

301011A

Section A: Professional Ethics (20 Marks)

- This section consists of questions with serial number 1 - 2.
- Answer all questions.
- Marks are indicated against each question.
- Do not spend more than 25 - 30 minutes on Section A.

1. It is difficult to judge whether an organization is ethical or not. Various theories have been developed in this regard and 'ethics and corporate governance' is one of them. Discuss how 'ethics and corporate governance' is helpful in judging the ethical nature of an organization. (10 marks)
2. Law is a consistent set of universal rules that are widely published, generally accepted and usually enforced. It can be enforced only if it is widely accepted. Discuss the various processes for the formulation of laws. (10 marks)

END OF SECTION A

Section B: Case Study (80 Marks)

- This section consists of questions with serial number 3 – 8.
- Answer all questions.
- Marks are indicated against each question.
- Do not spend more than 140 - 150 minutes on Section B.

Case Study*

3. Perform SWOT analysis for the Indian steel industry. (14 marks)

4. Amongst the various SBUs of Tata group, Tata Steel Company was selected for studying the global strategy framework, the evidence for which was its acquisition of U.K., based company, Corus. With special reference to the Corus acquisition, describe the various areas where Tata Group exhibited its ability to identify the strategic need for global expansion and its capability to evaluate growth potential at company, industry and global levels. (14 marks)

5. Tata steel has acquired Corus through Leveraged Buyout (LBO) route. Explain different categories of LBOs based on the probable mechanism for debt repayment and the realization of value to equity. (12 marks)

6. Considering the untapped potential demand for steel in India, Mr. Sharma, an analyst estimated that the TSL will gradually expand its existing crude steel making capacity. As a result its revenues will grow at 20% a year for the next three years, after which the growth rate is expected to be 15% in fourth year and 10% in fifth year. It is expected that the cost of production inclusive of depreciation will be 60% of the total revenues for first two years, after that, it will linearly decline and stabilize at 45% of revenues by fifth year. Increase in net capital expenditure and net working capital is expected to be 60% of the increase in total revenues for the first three years and from the fourth year onwards it is expected to be 50%. The entire internal accruals generated in a year will be sufficient to finance both the net capital expenditure and net working capital. Hence, it is estimated that there would be no additional borrowings in the future. Stocks of TSL have a beta of 1.2, which is expected to remain constant during the period under consideration. The treasury bond rate is 7.5% and premium on market portfolio is 9.5%.

 You are **required** to compute Economic Value Added (EVA) of TSL under residual income method from the FY2007-08 to FY2011-12 and also interpret the same.

 (Note: Ignore deferred tax and provision for employee separation compensation for the purpose of computation of capital employed) (18 marks)

7. Using the closing stock prices of Tata Steel Limited (TSL) and the Sensex values for the year 2007 given in Annexure III, you are required to calculate the beta of the TSL stock and the coefficient of correlation between the returns on the TSL stock and the returns of the Sensex and also interpret the same. (10 marks)

* The above case is prepared only for the purpose of examination and not to illustrate either effective or ineffective performance of the fund. The case contains real information adapted and combined with other information to generate discussion or analysis on the desired topics.

8. Explicate the characteristics of Indian Steel Industry and also analyze various issues associated with it.

(12 marks)

Tata Steel Limited

"We want to extend our footprint overseas wherever it makes sense to us. We want to be in a place in a meaningful way, not just as a red dot on a map to say that we are there."

– Ratan Tata, CEO, Tata Steel Limited

Tata Steel Limited (TSL) is India's oldest and largest integrated private sector steel manufacturer. Established in 1907, it is the first steel company not only in India but also in Asia. It is the world's 2nd largest geographically diversified steel producer with presence in over 50 countries and operations in 24 countries. It is also the world's 6th largest steel company with the total annual crude steel production capacity of about 28 million tons. It has recorded its best ever sales turnover and profitability during the year 2006-07. Its finished steel sales were higher by 11.33% at 4.51 million tons over the previous year 2005-06 and net profit was higher at Rs.43,742 million an increase of 24.92% compared to the previous year.

