ANNEXURE 2
Management Discussion and Analysis

I. Overview

The objective of this report is to convey the Management's perspective on the external environment and steel industry, as well as strategy, operating and financial performance, material developments in human resources and industrial relations, risks and opportunities, and internal control systems and their adequacy in the Company during the Financial Year 2019-20. This should be read in conjunction with the Company's financial statements, the schedules and notes thereto and other information included elsewhere in the Integrated Report. The Company's financial statements have been prepared in accordance with Indian Accounting Standards (**'Ind AS'**) complying with the requirements of the Companies Act, 2013, as amended and regulations issued by the Securities and Exchange Board of India (**'SEBI'**) from time to time.

Your attention is also drawn to sections on Opportunities, Risks and Strategy Planning forming part of the Integrated Report.

II. External Environment

1. Macroeconomic Condition

With continued weakness in global trade and investment, global growth slumped to 2.9% in 2019, leading to varying degrees of deceleration in economies around the globe. Rising geopolitical tensions, worsening trade relations among some nations, trade policy uncertainties, and stress in key emerging market economies continued to impact global economic activity. Intensifying social unrest in several countries and weather-related disasters also contributed to declining global economic activity.

Growth in the advanced economies slowed down to 1.7% in 2019 as compared to 2.2% in 2018. The US economy slowed to 2.3% in 2019 on account of rising geopolitical tensions and policy uncertainty. Growth in the European region also slowed to 1.2% in 2019. The industrial sector in Germany struggled with lower demand from Asia and disruptions to car production. Uncertainty related to Brexit also weighed on growth in the European region. Growth in Japan was at 0.7% owing to the impact of Typhoon Hagibis, increase in value-added tax, and overall slowdown in manufacturing and exports – particularly those to China. Growth in China dropped to 6.1% in 2019 owing to lower investor sentiment and cooling domestic demand.

In India, growth slowed down to 4.2% in 2019. This economic slowdown can be attributed to weak investments and declining consumer demand. Further, several sectors such as real estate, aviation, automobile, and construction sectors suffered a consistent decline in demand. The banking sector and financial services also witnessed significant pressure of non-performing assets.

Overall, increasing trade tensions, worsening financial market sentiments, intense social unrest across many countries, and sluggish economic growth led to slowdown in global economy.

2. Economic Outlook

In view of the COVID-19 pandemic, there remains considerable uncertainty around the global economic forecast for 2020. According to the International Monetary Fund (**'IMF'**), global economy is projected to contract sharply by 4.9% in 2020, surpassing the decline seen during the global financial crisis a decade ago. Stark differences will be observed between impact of the pandemic on advanced economies, and emerging markets and developing economies owing to differences in governance capacity, health care systems, strength of financial institutions, and currency strength.

Growth is expected to be slower in most advanced economies. Countries in the emerging market and developing economies will also witness a slump in growth due to external demand shock, tightening in global financial conditions, and a plunge in commodity prices. In China, where recovery from the sharp contraction in the first quarter is underway, growth is projected at 1% in 2020, supported in part by policy stimulus. The IMF projects a partial recovery in 2021, however, the level of GDP growth is expected to remain below the pre-COVID-19 trend, with uncertainty about strength of the rebound.

India's economy in the Financial Year 2020-21 is projected to grow at a slower pace following a longer period of lockdown and slower rate of recovery than anticipated. Effective policies and fiscal measures by the Government will be essential to forestall contraction of growth.

III. Steel Industry

1. Global Steel Industry

Global crude steel production in 2019 saw a growth of 3.4% over 2018 to reach 1,869.69 MnT. This increase was primarily due to the growth in steel consumption in infrastructure, manufacturing, and equipment sectors. The automotive production trended down across most countries over the second half of 2019 which had an impact on the steel demand towards the end of the year.

China continued to be the world's largest steel producer with increase in production by 8.3% to reach 996 MnT. China contributed to 53% of the global crude steel production in 2019. While steel demand remained relatively strong, the country faced significant downside risks due to broader global uncertainty and tighter environmental regulations. In United States, crude steel production went up to 88 MnT, recording an increase of 1.5% over 2018, owing to lower global automotive production and prevailing trade tensions. In Japan, steel consumption declined largely due to a slowdown in manufacturing during 2019. The country produced 99 MnT of crude steel last year, a decrease of 4.8% compared to 2018. In Europe, crude steel production slumped to 159 MnT in 2019, recording a decrease of 4.9% over 2018. The decrease was on account of challenges faced with oversupply and trade tensions.

In 2019, India became the second largest crude steel producing country in the world, with a crude steel production of 111 MnT, an increase of 1.8% over the previous year. However, the growth rate was much lower compared to the previous year. Growth in the construction sector weakened due to falling investments in fixed asset formation. Sharp fall in the private consumption led to weaker growth in automotive and consumer durables. The tighter liquidity conditions due to defaults in NBFC sector impacted credit availability. The automotive sector was also impacted by factors such as regulatory changes, rise in ownership cost, and shared economy while, the capital goods sector continued to remain weak due to the decreasing output and stagnant investment in the manufacturing sector.

2. Outlook for Steel Industry

The COVID-19 pandemic has severely affected economies and industries globally and the steel industry is no exception. Therefore, outlook for the steel industry includes scenarios regarding the pandemic's speed of propagation, possible recurrence, near-term impact of measures being taken to contain the outbreak, and the effectiveness of the stimulus announced by the Governments of various nations.

After slower than expected growth in 2019, steel demand is estimated to contract significantly in the Financial Year 2020-21. According to the World Steel Association (**'WSA'**), it is possible that the impact on steel demand in relation to the expected contraction in GDP may turn out to be less severe than that seen during the erstwhile global financial crisis. In comparison with other sectors, the manufacturing sector is expected to rebound quicker though supply chain disruptions are likely to continue.

Most of the steel producing regions are expected to witness a decline in crude steel output due to production cuts amidst ongoing lockdowns. However, it is expected that compared to other countries, China will move faster towards normalisation of economic activity as it was the first country to come out of the COVID-19 crisis. Governments of different nations have announced sizeable stimulus packages which are expected to favour steel consumption through investment in infrastructure and other incentives for the steel industry.

In India, muted demand and oversupply is likely to result in suppressed steel prices and capacity utlisation in the near term. Since India depends largely on migrant labour, restarting construction and infrastructure projects will be a challenge. The demand from infrastructure, construction, and real estate sectors is likely to be subdued in the first half of the Financial Year 2020-21 due to the lockdown during the first quarter followed by the monsoons during the second quarter. Further, the demand from automobile, white goods, and capital goods sectors is likely to reduce significantly with consumers deferring discretionary spends in the near term. Effective government stimulus and return of consumer confidence is likely to be the key driver for a gradual recovery over the second half of the Financial Year 2020-21.

IV. Strategy

During the year under review, the Company continued to focus on operational and marketing excellence to counter adverse business conditions. The Company aspires to be the most valuable and respected steel company in the world for which it has taken steps to be structurally, financially, and culturally future-ready. The Company continues to place special emphasis on strengthening its financial profile to enable future growth and to achieve volume growth while remaining cost competitive. The ongoing integration and improvement initiatives undertaken at Tata Steel BSL Limited (formerly Bhushan Steel Limited) and Tata Steel Long Products Limited (formerly Tata Sponge Iron Limited) have helped to unlock synergies and improve cost competitiveness while enhancing the capacity utilisation of the production units. The focus on driving digital transformation and greater efficiency through One IT and an integrated supply chain structure continue to unlock value for the Company. The Services and Solutions portfolio and New Materials Business (Graphene & Fibre Reinforced Polymer) have put in place the requisite enablers for the Company to scale up.

Building a culture of Agility and Innovation has been identified as an important lever to make the Company fit for the future. The Company has taken many initiatives to inculcate Agility in the organisation through experiments on agile ways of working in new businesses and enabling functions in core businesses along with process simplification. The learnings from the experiments will be used to create the blueprint for organisation wide deployment over the next couple of years. During the year under review, the Innovation framework in the Company was strengthened by putting in place the required teams and governance structure.

The Company has made significant progress in Leadership in technology, a key aspect of the Company's strategy. Several Technology Leadership Areas are being worked upon enabled by creating required knowledge partnerships and leveraging the agility and innovativeness of start-ups. The Company has made progress towards imbibing Industry 4.0 and is the only steel company to have two digital lighthouses, as recognised by World Economic Forum.

The Company aspires to further strengthen its leadership position in the industry and is pursuing the following priorities in the medium term:

Industry leadership in Steel: India is amongst the fastest growing steel markets in the world. In order to meet the increasing demand, the Company has expanded its operations organically and inorganically and is also continuing to strengthen its long products portfolio to participate in the growing market. Towards this objective, the Company through its subsidiary, Tata Steel Long Products Limited (formerly Tata Sponge Iron Limited), is focussed on ramping up the acquired steel business of Usha Martin Limited. The Company also aspires to attain a leadership position in new segments such as Lifting and Excavation, Oil and Gas, Pre-Engineered Buildings, etc. and to maintain leadership position in segments such as Automotive, Emerging Corporate Accounts (Small and Medium Enterprises), Individual House Builders, amongst others.

Consolidate position as global cost leader: The Company aims to continue to be one of the lowest cost producers of steel in the world. Over the years, the Company has improved its operating parameters to reach global benchmark levels. Post acquisition of Tata Steel BSL Limited and steel business of Usha Martin Limited, focussed synergy programmes have been put in place to ensure horizontal deployment of the Company's process capabilities in the acquired assets. Further, during the year under review, the Company, through its Shikhar25 programme, achieved performance improvements of ₹4,298 crore (including ₹1,965 crore value protection initiatives).

Insulate revenues from steel cyclicality: Steel industry is cyclical in nature. In order to insulate revenues from steel cyclicality, the Company is focussing on the branded retail business and downstream product portfolio. The Company has embarked on building a Services & Solutions (**'S&S'**) business which offers steel-based solutions for end user needs and which are seeing significant growth. Leveraging our deep knowledge of customer needs and ability to execute insight-driven innovation, we believe that this portfolio will provide a significant competitive advantage to the Company, contributing to 20% of revenue going forward. The Company is also scaling up a portfolio of offerings in materials other than steel – currently focussing on Fibre Reinforced Polymer and Graphene. S&S and new materials businesses will provide added impetus to the Company's differentiated play and provide a unique growth opportunity.

Industry leader in Corporate Social Responsibility and Safety, Health and Environment: As one of the leading steel producers in the world, the Company also aspires to be a leader in sustainable business practices in the industry. Towards this objective, the Company is taking steps to reduce its environment footprint. The Company has entered the steel scrap recycling business to promote sustainable steel making and to create a formal circular economy for steel. The first scrap recycling unit under this initiative is being developed in Rohtak, Haryana. The Company formed Carbon Impact Centre to have a focussed intervention to drive low carbon transition and initiatives and to achieving a goal of Carbon neutrality in the long-term. Initiatives are taken to reduce dependency on fossil fuel. The Company has also completed the phase 1 of feasibility study for Renewable potential assessment at Jamshedpur, Kalinganagar and raw material locations. On the longer horizon, the Company continues to explore and invest in technologies involving sustainable production, storage and use of Hydrogen across the steel value chain, carbon capture, use and storage and HIsarna technology to reduce its carbon footprint. The Company is also focussed on effective by-product management.

The Company also recognises the need to create a safe and healthy environment for all its employees and other stakeholders and desires to be an industry leader in the Safety, Health & Environment and Corporate Social Responsibility (**'CSR'**). This will be achieved through enhanced focus on reducing unsafe incidents at the workplace as well as reducing carbon emissions and consumption of natural resources such as water. The Company will continue to deepen the engagement with communities, aiming to change many more lives through its CSR initiatives.

Strategic enablers: In order to be future-ready, the Company is focussed on creating an organisation culture which is built on a strong foundation of agility and innovation. People are the key asset for any organisation and hence, the Company continues to direct its efforts towards building a future-ready, engaged, and diverse workforce. The Company is also focussed on investing in various digital initiatives, enabling new business models, and enhancing the digital maturity of the organisation. A structure and engagement mechanism for partnering with start-ups, academia, and other R&D organisations is set up and a team to monetise existing intellectual property owned by the Company is formed.

V. Operational Performance

1. Tata Steel Group

During the year under review, the consolidated steel production for Tata Steel group (**'the Group'**) was 28.46 MnT recording a 5% increase over that of the previous year. The Group recorded total deliveries of 26.68 MnT as against 26.80 MnT in previous year. The steel deliveries decreased at Tata Steel Limited by 2.9% and at Tata Steel Europe by 4%. This decrease was off-set by higher deliveries at Tata Steel BSL Limited (**'TSBSL'**) by 16%. The increase at TSBSL is due to ramp-up of operations. Further, in the previous year, deliveries prior to the acquisition of TSBSL on May 18, 2018 under the Insolvency and Bankruptcy Code were not included. Further, the acquisition of steel business of Usha Martin Limited by Tata Steel Long Products Limited (formerly Tata Sponge Iron Limited) on April 9, 2019 also increased the total deliveries of the Group by 0.51 MnT.

The turnover for the Group was at ₹1,39,817 crore during the Financial Year 2019-20, a decrease of 11% over the previous financial year. The decrease is due to decline in realisations across geographies along with lower deliveries.

The EBITDA of the Group was ₹17,735 crore during the Financial Year 2019-20 as compared to ₹29,770 crore in the previous year.

