

PART 1 NATURE OF BUSINESS**1. Policy and Business Overview****Business Description of the Company**

Tata Steel (Thailand) Public Company Limited (TSTH) was formerly known as Millennium Steel Public Company Limited. Millennium Steel Public Company Limited was established by merging the businesses of N.T.S. Steel Group Plc., (NTS) whose shares were held by Horrungrueng Group and Siam Iron and Steel (2001) Co., Ltd (SISCO) and Siam Construction Steel Co., Ltd (SCSC), whose shares were held by Siam Cement Holding Limited. In 2006, Tata Steel Limited (TSL), through its wholly owned subsidiary Tata Steel Global Holdings Pte. Ltd. ("TSGH"), acquired the majority stake in Millennium Steel Public Company Limited. The company changed its name from Millennium Steel Public Company Limited to Tata Steel (Thailand) Public Company Limited (TSTH).

The Company's major shareholder, Tata Steel Global Holdings Pte. Ltd. ("TSGH"), is a wholly owned subsidiary of Tata Steel Limited ("TSL") and which operates its business as an investment company with its head office at Singapore. TSL is a registered company incorporated under Indian Laws and is among top three integrated steel producers in India. Though TSL (Indian operations) is in the same industry as the Thailand based Company, its product range is much more diversified and the company caters to a wider group of customers. TSL extends support to TSTH in the business operations by providing assistance in technology knowhow, treasury & finance, training of people, safety, information technology and International sales through its network of offices around the world. Along with operations in Singapore, TSL drives the long products strategy in India & SE Asia in an integrated manner.

TSTH operates its business as a holding company with shareholding in its three subsidiaries namely N.T.S., SISCO and SCSC. The three subsidiaries produce Reinforcing bars (Rebars), Wire Rods, Small Section and Special Bar Quality Steel led by an experienced and knowledgeable management team.

The Company's operations are undertaken as a group with the Tata Steel (Thailand) Plc as the top policy maker and the three subsidiaries responsible for carrying out the operations according to the prescribed policy with regard to marketing & sales, production, raw material sourcing, finance, human resources management and other aspects of the business.

1.1 VISION**VISION**

TATA Steel (Thailand) shall delight the Customers through innovative best in class products & services in construction steels and thus create value for its shareholders.

We will realize our vision by fostering a culture of trust & continuous improvement while keeping employees happy and adhering to highest standards of business conduct.

Safety

- Reduce Loss Time Injury Frequency (LTIF) to 0. Be a Zero harm company

1.2 Significant Developments

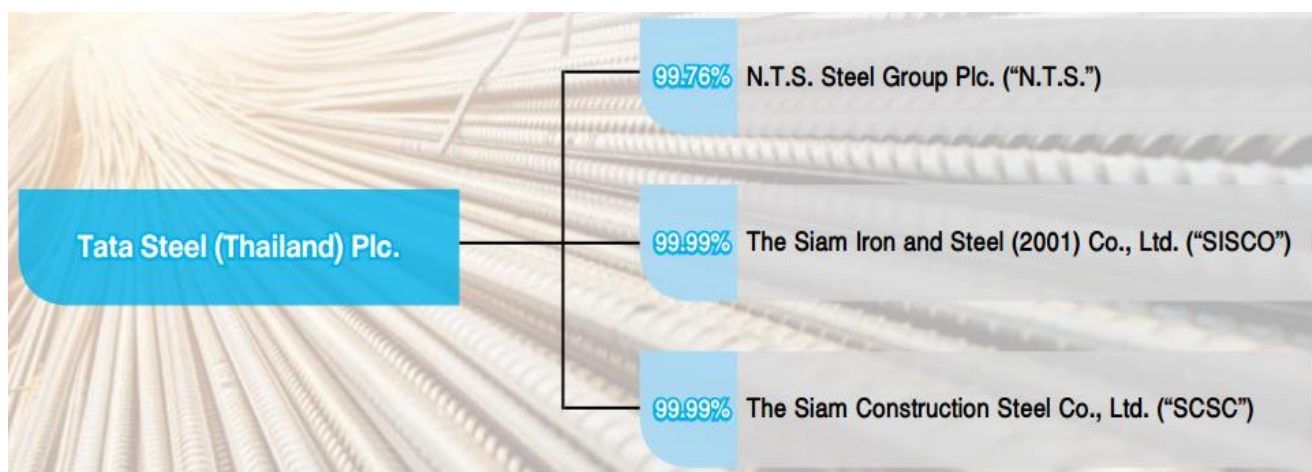
Previous significant profile and developments as follows:

2002	• The Company established as a Public Company Limited named “Millennium Steel Public Company Limited” (MS). • Successfully merged the Company business among N.T.S., SISC and SCSC, last two of which were subsidiaries of Cementhai Holding Company Limited (CHC). • The Stock Exchange of Thailand (SET) approved the Company securities as listing securities and started trading under the sector of “REHABCO” (Rehabilitation Plan).
2004	• The SET authorized the Company securities to resume trading at the sector of “CONMAT” (Construction and Furnishing Material).
2005	• CHC agreed to sell all MS shares pursuant to the Blinding Offer of Tata Steel.
2006	• Tata Steel Groups submitted their voluntary tender offer to all Company’s shareholders. • The Company major shareholders changed from “CHC” to “Tata Steel Group” • The Company name changed from “Millennium Steel Public Company Limited” to “Tata Steel (Thailand) Public Company Limited”. • The SET announced the change in stock symbol trading from “MS” to “TSTH”.
2007	• The Company paid the annual dividend payment for the year 2006 to all preferred shareholders and ordinary shareholders at the rate of Baht 0.03 per share (38% of its net profit).
2008	• The Company paid the annual dividend payment for the year 2007-2008 to all preferred shareholders and ordinary shareholders at the rate of Baht 0.076 per share (20% of its net profit).
2009	• The Mini Blast Furnace (MBF) which is steel production project using iron ore as raw material completed. This was considered first of its kind project in Southeast Asia.
2011	• The SET announced to regroup the Company securities to be under the sector of “STEEL” • Mini Blast Furnace mothballed in August 2011 due to cost of imported raw materials. • TATA Tiscon Branded rebar launched in August 2011.
2012	• The Company entered the Special Bar Quality steel market, only producer of this product in Thailand. • The Company launched seismic resistant rebar for earth quake prone areas, first time in Thailand.
2013	• The Company was recognized by the SET for CSRI Recognition Award. • NTS was awarded Prime Minister’s Industry Award - Safety Management.

2014	- The Company was recognized by the SET for Outstanding CSR Award and CSR Recognition award. - NTS was awarded Prime Minister's Industry Award - Quality Management.
2015	- The Company listed on Thailand Sustainability Investment 2015 for its outstanding performances in Environment, Social and Governance aspects with potential of giving long-term profit to the investors by the SET. - The Company was 1 of the first 30 companies in Thailand that joined The Children Sustainability Forum to make a commitment in protecting Children Rights. - SCSC received 'Green Mining Award 2015' from Department of Primary Industries and Mines (DPIM).
2016	- The Company received "Thailand ICT Excellence Award 2017" for "Core Process Improvement Project". - SCSC won the Prime Minister's Industry Awards 2016 - Safety Management. - SCSC represented at ICQCC 2016 (International Convention on Quality Control Circle 2016) held in Thailand. The team received Gold Award. - SISCO won Corporate Social Responsibility -Department of Industrial Works Award (CSR-DIW). - SCSC received Green Star Award 2016.
2017	- The Company arranged the event "Tata Steel Mini Marathon 2018 Run for War Veterans" for the first time to strengthen corporate brand. - The Company received "Thailand Sustainability Investment Award" and "Sustainability Report Award 2017" from SET. - NTS has been awarded with Prime Minister's Industry Award - Safety Management. - NTS and SCSC received "National Safety award" from the Ministry of Labour. - NTS and SISCO received "Carbon Footprint for Organization" from Thailand Greenhouse Gas Management Organization. - NTS received "CSR DPIM" from Department of Primary Industries and Mines - SCSC received 'Green Star Award' from IEAT - SCSC received "Green Mining Award" from Department of Primary Industries and Mines (DPIM) - SCSC received "Corporate Social Responsibility - Department of Industrial Works Award" (CSR-DIW) and SISCO won Corporate Social Responsibility (Continuous level) - SCSC received "Kaizen Gold Award".
2018	- Tata Business Excellence Model (TBEM) score improved from 'Good Performance' in 2016 to 'Emerging Industry Leader'. - The Company received "Thailand Sustainability Investment Award 2018" and "SET Sustainability Award 2018 in Outstanding Category" from The Stock Exchange of Thailand. - NTS received "Corporate Social Responsibility - Department of Industrial Works Award" (CSR-DIW) and SCSC and SISCO received "Corporate Social Responsibility - Department of Industrial Works Award" (CSR-DIW) - Continuous level. - SCSC and SISCO received "Carbon Footprint for Organization (CFO)" from Thailand Greenhouse Gas Management Organization.

	• NTS and SCSC received “Green Mining Award” from Department of Primary Industries and Mines, Ministry of Industry (DPIM). • SISCO received “3R Waste Management Award” from Department of Industrial Works, Ministry of Industry. • NTS received “The Prime Minister’s Industry Award 2018 on Quality Management”. • NTS and SCSC received “National Occupational Safety and Health Award (National Level)” from Department of Labour Protection and Welfare, Ministry of Labour.
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1.3 Shareholding Structure



Policy on division of operation between companies within the group

The Company has a policy to allocate production at each of its subsidiaries with an objective to maximize the profitability of the company as a whole. The product mix is derived based on the technical and production capability of each plant and specific decisions to roll a particular product is based on the market needs and to serve customer requirements.

Subsidiary	Paid up Capital (Million Baht) As at March 31, 2019	Business Type	Product
N.T.S. Steel Group Plc. ("NTS")	4,627.96	Manufacture steel	Rebars and Wire Rods
The Siam Iron and Steel (2001) Co., Ltd. ("SISC")	120.00	Manufacture steel	Wire Rods and Small Sections
The Siam Construction Steel Co.,Ltd. ("SCSC")	1,750.00	Manufacture steel	Rebars

2. Nature of Business Performance

Structure of Revenues

The Group's operations involve the single business segment of the manufacture and sales of long steel products. The proportions of the Company's revenues from the sales by product lines, as produced by subsidiaries, are as follows:

Line of Products	Audited		Audited		Audited	
	Year 2018 - 2019		Year 2017 - 2018		Year 2016 - 2017	
	Million Baht	%	Million Baht	%	Million Baht	%
Domestic Market						
Rebars	12,064	54.3	12,174	54.7	12,929	65.6
Wire Rods	6,801	30.6	6,977	31.4	4,263	21.6
Small Sections	827	3.7	1,094	4.9	1,106	5.6
Others	61	0.3	52	0.2	95	0.5
Total Revenues from Domestic Sales	19,753	88.9	20,297	91.2	18,393	93.3
Exports						
Rebars	2,200	9.9	1,729	7.8	1,295	6.6
Wire Rods	269	1.2	220	1.0	13	0.1
Total Revenues from Exports	2,469	11.1	1,949	8.8	1,308	6.7
Total Revenues	22,222	100.0	22,246	100.0	19,701	100.0

2.1 Nature of Products

1. Reinforcing Bars (Rebars)

- 1.1 Round Bar in the size range of 6-25 mm. diameters is manufactured in accordance with Thai Industrial Standard (TIS) No. 20-2559, grade SR24.
- 1.2 Deformed Bar in the size range of 10-40 mm. diameters is manufactured in accordance with Thai Industrial Standard (TIS) No. 24-2559, grades SD40 and SD50.

These Rebars are marketed under 'TATA TISCON' trademark. Major usage is in the construction sector in concrete reinforcement such as beams, columns, road surface, bridges, stadiums, dams, houses and buildings, etc.

In addition, the Company markets special quality Rebar under trademark 'TATA TISCON S' where 'S' indicates super ductile. These Rebars has special characteristic to withstand the earthquake shock for a longer period of time compared to standard Rebars. These products are available in size range of 10-40 mm diameter and grade SD 40 and SD 50

The Company is developing next generation of high strength Rebars equivalent to SD 60.

2. Wire Rod

Major types of products in this category are:

- 2.1 **Low Carbon Wire Rod:** These are produced in the size range 5.5-17 mm diameter, conforming to SWRM 6-22 grade and in accordance with Thai Industrial Standards (TIS) No. 348-2540. Major applications of wires made from Low Carbon wire rods include binding wire, nail, wire mesh, galvanized wire, barbed wire, numeral wire and chain, etc.
- 2.2 **Carbon Wire Rod for Cold Heading Quality:** These conform to SWRCH 6A-22A grade and are produced in the size range of 5.5-17 mm. in diameter. The wire rods are manufactured in accordance with Thai Industrial Standards (TIS) No. 2243-2548 and end application of wires includes nut, bolt and screw, etc.
- 2.3 **Wire Rod for Welding Electrode Quality:** These comply with SWRY11 grade, are produced in size range of 5.5-17 mm. diameter and in accordance with Thai Industrial Standards (TIS) No. 2244-2548. Wires from these wire rods are used for making stick welding electrodes.
- 2.4 **High Carbon Wire Rod:** These are produced in the size range of 5.5-17 mm diameter, conforming to SWRH 27-82 grade and manufactured in accordance with Thai Industrial Standards (TIS) No. 349-2548. These wire rods serve as raw material for making pre-stressed concrete wire, strand wire, compression spring, binding spring, torsion spring, tire cord, bead wire and sling, etc.

3. Small Section Structural Steel

This product range consists of angle and channel steel complying to SM400-570 and SS400-540 grade and is manufactured in accordance with Thai Industrial Standard (TIS) No. 1227-2558 under trademark 'BorKorSor'. Small section finds extensive usage in general engineering, signboards, support for roofs, transmission line towers etc.

4. Carbon Steel Round Bar

Carbon steel round bar with SS 400-540 quality class and 19-47 mm diameter is manufactured in accordance with JIS G3101 (1995) grade for general use and with S10C-S50C grade in 19-40 mm. diameter is manufactured in accordance with JIS G4051 (1979) grade for application in automobile and general engineering sector.

5. Cut and Bend

These consist of ready to use Rebars at the construction site. Conventional Rebars are produced in straight length or in coil form and then cut to required shape and size. This results in avoiding generation of waste at the site and do not need space along with skilled manpower to produce. Cut and Bend Rebars are made on automatic machinery at the plant and transported just in time to the construction site. As construction practices mature, space and availability of skilled workforce becomes a constraint, proportion of using Cut and Bend Rebars increases.

The Company also manufactures ready to use Stirrups that are marketed under trademark 'Tiscon Superlink' and ready to use dowel under trademark 'Tata Tiscon'. Tiscon Superlink is used during construction of beam and column while dowel equivalent to ASTM A615 grade 60 finds application in road construction and concrete yard.

Management Standard System

All the three subsidiaries of Tata Steel (Thailand) namely, The Siam Iron & Steel Company Limited (SISCO), The Siam Construction Steel Company Limited (SCSC) and N.T.S. Steel Group Public Company Limited (NTS) have adopted international standards and received certificate of Quality Management System ISO 9001:2015 and also received certificate of General requirements for the competence of testing and calibration laboratories ISO/IEC 17025:2005.

In addition, the Company realizes the importance of the environment control. All the three subsidiaries of Tata Steel (Thailand) have received ISO 14001:2015 certificate for the environmental control and also received certificate of Carbon Footprint for Organization (CFO) from Thailand Greenhouse Gas Management Organization (TGO).

The Company accords highest priority to safety and well-being of workmen at the workplace. All the three subsidiaries of Tata Steel (Thailand) have received certificate of International standard of Occupational Health and Safety Management Systems TIS 18001-2554 and BS OHSAS 18001:2007.

TSTH Marketing & Sales and Procurement divisions are also ISO 9001: 2015 certified for Quality Management System.

