent directors

1. Yogesh Tulsyan

Yogesh Tulsyan is an Independent Director of the Company. He is a Law Graduate from the University of Calcutta. He brings 42 years of Experience and legal acumen to the company's board. He specializes in legal matters pertaining to taxation.

2. CA. Sourabh Ajmera

Sourabh Ajmera is an Independent Director of the Company. He holds memberships with the Institute of Chartered Accountants of India, and he has completed his B. Com from Maharshi Dayanand Saraswati University (MDSU), Ajmer. He is a managing partner at Ajmera & Ajmera, Chartered Accountants. and his specializing in startup advisory, internal audit, and virtual CFO services. Additionally, he holds the position of Director at Dow Jones Consulting India Private Limited and Wall Street Journal India Publishing Private Limited. he has been associated with the company since August 06, 2022.

3. CA. Ravi Kant Jagetiya

Ravi Kant Jagetiya, is an Independent Director of the company. He is a member of the Institute of Chartered Accountants of India. He is the proprietor of R. K. Jagetiya & Co. (Chartered Accountant), He specialized in providing mentorship to Small and Medium Enterprises (SMEs) with a focus on fund raising through both primary and secondary markets, cost re-engineering, operational viability, bank audits, internal and system audits, risk-based internal audits, and management of income tax assessment proceedings for corporates. He contributes his expertise to the company's board. He has been associated with the company since August 06, 2022.

4. Arpit Kabra

Arpit Kabra is an Independent Director of the Company. He holds membership with the Institute of Chartered Accountants of India and holds the position of regional council member at the Western India Regional Council (WIRC). He specialized in a range of financial and auditing domains, including but not limited to bank audits, internal and system audits, risk-based internal audits, and the management of income tax assessment proceedings for corporate entities. His extensive expertise in these areas adds significant value to the company's governance and strategic oversight. He has been associated with the company since May 02, 2023.

7.1.3 Infrastructure details*

The company's storage facilities are detailed below:

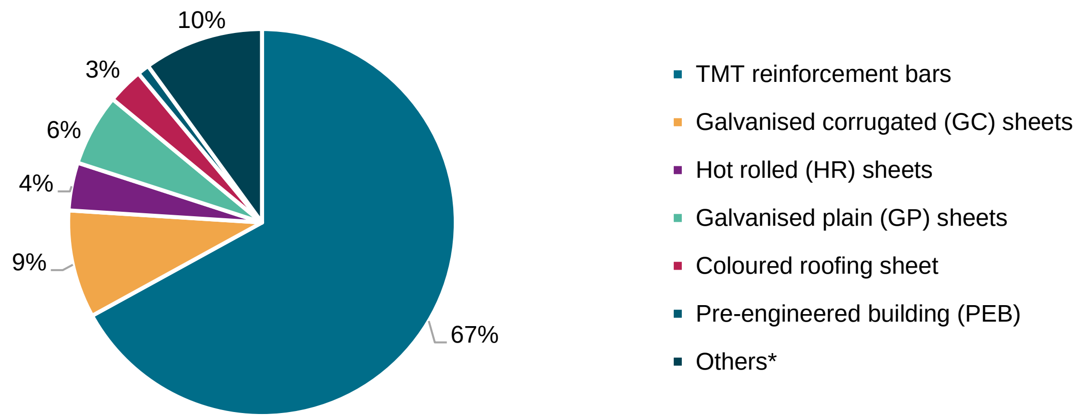
Address	Area (sq ft)	Details (leased/owned/rented/licensed)
Mauza Rajiganj, Pragna Haveli, Thana Sadar no-67, near Matia Chowk, opposite Tata Motors Ranipatra, Purnia, Bihar - 854337	544,600	Taken on a lease basis from Jagdamba Value Steel Pvt Ltd
Old Stockyard, N.H. 30, P.O. Baikatpur, p.s. Khusrupur, Fatuha, Patna, Bihar - 803202	147,936	Owned by the promoter and director, Bijay Kishorepuria, it has been granted on a lease basis
New Stockyard, 200 metre ahead of BP petrol pump, N.H. 30, P.O. Baikatpur, P.S. Khusrupur, Patna, Bihar – 803202	214,853	Owned by the promoter and director, Bijay Kumar Kishorepuria, Nitin Kishorepuria, Sabita Devi Kishorepuria, Rachna Kishorepuria and has been granted on a lease basis
8/1, Industrial Estate Road, Patliputra Patna, Patna, Bihar - 800013	16,485	Taken on a lease basis from Bihar Industrial Area Development Authority, Patna
9c, Patliputra Industrial Area Patna, Bihar - 800013	6,750	Taken on a lease basis from Bihar Industrial Area Development Authority, Patna
9c (part), Patliputra Industrial Area Patna, Bihar - 800013	8,250	Taken on a lease basis from Bihar Industrial Area Development Authority, Patna
Old NH 30, Mosimpur, Near Batuk Petrol Pump, PO, Khushrupur, Dist - Patna, 803203	2,29,980	Taken on a lease basis from Jai Basukinath Traders Pvt Ltd

Source: BMW Ventures

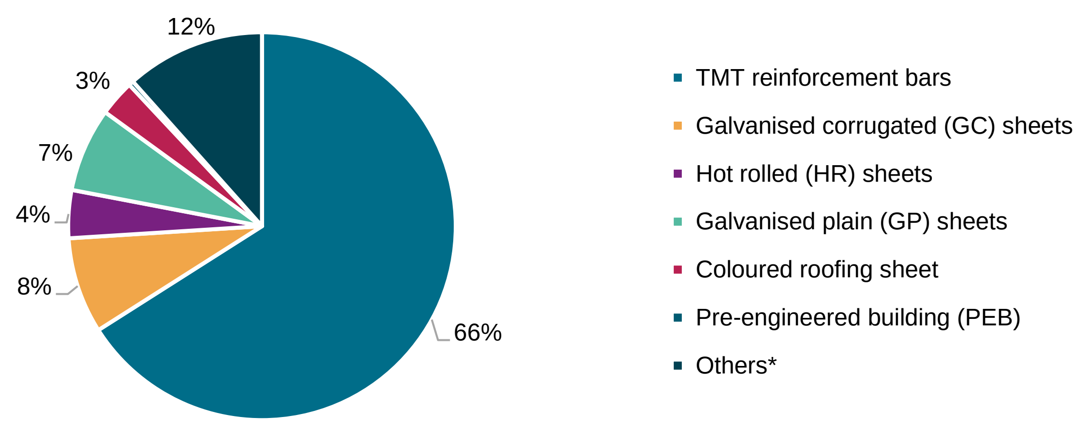
7.1.4 Business verticals

Product segment-wise operating revenue

Total operating revenue of Rs 193,820 lakh in FY24



Total operating revenue of Rs 147,718 lakh in FY25 till December'24



**Others includes: 1. Structura - Rectangular, Square and Circular Steel Hollow Sections. 2. Wire - Galvanized wires. 3. CR Sheet - Cold rolled Sheets & Coil. 4. Agrico -Hoes, shovels, sickles, crowbars, pickaxes and hammers. 5. Door - Residential & Commercial doors and windows, 6. Distribution of Engine & Spare parts, 7. PVC Pipes. 8.Steel Girders. 9. GP Sheet Blue Diamond. 10 Other Operating Income*

Source: BMW Ventures, Crisil Intelligence

TMT reinforcement bars is the company's largest product segment, accounting for 66% (~Rs 97,400 lakh) of revenues in fiscal 2025 till December, followed by GC sheets (8%; Rs 12,334 lakh).

Based on the revenue split between the product segments, the key focus products are:

Product	FY24 annual sales (tonne)	FY25 (till Dec'24) sales (tonne)
TMT reinforcement bars	206,100	154,256
GC sheets	19,556	14,076
HR sheets	15,215	11,811