2. Tata Steel Limited (Standalone)

The turnover and profit/(loss) figures of Tata Steel Limited are given below:

(₹ crore)

	FY 20	FY 19
Turnover	60,436	70,611
EBITDA	15,096	20,744
Profit before tax (PBT), before exceptional	8,315	16,341
Profit before tax (PBT)	6,611	16,227
Profit after tax (PAT), before exceptional	8,447	10,647
Profit after tax (PAT)	6,744	10,533

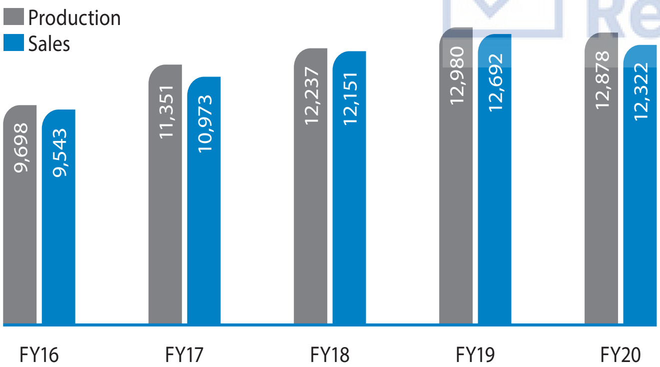
a) Operations

(mn tonnes)

	FY 20	FY 19	Change (%)
Hot Metal	14.09	14.24	(1)
Crude Steel	13.16	13.23	(1)
Saleable Steel	12.88	12.98	(1)
Sales	12.32	12.69	(3)

The saleable steel production and sales trend over the years is as follows:

Production and Sales of Steel Division (kt)



During the year under review, the saleable steel production stood at 12.88 MnT which is lower by ~0.79% and saleable steel sales stood at 12.32 MnT which is lower by ~2.9% as compared to the previous year. The hot metal production stood at 14.09 MnT which is 1.05% lower than that of the previous year.

i) Tata Steel Jamshedpur

During the Financial Year 2019-20, Tata Steel Jamshedpur ('**TSJ**') produced 10.19 MnT of crude steel (previous year: 10.22 MnT). The decrease was due to operational challenges at steel works. During the year under review, there was lower specific consumption of lime, ferro alloys, and specific energy.

ii) Tata Steel Kalinganagar

During the year under review, Tata Steel Kalinganagar ('**TSK**') produced 2.96 MnT of crude steel (previous year: 3.01 MnT). This decrease was due to interruption in the operations of the blast furnace.

During the year under review, TSK achieved higher consumption of agglomerates and higher pulverised coal injection which had led to lower coke consumption and lower flux consumption. The operations at TSK have in place environmental management systems and comprehensive processes for ensuring health and safety of people, plant, and equipment. The plant is designed to have minimal water foot print, by-product gas based power generation leading to reduction in carbon footprints, Coke Dry Quenching technology, zero-effluent discharge, and significant reduction of noise and dust pollution. TSK achieved successful commissioning of Ladle Furnace facility at Steel Making. TSK developed 26 new products during the year under review.

TSK has embarked on the second phase of capacity expansion to take the total capacity of the plant to 8 MnT per annum.

b) Marketing and Sales Initiatives

During the Financial Year 2019-20, the Company recorded sales of 12.32 MnT which is 2.9% lower than that of previous year. This decrease is attributable to lower than expected sales in the month of March 2020 on account of the nationwide lockdown imposed by the Government of India, to contain the spread of COVID-19.

The break-up of sales in our various segments and the break-up of domestic sales to exports are as follows:

(mn tonnes)

	FY 20	FY 19
Automotive & Special products	1.45	2.12
Branded Products, Retail & Solutions	3.82	3.90
Industrial Products & Projects	4.61	4.69
Domestic	**9.88**	**10.71**
Exports	1.50	1.06
Domestic + Exports	**11.38**	**11.77**
Transfers (Wires, Tubes, Agrico, Tinplate)	0.94	0.92
Total Deliveries	**12.32**	**12.69**

The key business initiatives, and achievements in the Financial Year 2019-20 are given below:

Automotive and Special Products: The automotive industry continued to witness strong headwinds with sharp decline across all segments especially in steel-intensive passenger vehicle and commercial vehicle segments. The Company registered annual sales of 1.45 MnT with an increase in share of high-end sales (outer panels, coated supplies, and high tensile grades >440 MPa in hot-rolled and cold-rolled steel) from 19.5% in the previous year to 25% in the current financial year. During the year under review, the Company also secured more than 35% share in five out of ten new passenger cars launched.

The Company's efforts in strengthening relationship was backed by the recognition received from automakers. Major recognition received during the year was the "Overall Performance Award" from a major passenger vehicle (PV) maker for exhibiting exemplary performance in quality, cost, delivery and development for the fifth consecutive year. During the year under review, the Company (along with Jamshedpur Continuous Annealing and Processing Company Private Limited) also received a Certificate of Appreciation from a Japanese PV manufacturer for improving process quality.

Branded Products, Retail, and Solutions: During the Financial Year 2019-20, the Company's annual sales of Branded products was at 3.82 MnT. The B2C segment achieved sales volume of 1.63 MnT, and Tata Shaktee achieved a sales volume of 182 kt, with the launch and scale up of new products such as WAMA (wall profile) (4.3 kt) and Long Length Galvanised Corrugate Steel sheets (7.4 kt) contributing to the sales. Tata Kosh achieved its best-ever sales of 43 kt in Financial Year 2019-20. Further, through the Tata Steel channel, 15 kt of Tata Shaktee and 37 kt of Tata Kosh of TSBSL were sold during the current period.

During the current year, the B2ECA (Business to Emerging Corporate Accounts) business clocked a volume of 2.2 MnT and in the process serviced more than 9,000 customers. Value-Added Products contributed to 23% of overall ECA Volumes which grew by 17% as against that of previous year. This was achieved through development and access to key micro-segments such as ATM safe, Railways & Metro coach, Wagons, Transmission Line tower, Pre-Engineered Buildings, Solar, and introduction of segment specific seven new products. Emerging Corporate Accounts (ECA) business ventured into retail space through Tata Astrum Super Brand. The ECA business spread across 15 states with 21 distributors, has sold Tata Astrum Super Brand through 550 retailers and has reached more than 2,500 end user fabricators. ECA Brands won 14 Awards and recognitions in the Financial Year 2019-20 including CII Customer Centricity Award. Tata Steel is the first Steel company to win this award.

Industrial Products, Projects, and Exports: The year witnessed stable growth in Infrastructure, Railways, Pre-Engineered Building (**'PEB'**), and Oil & Gas (**'O&G'**) segments and de-growth in LPG, Real Estate, and Lifting & Excavation (**'L&E'**) segments. As a result, the vertical achieved total sales of 4.61 MnT in the Financial Year 2019-20.

The Company continued to enrich its product portfolio with a focus on Engineering and Value-Added Products (VAP). Railways segment grew by 39% year-on-year from 39 kt to 54 kt. Precision Tubes segment reported sales at 107 kt reflecting a growth of 16% year-on-year. Sales of Value-Added Rebars also grew by 16% year-on-year to 56 kt. The Engineering Segment achieved best-ever sales and recorded a growth of 5% year-on-year. O&G segment recorded 3x growth in sales on account of approvals from major Oil Marketing Companies for API X60. The Company significantly increased its market share in L&E and PEB segments with an enriched product basket offering and engagement through value creation and cost saving initiatives such as Value Analysis and Value Engineering and Re-nesting exercises with key players in the industry.

As a recognition for the work on development of high strength grades, the Company was bestowed the "Innovation Award" by the market leader of earth moving equipment OEM and the "Best Supplier Award" from the market leader of mobile and tower cranes OEM.

In the Construction space, the Company maintained its focus on offering services and solutions through Cut & Bend. Tiscon Readybuild recorded sales of 138 kt in Financial Year 2019-20. India's first Branded Welded Wire Fabric "Sm@rtFAB" achieved 1.29 kt sales thereby recording a 20% year-on-year growth in sales. The Company also supplied ~111 kt rebars (~10% of total project sales) to 26 marquee projects in India, viz. Longest River bridge – New Ganga Bridge, Tallest building in NCR – 'The Amaryllis', 701 km 'Corridor of Prosperity' connecting Mumbai and Nagpur – Maharashtra Samruddhi Mahamarg, and World's largest Cricket Stadium: Sardar Vallabhbhai Patel Stadium, Ahmedabad.

In International market, the Company continues to expand its reach to new geographies such as Kuwait, Qatar, and Philippines, etc. while continuing to maintain its presence in Middle-East (**'ME'**), neighbouring countries, and South-East Asia (**'SEA'**) markets. With success and learning from domestic PEB market, the Company also ventured in the PEB segment for the first time in ME and SEA. With enhanced focus, the Company's VAP sales doubled in the export market (52 kt in the Financial Year 2018-19 and 110 kt in the Financial Year 2019-20).

Further, a specific drive was undertaken to optimise supply chain cost for exports between our two plants – TSK and TSJ, and three sea ports – Dhamra, Haldia, and Paradip. Container Exports have commenced from Vishakhapatnam port, thereby reducing dispatch cost and increasing options of vessel availability.

Services and Solutions: The Company has strengthened its position in the Services and Solutions space by providing better consumer experience and expanding product portfolio. During the year under review, Tata Pravesh Doors and Windows registered 30% increase in turnover as compared to the previous year. Since inception 1,00,000 Tata Pravesh units have been installed and more than 20,000 consumers have been served. Nest-In, the construction solutions brand, continued to grow rapidly. This business has executed orders worth ₹64 crore and achieved an order book of ₹91 crore in the Financial Year 2019-20. Since inception, Nest-In has installed over 5 lakh square feet of housing and nearly 9,000 EzyNest units.

Digital Initiatives: The Company's first of its kind portal for the Individual Home Builder (IHB), Tata Steel Aashiyana, achieved a turnover of ₹316 crore in the Financial Year 2019-20, recording a 200% growth over that of the previous year. Tata Basera, a Tata Group level synergy initiative led by Tata Steel, has expanded its reach to more than 240 districts. The Tata Basera programme offers special benefits from five Tata Group companies to IHB who purchase Tata Tiscon/Pravesh Doors. These digital initiatives are helping reach hitherto unserved territories, allowing the Company to serve new markets and customers.

Apart from Aashiyana, Tata Steel has also scaled up various digital initiatives in multiple customer segments. COMPASS, a digital supply chain visibility solution rolled for B2B, and DigEca, an initiative that captures lead management for ECAs received traction from distributors and customers. The Company also completed Digital Analytics based projects named Paras, Amrit, and Ascend for market demand assessment and improvement in product value realisation.

c) Sustainable Steel Business Initiatives

i) New Materials Business

The New Materials Business (**'NMB'**) was set-up to partially insulate revenues from cyclicality of the steel business and respond to the growing demands of alternative materials. NMB has two verticals (a) Composites and (b) Graphene.

Composites: The Composites business focusses on Fibre Reinforced Polymer ('**FRP**') composites with products mainly made of Glass Reinforced Polymer ('**GRP**'). FRP is a composite material comprising glass/carbon/other fibres, embedded in a polymer matrix. Its key benefits include lightweight, corrosion resistance, high strength to weight ratio, and design freedom. The FRP business completed its first full year of commercial operations and expanded its market presence through successful product launches in three segments: Infrastructure, Industries, and Railways. Apart from the two key products in the infrastructure sector, GRP pipes and streetlight poles, NMB launched a wide range of FRP solutions in the city infrastructure segment. These FRP solutions include FRP street furniture, gazebos, fencing, and a range of decorative and translucent poles. Building on the success of installing India's first FRP foot-over bridge in March 2019, NMB completed two more successful FRP bridge projects during the year. The Company is now well placed to offer FRP bridges in a number of sectors including roadways, railways, waterways, harbours, and ports, golf clubs and theme parks, and process industries.

In the Industries segment, FRP pressure vessels for water filtration, and FRP tanks and chemical equipment for paper and pulp, textile, and iron and steel industries have been supplied. These products are best placed to tackle corrosive atmosphere and tailored for being lightweight and offering long maintenance free service life. In the railways sector, following the initial success of supplying FRP components to the Indian Railways, NMB has entered the business of furnishing railway coach interiors, and is working closely with key railway production units and zonal railways.

Graphene: The Graphene Business unit focusses on the production of graphene powder, graphene master batches, and graphene enriched products. It has strengthened its position in coated solutions through its offerings of liquid, dry, and aerosol based formulations. During the year under review, nearly 1,500 tons of graphene-coated "cut and bend" super links (GFX Ultima) were sold. Graphene-doped polymer formulations were developed and deployed in the steel plant in form of idlers, screen, and liners. These have resulted in significant increase in working life of these components. Graphene-doped fabrics are resistant to water, stain, and odour, and are ideal for techwraps and trolley-bags.

NMB is currently poised to work collaboratively with a network of technology and manufacturing partners to realise the above stated vision of overcoming the cyclicality of the steel business.

ii) Steel Recycling business

In the Financial Year 2018-19, the Company entered the Steel Recycling Business which entails setting up of Steel Scrap Recycling Plants across India. It is primarily a sustainability initiative, as the process of steel manufacturing through recycling of steel scrap has much lesser carbon footprints. The first Steel Recycling Unit (0.5 MnT capacity) is being set up at Rohtak and will be commissioned in the Financial Year 2020-21. Steel production capacity in India is planned at ~300 MnT by 2030, out of which 35-40% is envisaged through the scrap route. The Indian scrap industry is highly fragmented and unorganised with long and complex supply chains. The small aggregators collect scrap from various sources and sell unprocessed scrap with inconsistent quality. The industry, employing about a million people, is not a part of the formal economy, and the workforce lacks social security. The operations are manual and there are concerns towards safety and environmental issues. There is a lack of requisite policy framework for the industry. This initiative of Tata Steel aims to provide the much-needed fillip to the Steel Scrap Industry by making available quality processed scrap, streamlining the currently unorganised scrap supply chain, enhancing the transparency, and lowering the dependency on imports. Digital Platform as well as Channel Networks will be established to collect scrap from various segments such as Households, Industries, and End of Life Vehicles. The scrap will be processed through mechanised equipment viz. shredder, shears, balers, etc. and will be used as an input raw material for downstream steel making through Electric Arc Furnaces.

The Steel Recycling Business has the potential of transforming the Scrap Industry in India.

d) Business Improvement Initiatives

i) Total Quality Management and Shikhar25 (Operational Improvement Programmes)

The Total Quality Management (**'TQM'**) way of working has been the hallmark of Tata Steel for past many years. TQM techniques are routinely deployed for all operation and maintenance process improvements.

Shikhar25, a focussed EBITDA improvement programme, works across departments of Tata Steel to improve operational efficiency, lower costs, optimise product mix, reduce and recycle waste, and maximise energy and material efficiency, through 25 IMPACT centres including 4 new IMPACT centres viz. TSK Shared Services, Raw Material Procurement, Outbound Supply Chain, and Advocacy. Post acquisition of TSBSL and steel business of Usha Martin Limited by TSLP, the focus has been on synergy for optimal utilisation of shared resources across Tata Steel to generate maximum value.