The centenary company holds a strong position in the construction, automobile, and packaging markets. Its strategy is to become one of the most efficient steel producers in the world.

Mr. Muthuraman, Managing Director of TSL, announced that "By 2012, the TSL hopes to be the global steel industry benchmark for value creation and corporate citizenship".

Indian Steel Industry

The steel industry in India has hugely influenced the country's rapid economic growth. It gained momentum in the world steel arena through the soaring demand for steel in key sectors like infrastructure, real estate, and automobiles, both in India and abroad. India became the fifth largest steel producer in the world behind China, Japan, the US and Russia with a sharp rise in steel production in the year 2007. The finished steel production in India grew by 16.52 per cent, from 44.54 million tons in 2005-06 to 49.39 million tons in 2006-07. By 2015-16, India is estimated to become the second largest producer of steel in the world producing 137 million tons.

The consumption of steel has also increased to 46.14 million tons in the year 2006-07 compared to 41.43 million tons in 2005-06. This shows a growth rate of 11.36%, which is higher than the world average. According to a study conducted by the Credit Suisse Group, steel consumption in India is expected to grow at 16% annually till 2012, with the ever-rising demand for construction projects; this is worth US\$1 trillion. Steel exports have recorded 4.75 million tons for the year 2006-07, which shows an increase of 6.26% over 2005-06. Steel producers in India have recorded encouraging results due to the surge in demand. For instance, in the second quarter of 2007-08, the top six companies that account for 70% of the total production capacity have recorded a year-on-year growth rate of 11.4%, 12.7% and 9.7% in net sales, operating profit and net profit, respectively.

Industry Value Chain

The steel industry is extremely capital intensive and is bridled with high production rates. Thus, steel production plays a crucial role in ensuring the profitability. Though the manufacturing of steel has existed for centuries, the process for making steel continues to evolve over time.

Some establishments in the industry produce steel by melting iron ore, scrap metal, and other additives in furnaces. This melted metal is solidified into semi-finished shapes; this

semi-finished metal is rolled, drawn, cast, and extruded to make sheets, rods, bars, tubing, beams and wire. Other establishments in the industry produce steel products directly from purchased steel. Producing steel by using scrap metal as its base is the least costly method. The steel scrap is taken from many sources like old bridges, refrigerators, and automobiles and other additives. The scrap steel is placed in an Electric Arc furnace (EAF) and steel is produced melting the scrap through intense heat generated by carbon electrodes and chemical reactions. The establishments, which produce steel using this method, are known as Electric Arc Furnace (EAF) mills or mini-mills.

Industry Structure

Based on the production process, capacity and technology used, the structures of the Indian steel industry with its various segments are as follows:

1. **The Main Producers:** These producers are the integrated steel plants that have high levels of backward integration and a combined capacity of around 19 million tons per annum with the capacity utilization rates exceeding 100%. The main producers include public sector plants of SAIL (including its subsidiaries – IISCO, Alloy Steel Plant, Salem and VISL), RINL and the one and only private sector plant, TSL.
2. **Secondary Producers:** Secondary producers include both Other Major Producers and the Other Secondary Producers as explained below:
 - a. **Other Major Producers:** Producers under this category include the integrated steel plants (other than Main Producers) having a crude steel capacity of 0.5 million tons and above and use different technology methods like DRI-EAF DRI/BF-EAF, COREX/BF-BOF. This category includes ESSAR, ISPAT and JVSL, which are estimated to have a total of 5.8 million tons of crude steel capacity.
 - b. **Other Secondary Producers:** Producers under this category include mini steel plants with Electric Arc Furnaces (EAF) and Induction Furnaces (IF) with capacity below 0.5 million tons. It includes all Energy Optimizing Furnace (EOF) units and the stand-alone processors without backward integration of steel making. It also includes Re-Rolling (RR) Units, Cold Rolling (CR) Units, GP/GC Sheets Units, Pig Iron and Sponge Iron Plants (other than those of main/major producers). Based on the items of production, these producers are divided into two categories: Mini Steel Plants and stand-alone processors.