Coloured roofing sheets	4,966	3,419
GP sheets	14,771	14,199

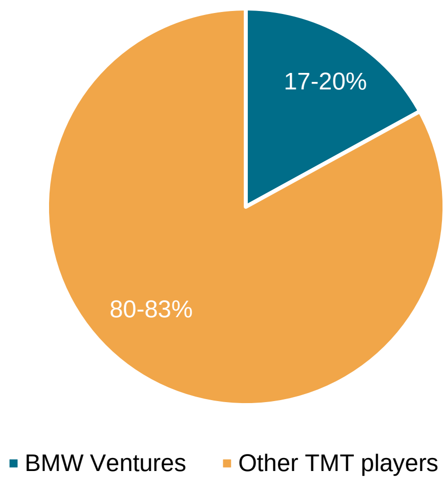
Source: BMW Ventures

7.1.5 Operational performance review

Focused product 1: TMT reinforcement bars

Market segregation

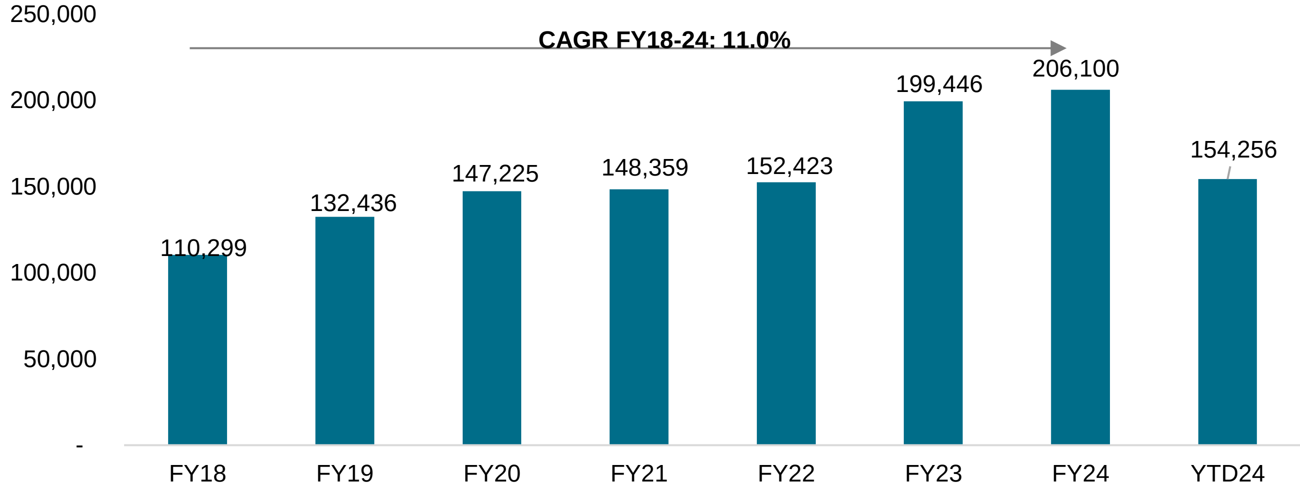
TMT reinforcement bar retail market segregation in Bihar in FY24: 1.08 MTPA



Source: Industry, Crisil Intelligence

Of the ~1.08-million tonne per annum (MTPA) TMT reinforcement bar market in Bihar as of fiscal 2024, BMW Ventures accounted for ~19% (~0.21 MTPA) of the TMT market in Bihar. The remaining ~81% (~0.87 MTPA) is occupied by distributors of other brands such as Kamdhenu, Balmukund, Captain, etc.

TMT reinforcement bar sales volume (tonne)

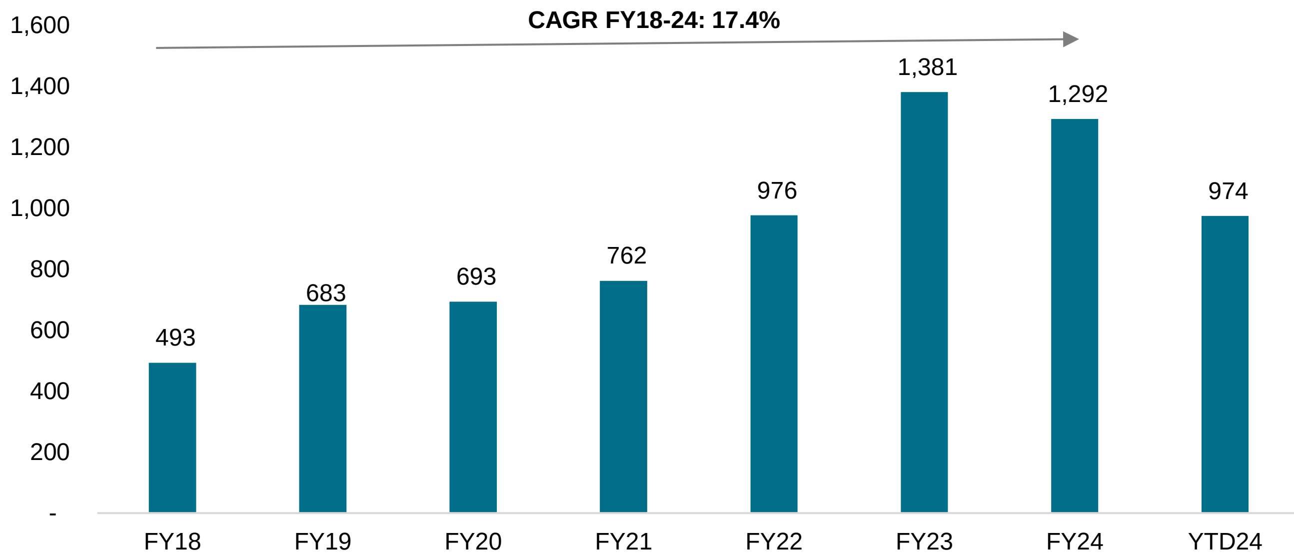


YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

TMT bars sales volume increased from 110,299 tonne in fiscal 2018 to 206,100 tonne in fiscal 2024, at CAGR of 11.0%. During this period, the overall sales volume has consistently trended up. The growth in sales volumes over the fiscals was led by increased infrastructure development under various government schemes for constructing national highways and railway networks in a bid to increase economic activity in the country. As of December, sales volume for the current fiscal totalled 154,256 tonne.

TMT reinforcement bars sales value (Rs crore)



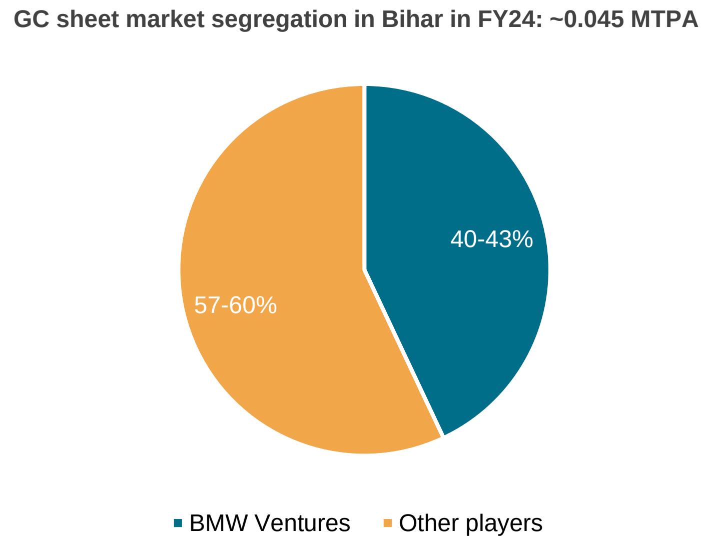
YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

While sales volume increased ~11.0% during the period, value increased at a CAGR of over 17.4% owing to fluctuating prices of steel in the international and domestic markets. The net annual sales for the fiscal 2024 amounted to Rs 1,292 crore. As of December, net annual sales for the current fiscal amounted to Rs 974 crore.

Focused product 2: GC sheets

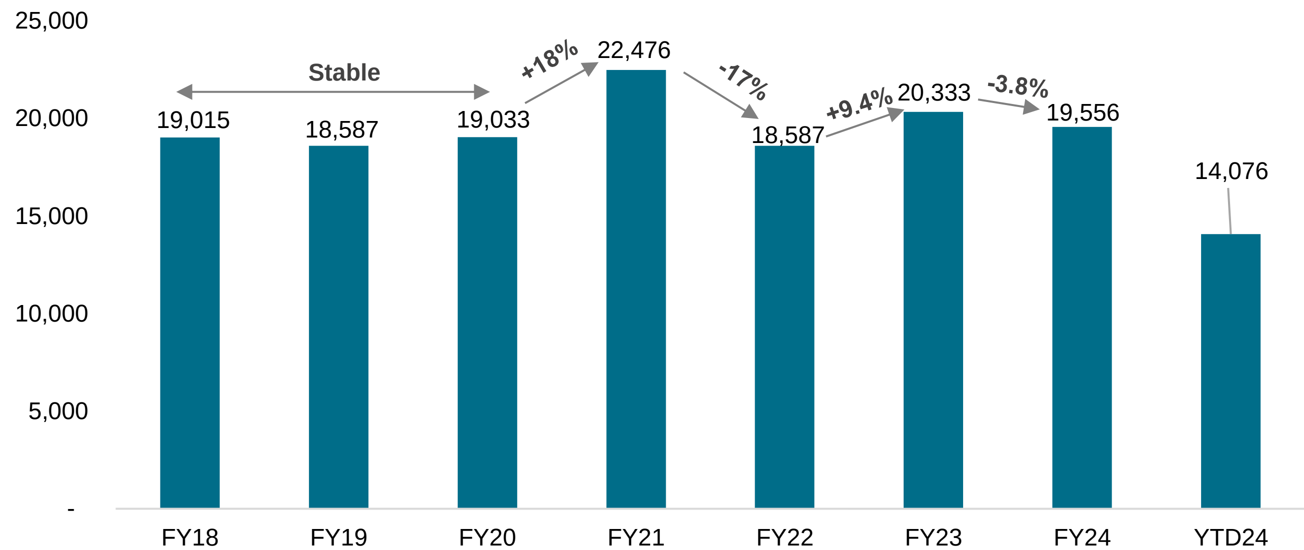
Market segregation



Source: Industry, Crisil Intelligence

Of the 0.045-MTPA GC sheets market in Bihar as of fiscal 2024, BMW Ventures accounts for ~40-43% (~0.020 MTPA). The remaining 57-60% (~0.025 MTPA) is occupied by others brand distributors like such as Kamdhenu, 5Star, Aarti Bhushan (Nepal), and Jindal India (primary brand competitor).