Preparing the workforce for Industry 4.0

In the present continuously evolving scenario, businesses across the globe are deploying advanced analytics and digital transformation to change the way they function. The Company has been a front runner and has made significant investments in these areas to develop capability as well as infrastructure. The current year has been a testimony to the efforts in these areas as the greenfield plant of TSK was adjudged Manufacturing Lighthouse by the World Economic Forum for showing leadership in applying fourth industrial revolution technologies to drive financial and operational impact. Further, the Company is making steady progress in using Industry 4.0 techniques in the following areas:

- **Safety:** Contract Workforce Safety & Management, Road Safety Management through use of video analytics
- **Plant Operations:** Usage of advanced analytics in improving yield, throughput, and quality. Digital twins and Artificial Intelligence have aided product quality prediction, and integrated and smart mining
- **Maintenance:** Smart plant maintenance through Maintenance Technology Roadmap and Smart Asset Management System
- **Logistics:** Artificial intelligence based operations and logistics planning, and analytics powered network optimisation for reduced costs and improved fulfilment
- **Marketing & Sales:** Online and Channel Sales enabled through digital platforms such as Aashiyana, COMPASS, DigEca, etc. enabled digital sales of products and services
- **Procurement:** Use of digital negotiation factory and vendor performance analysis, integrated margin management tools for flux and coal for optimised buying
- **Finance & HR:** Smart closure of financial accounts, chatbots, and robotic process automation for seamless and enhanced stakeholder experience. Artificial intelligence aided recruitment, mass customisation of policies and overall employee experience

During the year under review, approximately 600+ projects were implemented and achieved savings of ₹4,298 crore.

ii) Strategic Procurement Initiatives

The Company took several new initiatives for its raw material procurement which have resulted in substantial savings in the cost and working capital

- **Digital journey:** The Company implemented a customised in-house e-auction tool to secure its metallurgical coal supplies digitally. The result of the online reverse auction conducted by Tata Steel Coal Strategic procurement team in October 2019 resulted in single day market drop of \$12/t to \$133/t (highest in the last 3 years). The fixed price trades through e-auction tool have resulted in an overall spend reduction due to drop in market prices impacting overall metallurgical coal buy. The Company also invested in developing a predictive analytics tool for forecasting coking coal prices by incorporating 13,000+ data inputs such as weather, ports congestions, policy changes (China and global macro variables).
- Implementation of Vendor Managed Inventory at Indian ports for coal and supplier credit enhancement resulted in free up of non-fund based working capital lines.
- Group synergies through centralised procurement, technical optimisation, and knowledge sharing resulted in substantial savings mainly coming from the acquired TSBSL plant.

e) Performance of Business Units

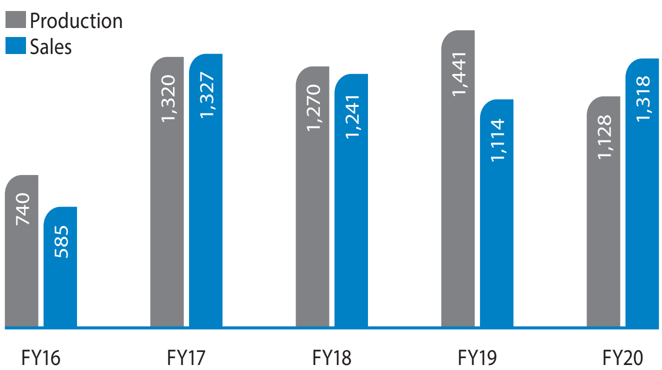
i. Ferro Alloys and Minerals Division

Our Ferro Alloys and Minerals Division ('**FAMD**') is one of the leading producer of ferro chrome and manganese alloys in India. Its production facilities (from Mines to Market) are integrated with production bases spanning across four Indian States and having customers across the world. FAMD has captive plants at Joda, Bamnipal and Gopalpur (since June 2018) and has Ferro Processing Centres ('**FPCs'**) under a business partnering agreement for production of Chrome and Manganese alloys.

During the Financial Year 2019-20, Sukinda Chromite mine and Gomardih Dolomite mine leases expired as per the mining regulations on March 31, 2020. The Sukinda Chromite Mines was put up for auction. Tata Steel Mining Limited (formerly T S Alloys Limited), a subsidiary of Tata Steel Limited had participated in mining auction in Odisha and won the auction for the mine. The Gomardih Dolomite mine is yet to be auctioned.

The production and sales performance is as below:

Production and Sales of FAMD (kt)



Due to the outbreak of the COVID-19 pandemic, the Government of India had imposed a stringent nationwide lockdown with effect from March 25, 2020, which brought the business to a sudden halt in the last week of March 2020. During the Financial Year 2019-20, the production was lower than previous year by 19%. However, the sales increased by 18% as compared to that of previous year.

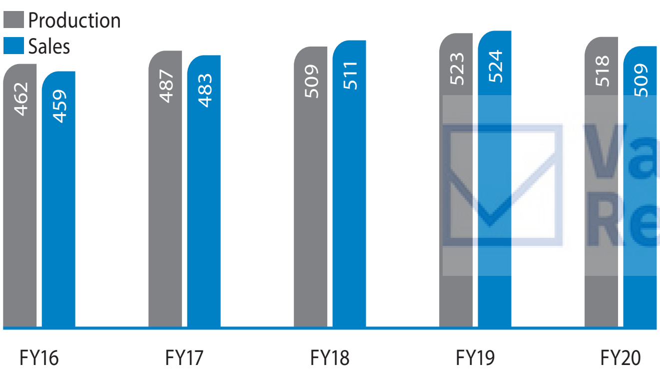
During the year under review, the operation of manganese Business in Joda received the certifications under Integrated Management System.

ii. Tubes Division

The Company's Tubes Strategic Business Unit is a leading manufacturer of pipes and tubes in India having its manufacturing facility situated at Jamshedpur with an annual production capacity of around ~500 kt. The three main lines of businesses are conveyance tubes (Tata Pipes), structural tubes (Tata Structura), precision tubes for auto and boiler segments.

The production and sales performance is as below:

Production and Sales of Tubes Division (kt)



During the Financial Year 2019-20, the growth of the automotive sector declined by ~13% while the infrastructure and construction sector grew by 4-5%. The division produced less by 1% and sold less by 3% than that of previous year. However, the division maintained its 8% market share. During the year, the division launched two new products viz. Graphene coated tubes, Hat Profiles (Purlin Application) and Galvanised Plain tubes (from TSBSL).

During the year under review:

- 'Tata Structura' the structural hollow steel branded product has been accorded the 'Superbrand' status in both B2C and B2B segment.
- Tata Structura and Tata Pipes received the GreenPro certificate in the 3rd edition of GreenPro summit organised by Confederation of Indian Industry.
- HF2 Warrior team of Standard Tube Mill received the 'Par Excellence award' at National level organised by Quality Circle Federation of India
- Tata Structura was awarded 'India's Most Trusted Brand Award 2019' by the International Brand Consulting Corporation.

iii. Industrial By-Products and Management Division

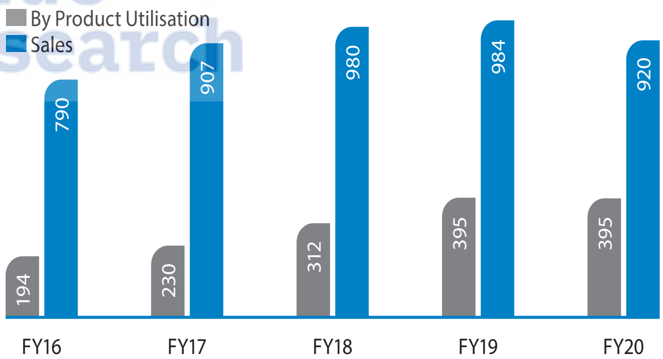
The Company's Industrial By-products and Management Division ('**IBMD**') handles variety of by-products in the entire value chain. The business operates on the principle of 3Rs (Reduce, Reuse, Recycle), thereby ensuring contribution towards the green journey of Tata Steel. IBMD manages ~14 MnT per annum of by-products spanning across 20+ product categories with more than 250 stock keeping units. The division achieved a total sales volume of ~10 MnT per annum in the Financial Year 2019-20.

With the objective of harnessing 'Value from waste and by-products', IBMD is committed to becoming a knowledge driven business unit leveraging digital and innovation as key pillars. The division has also explored into downstream value enhancement of by-products which serve as quality benchmarks in the industry.

During the Financial Year 2019-20, the synergy initiatives in the IBMD gained momentum. India's first Steam Ageing facility for "Accelerated Weathering" of LD slag was commissioned at TSJ and IBMD commenced the sales of value-added flat product seconds.

The by-product utilisation at the plant and sales are given below:

By Product Utilisation at Plant and Sales of IBMD (kt)



During the Financial Year 2019-20, by-product utilisation at plant was same as compared to that of previous year whereas sales dropped by ~6.5%. Despite the nationwide lockdown on account of COVID-19 pandemic during end of March 2020, which disrupted the supply chain, the division managed to timely evacuate the by-products from the plant to ensure smooth operations of the plant. The BF Slag was dispatched to the Dhamra port for exports, Coal Tar was dispatched by rake for the first time ever and the coal dispatches to institutional customers were continued through rakes.

IBMD has developed a new product in the form of paver block made from LD slag, which enables waste utilisation such as LD slag, and helps to protect the environment and yield a value to the business. Further, Air Cooled Blast Furnace slag is used as a natural aggregate for road making.

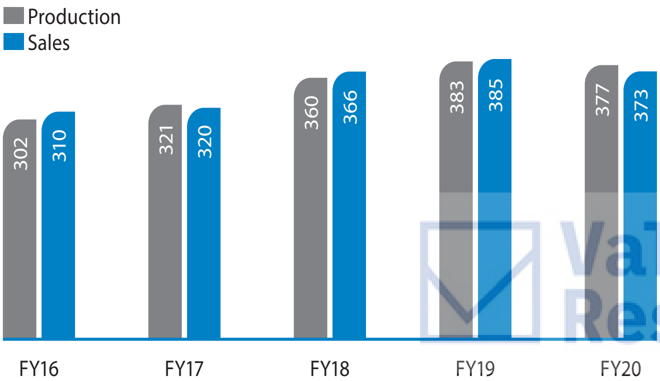
During the year under review, Tata Aggreto won the "Environmental Stewardship" award at ET Now World CSR Congress, for its sustainable usage in road construction (~120 kt was utilised in construction of National Highways 32 and 33).

iv. Wires Division

The Company's Global Wires India ('**GWI**') Business Unit is the largest manufacturer of steel wires in India. The plants are located at Tarapur, Pithampur, and Jamshedpur, and contribute to nearly 65% of its sales volume, with remaining 35% being catered by Wires Processing Centres. GWI caters to the requirements of the Indian Automobile, Construction, and rural markets with various products.

The production and sales performance is as below:

Production and Sales of Wires Division (kt)



Due to the COVID-19 pandemic, the industry is facing new challenges over and above de-growth in automotive segment. The nationwide lockdown in the last week of March 2020, affected the business and operational performance of the division. During the year under review, the production was lower by 1.5% and sales lower by 3.2% as compared to those of the previous year.

During the year under review, the Spring Steel plant achieved Level – 1 of GWOEM (Global Wires Operational Excellence Model), as part of world-class quality initiative, leading to operational excellence (yield improved by 17%, internal rejections reduced by 38%, and customer complaints reduced by 60%). The division also achieved higher sale of wires through online portal "Aashiyana".

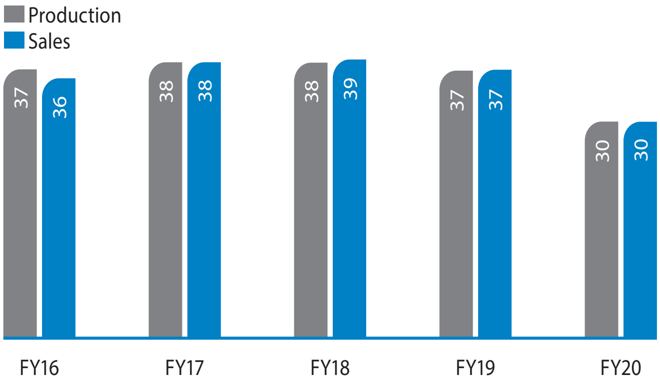
Tata Wiron received the 'National Award for Marketing Excellence in Iron and Steel Industry' and the 'Antardrishti' campaign received 'National Award for Marketing Excellence' for the Best Rural Marketing Campaign.

v. Bearings Division

Our Bearings Division is one of the India's largest quality bearing manufacturers, having its manufacturing facility situated at Kharagpur, West Bengal with an annual production capacity of 40 million bearing numbers. The Company is foremost in the manufacturing of a wide variety of bearings and auto assemblies and the product range includes Ball Bearings, Taper Roller Bearings, Hub Unit Bearings, Clutch Release Bearings, Double Row Angular Contact Bearings, Centre Bearings, and Magneto Bearings. The division is the only bearings manufacturer in India to win the TPM Award (2004) from Japan Institute of Plant Maintenance, Tokyo.

The production and sales performance is as below:

Production and Sales of Bearings Division (mn nos.)



During the year under review, the growth in the automotive sector and the tractor industry declined due to lack of any programme to boost the sector. The COVID-19 pandemic also adversely affected the business environment towards the end of March 2020. Compared to the previous year, production in the division was lower by 19% and sales were lower by 18%.

3. PERFORMANCE OF MAJOR SUBSIDIARIES

i. Tata Steel BSL Limited

Tata Steel BSL limited ('**TSBSL**') (formerly Bhushan Steel Limited) was acquired on May 18, 2018 through the Corporate Insolvency Resolution Process ('**CIRP**') under the Insolvency and Bankruptcy Code ('**IBC**'). On June 1, 2019, TSBSL completed the acquisition of Bhushan Energy Limited (now Angul Energy Limited) through the CIRP under IBC.