Investment Promotion License-Based Privilege

The Company can enjoy certain privileges from the BOI and its subsidiaries as of March 31, 2019 as follows:

	Production Volume (tons per annum)	Privileges Received
NTS		
Phase II	500,000	▪ Tax exemption for 8 years for the net profit from the first income (April 2006 – April 2014) ▪ Net loss incurred between 1st – 8th year can be realized against taxable profits during the next 5 years.
MBF*	500,000	▪ Tax exemption for 8 years for the net profit from the first income (November 2009 – November 2017) ▪ Net loss incurred between 1st – 8th year can be realized against taxable profits during the next 5 years.

*Mini Blast Furnace Project

2.2 Industry Situation

Domestic Market

1. Reinforcing Bars

The Company distributes this product through dealers in Bangkok and provinces in every region of the country. It also directly sells to selected construction companies and project owners. The trademark used is TATA TISCON which is widely recognized and accepted in Thailand and neighboring countries. The Company continuously evaluates the need to increase dealers in provinces based on the reach and potential in the area.

The Company has a Market Development team for new products such as Seismic Rebar, SD50 High Strength Rebar, Cut and Bend, Stirrup and Dowel. This team regularly meets designers, project owners, government agencies, construction work supervisors, construction contractors and dealers to explain the techno-commercial aspects of the new products. In addition, the Company regularly organizes various types of marketing activities for major dealers and modern trade i.e. Global House, Thai Watsadu Mega Home and Do Home.

2. Wire Rod

The Company directly sells to the manufacturer of wires and selectively distributes via traders in few cases. The Company has created sound platform for continuously improving the product and service offerings to the customers through creation of customer service teams. The team comprise of representatives from production, marketing & sales, technology group and production planning department.

The Company has focused on making customized products as per customer requirements and end applications. The Company regularly supply wire rods for Tire Cord which is a high end application.

3. Small Sections

The Company distributes this product via dealers in Bangkok and provinces in selected regions. Moreover, the marketing & sales team regularly visits end customers such as tower fabricators and EGAT (Electricity Authority of Thailand) to understand the demand trend and changes expected in product and service offerings in the future.

4. Special Bar Quality

The Company directly distributes to the manufacturers of bright bar.

5. Cut and Bend

The Company sells this value added product via the dealers in Bangkok and provinces in every region and also directly sells to the construction companies and project owners.

The Company has organized a separate project management team to coordinate with project owners about production plan and delivery to match with each project site's requirements.

All products are promoted through social media, radio, print media, billboard in Bangkok and provinces. The Company arranges marketing activities in various forms to create a relationship with its customers and distributors.

Export Market

The Company regularly exports Rebars and Wire Rods to countries in the ASEAN region such as Laos, Cambodia, Myanmar, Singapore, and Indonesia. In addition, the Company exports Rebars to India which is supported by the dealer network of Tata Steel India. Total exports during the year were around 11 percent of the total sales.

During the year, the Company has been granted manufacturing license in accordance with international standard, including ACRS (Australia / New Zealand), BIS (India) and SIRIM (Malaysia) to expand export base.

Distribution Proportion

Distribution Channel	Financial Year (%)					
	2018-2019	2017-2018	2016-2017	2015-2016	2014-2015	2013-20134
Direct Sales	45	46	39	34	32	36
Regional Agent	21	18	18	18	18	16
Agent in Bangkok Metropolitan Region	34	36	43	48	50	48
Domestic Total	100	100	100	100	100	100

Business Environment

According to the Iron and Steel Institute of Thailand, the country's demand for steel in 2018 was 17.4 million tonnes, increased by 4.8% from the previous year. Import volume was 12 million tonnes, at 69% of the demand for steel in Thailand, rose by 6.4% year-on-year.

Demand for long product in Thailand was 5.8 million tonnes, increased by 2.2 percent year-on-year. Import volume was 2.9 million tonnes, 51% of the demand for long product in Thailand, went up by 11.7% year-on-year.

Table showing production/import/export/usage of steel in Thailand

Year	Production Quantity (Million Tons)	Growth (%)	Import (Million Tons)	Growth (%)	Export (Million Tons)	Growth (%)	Usage Requirement (Million Tons)	Growth (%)	Import (% of Usage Requirement)
2018	7.11	3.5	12.05	6.4	1.71	10.3	17.44	4.8	69.1
2017	6.87	-13.9	11.33	-10.2	1.55	20	16.54	-13.7	68.0
2016	7.98	22.8	12.61	10.3	1.29	8.1	19.28	15.3	65.3
2015	6.50	-3.7	11.44	-3.94	1.20	-11.4	16.74	-3.2	68.3
2014	6.75	-5.2	11.90	-2.9	1.35	-3.1	17.35	-3.7	68.8
2013	7.12	1.4	12.25	8.5	1.40	0.3	17.97	6.3	68.2
2012	7.02	1.2	11.29	23.6	1.40	9.7	16.91	14.3	66.8

Competitive scenario**Domestic Market**

Competitors of the Company can be classified into four categories as below:

1. The manufacturer with Electric Arc Furnace (EAF) using domestic and imported scrap as raw material. They manufacture semi-finished product called billet to produce finished steel products such as Rebar, Wire Rod, Structural steel and Special steel. This method can remove the impurities up to almost 100 percent, resulting in consistent quality products.
2. The manufacturers with Induction Furnace (IF) using domestic scrap as raw material for the production of semi-finished products called billet. This method requires high quality scrap steel and strict production control in the absence of secondary refining. The product quality and consistency is not as good as that produced from EAF route of steel making as there may be some impurities in the product. This billet is used to produce products such as Rebar and Sections.
3. Re-rollers using domestic and imported billet. These players do not have or run steel making operations. Finished products from these manufacturers include Rebar, Wire Rod, Sections and Special products.
4. Importers of finished products such as Rebar, Wire Rod, Sections and Special products as an user as well as a distributor.