GC sheet sales volume (tonne)

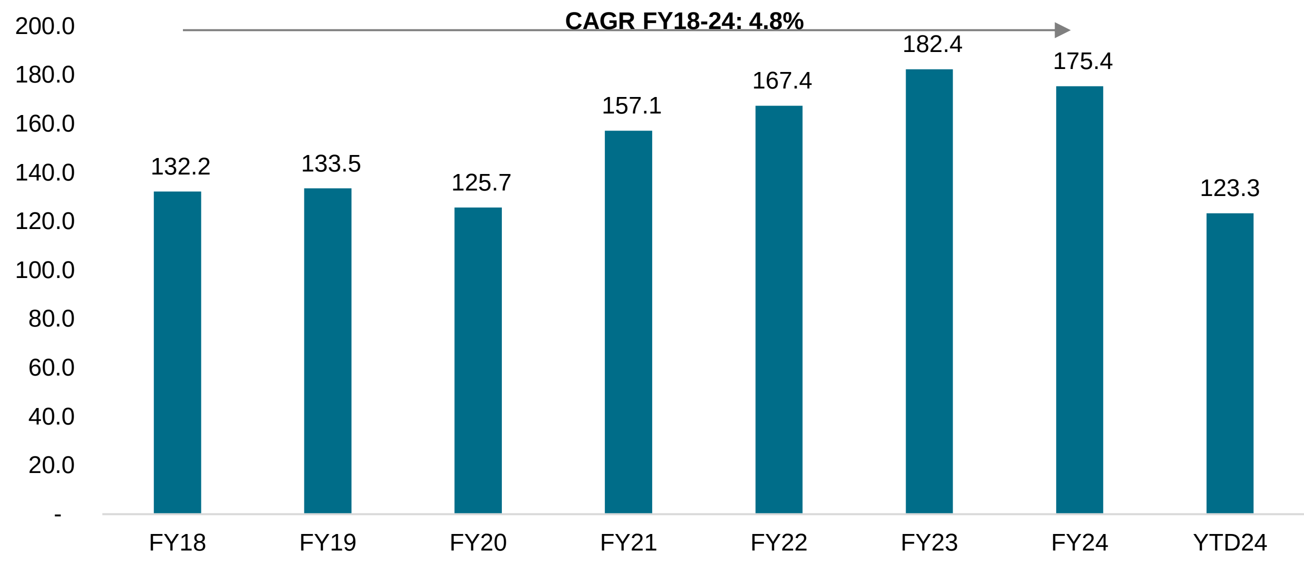


YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

BMW Ventures' GC sheet sales volume remained constant through fiscals 2018-2020. In fiscal 2021, however, sales volume improved by over 18% on-year owing to increase in house construction activities after people returned to their native places as a result of the lockdowns. In fiscal 2022, sales volume touched the pre-pandemic levels again after suffering an on-year dip of 17.3%. However, in fiscal 2023, sales increased 9.4% on-year to 20,333 tonne. In fiscal 2024, sales volume was 19,556 tonnes. As of December, sales volume for the current fiscal totalled 14,076 tonne.

GC sheet sales value (Rs crore)



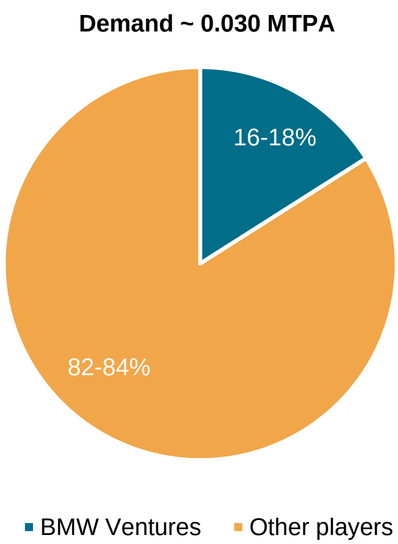
YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

The GC sheets segment's revenue increased at a CAGR of 4.8% between fiscals 2018 and 2024. Fiscal 2020 saw an on-year fall of over 6% even though sales volume increased slightly, owing to a sudden dip in the domestic steel prices in fiscals 2019-2020. In fiscal 2024, the revenues from sales of GC Sheets totalled Rs 175.4 crore. As of December, net annual sales for the current fiscal amounted to Rs 123.3 crores.

Focused product 3: Coloured roofing sheets

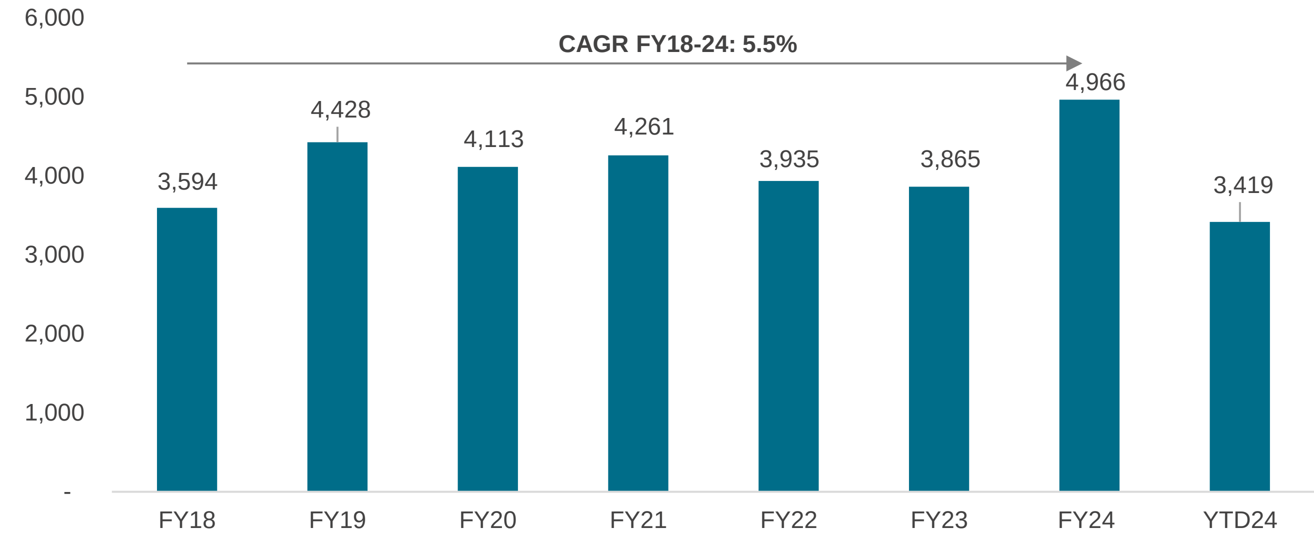
Coloured roofing sheet market segregation in Bihar (fiscal 2024)



Source: Industry, Crisil Intelligence

The coloured roofing sheets market in Bihar stood at around 0.030 million tonne per annum in fiscal 2024. Of this, BMW Ventures accounted for 16-18% (~0.005 MTPA). Other brands, such as Kamdhenu, Ultra Shine, Jindal etc., accounted for the balance 82-84% (~0.025 MTPA). Jindal was the market leader.

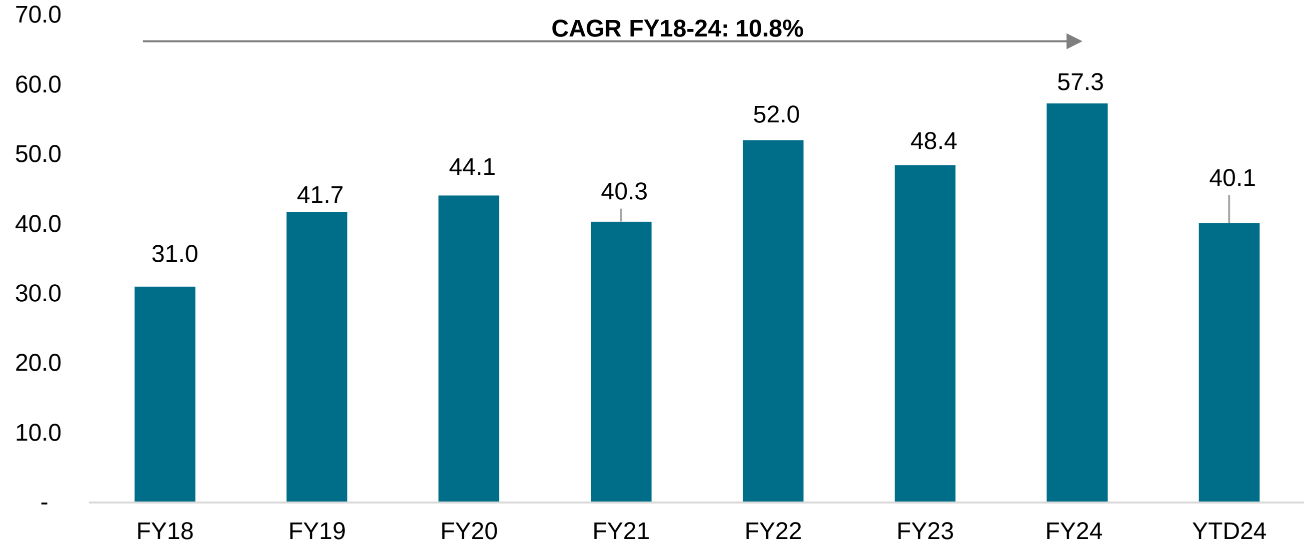
BMW Ventures' coloured roofing sheets sales over fiscals 2014-2024 (tonne)



YTD: Fiscal 2025 till December'24
Source: BMW Ventures, Crisil Intelligence

Annual sales of colour roofing sheets increased from 3,594 metric tonne to 4,428 metric tonne from fiscal 2018 to 2019 owing to the company's sharpened focus on the product. The sales volume dipped in 2020 to 4,113 metric tonnes, however, in fiscal 2021, the volume rose 3.6% on-year owing to a spike in construction activities with urban labourers returning to their native places during the Covid-19 lockdowns. The sales volume dipped slightly in fiscals 2022 and 2023. In fiscal 2024, the sales volume for coloured roofing reached al was 2,950 tonnes, an on-year increase in sales by 28.2%. Over fiscals 2018-2024, the sales for coloured roofing sheets increased at a CAGR of 5.5%. As of December, sales volume for the current fiscal totalled 3,419 tonne.