The turnover and profit and loss of TSBSL for the Financial Year 2019-20 are as follows:

(₹ crore)

	FY 20	FY 19
Turnover	18,199	18,376
EBITDA	2,370	3,033
Profit before tax (PBT), before exceptional	(686)	(922)
Profit before tax (PBT)	(617)	(881)
Profit after tax (PAT), before exceptional	(686)	(922)
Profit after tax (PAT)	(617)	(881)

The production and sales performance of TSBSL is given below:

(mn tonnes)

	FY 20	FY 19	Change (%)
Crude Steel	4.46	3.58	25
Saleable Steel	4.25	3.50	21
Sales	4.14	3.57	16

During the Financial Year 2019-20, the saleable steel production stood at 4.25 MnT and crude steel production stood at 4.46 MnT recording an increase of ~21% and ~25% respectively as compared to that of the previous year. The increase at TSBSL is due to ramp-up of operations. Further, in the previous year, deliveries prior to the acquisition of TSBSL on May 18, 2018 under IBC were not included.

Post the acquisition, many improvement projects were undertaken at TSBSL. TSBSL plans to sweat all the assets and reach higher level of capacity utilisation. In order to maximise capacity utilisation, TSBSL undertook the following initiatives;

- Development of value added products – TSBSL developed new grades in Oil and Gas segment as well as adhesive coated material for auto sector for brake application (as an import substitute).
- Development of new customers & market – During the year under review, TSBSL appointed six new distributors across India. Also, new customers were added in the OEM segment to increase the market presence and secure good share of business in OEM segment.

Value creation through synergy initiative with parent organisation – TSBSL technical and quality teams are working closely with the Tata Steel teams to develop high-end HR grade operational capability for high-end segments and to increase the volumes in branded products.

Operational Excellence: Be1 Programme

This is a flagship multi-dimensional excellence programme driving operational, commercial, financial, and capability excellence. These programmes enabled building a robust pipeline of improvement initiatives which will continue to deliver value over medium and long-term and strengthen TSBSL's financial position. The pipeline was built by conducting more than 50 idea generation workshops involving employees across all levels to the shop floor. These initiatives are focussed on cost reduction, throughput debottlenecking, and value creation.

Key initiatives on cost that drove value across the organisation include – fuel rate reduction, power cost reduction, Value-in-Use driven buying of all Raw Materials, Suppliers Days for best cost, country sourcing of Refractories and Graphite Electrodes, and HR barter with other steel players for logistics cost reduction.

Key initiatives on throughput include debottlenecking across upstream and downstream units, DRI (Direct Reduced Iron) kilns operationalisation, and horizontally deploying standardised maintenance practices for critical equipment. Besides these, initiatives focussed on value creation including diversifying end customer segments (especially non-auto), creating a full potential and GTM (Geometry Technology Module) view for strengthening export volumes, and reducing order delivery time through design of HR buffer for downstream plants.

In addition, the programme focussed on leveraging group synergies with Tata Steel to increase use of captive raw material, combined cargo planning (inbound and outbound), inter-plant synergies, and manufacture of Tata Steel branded products at TSBSL plants at arm's length. The plant achieved multiple Business Process Developments best demonstrated performance throughout the year across both cost and throughput Key Performance Indicators.

TSBSL started using digital tools to create sustainable value. A few key highlights from digital include the Digital Twin for steel melting shop which helped debottleneck throughput, GPS tracking of all outbound trucks from gate entry to customer unloading.

The benefits achieved from these initiatives in the Financial Year 2019-20 is approximately ₹1,950 crore.

The turnover of TSBSL was marginally lower due to lower market realisation, partly offset by higher volumes. The loss before tax was lower due to lower interest cost as in the previous year TSBSL had Inter-Corporate Deposits to be discharged.

ii. Tata Steel Long Products Limited

Pursuant to the Business Transfer Agreement entered into between the Company and Usha Martin Limited (**'UML'**) on September 22, 2018 and its subsequent novation in favour of Tata Steel Long Products Limited (**'TSLP'**) (formerly Tata Sponge Iron Limited), a subsidiary of the Company, the steel business of UML was acquired by TSLP on April 9, 2019 (other than transfer of some of the assets including iron ore mines, coal mines, and certain land parcels). Further, the transfer of iron ore mines and coal mines was completed on July 3, 2019.

TSLP's current product portfolio is unique in nature and complementary to Tata Steel product basket. It primarily deals in two products viz. DRI (Direct Reduced Iron/Sponge Iron) and Special Steel. DRI is highly commoditised in nature and used as a Raw material (substitute to the steel scrap) in the electric arc furnaces or induction furnaces. Special steel is used for high-end and critical applications such as forging, bearings, fasteners, spring, etc. This has enabled the Company to complete its offering in the Automotive sector for critical long products-based components apart from being a leader in flat products-based parts/components.

TSLP immediately after acquisition has engaged in transformation programme and launched "Shikhar" (multi-divisional, cross functional improvement initiative that aims to drive break through improvement projects) to achieve operational excellence and get the synergy benefits for long-term sustainability. The programme generated more than 1,100 ideas and TSLP successfully implemented majority of those, resulting in total savings of ~ ₹300 crore.

The turnover and profit/(loss) for the Financial Year 2019-20 are as follows:

(₹ crore)

	FY 20	FY 19
Turnover	3,490	992
EBITDA	184	156
Profit before tax (PBT), before exceptional	(369)	188
Profit before tax (PBT)	(530)	188
Profit after tax (PAT), before exceptional	(355)	124
Profit after tax (PAT)	(516)	124

Steel Business of UML was acquired on April 9, 2019, hence the Financial Year 2018-19 numbers of steel business are not available for comparison and analysis.

The production and sales performance is given below:

(mn tonnes)

	FY 20	FY 19	Change (%)
Crude Steel	0.58	-	N.A.
Saleable Steel	0.48	-	N.A.
Sales	0.51	-	N.A.

During the Financial Year 2019-20, TSLP produced 765 kt of sponge and 585 kt of steel. The deliveries of sponge were at 626 kt and 511 kt of steel. The turnover of the current year includes sale of sponge iron and steel whereas that of previous year includes only sale of sponge iron. TSLP reported losses mainly due to higher depreciation and higher finance cost along with higher exceptional charges post acquisition of steel business of UML.

iii. Tata Steel Europe

The eurozone economy grew by 1.2% in 2019 compared to 1.9% in 2018. Growth was negatively impacted by a slowing Chinese economy and US protectionism. Growth in the United Kingdom ('**UK**') economy was 1.4% in 2019 although uncertainty regarding Brexit continued to persist.

European steel spot prices, based on Hot Rolled Coil ('**HRC**') in Germany (parity point), weakened significantly during the year to €469/t, a decrease of €82/t. The decrease was driven by lower demand and continuing high levels of imports.

Following the completion of appropriate approvals and the passing of required legislation in the UK and European Union ('**EU**'), the UK left the EU on January 31, 2020 and entered a transition period which currently ends on December 31, 2020. The UK Government intends to have concluded a Free Trade Agreement ('**FTA**') by the end of December 2020. This in itself is a demanding timeline, and until the terms of the FTA are understood, strategic planning for the future under new trade arrangements remains a challenge. There could be a scenario under which the UK does not conclude an FTA before the end of December 2020.

Tata Steel Europe (**'TSE'**) is well prepared for a "No Deal" event and has taken mitigating steps which would avoid significant cost and disruption to the Company, fully documenting plans for reference and deployment as required.

During March 2020, the COVID-19 pandemic accelerated with many countries taking actions to restrict movement of people and to shutdown industrial activities to contain the spread of COVID-19. The key steel consuming industries reduced production amidst weakening economic activities, national lockdowns, shortage of manpower, and logistical issues and thus steel demand reduced.

The turnover and profit/(loss) figures of TSE (continuing operations) are given below:

(₹ crore)

	FY 20	FY 19
Turnover	55,939	64,777
EBITDA	(664)	5,414
Profit before tax (PBT), before exceptional	(5,012)	(1,078)
Profit before tax (PBT)	9,837	(1,147)
Profit after tax (PAT), before exceptional	(3,511)	(1,405)
Profit after tax (PAT)	11,337	(1,475)

The production and sales performance of TSE (continuing operations) is given below:

(mn tonnes)

	FY 20	FY 19	Change (%)
Liquid Steel Production	10.26	10.31	(1)
Deliveries	9.29	9.64	(4)

TSE's production in the Financial Year 2019-20 was almost at par with that of previous year. The deliveries were lower by 4% over that of previous year.

During the year under review, the revenue was at ₹55,939 crore, lower by 14% from that of previous year due to decrease in average revenue per tonne, along with lower deliveries, due to lower steel demand in Europe. The profit before tax in the Financial Year 2019-20 was significantly higher primarily on account of gain from interest waiver of £1.12 billion (₹10,088 crore) on the waived inter-company loan of £0.77 billion (₹6,981 crore) due to restructuring of inter-company debt during the second quarter of Financial Year 2019-20. However, the same was eliminated on consolidation in the group accounts, partly offset by higher exceptional charge mainly on impairment of PPE.

The principal activities of TSE in the Financial Year 2019-20 comprised the manufacture and sale of steel products. TSE's operations produced carbon steel by the basic oxygen steelmaking method at its integrated steelworks in the Netherlands at IJmuiden and in the UK at Port Talbot. During the Financial Year 2019-20 these plants produced 10.3 MnT (previous year: 10.3 MnT) of liquid steel.

Whilst TSE seeks to increase its differentiated/premium business, which is less dependent on market price movements, it still retains focus in both the UK and IJmuiden on improving its operations, consistency, and taking measures to protect against unplanned interruptions and property damage.

Strip Products Mainland Europe – Liquid steel production at IJmuiden Steel Works, Netherlands during the Financial Year 2019-20 at 6.8 MnT was 0.3 MnT lower than that of previous year, reflecting the weaker market circumstances. Record annual output of 1.4 MnT was achieved at the Direct Sheet Plant. The impact of COVID-19 was still relatively limited in the Financial Year 2019-20. During the year under review, Strip Products Mainland Europe continued with the Transformation Programme which is targeting improvements to delivery and yield performance, commercial mix, and reducing operating costs and unplanned downtime. Further, progress was also achieved in its 'Strategic Asset Roadmap' (STAR) capital investment programme to support the strategic growth of differentiated, high value products in the automotive, lifting and excavating, and energy and power market sectors.

Implementation of the 'Roadmap 2030' continued, which contains a series of measures to eliminate the environmental impact (noise, dust, odour) of Strip Products Mainland Europe.

Strip Products UK – Liquid steel production at Port Talbot Steel Works, Wales during the Financial Year 2019-20 was at 3.5 MnT, 0.3 MnT higher than that of the previous year due to an outage to extend the life of Blast Furnace-5 taken in the previous year. During the Financial Year 2019-20, Strip Products UK extended the successful 'Sustainable Operational Excellence' programme across the hub with many areas entering the sustainable phase after achieving a significant impact on daily management activities in the first phase. Following the 'Delivering Our Future' improvement initiative, work began on folding the activities into the European Transformation programme. The Port Talbot Hot Strip Mill recorded its highest ever availability with inherent capability to exceed record production.

New Products

TSE introduced 22 new products into the Group's product portfolio. Major new products are:

- Valast range of abrasion resistant steel grades for the engineering sector;
- MagiZinc full finish for the automotive market;
- Chromium-6 free Trivalent Chromium Coating Technology (TCCT) as replacement for Electrolytic Chromium Coated (ECCS) and Chromium Free Passivation Alternative (CFPA) products for the packaging market.

Differentiated products accounted for 37% of TSE's portfolio.

Strategic Activities

During the year under review, the Company and thyssenkrupp AG decided not to pursue the proposed transaction to form a joint venture to combine their steel businesses in Europe. The decision was taken after careful evaluation of the viability of the proposal in light of the feedback received from the European Commission ('**EC**'). Thereafter, on June 11, 2019, EC formally announced its decision to prohibit the proposed joint venture.

On September 2, 2019, TSE announced that it had signed a definitive agreement with JFE Shoji Trade Corporation (JFE) for the sale of Cogent Power Inc (manufacturer of cores for electrical distribution transformers in Canada and a part of Cogent business unit). The sale of CPI to JFE completed on September 20, 2019. TSE also announced that despite exploring all options it was unable to find a viable option for Orb Electrical Steels and therefore decided to close the site. Orb Electrical Steels was a manufacturer of Grain Oriented Electrical Steel in Wales, UK and a part of Cogent business unit.

During the year under review, TSE commenced a company-wide Transformation programme to improve the performance of the business, helping it to become more sustainable and enabling investments necessary to secure its long-term future. Improvements in performance will come from productivity improvements, increased sales of higher-value steels, and employment cost savings. In the Financial Year 2019-20, the Transformation programme delivered over £200 million worth of sustainable benefits.

Awards and Accolades

TSE won a Steelie Award for 'Excellence in Life Cycle Assessment' from the Word Steel Association. The award for developing a life cycle tool to assess the sustainability of new product recognises TSE's leading contribution to sustainability in the steel industry.

iv. South East Asia Operations

On January 28, 2019, the Company through its subsidiary T S Global Holdings Pte. Ltd. (**'TSGH'**), had entered into definitive agreements with HBIS Group Co. Ltd. (**'HBIS'**) to divest its entire equity stake in NatSteel Holdings Pte. Ltd. (**'NSH'**) and Tata Steel (Thailand) Public Company Ltd. (**'TSTH'**).

Therefore, in accordance with Ind AS 105, "Non-current Assets Held for Sale and Discontinued Operations", the assets and liabilities of businesses forming part of the disposal group were classified as held for sale as on March 31, 2019 and were presented separately in the Consolidated Balance Sheet as on March 31, 2019. In the results as on March 31, 2019, these companies had been disclosed within discontinued operations.

During the year under review, TSGH decided not to pursue the proposed transaction with HBIS, for want of regulatory approvals. While, the termination of definitive agreements with HBIS was beyond the management's control, active discussions and engagement with other potential buyer(s) demonstrate that the management is committed to sell the disposal group and there is an active programme in process for completing the sale.

The conditions for classification as held for sale, therefore, continue to be met and the businesses would continue to be classified as held for sale as on March 31, 2020.