Considering the current capacity of domestic Rebar, Wire Rod and Section, totaling over 15 million tons, compared to the domestic demand for long product in 2018 at 5.8 million tonnes, the remaining capacity is considered sufficient to accommodate future demand and there should not be any need to import.

In 2018, the steel industry experienced high competition from existing domestic producers who have invested in the machinery and engaged external experts to improve their production capability to produce high quality grades and also from the increase of materials available from the new manufacturers through low cost Induction Furnace route.

With the policy of reducing production capacity and increase in domestic demand, export of steel products from China has decreased during last few years. However, import of wire rods from Vietnam and Malaysia has gone up on account of new capacities that got added in these countries in last 1-2 years. The Company continues to closely monitor the imports of Wire Rod into Thailand.

Export Market

The Company has focused on exports to countries like Laos, Cambodia, Myanmar, and Indonesia in the ASEAN region. Major competition in Lao and Cambodia is from Vietnam steel manufacturers. China is dominant player in Myanmar. However, 'Made in Thailand' and 'Tata Tiscon' enjoys good reputation in the neighboring countries and are recognized for their superior quality. Accordingly, the Company has been working to strengthen the network in these countries. The Company also regularly exports Rebars to India.

Trend of Industry in 2019

International Monetary Fund (IMF) forecasts world economic growth at 3.5%, declined from previous year (3.7%) reflected by a persistent decline in the growth rate for emerging market and developing economies in 2019. Contractions in Argentina and Turkey, as well as the impact of trade actions on China and other Asian economies have impacted the growth adversely. China's economy is expected to slow down to 6.2%, decreased from last year (6.6%) China has stimulus policies to boost economy by increase in investment budget to 7.3% in 2019, up by 1.4% from previous year which will come from infrastructure projects, especially railway and roads. According to forecasts of the National Economic and Social Development Council (NESDC) the Thai economy is expected to grow in the range of 3.5-4.5%, from 4.1% in the previous year. The supporting factors are favorable growth momentum of private consumption, an improvement of private investment attributed by rising capacity utilization to

foster export growth and increased BOI's investment applications, an acceleration of public investment following progresses of key public infrastructure projects, especially projects in Eastern Economic Corridor (EEC) that encourage foreign investment in Thailand. Recovery of tourism sector and a clearer redirection of global trade, production, and investment will help to ease the impacts from global slowdown. However, risks from trade war and political uncertainty may have an adverse impact on Thai economy. World Steel Association estimates world steel demand will increase 1.4% from previous year; slowdown of car production and construction activities are likely to impact the demand.

China's demand for steel growth is expected to remain at the same level as last year. The tightening of trade relations between China and USA may lead to steel demand slowdown. In Thailand, the domestic steel industry remains very competitive from new induction furnaces added during last 2-3 years, new investments by Chinese steelmakers and import from China, Vietnam and Malaysia. Measures to increase import tax by USA, may cause steel prices to fluctuate and the countries who were exporting to the USA may look for alternate markets which may also disturb the demand-supply balance in the ASEAN region.

2.3 Procurement

Procurement Division of Tata Steel (Thailand) works toward long term sustainability and aims to expand its supply chain network continuously. Parallely, the division regularly communicates policies related to Ethics, Corporate Governance and Safety Standards to all concerned in the supply chain and to relevant business partners so that they can develop proper systems in these areas.

The Company sources raw materials and other products both from domestic market and through import by emphasizing on Value In Use (VIU). Proportion of domestic and import supply was approximately 79% and 21% for 2018 -19. Share of domestic buying is higher due to shorter lead time, lower transportation costs, lower currency risk related to fluctuation in foreign currency exchange rate. This also helps in jobs creation and driving the economic growth in the country.

Raw material prices have been very volatile. China's environmental policy also impacted the availability and price of some of the main raw materials globally, though the impact has begun to ease out since the third quarter last year. The company faces challenges from competition in the procurement of raw materials from induction furnace manufacturers in Thailand. As a mitigation strategy, the Company continues to look for low-cost alternative materials. Care is taken to ensure that there is no waste that affects the environment while procuring any product or services.

Metallic Sourcing

Steel scrap is the main raw material for electric arc furnaces. In 2018, scrap was procured mainly from domestic sources which remained highly competition due to expansion of induction furnace players and also due to the attractiveness to export in view of high international steel scrap price. The company continues working on developing alternate low cost steel scrap, as well as expanding the scrap purchasing yards, especially in the southern part of Thailand which has the potential to boost up scrap volume. The yard expansion is expected to increase domestic volume and replace imported scrap. Occasionally, the company also purchases semi-finished products (billet) from the open market after due consideration of reliability of the product and cost benefits over purchase of scrap.

Raw Materials sourcing

Raw Materials team handles the procurement of ferro alloys, refractory and other additives used in the electric arc furnace. Key strategy is to find the right source of supply with optimum value and price combination suitable for the Company operations. Sourcing directly from manufacturers in low cost countries as well as seeking new vendors are the key strategies being implemented continuously from the previous year.