BMW Ventures' coloured roofing sheets sales over fiscals 2014-2024 (Rs crore)



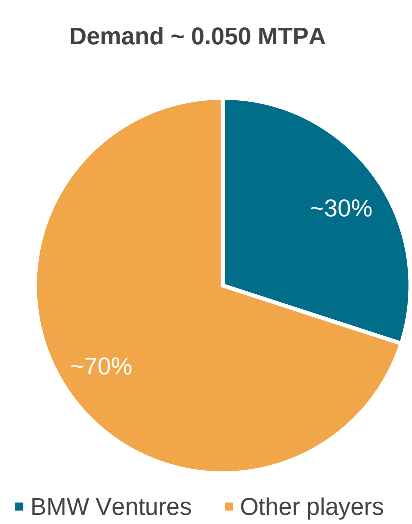
YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

Typically, the prices of coloured roofing sheets do not see sizable fluctuations. Even though the sales volume declined marginally in fiscal 2022, a recovery in overall steel prices during the fiscal from the lows observed in the previous two fiscals boosted the revenue from the coloured roofing sheets segment over 29% on-year. In fiscal 2023, the revenue fell 6.8% even though the sales volumes decreased just by 1.8%. The revenue for the current fiscal stood at Rs 57.3 crore. The company logged a CAGR of 10.8% in revenue from the segment between fiscals 2018 and 2024, much higher than the CAGR for sales volume of 5.5%, highlight increase in the average realisations. As of December, net annual sales for the current fiscal amounted to Rs 40.1 crores.

Focused product 4: Hot rolled (HR) sheets

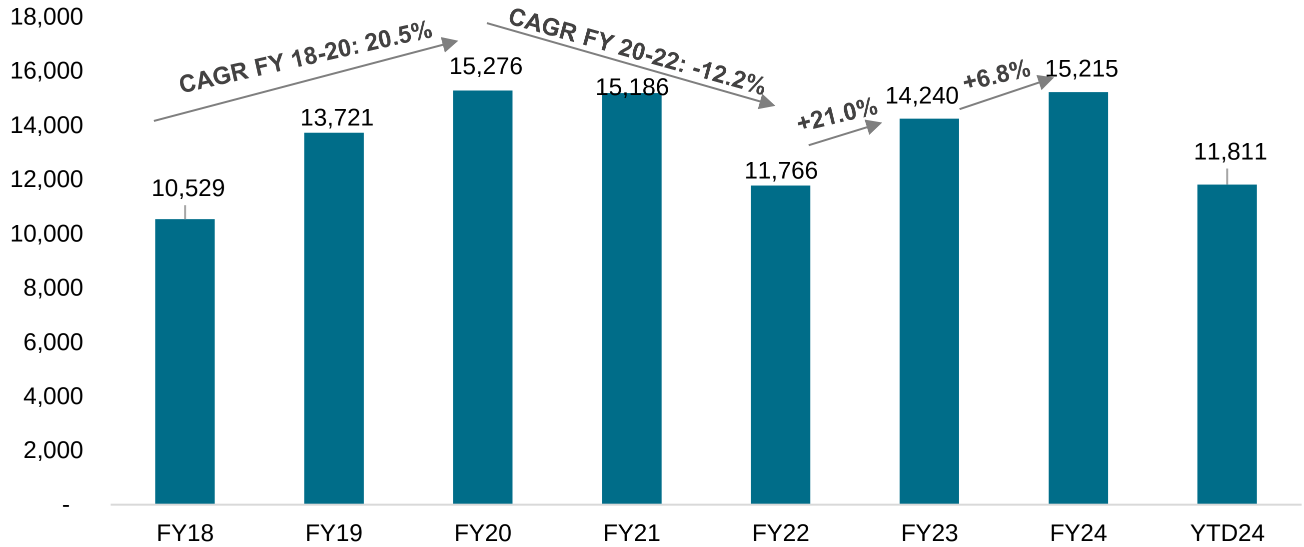
HR sheet market segregation in Bihar (fiscal 2024)



Source: Industry, Crisil Intelligence

The HR sheets market in Bihar stood at around 0.050 MTPA in fiscal 2024. Of this, BMW Ventures accounted for 33-35% (~0.015 MTPA). Distributors of other brands such as Sail, Bokaro etc. accounted for the balance ~70% (~0.035 MTPA).

Sales of HR sheets over fiscals 2018-2024 (tonne)

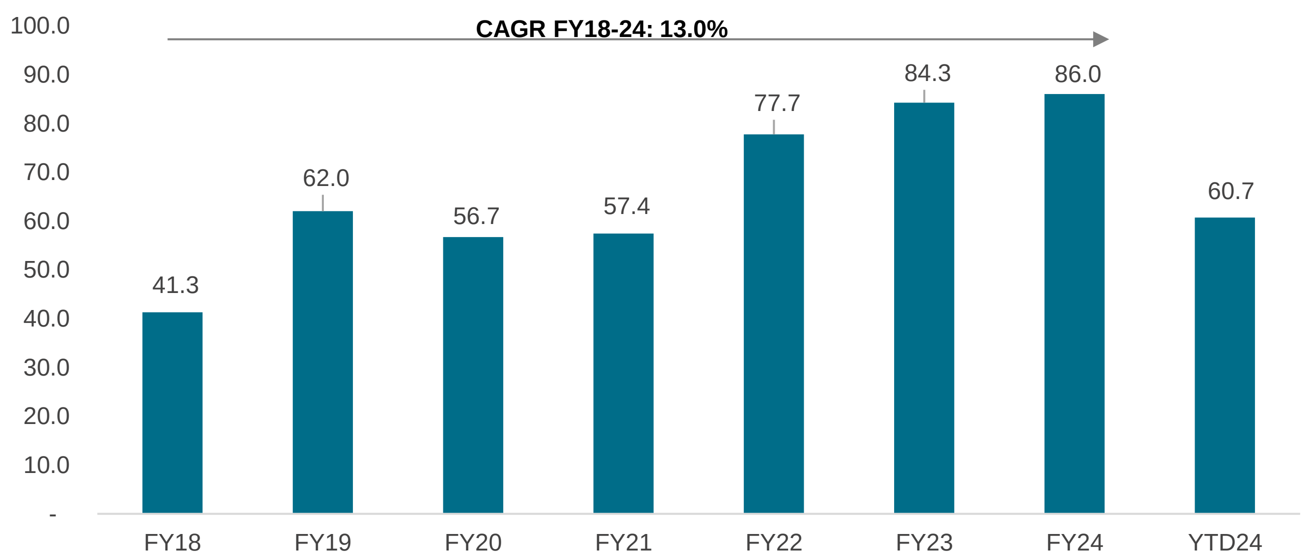


YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

The company's sales of HR sheets rose from 10,529 tonne in fiscal 2018 to 15,276 tonne in fiscal 2020, logging a CAGR of 20.5%. However, during fiscals 2020-2022, the volume fell 12.2% on a compounded basis to 11,766 tonne, owing to pandemic-related demand disruption. The annual sales volume increased 21.0% on-year in fiscal 2023 to 14,240 million tonne. Sales volume reached 15215 tonne in fiscal 2024, an on-year increase of 6.8%. As of December, sales volume for the current fiscal totalled 11,811 tonne.