Changes in the Structure of Steel Industry

Indian steel industry's structure has undergone huge changes in the post-deregulation period especially in terms of ownership. During this period, the capacity creation was largely at the behest of the private sector. Accordingly, private sector recorded a significant shift in the production stages of crude steel and finished steel. During 1992-93, private sector accounted for 37% of crude steel and 67% of finished steel production. By 2005-06, this increased to 59% and 71% of crude steel and finished steel respectively. Additionally, the new technologies have also affected the production in the industry to a great extent. Capacities created due to deregulation have been based on technologies as diverse as COREX (JSW), large-scale hybrid technologies combining Electric Steel-making with BF hot metal with downstream rolling of flat products (Ispat Industries Ltd.) and large-scale integrated 'DRI-EAF-Flat Products Rolling' capacities (Essar Steel Ltd.) etc.

Organized vs. Unorganized

While considering scale of production/capacity in place, technology in use, integration of production processes and vintage of the plants the major chunk of main producers in the

Indian steel industry is organized whereas the consolidated category of 'Secondary Producers' is unorganized. The organized sector includes companies like Steel Authority of India Limited (SAIL), TSL, Rashtriya Ispat Nigam Ltd. (RINL), ISPAT, ESSAR and Jindal South West Limited (JSW). The unorganized segment comprises the Corex/MBF based units, the Pig Iron units, the Electric Arc Furnace units, the producers of HR sheets/coils, Cold Rolled sheets/coils, GP/GC sheets and Color Coated Sheets. All these are medium to large units wherein some use latest state-of-the-art technologies. On the other side, induction furnaces and coal based sponge iron units are mostly small units. These units are unique in India and their sustained growth is based on the government policies.

Performance

The performance of both organized and unorganized sector in the steel industry can be observed from the information given below:

According to the industry sources, the apparent consumption of finished mild steel for the year 2004-05 was approximately 33.4 million tons. The total domestic production for this period was approximately 38.4 million tons. The import of finished mild steel was approximately 2.1 million tons and the export of finished mild steel was approximately 4.4 million tons. While in 2005-06, the apparent domestic consumption of finished mild steel was approximately 38.1 million tons. The total domestic production for this period increased to approximately 41.3 million tons. The import of finished mild steel was approximately 3.8 million tons and the export of finished mild steel was approximately 4.5 million tons. For this period, the exports were more or less at the same level but the imports recorded a growth of 79% over previous year. Automotive segment that grew at an annual rate of over 15% during 2004-05 and 2005-06 has been a key growth driver of steel industry.

During the period 2004-07, the growth in construction sector has been in the range of 12-14%, hugely due to industrialization, massive infrastructure investment, urbanization, and the real estate boom. As a result of which, the apparent domestic consumption of finished mild steel for the year 2006-07 was approximately 43.7 million tons. The total crude steel produced for this period increased to approximately 45 million tons. While the import of finished mild steel was approximately 4.1 million tons, the export of finished mild steel was approximately 4.8 million tons.

Future Outlook

As regards the future the key growth drivers for the future growth of steel industry in India are expected to be Construction, Automobiles, Water, Oil and Gas transportation, and capital goods sectors. Approximately Rs.15,000 billion worth investments are projected in infrastructure sector like rails, roads, ports and airports in the 11th Five-Year Plan period. This will lead to an increase in the activities of the construction industry and thus lead to increased consumption of long products.

India is expected to become a major hub for the automobile and auto components sector as the domestic automobile sector is growing at 14.2% CAGR over the past few years and the auto components market has been growing at 19.2% CAGR. This will increase the demand for cold rolled and coated products. Accordingly, the demand for pipelines for crude oil, LNG and Petroleum products will lead to the increase in demand for flat products particularly in the Pipes and Tubes segment.

The rural market in India is not explored to the multi-faceted use of steel. This market has huge potential for significant steel consumption as 70 percent of Indian population still lives

in rural areas. In this regard, appropriate steps can help penetrate this segment. Enhancing applications in rural areas will significantly increase the per capita consumption of steel. Steel is used in a cost effective manner in the segment of housing, fencing, structures and other possible applications where steel can substitute other materials and provide advantage to users with desirable conservation of forest resources.