Profit of ₹10 crore for the financial Year 2019-20 (Previous Year loss of ₹89 crore) is reported under "discontinued operations" in the Statement of Profit and Loss for the period ended March 31, 2020. The assets and liabilities of the entities held for sale have been separately disclosed in the Balance Sheet as at March 31, 2020. The Company has taken an impairment charge of ₹1,175 crore recognised for fair value measurement loss of NSH operations within profit/loss from discontinued operations in its consolidated financial statements.

v. Tata Metaliks Limited

Tata Metaliks Limited (**'TML'**) has its manufacturing plant at Kharagpur, West Bengal which produces annually 300 kt of pig iron and 200 kt of ductile iron pipes. Pig iron is marketed in the brand name 'Tata eFee' (world's first brand) and ductile iron pipe is marketed in the brand name 'Tata Ductura'.

During the year under review, the pig iron business was volatile and had a weak demand due to slow down of auto sector and low realisation, while the Ductile Iron pipe business was stable as it is driven by Government investment in water and sanitation infrastructure projects.

During the year under review, as part of the Digitisation journey, TML implemented smart machines, business on mobile, and data analytics in plant operation, maintenance, procurement, marketing & sales, HRM, project management, and finance & accounts. TML also introduced robotics in plant operation.

The turnover and profit/(loss) figures of TML for the Financial Year 2019-20 are as follows:

(₹ crore)

	FY 20	FY 19
Turnover	2,051	2,155
Profit before tax (PBT)	201	212
Profit after tax (PAT)	166	182

During the Financial Year 2019-20, the production of Pig Iron (**'PI'**) was at 320 kt, higher by 35 kt than that of previous year due to improved productivity of the furnace. The production of ductile iron pipes was at 225 kt, lower by 4% than that of previous year due to weak demand and adverse product mix. Deliveries of PI were at 519 kt, higher by 31 kt than that of previous year and deliveries of ductile pipes were at 218 kt lower by 8% than that of previous year. The turnover declined by 5% due to decrease in realisation as there was a decline in steel prices. This resulted in 9% decline in profit after tax from that of previous year.

vi. The Tinplate Company of India Limited

The Tinplate Company of India Limited (**'TCIL'**) is the largest indigenous producer of tin-coated and tin-free steel used for metal packaging. TCIL has also been 'value-adding' its products by providing printing and lacquering facility to reach closer to food processors/fillers. TCIL has two Cold Rolling Mills and two electrolytic tinning lines with an installed annual production capacity of approximately 379 kt of tinplate and tin-free steel.

The turnover and profit/(loss) figures of TCIL for the Financial Year 2019-20 are as follows:

(₹ crore)

	FY 20	FY 19
Turnover	2,123	2,611
Profit before tax (PBT)	104	92
Profit after tax (PAT)	95	58

During the Financial Year 2019-20, the production was 340 kt with an overall capacity utilisation of 90%. The production was lower by 18 kt than that of previous year. Deliveries were at 311 kt, lower by 32 kt than that of previous year owing to lower market demand. The turnover declined by ~19% due to lower market realisation and profit before tax increased by ~13% than that of previous year.

TCIL's product mix continues to serve end-uses such as edible oils, paints, pesticides, battery jackets, aerosol cans, processed foods, and crown corks. The products continue to be supplied in sheet and coil form. TCIL continued with its customer-focussed initiatives, in a structured way. One such initiative 'Pragati', consists of cross functional teams with members from TCIL and the customers, that addresses issues related to process efficiency and yields at the customers' end. This has helped the organisation to further improve relationships with customers. TCIL, over the last two years, has been preparing for emerging domestic competition. The implementation of these plans has created a favourable impact on the customers which is visible through the VOC (voice-of-customer) captured through various interactions.

TCIL completed the installation of Multi-Roll Leveller at both the ETLs (Extract, Transform and Load), to improve the shape characteristics of the product to International Standards. A cross-functional team based approach to improve the surface quality has been effective to prevent fine surface defects. TCIL has successfully commissioned its second Printing line at Solution Centre to meet the evolving printed sheet requirements both in the domestic and international markets. TCIL also has been working on new products/variants (1.6% of total production in FY 2020) to sustain its leadership position in the domestic market (44% market share) and to cater to different needs of customers.

After receiving the second level Total Productive Maintenance (**'TPM'**) award, TCIL's focus is on the deployment of TPM - Level 3. Two more pillars (Roll Management and Supply Chain Management) have been added to the existing 8-Pillar TPM Structure and, these ten pillars will bring further improvements in process and internal efficiencies for sustained operations. TCIL has undertaken cost control measures such as efficient utilisation of raw materials, reduction in power consumption (Variable Frequency Drives for high power motors, LED lamps across Plant), reduction in fuel and water consumption, reduction in consumables, reduction in number of strip breakages at mills and improvement in throughput.

The focus on environment management was through on-line monitoring of effluent & stack data (being shared with Jharkhand State Pollution Control Board on-line), rain water harvesting recharging system constructed in Tinplate Hospital, General Office and in Works, Compost from Canteen food waste, Recovery of water from waste water of ETLs.

The operations of TCIL are certified to Integrated Management Systems.

vii. Tata Steel Downstream Products Limited

Tata Steel Downstream Products Limited (**'TSDPL'**) (formerly Tata Steel Processing and Distribution Limited) is a leader in the organised Steel Service Centre business in India. TSDPL has a pan India presence with ten steel processing plants and thirteen distribution and sales locations. Value-added offerings of TSDPL include slitting, cut-to-length, blanking, corrugation, plate burning, fabrication, component manufacturing, and steel intensive products and applications. TSDPL's products and services conform to world-class quality standards in meeting customers' demand. Its entire operations including supply chain runs on a state-of-the-art ERP (Enterprise Resource Planning) system.

The key highlights on the performance during the Financial Year 2019-20 are as follows:

- TSDPL increased its processing capacity by commissioning a state of the art cut-to-length line to process high strength HR coil up to 12 mm at Kalinganagar and Pune
- Tada plant completed the expansion to handle higher volumes and more value-add services such as plate bending, blasting, and painting facility
- TSDPL Introduced several new products and service offerings which included extra high strength, scale brushed, edge trimmed, and stress relieved cut sheets and plates from Kalinganagar, processed electrical sheet and stamped components in Pantnagar region, floor and wall mounted IT racks and security safes

The turnover and profit/(loss) figures of TSDPL for the Financial Year 2019-20 are as follows:

(₹ crore)

	FY 20	FY 19
Turnover	3,108	4,281
Profit before tax (PBT)	95	118
Profit after tax (PAT)	61	76

During the year under review, the production from tolling business was at 1,836 kt, lower by ~12% than that of the previous year, due to lower businesses from Tata Steel and distribution business was at 627 kt, lower by ~23% than that of previous year due to lower demand in auto segment. The deliveries from tolling business was 1,799 kt which was in line with the previous year. The deliveries in distribution business was 609 kt, lower by ~24% than that of the previous year due to lower demand from auto segments. The turnover for the financial year declined by ~27% due to adverse market conditions, attributable to lower realisation and lower volumes from distribution business. The profit before tax declined by ~19%.

Awards and Accolades:

National Safety Council of India awarded TSDPL's Pune plant with a Bronze Trophy for the assessment period of CY 2016-18 and 'Suraksha Puraskar' and Jamshedpur plant "Prashansa Patra".

viii. Bhubaneshwar Power Private Limited

The turnover and profit/(loss) figures of Bhubaneshwar Power Private Limited (**'BPPL'**) for the Financial Year 2019-20 are as follows:

(₹ crore)

	FY 20	FY 19
Turnover	510	541
Profit before tax (PBT)	(9)	64
Profit after tax (PAT)	25	60

Uninterrupted power supply and cost of power is a challenge for large power intensive process industries. Industries which produce 365 days per annum, continue to depend on thermal power plants for their base load requirements.

BPPL is in the business of generation of power. It owns 135 MW (2x67.5 MW) coal based power plant in Odisha. BPPL supplies 120.5 MW power to Tata Steel and Tata Steel Mining Limited (formerly T S Alloys Limited).

During the year under review, the plant operated at a load factor of 78.51%, and generated 931 million units of power, as against 924 million units in the previous year. The plant availability has come down from 94% to 87.47% attributable to operational disturbance due to cyclone FANI and adverse coal supplies.

During the Financial Year 2019-20, the turnover of BPPL was ~6% lower than that of previous year, due to lower cost of generation as the revenue model is cost plus contract. Profit before tax declined mainly as previous year included a one-time gain of ~₹50 crore on fair valuation of loans. However, profit after tax increased due to an accounting credit on re-assessment of deferred tax assets and liabilities post adoption of lower tax rate which were announced during the year.

ix. Creative Port Development Private Limited

Creative Port Development Private Limited (**'CPDPL'**) is in possession of a 54 years concession from the Government of Odisha for development of a Greenfield Seaport at Chaumukh Village, in Balasore District, Odisha on a "BOOST" basis (Build, Own, Operate, Share & Transfer). CPDPL is availing this concession through a Special Purpose company "Subarnarekha Port Private Limited" and is in possession of all the statutory approvals for the project. In Phase – 1, the port will have an initial capacity of 25 MnT per annum with a potential to expand to 150 MnT per annum. CPDPL is already in possession of the port land and is in the advanced stage of getting the required land for railway corridor and construction of access road.

VI. FINANCIAL PERFORMANCE

1. Tata Steel Limited (Standalone)

During the Financial Year 2019-20, the Company recorded a profit after tax of ₹6,744 crore (previous year: ₹10,533 crore). The decrease is primarily on account of decline in realisations, lower deliveries, lower finance income, higher finance cost, and higher exceptional charges as compared to that of the previous year. The basic and diluted earnings per share for the Financial year 2019-20 were at ₹57.11 per share (previous year: Basic: ₹90.41 per share, diluted: ₹90.40 per share).

The analysis of major items of the financial statements is given below:

a) Revenue from operations

(₹ crore)

	FY 20	FY 19	Change (%)
Sale of products	57,168	67,214	(15)
Sale of power and water	1,648	1,709	(4)
Other operating revenue	1,620	1,688	(4)
Total revenue from operations	**60,436**	**70,611**	**(14)**

During the year under review, sale of products was lower as compared to that of the previous year, primarily due to lower realisations and decline in volumes. Ferro Alloys and Mineral Division (FAMD) registered lower revenue owing to lower sales of Ferro Chrome along with decline in prices due to depressed demand in the international markets. Wires and Tubes division registered lower revenue due to decrease in realisations and volumes.

b) Purchases of stock-in-trade

(₹ crore)

	FY 20	FY 19	Change (%)
Purchases of stock-in-trade	1,563	1,808	(14)

During the year under review, Purchases of stock-in-trade was lower as compared to that of the previous financial year due to lower purchases of wire rods, imported rebars, hot rolled coils, cold rolled coils, and slabs, owing to lower requirement.

c) Cost of materials consumed

(₹ crore)

	FY 20	FY 19	Change (%)
Cost of materials consumed	17,407	19,840	(12)

During the year under review, cost of materials consumed decreased primarily due to lower cost of imported coal, along with lower consumption of coal and purchased pellet. Moreover, cost of ferro alloys and other raw materials also declined.

d) Employee benefits expense

(₹ crore)

	FY 20	FY 19	Change (%)
Employee benefits expense	5,037	5,131	(2)

During the year under review, the employee benefits expense decreased primarily on account of reversal of excess provision post finalisation of wage agreements. The decrease was partly offset by increase due to change in the actuarial estimates owing to change in discounting rates along with normal salary revisions and its consequential impact on the retirement provisions.

e) Depreciation and amortisation expense

(₹ crore)

	FY 20	FY 19	Change (%)
Depreciation and amortisation expense	3,920	3,803	3

The increase in depreciation is due to higher charge on Right of Use assets post implementation of Ind AS 116.

f) Other expenses

(₹ crore)

	FY 20	FY 19	Change (%)
Other expenses	22,132	23,823	(7)

Other expenditure represents the following expenditure:

(₹ crore)

	FY 20	FY 19	Change (%)
Consumption of stores and spares	4,616	4,040	14
Repairs to buildings	65	61	5
Repairs to machinery	3,181	2,950	8
Relining expenses	94	88	7
Fuel oil consumed	198	211	(6)
Purchase of power	2,906	2,823	3
Conversion charges	2,795	2,722	3
Freight and handling charges	4,047	4,320	(6)
Rent	59	72	(19)
Royalty	1,751	2,003	(13)
Rates and taxes	832	1,201	(31)
Insurance charges	147	133	11
Commission, discounts and rebates	180	189	(4)
Allowance for credit losses/ provision for advances	2	1	50
Other expenses	2,929	3,809	(23)
Less:-Expenditure (other than interest) transferred to capital & other accounts	(1,671)	(800)	109
Total Other expenses	**22,132**	**23,823**	**(7)**

Other expenses were lower as compared to those of the previous financial year primarily on account of lower freight and handling charges mainly due to favourable rates, decrease in royalty expense along with rates and taxes on reversal of excess provision, higher one time charges in previous year not present in current year, partly offset by, higher repairs to machinery mainly due to IT transformation initiatives. Consumption of stores and spares increased primarily due to charging of project expenses on account of Kalinganagar Phase-II, majorly eliminated through transfer to capital account.

g) Finance costs and net finance costs

(₹ crore)

	FY 20	FY 19	Change (%)
Finance costs	3,031	2,824	7
Net Finance costs	2,861	600	377

During the year under review, finance costs increased mainly on account of issue of Non-Convertible Debentures along with higher interest cost on finance lease obligations primarily due to implementation of Ind AS 116.

Net finance charges were higher on account of lower interest income on inter-corporate deposits along with lower gain on sale of mutual funds.

h) Exceptional items

(₹ crore)

	FY 20	FY 19	Change (%)
Exceptional items	(1,704)	(114)	N.A.