Sales of HR sheets over fiscals 2014-2024 (Rs crore)



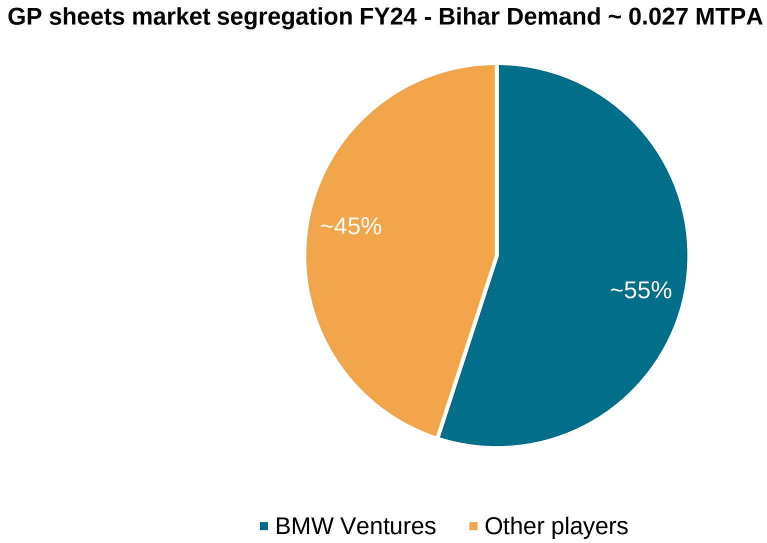
YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

The company logged a CAGR of 13.0% in revenue from the HR sheets segment between fiscals 2018 and 2024, increasing from Rs 41.3 crore in fiscal 2018 to 86.0 crore in fiscal 2024. As of December, net annual sales for the current fiscal amounted to Rs 60.7 crores.

Focused product 5: GP Sheets

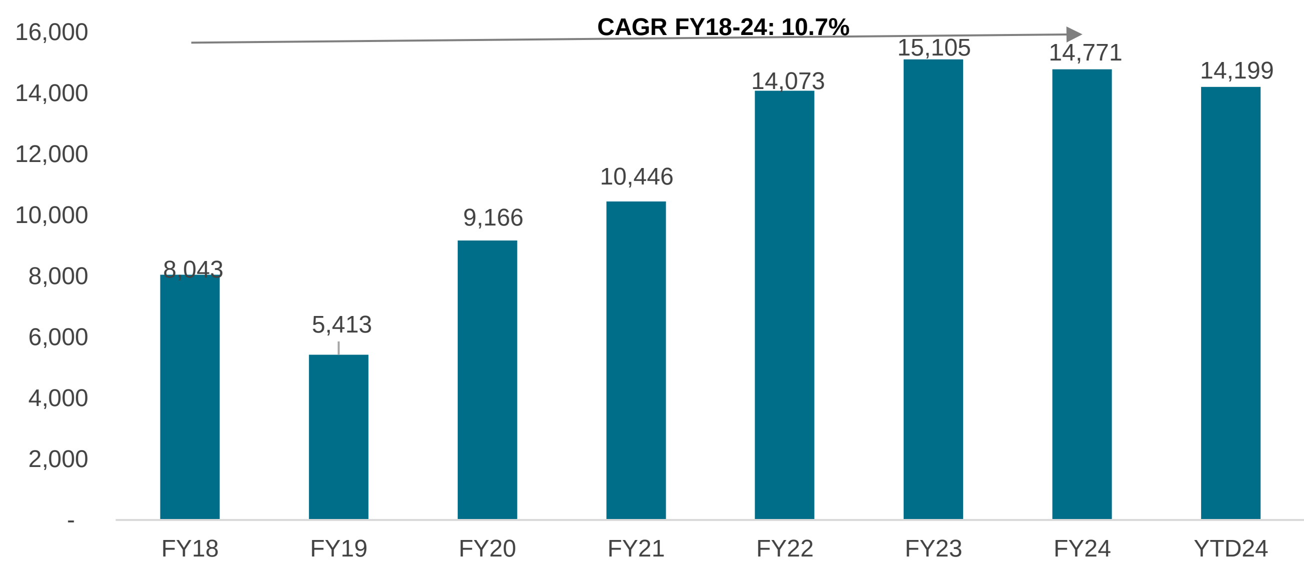
GP sheets market segregation in Bihar (fiscal 2024)



Source: Industry, Crisil Intelligence

The GP sheets market in Bihar stood at around 0.027 MTPA in fiscal 2024. Out this, BMW Ventures accounted for around ~55% (~0.015MTPA). Small and local distributors accounted for the balance.

BMW Ventures' GP sheets sales over fiscals 2018-2024 (tonne)



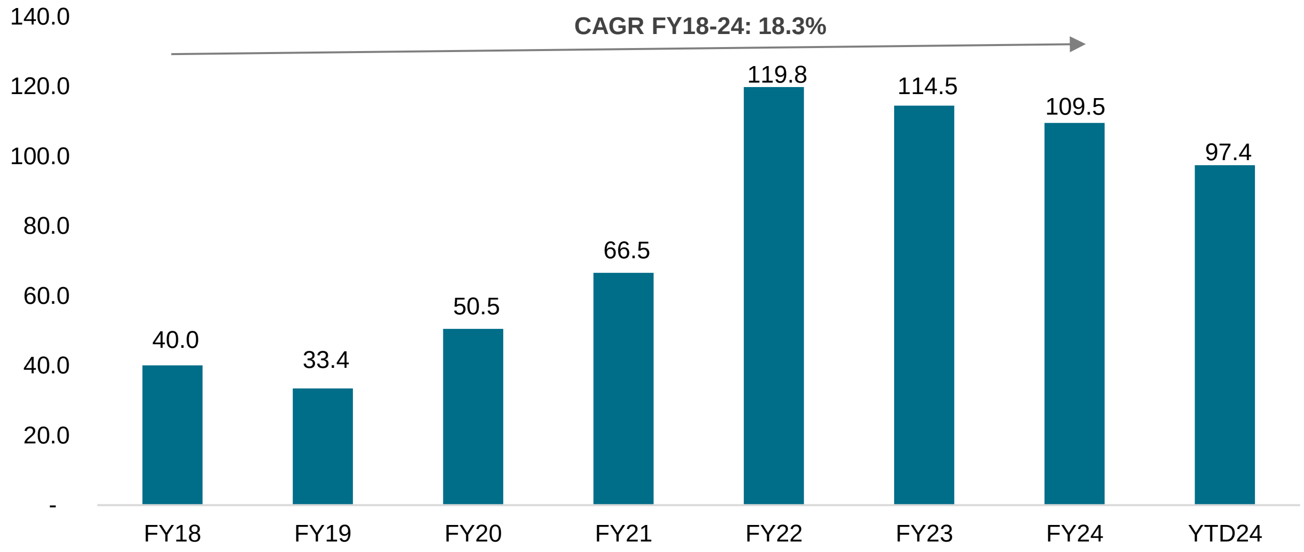
YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

Crisil Intelligence

The company's sales of GP sheets rose from 8,043 tonne in fiscal 2018 to 14,771 tonne in fiscal 2024 logging a CAGR of 10.7%. As of December, sales volume for the current fiscal totalled 14,199 tonne.

BMW Ventures' GP sheet sales over fiscals 2018-2024 (Rs crore)



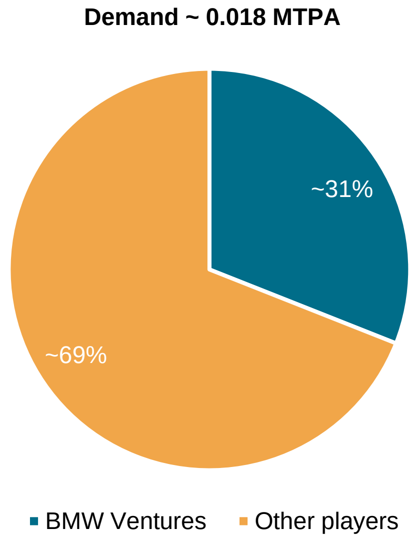
YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

The company's revenue from the GP sheets segment logged a CAGR of over 18.3% during fiscals 2018-2023, increasing from Rs 40.0 crore in fiscal 2018 to Rs 109.5 crore in fiscal 2024. The average realisations increased faster than the volume sales of GP sheets. As of December, net annual sales for the current fiscal amounted to Rs 97.4 crores.

Focused product 6: CR sheets

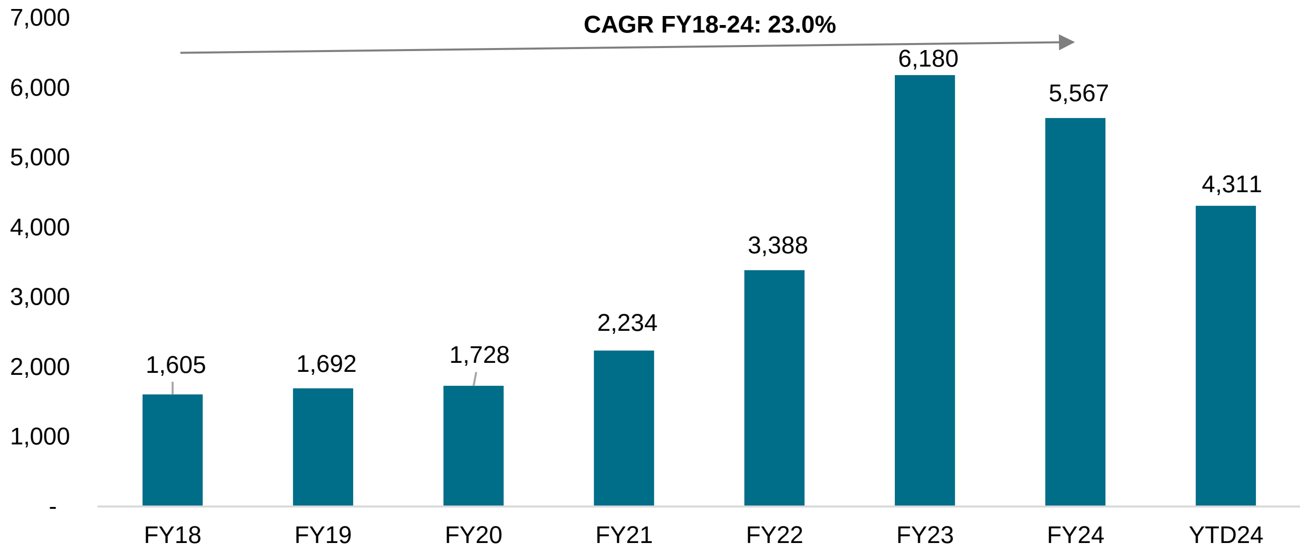
CR sheets market segregation in Bihar (fiscal 2024)



Source: Industry, Crisil Intelligence

The CR sheets market in Bihar stood at around 0.018 million tonne per annum in fiscal 2024. Of this, BMW Ventures accounted for around 31% (~0.006 MTPA). Brands such as SAIL, Bhushan Power etc. accounted for the balance 69% (~0.012 MTPA).