The consumption of steel worldwide is expected to get doubled in the next 25 years. Indian steel industry will definitely have substantial gain in the export market through the combination of improved steel quality with low cost.

Company Analysis

Established in 1907, TSL is the first private sector steel company with a production capacity of 100000 tons. In these 100 years, it transformed into a global steel giant. It has plans to develop in both organic and inorganic routes. Mr. B Muthuraman, Managing Director, TSL said "More than a chronology of events, the Centenary of Our Company is a celebration of enduring values, exemplary corporate governance and unique achievements in creating customer delight. The Centenary story of Tata Steel is also linked intrinsically to the genesis and growth of an Industrial India, as envisioned by our Founder Jamsetji Nusserwanji Tata."

Jamshedpur plant is the first steel plant started by the company. Besides this plant, it has three Greenfield steel projects in the states of Jharkhand, Orissa and Chhattisgarh, and plans to set up steel making facilities in Vietnam and Bangladesh. TSL has created manufacturing and marketing network in Europe, South East Asia and the Pacific-rim countries by investing in Corus, Millennium Steel (renamed TSL Thailand) and NatSteel Asia, Singapore. It entered the steel building and construction applications market through its joint venture Tata BlueScope Steel Limited.

The company has a distinct benefit of raw material sourcing with iron ore mines and collieries in India. It has joint ventures in Thailand, Australia, Mozambique, Ivory Coast (West Africa) and Oman, which provide raw materials security. In order to grow and globalize, it is exploring opportunities in titanium dioxide business in Tamil Nadu, high carbon Ferro-chrome plant in South Africa, and setting up a deep-sea port in coastal Orissa.

Business Analysis

TSL produces hot and cold rolled coils and sheets, galvanized sheets, tubes, wire rods, construction re-bars, rings and bearings. These products are mainly targeted at automobiles, white goods, construction and infrastructure markets. It has introduced brands in order to decommunitise steel. It is focused to increase the sale of its branded products and the sales of these products as a proportion of its total sales.

Revenue Model

The branded products play a key role in the revenue model of TSL. Apart from branded products, the revenue of the company comes from value added products for the end customers and Original Equipment Manufacturers (OEMs). The branded products has mainly assisted the company to de-link itself from the volatility of steel prices and also added value to the overall portfolio. The revenue from branded products increased from Rs.13,000 million to Rs.46,040 million during the FY 2002-03 and 2006-07 at 12 percent of turnover.

Segment Analysis

Strategic Business Units

The products of TSL as discussed earlier are produced in various divisions. Company also depends on its steel division for all its major operations. Besides this, its main Steel

Division and all its operations are grouped under the following Strategic Business Units:

Bearings Division: This division manufactures ball bearings, double row self-aligning bearings, magneto bearings, clutch release bearings, and tapered roller bearings for two wheelers, fans, water pumps, etc.

For the FY 2006-07, this division increased its capacity by 120% and increased its production by 7.2% to 30 million bearings. The sales from this division recorded an increase of 28.97 million units as compared to 27.38 million units for the FY 2005-06, which comes to around 5.8%. During the year 2006-07, an excess supply of bearings resulted in a pressure on their prices. Compared to the FY 2005-06, the cost of raw materials increased by around 8% in the FY 2006-07; but this negative impact was mitigated largely through increased capacity utilization and improved manpower productivity.

Ferro Alloys and Minerals Division: It operates chrome mines. It also has units for making Ferro chrome and Ferro manganese. It is considered as one of the major players in the global Ferro chrome market. It recorded a strong performance for the FY 2006-07. Sukinda chromite mine's gross excavation increased by 3.8% to 13.65 million tons when compared to 13.15 million tons for the FY 2005-06. While the concentrate production increased by 4% to 465,000 tons, the Joda plant has achieved its best ever production of 51,020 tons of Ferro alloy for the FY 2006-07. The manganese ore sales too have increased in the domestic market by 17% to 365,000 tons and the total manganese alloys sales increased by about 50% to 54,000 tons.

Agrico Division: This is the first organized manufacturer of hand tools which are used for application in agriculture.