For the procurement of capital equipment, the procurement process has been improved by collaborating with the procurement functions in Tata Steel India, China Office (TSL China Desk) in order to expand the vendor base into China for machinery and consumable supplies.

Risk Factors**Metallic and Raw Material Price Fluctuations**

Scrap is commodity and there is high demand of domestic scrap from new induction furnaces in the country. Similarly, there is high volatility in the price of steel scrap and iron ore in the international market. These volatility may impact the price of raw materials quickly affecting the overall cost of the company.

Sole Source Manufacturer/ Supplier

Procurement has reduced risk from single manufacturer/ supplier through multiple ways. Firstly, working together with end users through Strategic Procurement Optimization Team (SPOT), efforts are made to develop multiple suppliers. Plant is encouraged to take controlled trials so that usability of alternate material or supplier is tested. Consequently, results show that the supply dependence on single vendors has significantly declined. Secondly, in case it is single supplier or original equipment manufacturers (OEM), effort is made to develop long term relationship so that joint development is undertaken to manage the cost effectively. Procurement team regularly reviews the items under single source.

Environmental Impacts

The Company has set up and communicated clear policies to suppliers and business partners to recognize and comply with environmental laws including the rules and regulations prescribed by the laws of the land. Presently, the Company has no legal dispute or lawsuits relating to environment issues.

Production capacity of Tata Steel (Thailand)

	NTS	SISCO	SCSC	Total
Capacity (tons per annum)				
- Rebars	450,000	-	500,000	950,000
- Wire rods	350,000	300,000	-	650,000
- Small Sections	-	100,000	-	100,000
Total capacity	800,000	400,000	500,000	1,700,000

Source: Tata Steel (Thailand) Plc.

With the total finished goods production of 1.13 Million Tons, the production capacity utilization for the financial year ending in March 31, 2019 stood at 66%.

3. Risk Factors

There are several rapid, unprecedented and unpredictable changes taking place all the time. The size, scale and scope of these changes in today's world can be enormous. The geo-political environment and regulatory framework are uncertain which in turn is leading to changes in the supply-demand equation, commodity prices, market forces and competition. Many changes are driven by changes in technology and have consequential impacts on supply chain, manufacturing, assembling, logistics and costs. The aforementioned uncertainties warrant robust process and framework to minimize the threats and capture opportunities to create sustainable value for the organization. The Company follows a robust five step Enterprise Risk Management ('ERM') process to address the risks associated with its business. The ERM process framework has evolved and is aligned with Tata Steel (TSL) Group which is based on international standards such as ISO 31000 and Committee of Sponsoring Organizations of the Treadway Commission ('COSO') with inputs drawn from the best practices of leading companies across industries.

The Company confronts several risks in areas of commercial, operations, safety, human resources etc. Accordingly, a risk portfolio matrix has been developed consisting of all known business risks, followed up with a detailed analysis of business environment, market condition and risk mitigation plans with process owners. The Company identifies risks and classifies them into A, B & C category based on likelihood of its occurrence and its impact to business. Category A risk is being highest on the risk metric.

The Risk Register is regularly reviewed by senior executives of various functional units in order to avoid any undue deviations or adverse events by designing and implementing suitable mitigation plans proactively. Regular and extensive reviews at business units lead to robust implementation of mitigation plans which ultimately create value for the business. The movement of risk is understood through the enterprise risk heat map. The same is also reviewed by the Board of Directors on quarterly basis.

Information regarding the Company's key risks and their mitigation strategies are as follows:

1. Market Risk

The GDP growth of the country significantly relies on public investment which has an impact on the steel demand. In 2018, public investment grew by 3.3 percentages which has been below the estimated growth and apparent steel consumption increased by 4.8 percentages with long steel consumption increased by 2.2 percentages. In addition, imports from China and rising imports from Vietnam and Malaysia also challenge the domestic steel industry in Thailand resulting in long steel production decline by 1.2% during 2018. Periodic engagement with the regulators through the Steel Manufacturers' Associations has helped to reduce the impact of gap in anti-dumping measures taken by the government. In the past year, Company has expanded in the super ductile rebar market, the ready-use product market like dowel and stirrup and expanded in the special wire rods product market like tire cord. All these product segments witnessed sales growth when compared with the previous year. In addition, Company has increased Rebar sales thru the modern trade channel which has been showing comparatively higher growth every year. Besides, focused actions to create Tata Tiscon brand through online social media, dealer partnership program and other marketing activities have helped to build relationship with customers and end users.

The Company also intensified its efforts in export markets to expand its market reach, especially to the Asean countries and India; as additional measure to mitigate the volatility in domestic steel demand. This effort has enabled to increase the customer base which resulted in higher export sale volume as compared to last year and also build Tata Tiscon brand to be popular in the Asean region.

2. Risk of Raw Material Supply

Raw materials of TSTH production are sourced from both domestic and import. In 2018, there was very high competition in domestic sourcing market from many domestic producers. The main reasons came from high price of raw material in the international market and investments in capacity expansion from domestic producers.

This situation impacted the sourcing cost of TSTH raw material which is mainly sourced from domestic suppliers. In view of high volatility in raw material price, the company has implemented a sourcing strategy by considering many related factors and closely co-operated between marketing & sales, procurement, production and corporate strategy within the Company and has managed this risk by developing innovation in production process by creating opportunities to produce from alternative types of raw materials. The Company has also been developing key partner vendors for domestic raw material sourcing and through effective inventory management.