BMW Ventures' sales of CR sheets over fiscals 2018-2024 (tonne)

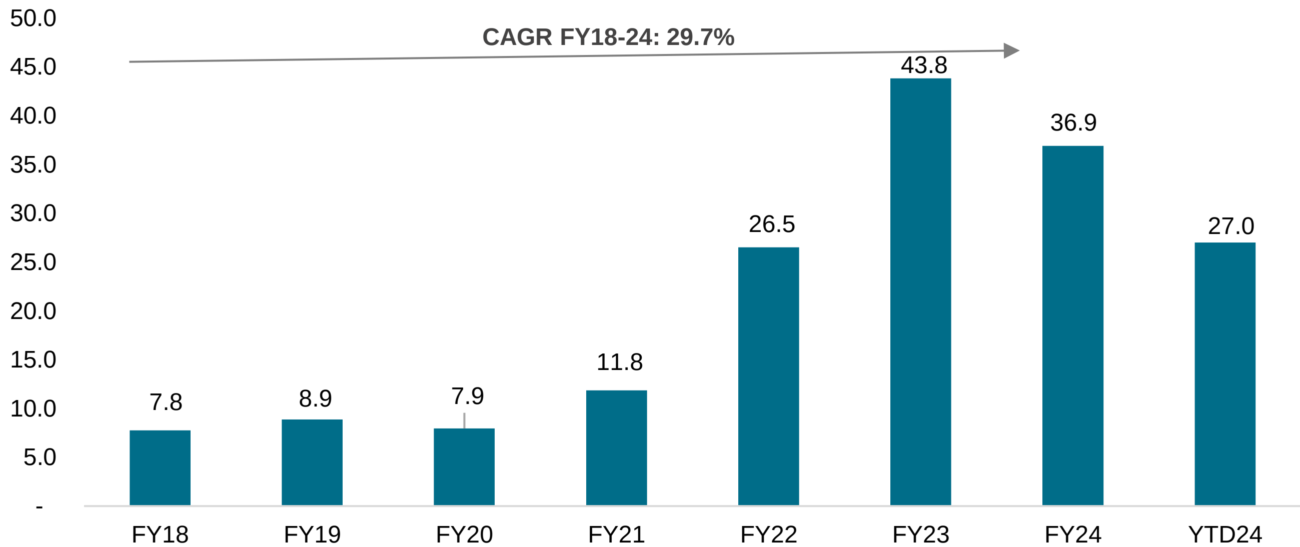


YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

The company's sales of CR sheets rose from 1,605 tonne in fiscal 2018 to 5,567 tonne in fiscal 2024 increasing many fold at a CAGR of 23.0%. As of December, sales volume for the current fiscal totalled 4,311 tonne.

BMW Ventures' sales of CR sheets over fiscals 2018-2024 (Rs crore)



YTD: Fiscal 2025 till December'24

Source: BMW Ventures, Crisil Intelligence

The company's revenue from the CR sheets segment increased from Rs 7.8 crore in fiscal 2018 to Rs 36.9 crore in fiscal

2024, mirroring the trend in CR sales volume over the period and clogging a significant CAGR of 29.7%. As of December, net annual sales for the current fiscal amounted to Rs 27.0 crores.

Value-chain analysis of BMW Ventures' focused products

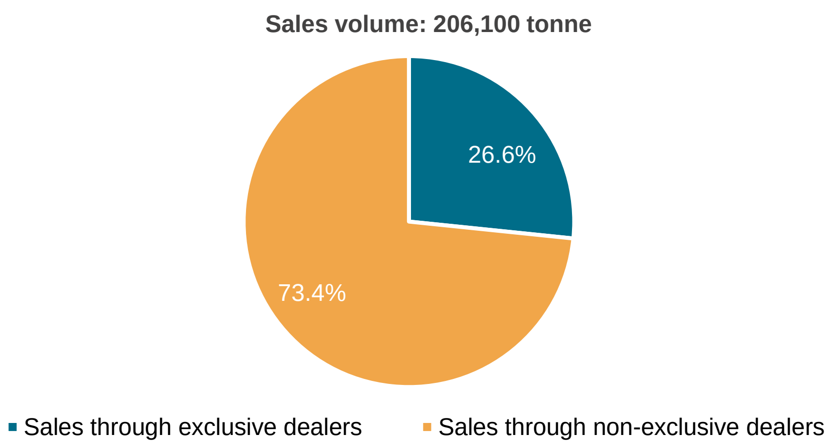
Product category of BMW Ventures	No of districts in Bihar with BMW Ventures dealership in December'24 (total districts – 38)	No of dealers in Bihar in FY25 till December'24		
		Exclusive dealers	Non-exclusive dealers	Total dealers
TMT reinforcement bars	29	137	801	938
GC sheets	29	21	232	253
GP sheets	31	-	160	163
HR sheets and coils	38	-	160	163
CR sheets and coils	31	-	150	151
Coloured roofing sheets	29	-	220	225

Source: BMW Ventures, Crisil Intelligence

The company's HR sheets and coils segment has dealerships in all the districts in Bihar. Of its six business segments, the TMT reinforcement bar segment has the highest number of dealers in the state — 938 as of December 2024, a sharp jump from 299 in fiscal 2013. Of the 938 dealers, 137 (~15%) are exclusive and the balance 801 are non-exclusive.

Similarly, of its 253 GC sheets dealers in the state, 21 (8%) are exclusive. The company has 225 dealers for coloured roofing sheets in the state, 163 for GP sheets, 151 for CR sheets and 163 for HR sheets and coils.

TMT bars sales breakup across 29 districts in Bihar in fiscal 2024 (tonne)



Source: BMW Ventures, Crisil Intelligence

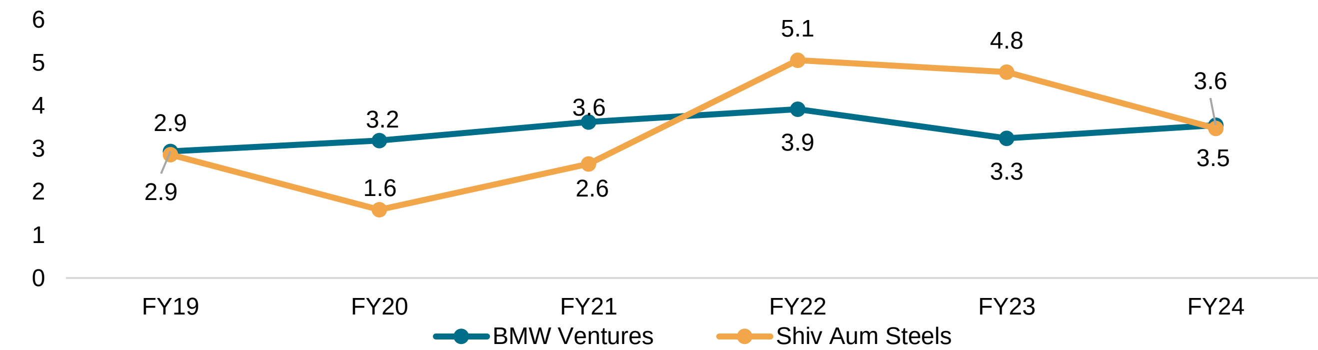
BMW Ventures has TMT reinforcement bar dealerships in 29 of 38 districts of Bihar. The company sold 206,100 tonne of TMT bars in fiscal 2024. Of this, 54,897 tonnes, or 26.6%, was sold by exclusive dealers.

Competition benchmarking

To benchmark the performance of BMW Ventures, a comparison has been drawn across profitability, liquidity, and leverage parameters across its peer- Shiv Aum Steels Limited, involved in similar kind of business and having the operational capabilities in the comparable range of BMW Ventures along with similar product offerings.