The details of exceptional items for the current year and previous year are as follows:

- Provision for Impairment of investments/doubtful advances amounting to ₹1,150 crore (previous year: ₹12 crore) relates to provision recognised for impairment of investments in subsidiaries and joint ventures, net of reversal of ₹1 crore on account of recovery of advances made to a joint venture.
- Provision for demands and claims amounting to ₹110 crore (previous year: ₹329 crore) relating to certain statutory demands and claims on environment and mining matters.
- Provision for demands and claims amounting to ₹86 crore (previous year: NIL) relating to SVLDRS Sabka Vishwas Legal Dispute Resolution Scheme.
- Provision for Employee Separation scheme (ESS) under Sunehere Bhavishya Ki Yojana ('SBKY') scheme amounting to ₹107 crore (previous year: ₹35 crore).
- Fair valuation loss on preference share investment held by the Company in some of its affiliates ₹250 crore (previous year: Nil)
- Profit on sale of non-current investments in TRL Krosaki Refractories Limited (an associate of the Company) Nil (previous year: ₹262 crore).

i) Property, plant and equipment (PPE) including intangibles and right of use assets

(₹ crore)

	FY 20	FY 19	Change (%)
Property, Plant and Equipment	66,392	70,417	(6)
Capital work-in-progress	8,070	5,686	42
Intangible assets	728	805	(10)
Intangible assets under development	177	110	61
Right of use Assets	4,113	0	N.A.
Total Property, plant and equipment(PPE) including intangibles & right of use assets	**79,480**	**77,018**	**3**

The movement in total PPE including intangible assets is higher primarily on account of increase in Right of Use Assets post implementation of Ind AS 116 along with increase in capital work-in-progress mainly at Kalinganagar Phase-II, partly offset by depreciation charge during the year.

j) Investments

(₹ crore)

	FY 20	FY 19	Change (%)
Investment in Subsidiary, JVs and Associates	26,578	4,438	499
Investments - Non-current	20,283	34,492	(41)
Investments - Current	3,235	477	578
Total Investments	**50,096**	**39,407**	**27**

The increase in investments was predominantly on account of higher investments in equity shares of subsidiaries mainly in T Steel Holdings Pte. Ltd. and in Tata Steel Long Products Limited (formerly Tata Sponge Iron Ltd.) along with increase in current investments in mutual funds. Decrease in other non-current investments is mainly in the preference shares of T Steel Holdings Pte. Ltd. on conversion to equity shares.

k) Inventories

(₹ crore)

	FY 20	FY 19	Change (%)
Finished and semi-finished goods including stock-in-trade	4,777	4,205	14
Work-in-progress	7	14	(52)
Raw materials	3,586	4,496	(20)
Stores and spares	2,347	2,540	(8)
Total Inventories	**10,717**	**11,255**	**(5)**

Raw material inventories decreased over that of previous year mainly due to decrease in coal inventory owing to lower rates and quantities. Inventory of stores and spares decreased mainly on account of planned reduction.

Finished and semi-finished inventory increased as compared to that of the previous year mainly due to increase in quantities, partly offset by lower rates.

l) Trade receivables

(₹ crore)

	FY 20	FY 19	Change (%)
Gross trade receivables	1,050	1,398	(25)
Less: allowance for credit losses	33	35	(5)
Net trade receivables	**1,017**	**1,363**	**(25)**

Decrease in trade receivables as compared to that of previous year is primarily due to lower month-end sales owing to nationwide lock down post outbreak of COVID-19.

m) Gross debt and Net debt

(₹ crore)

	FY 20	FY 19	Change (%)
Gross debt	41,423	29,701	39
Less: Cash and Bank balances (incl. Non-current balances)	1,281	753	70
Less: Current investments	3,235	477	578
Net Debt	**36,907**	**28,471**	**30**

Gross debt was higher due to drawal of short-term loans and other term loans, issue of non-convertible Debentures, drawal of External Commercial Borrowings (ECB) and increase in finance lease obligations post implementation of Ind AS 116, partly offset by scheduled repayments of non-convertible debentures and re-payments of ECB and term loans.

Net debt was higher as compared to that of the previous year. This is attributable to increase in Gross debt, partly offset by increase in current investments along with cash and bank balances.

n) Cash Flows

(₹ crore)

	FY 20	FY 19	Change (%)
Net Cash from/(used in) operating activities	13,454	15,193	(11)
Net Cash from/(used in) investing activities	(17,635)	(16,350)	(8)
Net Cash from/(used in) financing activities	4,630	(2,887)	260
Net increase/(decrease) in cash and cash equivalents	**449**	**(4,044)**	**111**

Net cash flow from/(used in) operating activities

During the year under review, the net cash generated from operating activities was ₹13,454 crore as compared to ₹15,193 crore during the previous year. The cash inflow from operating profit before working capital changes and direct taxes during the current year was ₹13,768 crore as compared to inflow of ₹19,949 crore during the previous year due to lower operating profits. Cash inflow from working capital changes in 2019-20 is mainly due to decrease in Non-current/Current financial and other assets by ₹1,442 crore and decrease in inventories by ₹533 crore, partly offset by decrease in Non-current/current financial and other liabilities/provisions by ₹471 crore. The income taxes paid during the current year was ₹1,819 crore as compared to ₹4,533 crore during previous financial year primarily due to change in corporate tax rates.

Net cash flow from/(used in) investing activities

During the year under review, the net cash outflow from investing activities amounted to ₹17,635 crore as compared to ₹16,350 crore during the previous year. The outflow during the current year broadly represents, investments in subsidiaries ₹8,945 crore, capex of ₹4,749 crore, net purchase of current investments of ₹2,662 crore and inter-corporate deposits given of ₹1,527 crore.

Net cash flow from/(used in) financing activities

During the year under review, the net cash inflow from financing activities was ₹4,630 crore as compared to an outflow of ₹2,887 crore during the previous year. The inflow during the current year broadly represents proceeds from borrowings (net of repayments) ₹9,772 crore, partly offset by payment of interest ₹3,084 crore, payment of dividend including taxes ₹1,787 crore.

o) Changes in Key Financial Ratios

The change in the key financial ratios as compared to previous year is stated below:

(₹ crore)

	FY 20	FY 19	Change (%)
Inventory Turnover (days)	70	60	16
Debtors Turnover (days)	7	8	(14)
Current Ratio (Times)	0.81	0.73	10
Interest Coverage Ratio[1] (Times)	4.37	9.57	(54)
Debt Equity[2] (Times)	0.55	0.44	27
Net Debt Equity (Times)	0.49	0.42	18
EBITDA Margin (%)	24.98	29.38	(15)
Net Profit Margin (%)[3]	11.16	14.92	(25)
Return on average Net worth[3] (%)	9.02	15.43	(42)

1) Interest Coverage Ratio: Decreased primarily on account of lower operating profits.

2) Debt Equity Ratio: Increased primarily on account of increase in borrowings over the Financial Year 2018-19.

3) Net Profit Margin and Return on average net worth: Decreased primarily on account of decrease in net profits primarily attributable to lower operating profits and higher exceptional charges during the Financial Year 2019-20.

2. Tata Steel Limited (Consolidated)

The consolidated profit after tax (including discontinued operations) of the Company was ₹1,172 crore as against ₹9,098 crore in the previous year. The decrease was mainly due to lower operating profits due to falling steel prices during the year and higher exceptional charges, partly offset by lower tax expenses during the year primarily on account of re-measurement of deferred tax liabilities based on the new lower rate of Income tax prescribed under Section 115BAA of the Income Tax Act,1961 along with creation of deferred tax assets at some of the foreign entities.

The analysis of major items of the financial statements is given below.

*(Note: The financials of Tata Steel Long Products Limited ('**TSLP**') for the Financial Year 2018-19 pertain only to the sponge business of TSLP, since the steel business of Usha Martin Limited ('**UML**') was acquired on April 9, 2019.)*

a) Revenue from operations

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	60,436	70,611	(14)
TSBSL	18,199	18,376	(1)
TSE	55,939	64,777	(14)
TSLP	3,490	992	252
Others	41,786	45,885	(9)
Eliminations & Adjustments	(40,033)	(42,972)	7
Total revenue from operations	**139,817**	**157,669**	**(11)**

The consolidated revenue from operations was lower as compared to that of the previous year primarily due to decline in realisations across geographies along with lower deliveries.

Tata Steel Europe ('**TSE**') reported decrease mainly on account of decrease in average revenue per tonne, lower deliveries by 4% along with adverse forex impact on translation.

The revenue from Tata Steel BSL Limited ('**TSBSL**') marginally decreased mainly due to lower realisation, partly offset by higher volumes as the previous period was consolidated only from May 18, 2018.

Revenue from TSLP increased post of acquisition of steel business of UML reflect revenue from sponge and steel businesses.

b) Purchases of stock-in-trade

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	1,563	1,808	(14)
TSBSL	3	7	(58)
TSE	3,110	4,814	(35)
TSLP	0	0	na
Others	4,199	6,110	(31)
Eliminations & Adjustments	(4,079)	(6,171)	34
Total purchases of stock-in-trade	**4,796**	**6,568**	**(27)**

Expense was lower mainly at TSE primarily on account of decrease in external steel purchases across a number of operating units, consistent with lower deliveries. At Tata Steel (Standalone), the expense was lower due to lower purchases of wire rods, imported rebars, hot rolled coils, cold rolled coils and slabs owing to lower requirement.

c) Cost of materials consumed

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	17,407	19,840	(12)
TSBSL	10,816	9,840	10
TSE	22,784	23,407	(3)
TSLP	2,392	709	238
Others	31,981	34,049	(6)
Eliminations & Adjustments	(32,136)	(33,536)	4
Total cost of materials consumed	**53,244**	**54,309**	**(2)**

Consumption was marginally lower mainly on account of decrease at Tata Steel (Standalone) due to lower cost of consumption of imported coal as well as other raw materials owing to decrease in prices. Tata Steel Europe reported marginal decrease in GBP terms along with favourable exchange impact on translation.

Cost at TSLP increased post acquisition of steel business of UML.

Others primarily reflects decline in transactions at T S Global Minerals Holdings Pte Ltd. due to sale of Black Ginger 461 Pty. Ltd. and lower activities at T S Global Procurement and Natsteel Asia which are majorly eliminated on consolidation.

d) Employee benefits expense

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	5,037	5,131	(2)
TSBSL	410	327	25
TSE	11,961	12,444	(4)
TSLP	192	45	328
Others	934	812	15
Total employee benefits expense	**18,534**	**18,759**	**(1)**

Decrease in expenses was mainly at TSE primarily at Strip Products Ijmuiden (driven by decrease of FTE– Full Time Equivalency) and at Cogent Power post disposal along with favourable exchange impact on translation.

Expense at Tata Steel (Standalone) decreased mainly on account of reversal of excess provisions post finalisation of wage agreements.

Expense at TSBSL reflects an increase mainly because the previous period was consolidated only from May 18, 2018. The increase is also attributable to change in the actuarial estimates owing to change in discounting rates.

Expense at TSLP increased post acquisition of steel business of UML.

e) Depreciation and amortisation expense

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	3,920	3,803	3
TSBSL	1,452	1,228	18
TSE	2,355	1,936	22
TSLP	311	12	2,584
Others	403	363	11
Total depreciation and amortisation expense	**8,441**	**7,342**	**15**

This expense was higher than that of previous year mainly on account of higher depreciation on Right of Use assets post implementation of Ind AS 116.

The expense at TSLP increased post acquisition of steel business of UML

f) Other expenses

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	22,132	23,823	(7)
TSBSL	4,875	4,661	5
TSE	18,205	18,826	(3)
TSLP	962	94	927
Others	2,360	3,770	(37)
Eliminations & Adjustments	(2,189)	(2,428)	(10)
Total other expenses	**46,345**	**48,746**	**(5)**

Other expenditure represents the following expenditure:

(₹ crore)

	FY 20	FY 19	Change (%)
Consumption of stores and spares	11,626	11,160	4
Repairs to buildings	108	133	(19)
Repairs to machinery	6,754	6,672	1
Relining expenses	94	88	7
Fuel oil consumed	599	451	33
Purchase of power	4,720	4,865	(3)
Conversion charges	2,652	2,681	(1)
Freight and handling charges	8,929	8,389	6
Rent	2,325	3,455	(33)
Royalty	1,824	2,191	(17)
Rates and taxes	1,174	1,485	(21)
Insurance charges	352	272	29
Commission, discounts and rebates	239	260	(8)
Allowance for credit losses/ provision for advances	6	174	(97)
Other expenses	7,262	8,134	(11)
Less: Expenditure (other than interest) transferred to capital & other accounts	(2,318)	(1,664)	39
Total Other expenses	**46,345**	**48,746**	**(5)**

Expense was lower mainly at Tata Steel (Standalone) on account of decrease in freight and handling charges, decrease in royalty expense along with rates and taxes on reversal of excess provision, higher one-time charges in previous year not present in current year.

TSE reported decrease mainly on account of lower consumption of stores and spares, lower level of repairs and maintenance, power cost, lower rent due to impact of Ind AS 116, and lower other general expenses along with favourable exchange impact on translation. These decreases were partly offset by purchase of emission rights as against sale during the previous year.

Decrease in 'Others' was mainly at T S Global Holdings on account of favourable exchange rate movement.

Increase in other expenses at TSBSL is primarily because the previous period was consolidated only from May 18, 2018. The increase is also attributable to higher stores and spares consumption, higher repairs to machinery, offset by lower rental expenses.

Other expenses at TSLP increased post acquisition of steel business of UML.

g) Finance costs

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	3,031	2,824	7
TSBSL	1,655	2,834	(42)
TSE	3,249	4,631	(30)
TSLP	293	3	9,591
Others	4,609	7,270	(37)
Eliminations & Adjustments	(5,304)	(9,902)	(46)
Finance costs	**7,533**	**7,660**	**(2)**

h) Net Finance costs

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	2,861	600	377
TSBSL	1,604	2,727	(41)
TSE	2,024	4,592	(56)
TSLP	242	(43)	663
Others	1,069	281	280
Eliminations & Adjustments	(1,838)	(1,531)	20
Net Finance costs	**5,962**	**6,626**	**(10)**

Finance cost was lower mainly due to repayment of external borrowings taken by Bamnipal Steel Limited for the acquisition of TSBSL. Decrease at TSBSL mainly relates to repayment of funds provided by Bamnipal Steel Limited for the acquisition which was majorly eliminated on consolidation. Decrease at TSE was mainly due to decrease in borrowings post restructuring of debt in September 2019, majorly eliminated on consolidation.