3. Safety, Health and Environment Risks

The Company had embarked on Safety Excellence Journey (SEJ) based on guidelines from TSL as well as the Environment Management System (ISO14001) and Occupational Health and Safety Assessment Management System (OHSAS 18001). At TSTH, Safety, Health and Environment (SHE) organization is defined by Apex Safety Council (ASC) with President & CEO as a chairman and Vice Presidents as the members. Some of the key initiatives launched during the year such as Contractor Safety Management (CSM) to take the same safety standards for contract employees as followed for own employees and strengthen Process Safety Management (PSM) and Road Safety. The Company focused on tracking lead indicators such as Lost Time Injury Frequency (LTIF), Medical Treatment Case (MTC), First Aid Case (FAC) and Property Damage. The employees are motivated to

report Near Misses, Safety Observation and Fatal Risk Control Program (FRCP). This highlights vulnerable areas and thereby helps to increase focus on the same.

The Company focuses on health by providing good work environment and regularly monitors industrial hygiene such as dust, noise, chemical and heat. The Company provides physical health check for employees, follows up and supports necessary treatment in case any abnormal result related to work is found. Organizational performance in this area is measured by tracking Health Index.

The Company accords high priority to utilize resources effectively and efficiently with appropriate environmental management regulation to minimize adverse impact to the community. The main raw material used across all three locations is ferrous scrap and is fully recyclable. The Company also emphasizes on environment by monitoring the CO₂ emission to measure and control greenhouse gases, follow up the Environment Impact Assessment (EIA) by monitoring gases such as NO_x, SO_x, CO and dust in all plants by targeting zero complaint and 100% compliance to the regulatory requirements. The Company also effectively utilizes water and applies Zero Discharge principle in water management. For waste management, the Company applies the 3R concept in order to maximize recycle waste by targeting 99% of waste back in process. All plants have improved their environment standard to Green Industry level 4.

4. Human Resource Risks

The Company may encounter the risk of non-availability of young generation for steel manufacturing environment as well as retain them with the company in the long run as it operates in the industrial zone, low unemployment rate in Thailand which gives options for alternatives, business challenges & competition, strict regulations on alien labor, rising trend of minimum wage as well as head-hunting by other companies. Although the attrition rate of the Company has remained at a good level, the Company has prepared various initiatives to reduce such risks.

The Company has taken initiatives to strengthen the corporate brand through top universities/local colleges, media and external organizations. At the same time, various improvements are made to ensure that the attrition rate remains at minimum level. There is a bench strength model to create manpower pipeline for each functions. The Company provides career growth opportunities and promotes through an internal recruitment program which provides career opportunity as well as extensive development programs on functional, business acumen, managerial and leadership capabilities.

In addition, there are various channels to listen to employees' voices and opinions to ensure communication to avoid risk of employee dissatisfaction. Employee welfare and benefits are continuously reviewed and improved to remain competitive, based on market survey and benchmark with other leading companies.

5. Financial Risk

Financial risk covers all financial commitments of the Company to its external stakeholders. Ensuring that the commitments are honored as per contracts, assumes highest importance within the TSL group. The Company has adhered to all its commitments during the year and will continue to ensure full compliance. The fluctuation in foreign exchange rates is being addressed through an appropriate foreign exchange hedging mechanism in line with structured hedging policies, monitored by the Regional Treasury Committee, with a formal reporting mechanism to the Board. Liquidity management is integrated with business plan and cash flow projection. The Company has also appropriate insurance policies to cover its assets and business.

6. Risks Associated with Natural Calamity

The Company's inherent risk to natural calamity is relatively moderate due to its operations spread in four different locations. However, the Company is aware of the risk associated with operating in industrial areas and does emergency handling procedures at all its facilities. Structured periodical mock drills are done to ensure effectiveness of such procedures. Disruption to business operation is effectively addressed by flexible supply chain management and switching operation amongst the three production units. Besides, the Company has taken extensive insurance coverage related to natural calamity and all industrial risks.

4. Operating Assets

4.1 Property, Plant and Equipment Used in Business Activities for the Company and Its Subsidiaries

As of March 31, 2019, property, plant and equipment used in business activities can be summarized as below:

Type of Asset	Proprietary right/ownership	Book Value (Baht million)	Obligation
1. Land	Ownership	798.69	- None -
2. Land improvement, buildings and structures	Ownership	527.32	- None -
3. Machinery and equipment	Ownership	1,672.21	- None -
4. Furniture, Fixtures, equipment and Vehicles	Ownership	67.72	- None -
5. Work in progress	Ownership	83.04	- None -
Total		3,148.98	

Details of operating assets can be categorized by each Company as follows:

Tata Steel (Thailand) Public Company Limited ("TSTH")

Type of Asset	Proprietary right/ownership	Book Value (Baht million)	Obligation
1. Building Improvement	Ownership	4.14	- None -
1. Furniture, Fixtures, equipment and Vehicles	Ownership	28.90	- None -
2. Work in progress	Ownership	0.00	- None -
Total		33.04	

N.T.S. Steel Group Public Company Limited ("NTS")

Type of Asset	Proprietary right/ownership	Book Value (Baht million)	Obligation
1. Land	Ownership	714.61	- None -
2. Land improvement, buildings and structures	Ownership	280.80	- None -
3. Machinery and equipment	Ownership	1,306.29	- None -
4. Furniture, Fixtures, equipment and Vehicles	Ownership	16.45	- None -
5. Work in progress	Ownership	38.45	- None -
Total		2,356.60	