Profitability parameters

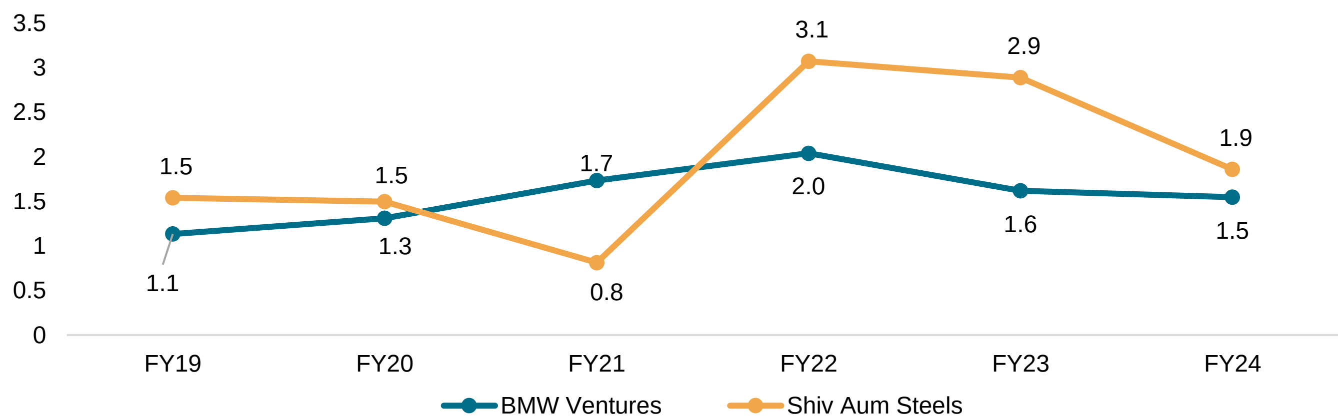
Comparison of operating profit margin (in %)



Source: BMW Ventures, Crisil Intelligence

Over fiscals 2019 to 2024, BMW Ventures' OPM remained higher or at par when compared to its peer. This indicates that BMW ventures has effectively managed its performance metrics, outperforming its competitor in mitigating the impact on its operating profit margins in those years. Looking at the OPM, both BMW Ventures and Shiv Aum Steels started at 2.9% in FY19. But their paths diverged. Shiv Aum Steels' margin dropped to 1.6% in FY20, then jumped to 5.1% in FY22, and finally settled at 3.5% in FY24. In contrast, BMW Ventures showed more stability, steadily increasing to 3.9% in FY22 and ending at 3.6% in FY24. A consistent upward trend, with only a minor dip to 3.3% in FY23. Overall, BMW Ventures seems to have a more predictable profit margin trajectory.

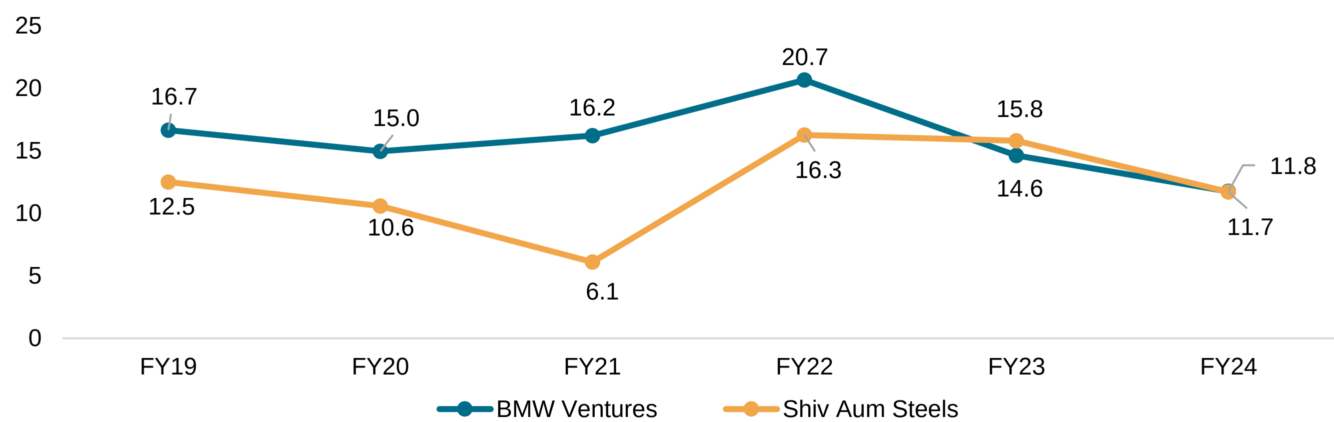
Comparison of net profit margin (in %)



Sources: Company financials, Crisil Intelligence
NOTE: For fiscals 2019, 2020 and 2021, PAT value has been taken as per the audited financials of BMW Ventures which has adjusted PAT post considering the provisions for CSR and stood at Rs.1,257 lakhs, Rs. 1,486 lakhs and Rs. 2,203 lakhs for fiscal 2019, 2020 and 2021 respectively.

BMW Ventures net profit margin (NPM) increased from 1.1% in fiscal 2019 to 1.5% in fiscal 2024. The company has effectively managed to maintain its NPM within a range of 1.1-2.0%, showcasing effective financial management and resilience in challenging environment. BMW Ventures started with a margin of 1.1% in FY19 and gradually increased it to 2.0% by FY22, before it slipped to 1.5% in FY24. Shiv Aum Steels, on the other hand, began with a higher margin of 1.5% in FY19, but it was more volatile - it dropped to 0.8% in FY21, then spiked to 3.1% in FY22, and finally settled at 1.9% in FY24. Overall, BMW Ventures' net profit margin has been more consistent, with smaller fluctuations compared to Shiv Aum Steels.

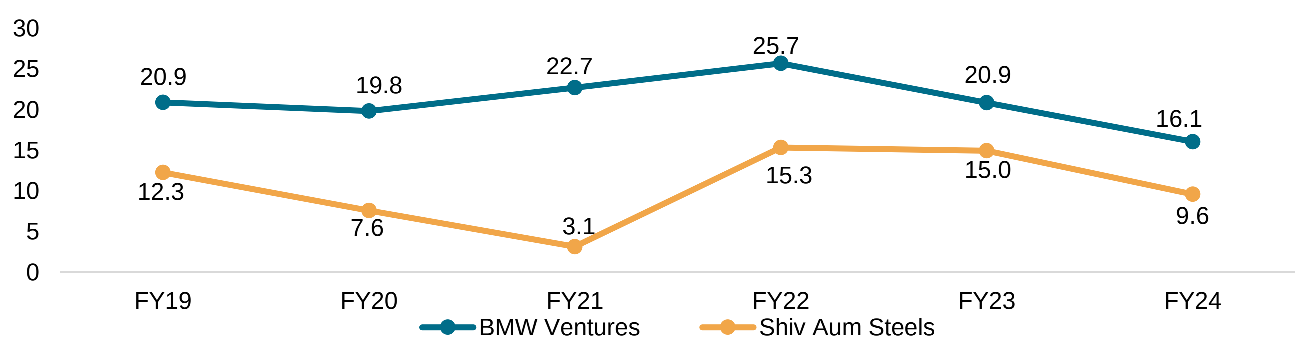
Comparison of return on capital employed (in times)



Sources: Company financials, Crisil Intelligence

BMW Ventures has consistently demonstrated superior performance in return on capital employed (ROCE) compared to its peer. In fiscal 2019, BMW Ventures' ROCE was 16.7 times, significantly higher than Shiv Aum Steels' 12.5 times. The company maintained its lead throughout fiscals 2019 to 2022. BMW Ventures stands out with its strong performance, starting at 16.7 in FY19 and peaking at 20.7 in FY22. Although it declined to 11.8 in FY24, its overall numbers are still impressive. In contrast, Shiv Aum Steels started lower at 12.5 in FY19 and had a tougher time, particularly in FY21 with a ROCE of just 6.1. While it's bounced back since, BMW Ventures' ROCE has generally been higher over the years, showcasing its ability to generate better returns on capital. BMW Ventures' robust ROCE highlights its strong capital efficiency and superior financial management.