Increase in finance cost at TSLP was post acquisition of steel business of UML.

Net finance charge was lower in line with decrease in finance cost. Expense was lower at TSE mainly due to higher finance income on refinancing of Senior Facilities Agreement (SFA). Expense was higher at Tata Steel (Standalone) mainly on account of interest income in previous year from inter-corporate deposits given to Bamnipal Steel Limited for acquisition of TSBSL, which was eliminated on consolidation.

i) Exceptional items

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	(1,704)	(114)	N.A.
TSBSL	69	41	N.A.
TSE	(2,221)	(69)	N.A.
TSLP	(161)	0	N.A.
Others	(659)	79	N.A.
Eliminations & Adjustments	924	(58)	N.A.
Total exceptional items	**(3,752)**	**(121)**	**N.A.**

Exceptional items during the Financial Year 2019-20, primarily represent:

- Provision for demands and claims amounting to ₹110 crore relating to certain statutory demands and claims on environment and mining matters at Tata Steel Limited (Standalone).
- Provision for demands and claims amounting to ₹86 crore relating to SVLDRS Sabka Vishwas Legal Dispute Resolution Scheme at Tata Steel Limited (Standalone).
- Provision for impairment of doubtful capital advances amounting to ₹42 crore at TSBSL.
- Impairment charges of ₹3,197 crore in respect of property, plant and equipment (including Capital Work-in-Progress, right of use assets, goodwill, capital advances and intangible asset) at Tata Steel Europe, Global mineral entities, Tata Steel Special Economic Zone, Tata Steel BSL Limited and Bhubaneshwar Power Private Limited.
- Restructuring provisions amounting to ₹161 crore at TSE.
- Provision for Employee Separation Scheme ('ESS') under Sunehere Bhavishya Ki Yojana ('SBKY') scheme amounting to ₹107 crore at Tata Steel Limited (Standalone).
- Expenses incurred on stamp duty and registration fees for a portion of land parcels and mines acquired as part of business combination ₹27 crore and provision for coal block performance guarantee ₹134 crore at TSLP.
- Notional fair valuation loss on preference share investment held by the Company in one of its affiliates ₹250 crore at Tata Steel Limited (Standalone).

Partly offset by,

- Gain on recovery of advances earlier provided for, amounting to ₹1 crore at Tata Steel Limited (Standalone).
- Write back of provisions amounting to ₹154 crore which primarily includes write-back of liabilities no longer required at TSBSL and settlement credit received at The Indian Steel & Wire Products Ltd. ₹18 crore.
- Profit on sale of subsidiaries ₹149 crore, profit on liquidation of group companies ₹41 crore at TSE.

The exceptional items in financial Year 2018-19 primarily include:

- Provision for demands and claims amounting to ₹329 crore relating to certain statutory demands and claims on environment and mining matters at Tata Steel Limited (Standalone).
- Provision of ₹172 crore in respect of advances with public bodies paid under protest by TSBSL.
- Provision for Employee Separation Scheme ('ESS') under Sunehere Bhavishya Ki Yojana ('SBKY') scheme amounting to ₹35 Crore at Tata Steel Limited (Standalone).
- Impairment charges of ₹10 Crore in respect of property, plant and equipment (including Capital Work-in-Progress and capital asset) and intangible asset at TSBSL.

Partly offset by,

- Profit on sale of non-current investments amounting to ₹180 crore, primarily in TRL Krosaki Refractories Limited (an associate of the Company).
- Restructuring and write back of provisions amounting to ₹245 crore which primarily includes write-back of liabilities no longer required at TSBSL and arbitration settlement at Tata Steel Utilities

and Infrastructure Limited (formerly Jamshedpur Utilities & Services Company Limited), partly offset by charge at TSE.

j) Property, plant and equipment (PPE) including intangibles and right of use assets

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	79,480	77,018	3
TSBSL	30,491	29,673	3
TSE	24,158	21,880	10
TSLP	4,646	228	1,940
Others	11,488	10,441	10
Eliminations & Adjustments	(270)	(154)	(75)
Total property, plant and equipment (PPE) including intangibles & right of use assets	**149,993**	**139,086**	**8**

Increase in PPE and intangibles was mainly due to increase in Right of Use Assets post implementation of Ind AS 116 along with acquisition of steel business of UML. Increase at TSE was mainly on account of additions and increase in capital work in progress along with increase on account of exchange impact on translation.

k) Inventories

(₹ crore)

	FY 20	FY 19	Change (%)
Finished and semi-finished goods including stock in Trade	12,520	11,152	12
Work-in-progress	4,273	4,592	(7)
Raw materials	9,513	11,425	(17)
Stores and spares	4,763	4,487	6
Total Inventories	**31,069**	**31,656**	**(2)**

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	10,717	11,255	(5)
TSBSL	4,839	4,582	6
TSE	12,859	13,714	(6)
TSLP	797	115	591
Others	1,990	2,141	(7)
Eliminations & Adjustments	(133)	(151)	13
Inventories	31,069	31,656	(2)

Decrease was primarily at Tata Steel (Standalone), mainly in raw materials and stores and spares, offset by increase in finished and semi-finished goods. Tata Steel Europe reported decrease on account of lower raw material and WIP inventory. These decreases were partly offset by acquisition of steel business of UML by TSLP. Increase at TSBSL was mainly due to higher stock of finished goods along with higher stores and spares, partly offset by decrease in raw material inventory.

l) Trade receivables

(₹ crore)

	FY 20	FY 19	Change (%)
Tata Steel (Standalone)	1,017	1,363	(25)
TSBSL	702	697	1
TSE	5,645	5,607	1
TSLP	156	78	99
Others	10,690	15,453	(31)
Eliminations & Adjustments	(10,325)	(11,387)	9
Net trade receivables	**7,885**	**11,811**	**(33)**

Decrease in 'Others' was primarily at T S Global Procurement mainly due to decline in securitisation transactions. Decrease at Tata Steel Limited (Standalone) was primarily due to lower deliveries during the month of March 2020 along with lower prices. These decreases were partly offset by acquisition of steel business of UML by TSLP.

m) Gross debt and Net debt

(₹ crore)

	FY 20	FY 19	Change (%)
Gross debt	116,328	100,816	15
Less: Cash and Bank balances (incl. Non-current balances	8,117	3,412	138
Less: Current investments	3,432	2,525	36
Net debt	**104,779**	**94,879**	**10**

Net debt was higher by ₹9,900 crore over that of previous year.

Gross Debt at ₹1,16,328 crore was higher by ₹15,512 crore as compared to that of previous year. Increase in Gross Debt was mainly on account of recognition of lease obligations post transition to Ind AS 116 along with higher borrowings at TSLP due to acquisition of steel business of UML, higher proceeds from borrowings (net of repayment) mainly at Tata Steel (Standalone) along with adverse exchange impact on translation being ₹4,095 crore. These increases were partly offset by marginal decrease at Tata Steel Europe.

The increase in Net Debt was in line with increase in gross debt partly offset by increase in cash and bank balances mainly at T S Global Holdings (**'TSGH'**) and Tata Steel (Standalone). Moreover, there was increase in current investments mainly at Tata Steel (Standalone), partly offset by decline at TSBSL.

n) Cash Flows

(₹ crore)

	FY 20	FY 19	Change (%)
Net Cash from/(used in) operating activities	20,169	25,336	(20)
Net Cash from/(used in) investing activities	(14,530)	(29,211)	50
Net Cash from/(used in) financing activities	(1,695)	(673)	(152)
Net increase/(decrease) in cash and cash equivalents	**3,944**	**(4,548)**	**187**

Net cash flow from/(used in) operating activities

During the year under review, the net cash from operating activities was ₹20,169 crore as compared to ₹25,336 crore during the previous year. The cash inflow from operating profit before working capital changes and direct taxes during the year under review was ₹18,078 crore as against ₹27,840 crore during the previous year, reflecting higher operating profits. Cash inflow from working capital changes during the current period was ₹4,196 crore, primarily due to decrease in inventories by ₹1,562 crore and Non-current/Current financial and other assets ₹4,631 crore, partly offset by decrease in Non-current/Current financial and other liabilities/provisions by ₹1,997 crore. The payment of income taxes during the year under review was ₹2,106 crore as compared to ₹5,094 crore during the previous year.

Net cash flow from/(used in) investing activities

During the year under review, the net cash outflow from investing activities was ₹14,530 crore as against an outflow of ₹29,211 crore during the previous year. The outflow in the financial Year 2019-20 broadly represents capex of ₹10,398 crore, acquisition of subsidiaries/ undertakings amounting to ₹4,433 crore, (mainly at TSLP – steel business of UML, BEL acquisition at TSBSL), along with purchase (net of sale) of current investments amounting to ₹766 crore.

Net cash flow from/(used in) financing activities

During the year under review, net cash outflow from financing activities was ₹1,695 crore as against outflow of ₹673 crore during the previous year. The net outflow primarily represents interest paid ₹7,419 crore and payment of dividend including taxes ₹1,815 crore, partly offset by proceeds from borrowings (net of repayment) ₹7,607 crore.

o) Changes in Key Financial Ratios

The details of changes in the key financial ratios as compared to previous year is stated below:

(₹ crore)

	FY 20	FY 19	Change (%)
Inventory Turnover (days)	85	72	19
Debtors Turnover (days)	26	28	(8)
Current Ratio (Times)	1.40	1.39	1
Interest Coverage Ratio[1] (Times)	1.68	4.38	(62)
Debt Equity (Times)	1.58	1.51	4
Net Debt Equity (Times)	1.42	1.43	(0)
EBITDA Margin[2] (%)	12.68	18.88	(33)
Net Profit Margin[3] (%)	0.84	5.77	(85)
Return on average Net worth[3] (%)	1.59	13.67	(88)

1) Interest Coverage Ratio: Decreased primarily on account of lower operating profits attributable to lower volumes and lower realisations across geographies.

2) EBITDA Margin: Decreased primarily on account of decrease in operating profits.

3) Net Profit margin and Return on average net worth: Decreased primarily on account of decrease in net profits attributable to lower operating profits and higher exceptional charge during the current year.

VII. Human Resources Management & Industrial Relations

Human resource has always been one of the most valued stakeholders for the Company. The Company has a culture of working together through joint consultation between Union and Management and a very strong commitment towards community development. Our people practices have enabled us to create an environment of collaboration and connect, which has aided us to achieve industrial harmony of over 91 years.

Improving employee productivity is of utmost importance to the organisation. During the year under review, employee productivity improved from 800 tonnes of crude steel/employee/year to 803 tonnes of crude steel/employee/year with the employees on roll in Tata Steel Limited moving from 32,984 to 32,364.

During the year under review, the Company embarked on major improvements in areas of diversity and inclusion. The Company was the first in the country to deploy women in all shifts in its mines through an initiative called 'Women@Mines'. The Company also rolled out a policy on equal rights for LGBTQ+ employees to enable partners of colleagues from the LGBTQ+ community to avail all benefits meant for employees' spouse. Efforts have been taken on hiring and creating infrastructure for diverse workforce as well as retaining and developing women leaders. Our continuous efforts in this direction have led to increase in gender diversity from 6.5% to 6.9% of the total workforce.

Digitalisation has been one of the most focussed area for the Management. Various projects such as 'Connected Workforce system' to improve safety of contract workforce; 'TalentPro' to have a unified view of talent and performance management along with learning; and real-time dashboards using analytics tool such as 'Tableau' to provide insights on employee cost, diversity and workforce productivity were implemented to improve employee experience and data driven decision making.

In order to fulfill the Company's commitment towards enhancing the skills of its workforce, 'School of Excellence'- an initiative to develop world-class technical competencies for employees, was introduced. During the year under review, over 50,000 contract workforce completed such certification.

During the year under review, the Company was certified as Great Place to Work in the Great Place to Work study conducted for the year 2020. The Company was also declared as one of the top 30 'India's Best Places to Work in the Manufacturing sector' by Great Place to Work for the 3rd year in a row.

In Europe, the Company is committed to provide an environment that recognises and values the differences in employee backgrounds and skills. The aim is to provide equal opportunity for all employees regardless of gender, sexual orientation, part-time or fixed term status, parental responsibilities, marital status, race, disability, colour, national or ethnic, and to maximise the benefits available from a diverse workforce.

In Europe, the Company strives to ensure that well-developed policies and procedures are in place for consulting and negotiating with trade unions, the European works council and employee representatives, so that views of employees can be considered in making decisions that are likely to affect their interests. UK Steel Enterprise Limited, a subsidiary of Tata Steel Europe, helps the economic regeneration of communities affected by changes in the UK steel industry and it has rolled out support measures to businesses across all steel sectors in the UK to help create new job opportunities for steel communities.

VIII. Digital Transformation

The Company is on a multi-year digital enabled Business Transformation journey intending to be the leader in Digital Steel making by 2025 through adoption of Digital Technologies. In the process, the Company intends to improve EBITDA, enhance digital maturity, and improve work practices to be more intelligent, insightful, and agile as an organisation.

Cloud, Data, and Artificial Intelligence (AI) are the key drivers of this transformation. The substantial investments made in Network, Cloud, and Cyber-security over the last couple of years has laid a strong foundation for a rapid and sustainable business transformation. The Company has developed a Maintenance Technology Roadmap ('**MTR**') to improve the sensor density on mission critical equipment to enable Predictive Maintenance. As a first step, an Asset Monitoring & Diagnostic Centre ('**AMDC**') has been set up for remote condition monitoring of such critical equipment. All these initiatives have accelerated data generation to ~20TB/month with data volumes growing 2.5x year-on-year. Leveraging the data, 100+ data analytics models have been deployed across processes to drive insights-based decision making.