The Siam Iron and Steel (2001) Company Limited ("SISCO")

Type of Asset	Proprietary right/ownership	Book Value (Baht million)	Obligation
1. Land	Ownership	84.08	- None -
2. Land improvement, building and structures	Ownership	32.82	- None -
3. Machinery and equipment	Ownership	170.01	- None -
4. Furniture, Fixtures, equipment and Vehicles	Ownership	15.62	- None -
5. Work in progress	Ownership	20.37	- None -
Total		322.90	

The Siam Construction Steel Company Limited ("SCSC")

Type of Asset	Proprietary right/ownership	Book value (Baht million)	Obligation
1. Land	Ownership	0.00	- None -
2. Land improvement, building and structures	Ownership	117.93	- None -
3. Machinery and equipment	Ownership	195.91	- None -
4. Furniture, Fixtures, equipment and Vehicles	Ownership	6.75	- None -
5. Work in progress	Ownership	24.22	- None -
Total		344.81	

5. Legal Dispute

As of March 31, 2019, the Company and its subsidiaries which include NTS, SISCO and SCSC had no legal dispute, neither as plaintiff nor defender, that have not yet been finalized in the following 3 cases:

- 1) No legal dispute or law suits which may have adverse impact to the assets of the Company or its subsidiaries in the amount of exceeding 5% of the shareholders' equity.
- 2) No legal dispute or law suits which may have material effect to the operations of business of the Company or its subsidiaries.
- 3) No legal dispute or law suits arising from the normal operation of the business of the Company and its subsidiaries.

6. General Information

Company's name	: Tata Steel (Thailand) Public Company Limited (Formerly known as : Millennium Steel Public Company Limited or "MS")
Registration No.	: 0107545000136
Business Type	: Manufacturer and distributor of long steel products
Securities Trading Symbol	: TSTH
ISIN Number	: Local TH0692010000 Foreign TH0692010018 NVDR TH0692010R12
Established	: July 12, 2002
Listing Date	: November 29, 2002
Trading Date	: December 18, 2002
Head Office	: 555 Rasa Tower 2, 20 th Floor, Phaholyothin Road, Chatuchak, Bangkok 10900, Thailand
Telephone	: +66 2937 1000
Fax	: +66 2937 1224
Website	: http://www.tatasteelthailand.com
Ordinary Shares	: 8,421,540,848 Baht
Paid Up Capital	: 8,421,540,848 Baht
Par Value	: 1.00 Baht per share
Registrar	: Thailand Securities Depository Company Limited 93 Ratchadaphisek Road, Dindaeng, Bangkok 10400, Thailand Tel : +66 2009 9000 Fax : +66 2009 9991 Email : SETContactCenter@set.or.th http://www.set.or.th/tsd
Auditors	: Ms. Varaporn Vorathitikul (Certified Public Accountant No. 4474) PricewaterhouseCoopers ABAS Ltd. ("PwC") 15th Floor, Bangkok City Tower, 179/74-80 South Sathorn Road, Sathorn Bangkok, 10120, Thailand

Filing a Complaint on : Chairman of the Audit Committee
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Corporate Communications : Mr. Jitti Suwanvajokkasikij
and Activity : Tel. +66 2937 1000 Ext. 2420 Fax. +66 2937 1224
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Subsidiaries Profile (As of March 31, 2019)
N.T.S. Steel Group Public Company Limited

Registration No.	0107536001273
Established	October 4, 1988
Business Type	Manufacturer of bars, rebars and wire rods
Steel Capacity (Billet)	550,000 ton/year (EAF on scrap)
Rolling Capacity	800,000 ton/year
Factory	No. 351, Moo 6, 331 Highway, Hemaraj Chonburi Industrial Estate, Bowin, Sriracha, Chonburi 20230 Tel. +66 3834 5355 Fax. +66 3834 5350
Ordinary Shares	3,856,637,797 Shares
Paid Up Capital	4,627,965,356.40 Baht
Par Value	1.20 Baht
Held by TSTH	99.76 %

The Siam Construction Steel Company Limited

Registration No.	0105532094348
Established	October 4, 1989
Business Type	Manufacturer of rebars
Steel Capacity (Billet)	550,000 ton/year (EAF on scrap)
Rolling Capacity	500,000 ton/year
Factory	No. 1, I-7 Road, Tambon Map Ta Phut, Amphur Mueang, Rayong 21150 Tel. +66 3868 3968, Fax. +66 3868 3969
Ordinary Shares	17,500,000 Shares
Paid Up Capital	1,750,000,000.00 Baht
Par Value	100 Baht
Held by TSTH	99.99 %

The Siam Iron and Steel (2001) Company Limited

Registration No.	0105544085276
Established	September 3, 2001
Business Type	Manufacturer of wire rods and small sections
Steel Capacity (Billet)	300,000 ton/year (EAF on scrap)
Rolling Capacity	400,000 ton/year
Factory	No. 49 Moo 11, Tambon Bang Khamode, Amphur Ban Mor, Saraburi 18270 Tel. +66 3628 8000 Fax. +66 3628 8002
Ordinary Shares	1,200,000 Shares
Paid Up Capital	120,000,000.00 Baht
Par Value	100 Baht
Held by TSTH	99.99 %