Comparison of return on equity (in %)

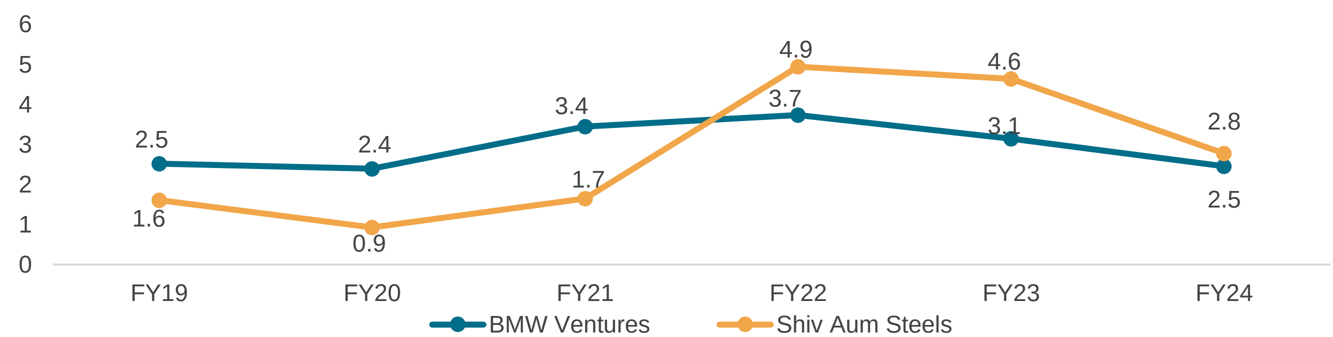


Sources: Company financials, Crisil Intelligence

BMW Ventures has shown superior performance in return on equity (ROE) over the years and have maintained a consistency in its ROE throughout fiscals 2019 to 2024, where its ROE remained with-in a range of 19.8-25.7%, peaking at 25.7% in FY22, although it did dip to 16.1% in FY24. In contrast, Shiv Aum Steels has struggled to match that level, with its ROE ranging from a low of 3.1% in FY21 to a high of 15.3% in FY22 and ending at 9.6% in FY24. What's notable is that BMW Ventures' ROE has been remarkably stable, with only a few percentage points of variation, while Shiv Aum Steels has seen much wider swings. This suggests that BMW Ventures is doing a better job of generating strong returns for its shareholders. In fiscal 2019, it's ROE was 20.9%, significantly ahead of Shiv Aum Steels' 12.3%. By fiscal 2023, BMW Venture's ROE demonstrated resilience, recording 20.9%, 5.9% points higher than Shiv Aum Steels' 15.0%. BMW Ventures' relatively stable ROE highlights its strong financial management and ability to generate returns for shareholders more effectively than its peer.

Leverage parameters

Comparison of interest coverage ratio (in times)



Sources: Company financials, Crisil Intelligence

BMW Ventures has demonstrated superior interest coverage ratios compared to its peer over fiscals 2019 to 2021. BMW Ventures has consistently maintained a relatively stable ratio, ranging from 2.4 to 3.7, with a slight dip to 2.5 in FY24. This suggests that the company has a comfortable cushion to cover its interest payments. In contrast, Shiv Aum Steels has had a more volatile experience, with its ratio plummeting to 0.9 in FY20, but then surging to 4.9 in FY22. Although it's come back down to 2.8 in FY24, Shiv Aum Steels' interest coverage ratio has seen some significant ups and downs over the years. Notably, BMW Ventures' ratio has been consistently higher than Shiv Aum Steels' until FY22, when Shiv Aum Steels briefly took the lead. However, BMW Ventures' stability in this area is still impressive.

7.1.6 Financial analysis

Profitability estimates

Particulars	Units	FY19	FY20	FY21	FY22	FY23	FY24
Total Revenue	*(Rs lakh)*	110,866	113,324	127,178	156,359	201,510	193,822
Ebitda	*(Rs lakh)*	3,297	3,623	4,547	6,168	6,549	6,887
Ebitda margin	*(%)*	3.0%	3.2%	3.6%	3.9%	3.3%	3.6%
PAT	*(Rs lakh)*	1,257	1,486	2,203	3,194	3,266	2,994
PAT margin	*(%)*	1.1%	1.3%	1.7%	2.0%	1.6%	1.5%

Source: BMW Ventures, Crisil Intelligence
NOTE: For fiscals 2019, 2020 and 2021, PAT value has been taken as per the audited financials of BMW Ventures which has adjusted

PAT post considering the provisions for CSR and stood at Rs.1,257 lakhs, Rs. 1,486 lakhs and Rs. 2,203 lakhs for fiscal 2019, 2020 and 2021 respectively.

BMW Ventures has shown some impressive resilience in its operational performance. Its EBITDA margins have generally been on an upward trend, growing from 3.0% in FY19 to 3.6% in FY24, with a peak of 3.9% in FY22. This stability is a testament to the company's ability to navigate challenges and maintain profitability. What's also notable is the improvement in its bottom-line performance - the PAT margin has grown from 1.1% in FY19 to 1.5% in FY24, with a peak of 2.0% in FY22. This suggests that the company is doing a good job of turning operational efficiencies into real profitability gains. Overall, the numbers point to a strong foundation for long-term sustainability.

SWOT analysis

S
- Considerable experience of promoters and established relationship with the principal supplier
- Prudent working capital management
- Healthy financial risk profile
- Multiple products
- Wide sales and distribution network
- Relationship with established players (prospective customers) in the industry

W
- Low operating margin owing to limited value addition in business

O
- Improving sentiment in the construction sector
- Government-led infrastructure development initiatives

T
- Political instability and regulations
- Intense competition from local players and foreign players

Source: BMW Ventures, industry, Crisil Intelligence

7.1.7 Key strengths

7.1.8 Considerable experience of promoters, established relationship with principal supplier

BMW Ventures is the sole distributor of long and flat products for its primary supplier, catering to more than 1250 dealers and large players in Bihar.

The promoters have been in the business for more than a decade and have a strong foothold in the company’s markets. They have also expanded the company’s presence into new regions. In fact, their strong understanding of the industry has helped it win several awards and recognitions. They are well-supported by qualified and experienced professionals across levels, with appropriate functional responsibilities.

Their experience and strong relationship with the primary supplier will continue to aid the business. The company also has a sizeable workforce of ~600 employees, which is a supporting factor, too.

- **Healthy financial risk profile**

Net worth as on March 31, 2024, was estimated at a healthy Rs 186.3 crore. It supports capital structure. Its gearing ratio stood around 2.1 times in fiscal 2024. Debt protection metrices are also comfortable with interest estimated at 2.5 times as on March 31, 2024.

- **Multiple products**

The company has a wide product portfolio — from Tata Steel products to PVC pipes and steel girders. This allows it to cater to the diverse demands of customers/ dealers. It has also diversified into manufacturing pre-engineered buildings and steel girders for railways.

- **Wide sales and distribution network**

The company markets and distributes its wide range of products to diverse customers in Bihar. It has marketing arrangements through its dedicated sales and marketing teams, supported by its promoter and director Nitin Kishorepuria, who has ~20 years of field experience. The products are marketed and sold in Bihar through an established sales network. The company works on a two-way marketing strategy — a direct approach to customers and through sales agents/ dealers.

- **Relationship with established players in the industry**

The company's customer base includes a diverse set of industries, including agriculture and real estate. The major customers, based on sales value of the products supplied in the year-ended March 31, 2024, are Shree Ranisati Enterprises, Neha Nidhi Steels, Manokaamna Infra Resources LLP, National Industrial Works, RK Steels, Basant Lal Agarwal, Sita Ram Om Prakash Hemkund Traders, North Bihar Coal Supplier and Maurya Motors Ltd. The company is poised to benefit from its strong relationship with industry players, enabling it to provide better services to customers.

- **Diversification into Manufacturing**

The company has expanded into the production of pre-engineered building solutions and has established a manufacturing unit that is registered and approved by the Research Designs and Standards Organisation (RDSO) for composite and other steel plate girder. Both units are located in Purnea.

- **Land bank for future expansion**

The company has purchased and registered 52.88 acres land

7.1.9 Key weakness

- **Low operating margin**

In fiscal 2024, the company's operating margin was a low 3.6%. However, prudent inventory management could ensure stable margin despite volatility in steel prices.

To mitigate the weakness, the company can diversify into non-trading high-margin businesses to improve its profitability.

7.1.10 Key opportunities:

- **Improving sentiment in the construction sector**

As the economy starts recovering from the pandemic, it is expected that the construction sector will grow at a robust pace. Private construction, which suffered when the afflictions were spreading, is expected to bounce back as the world comes out of the pandemic. Further, people who now have high disposable income after the pandemic due to decreased expenses will look to construct their own houses in the next few fiscals. This expected improvement in the construction industry will boost the demand for the company's products.

- **Government-led infrastructure development initiatives**

Both the union and state governments are increasingly allocating higher funds to develop infrastructure in Bihar. Various schemes, such as PM Gati Shakti Yojana and others for development of highways, bridges, dams etc, are expected to boost demand for the products of the company. The company can leverage these opportunities to improve the sales of its products.

7.1.11 Key threats:

- **Political instability and regulations**

Changes in governments and regulations can increase the risks for the company and even hamper its operating efficiency and profitability margins.

The company would need to develop a dynamic set of standard operating procedures to be able to adjust under different political environments to mitigate this threat.

- **Intense competition from local players and foreign players**

As the industry is expected to grow, it is highly likely that a high number of new local and foreign players will make an entry. As local players will know the localities better and foreign companies will have huge cash to burn, they might pose a threat to BMW Ventures. To overcome this challenge, it would need to regularly monitor the business and competitive environment and strategise accordingly.

8. Annexure

Details of licences and certificates

Licence type	Licence number	Date of issue
Bihar Shops and Establishment Act	PT 39708	3/10/1995
Importer and Exporter Code (IEC)	2195000295	6/7/1995
ISO 9001 :2015 (BMW Ventures Ltd)	21RQ10AF	10/6/2021
ISO 9001 :2015 (BMW Polytube Unit of BMW Ventures ltd)	21RQ10AE	10/6/2021
Bihar State Pollution Control Board	Application ID- 2771337	6/28/2019
Employee State Insurance Corporation	4200011447001500	3/4/2010
Employees Provident Fund Organisation	BR/PT/7516 Appl No.--98/53	4/16/1998
Legal Metrology Certificate	-	-

Source: BMW Ventures

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