Since the early stages of our transformation journey, the Company has acknowledged that Data Analytics and AI will have numerous applications in steel manufacturing. AI will allow the Company to be more cognitive of its internal processes, the externalities, and stakeholder expectations. A business first approach to AI helps drive this agenda through identifying user stories that drive clear tangible business benefits. The Company uses data analytics to arrive at optimum Coke, Pellet, and Sinter quality to improve the yield and throughput of the Blast Furnaces. Through Advanced Analytics the Company modelled the iron making process inside a Blast Furnace which reduces coke consumption and further yield improvement. Advanced Analytics models are guiding our operators on the optimum casting speed in the Continuous Casting process to arrive at the target properties at the lowest cost and time. Operations Research based models are driving logistics cost optimisation and yield and throughput improvement through efficient production planning. All such initiatives are governed and monitored in order to gain cost improvements. The Company broadly classifies the Analytics solutions into three stages: 1) Smart Assistance, 2) Intelligence Augmentation, and 3) Zero Human intervention. The Company started off the journey by driving Advanced Analytics, which is the precursor to AI adoption.

As a result of early adoption and perseverance, Tata Steel Ijmuiden, Netherland (in 2018) and Tata Steel Kalinganagar, India (in 2019) have been recognised as Industry 4.0 Lighthouses by World Economic Forum.

The Company targets to be a Zero Harm organisation and ensure safety and security for our employees and assets. We have built a Connected Workforce solution that gives us end-to-end visibility of the work patterns of the contract workforce across the plants. It helps us pre-empt unsafe incidents while improving the workforce productivity through analytics. We are using Video Analytics to detect the right usage of Personal Protective Equipment on the shop-floor, to monitor traffic inside the plant premises to improve road safety.

The pioneering e-commerce initiatives such as Aashiyana (for the Individual House Builders), DigECA (for the Micro, Medium and Small Enterprises), and COMPASS (for our large industrial accounts) are well poised to be the main stay of how business will be conducted going forward – with minimal in-person interactions. Key to all such initiatives are the Company's Channel Partners and the Sampoorna digital platform is enabling efficient distribution and enhancing customer experience through better collaboration along the distribution network. In the previous year, the Company piloted a solution that used satellite image and socio-economic data analytics for demand estimation of some of the product segments with success. This solution will prove essential in the era of social distancing where the Company can remotely identify demand hotspots and direct sales efforts towards it.

The prevalent level of sensorisation, automation, and camera density combined with data analytics allowed the Company's managers to manage operations remotely with a skeletal workforce during the National Lockdowns. Together, these technologies form the foundation to enable truly Integrated & Remote Operations and Smart Asset Maintenance from Mines to Mills. Sensorisation, via MTR programme, and AMDC have enabled "Remote Read & Diagnose" capabilities with focus on enabling "Remote Write" capabilities going forward.

The Company is looking at Integrated Supply Chain Planning & Logistics combined with Integrated Margin Monitor as themes & tools to drive end-to-end cost optimisation. The procurement processes are being platformatised through introduction of digital catalogue-based buying, commodity price prediction aided buying, analytics powered negotiation tools and end-to-end contract lifecycle management. A Virtual Command Centre ('**VCC**') is envisaged to enable centralised and decentralised interventions seamlessly. This will eliminate the need for any Physical Command Centres, which are resource intensive in building and maintaining. A VCC would ideally be a device agnostic app with defined access and control as per roles, responsibilities, profiles, and decision journeys, orchestrated via AI.

IX. IMPACT OF COVID-19 PANDEMIC ON THE COMPANY

The COVID-19 pandemic has posed unprecedented disruptions in business operations of companies all over the globe. At Tata Steel, the first and foremost priority is the health and safety of the employees and the communities in which the Company operates. The Company has been operating its facilities in accordance with the advisories issued from time to time, by the Central, State and local Governments, including the prescribed hygiene and safety standards and social distancing norms.

a) Impact on the operations

In view of the nationwide lockdown imposed to combat the COVID-19 pandemic and the slowdown in economic activity, there has been a significant reduction in demand in key steel consuming segments such as automotive, infrastructure, construction, real estate, capital goods, consumer durables amongst others. The steel consuming industries have reduced production amidst weakening economic activities, shortage of manpower, working capital constraints, and logistical issues, thereby impacting steel demand adversely.

Being part of the essential services and process industries where the continuous operations of the facilities is important, the Company's steel and mining operations were exempt from lockdown measures, subject to certain guidelines. The Company's mining operations continued to operate normally. However, the Company operated its facilities at Jamshedpur and Kalinganagar at reduce production levels on account of lack of demand from customers. Production at downstream facilities was temporarily suspended. Operations at Strategic Business Units such as Bearings, Tubes, and Wires were also halted. Supply chain activities were affected and all despatches were stopped.

At locations where operations were continuing, the Company adopted safety & hygiene standards at shop floor and offices and implemented social distancing norms, work from home, workforce deployment plan, and staggered shift timing for safety of the employees. The Company has also put in place digital interventions to ensure smooth functioning of essential services.

With the phased removal of the lockdown restrictions in India, the Company's upstream steel making operations have been ramped up and are currently operating at about 80% utilisation levels. The downstream units have reopened and are steadily ramping up.

In Europe, shutdown measures implemented by national governments starting from March 2020 significantly impacted manufacturing activity and steel-using industrial sectors. The Company maintained its operations while following national government advice to protect employees, contract workers, and the communities in which it operates. The Company is managing production levels at European mills to match the lower demand levels in Europe. The Company continues to operate at about 70% utilisation level. All four blast furnaces across the two steelmaking hubs – in IJmuiden, the Netherlands, and Port Talbot, Wales are being operated at reduced levels. Liquid steel production is also aligned to lower demand levels. The Company has taken necessary steps to ensure health and safety of its workforce without affecting its business continuity plans.

b) Impact on the profitability, cash flow, liquidity and financials

The impact on the operations of the Company on account of the COVID-19 pandemic, led to decline in steel deliveries which resulted in decline in earnings and increase in inventories. Post relaxation of the lockdown, the plant production is gradually ramping up and the inventory is being liquidated based on market demand and off-take. The Company's digital initiatives have enabled compliance of the internal financial controls and reporting of the Company. The Company has been fulfilling its legal obligations as required for execution of the existing contracts/agreements.

The Company continues to have a strong liquidity position. In response to the COVID-19, the Company is focussed on conserving cash and liquidity and is reducing the cost base to align with the operating and market situation with strong focus on working capital management. The Company has raised funds since April 2020 through issue of Non-Convertible Debentures and Commercial Papers.

The Company has always strived to have a balanced maturity profile and a judicious mix of funding instruments which help in minimising costs while providing flexibility in managing cashflows. Taking its cashflows and liquidity position into account, the Company is in a position to service its debt and other financing arrangements. The Company has chosen not to avail the moratorium offered by RBI on interest and principal payments, demonstrating its ability to service its debt obligations.

In Europe too, cost reduction is a key focus. The Company has implemented various measures across the European operations including, aligning production to demand levels, maximising flexible working practices, liaising with governments across different territories to seek further support, and reducing all non-essential spend. The measures are expected to help the Company to minimise costs and preserve cash. The Company's European operations have no debt repayments under its main financing facility until 2025 and therefore the focus is on conserving cash through cost reduction measures.

c) Outlook of steel market

The nationwide lockdown in India resulted in complete halt of activity across steel consuming sectors, both construction and manufacturing. While gradual resumption of business activities coupled with stimulus measures announced by government are expected to help revive the business activity, steel demand recovery is likely to be slower due to the unavailability of labour and weaker consumption growth. During H1 FY2021, most of the construction demand is expected to be driven by government infrastructure projects and rural construction. However, deferment of purchases of automotive and consumer durables coupled with weaker private investments and fragile exports is likely to keep steel consumption and consequently steel manufacturing at lower levels.

In Europe, the COVID-19 pandemic has led to a downgrading of Europe's economic outlook and steel consumption forecasts. The situation has led to a reduction in industrial activity across Europe. While national lockdowns are now being eased in some countries, the automotive, engineering and construction sectors are showing slow signs of recovery. As a result, steel manufacturing is expected to be low in line with lesser demand. However, demand for packaging and plating steels used in food products and batteries continues to be strong through the pandemic and the outlook remains strong.

d) Corporate Social Responsibility – helping the community in the wake of COVID-19 pandemic

Apart from ensuring smooth operations at its facilities, the Company has also undertaken various initiatives to help combat the COVID-19 situation. Tata Steel Medical Services has established 1,200 beds and more than 100 dedicated critical care beds in Jharkhand and Odisha, to cater to those affected with COVID-19. The testing laboratory established at Jamshedpur was amongst the first to be established outside the government sector and two more laboratories are in the process of being established in Odisha. Tata Steel Medical Services has also contributed to extensive screening and testing in these regions.

The Company through Tata Steel Foundation (TSF) and with the help of district administrations has reached out to citizens in the communities where the Company operates i.e. Jharkhand and Odisha. The Company has taken steps to provide food, sustainable livelihood to the communities and migrant labourers of the region, and ration and safety support to the vulnerable communities. The Company has also augmented the medical facilities at the designated hospitals for medical treatment.

X. RISKS AND OPPORTUNITIES

The Company operates in an increasingly complex, volatile and uncertain business environment with stringent regulatory and environmental requirements. The Company aspires to create long-term value for its stakeholders by embedding risk intelligence and building resilience within the organisation.

In this journey towards risk intelligence, a robust risk governance is developed across the organisation and is driven by the Board of Directors through the Risk Management Committee ('**RMC**') of the Board. The Company has also set up a management committee called the Group Risk Review Committee ('**GRRC**') which is responsible for the implementation of ERM process across the Company.

The Company has implemented an Enterprise Risk Management ('**ERM**') framework to provide a holistic view of aggregated risk exposures as well as to facilitate more informed decision-making. The ERM framework includes identification of risks and risk owners for regular tracking, mitigation, and reporting of risks to help the Company meet its business objectives. The Company through the ERM framework has identified key risks under various categories such as financial risks, macroeconomic and market risks, operational risks, safety risks, commodity risks, supply chain risks, information security risks, regulatory risks, climate change risks, and community risks. The Company has also mapped the severity of these risks and the likely impact on the Company and has developed mitigation strategies to eliminate or minimise the impact of the risks.

The COVID-19 outbreak is an unprecedented event and has certainly posed challenges for the Company. The risk intelligent culture embedded across the Company has helped in developing and adopting a multi-pronged strategy to effectively respond to the evolving pandemic situation. Operations were aligned with the prevailing market conditions by reducing upstream operations while curtailing downstream operations. Cross functional teams worked to manage supply chain and logistics issues within the constraints imposed by the lockdown to ensure that plant could operate as planned. The Company also focussed on cash and liquidity management to face any future disruption in business conditions.

Alongside identification of risks, the Company has a continuous process of monitoring and leveraging opportunities presented by the external and internal environment. Despite the immediate challenges posed by the COVID-19 pandemic, the Company will continue to leverage opportunities provided by the near-term and long-term macro and business environment. The Company has identified various opportunities for growth and improvement and has developed strategies to leverage these opportunities. These opportunities include identifying potential for organic and inorganic growth, foraying into new lines of business to cater to evolving needs of customers as well as to make the business more sustainable, developing business models to address issues on climate change, and embarking on the path of digital transformation to be a technology leader in the industry and to gain a competitive advantage over other players.

A detailed overview on the risk landscape and mitigation strategies as well as the strategies for capitalising on opportunities in business is provided in the "Risk and Opportunities" Section forming part of the Integrated Report.

XI. INTERNAL CONTROL SYSTEMS AND INTERNAL AUDIT

The Company has an Internal Financial Controls ('**IFC**') framework, commensurate with the size, scale, and complexity of the Company's operations. The framework has been designed to provide reasonable assurance with respect to recording and providing reliable financial and operational information, complying with applicable laws, safeguarding assets from unauthorised use, executing transactions with proper authorisation, and ensuring compliance with corporate policies.

The Board of Directors and the Audit Committee are responsible for ensuring that these controls are adequate and operating effectively. The Financial Statements are prepared on the basis of the Significant Accounting Policies that are carefully selected by the Management. These policies are supported by the Corporate Accounting and Systems that apply to the entity to implement the tenets of Corporate Governance and the Significant Accounting Policies uniformly across the Company. The Company has laid down Standard Operating Procedures and policies to guide the operations of the business. Business heads are responsible to ensure compliance with the policies and procedures laid down by the Management. Robust and continuous internal monitoring mechanisms ensure timely identification of risks and issues. The Company has deployed SAP Governance, Risk and Compliance (GRC) to test the effectiveness of the internal controls. The controls have been documented and embedded in the business processes.

The controls, based on the prevailing business conditions and processes have been tested during the year and no reportable material weakness in the design or effectiveness was observed. The framework on Internal Financial Controls Over Financial Reporting has been reviewed by the internal and external auditors. The Company uses various IT platforms to keep the IFC framework robust and our Information Management Policy governs these IT platforms. The systems, standard operating procedures, and controls are implemented by the executive leadership team and are reviewed by the internal audit team whose findings and recommendations are placed before the Audit Committee.

The scope and authority of the Internal Audit function is defined in the Internal Audit Charter. To maintain its objectivity and independence, the Internal Audit function reports to the Chairman of the Audit Committee. The Internal Audit team develops an annual audit plan based on the risk profile of the business activities. The Internal Audit plan is approved by the Audit Committee, which also reviews compliance to the plan. The Internal Audit team monitors and evaluates the efficacy and adequacy of internal control systems in the Company, its compliance with operating systems, accounting procedures, and policies at all locations of the Company and its subsidiaries. Based on the report of internal audit function, process owners undertake corrective action(s) in their respective area(s) and thereby strengthen the controls.

Significant audit observations and corrective action(s) thereon are presented to the Audit Committee. The Audit Committee at its meetings reviews the reports submitted by the Internal Auditor. Also, the Audit Committee at frequent intervals has independent sessions with the statutory auditor and the Management to discuss the adequacy and effectiveness of internal financial controls.

XII. STATUTORY COMPLIANCE

The Company has in place adequate systems and processes to ensure that it is in compliance with all applicable laws. The Company Secretary & Chief Legal Officer (Corporate & Compliance) is responsible for implementing the systems and processes for monitoring compliance with the applicable laws and for ensuring that the systems and processes are operating effectively. The Chief Executive Officer and Managing Director, places before the Board, at each meeting, a certificate of compliance with the applicable laws. The Company Secretary & Chief Legal Officer (Corporate & Compliance) also confirms compliance with Company law, SEBI Regulations and other corporate laws applicable to the Company.