Tata Growth Shop (TGS): This unit has designed, developed, manufactured, erected and commissioned thousands of tons of equipment, which includes overhead cranes to high precision components. It also includes a rocket launch pad for the Indian Space and Research Organization.

Tubes Division: It is the largest steel tube manufacturer with a major market share in India. It plans to further strengthen its market presence by expanding and modernizing its commercial and precision tube manufacturing capacity.

For the FY 2006-07, the production in this division has increased by 17.5% to 309,932 tons. The Structural Tube sales have increased by 65% to 58,334 tons, while the Precision Tube sales increased by 21% to 58,839 tons.

Wire Division: This unit is a pioneer in the manufacture of steel wires in India. It mainly produces coated and uncoated wires, branded as Tata Wiron. It also operates a wholly owned subsidiary in Sri Lanka.

Company Strategies

According to Mr. B. Muthuraman (in 2005), Managing Director, TSL "Tata Steel is looking forward to becoming something like a 40-50 million ton company in the next ten years. It is planning to go beyond the shores of India, build some Greenfield projects in India and make some acquisitions in India and overseas."

As mentioned earlier, TSL has modernized its operations to become one of the most efficient steel producers in the world. It has re-engineered its business processes during the 1990s in order to establish cost leadership in a liberalized scenario. The scenario of steel industry changed dramatically in 2003, after a decade of recessionary conditions, mainly due to the strong growth in China. TSL has taken up this opportunity and set out the plans

to grow and globalize through organic and inorganic routes.

The company has realized the necessity to grow in size and regional diversity to match International players. It made long-term plans in 2005 to become a 50 million ton steel producer by 2015 having multi-locational manufacturing facilities with strong regional presence focusing mainly on auto, packaging and construction sectors across the global markets.

The continued emergence of TSL on both domestic and international fronts, led to the various strategic initiatives as follows:

Strong Base in India

As a part of its strategy to retain its pre-eminent position in the Indian markets, company has taken major steps to enhance its position in India in near future. It has plans to expand its capacities through Brownfield and Greenfield projects as discussed below.

Brownfield Projects in India

Presently, company is expanding its crude steel making capacity from 5 million tons to 6.8 million tons. This is to be commissioned by June 2008. This expansion will increase the production of billets and slabs by 1.5 million tons and 0.3 million tons respectively, and which will be rolled into finished products in various finishing mills within the fold of the company. This project is estimated to cost Rs.45,500 million.

The company has already successfully completed the 1 million ton expansion in Jamshedpur. In order to further leverage the potential of this plant, the company is planning to expand its crude steel production capacity from 6.8 million tons to 9.7 million tons by 2010. With this expansion, the company will become cost competitive (both in terms of capital cost and operating cost) as it plans to upgrade the capacity of its existing blast furnaces and other facilities. To increase the production of Flat Products by 2.9 million tons, the company is to set up a new Thin Slab Caster Rolling (TSCR) facility in Jamshedpur as a part of its expansion plans at an estimated cost of Rs.91,000 million approximately.

Greenfield Projects in India

TSL is planning to set up a Greenfield project at Kalinganagar in the state of Orissa. This is a 6 million ton integrated steel project and will be executed in two phases of 3 million tons each, wherein the first phase would be commissioned by 2010. For this purpose, it has placed orders for major equipments such as Blast Furnace and Steel Melting Shop. It is also in the process of completing land acquisition and rehabilitation of families residing on the land. It has already applied for fresh iron ore leases to the Government and the approval process is in progress. In future, the company is planning to start integrated steel plants in Chhattisgarh and Jharkhand in a phased manner.

Other Projects in India

In addition to the Brownfield projects and Greenfield projects, company is also setting up a 1.6 million ton metallurgical coke making facility in Haldia. This project is mainly to support future enhanced coke requirement in Jamshedpur at an estimated cost of Rs.11,500 million. It is expected to be commissioned by March 2008. In this regard, it has acquired requisite land, completed civil work, and placed orders for major equipments.

Overseas Expansion

On the international arena, company has created manufacturing and marketing network in Europe, South East Asia, and the Pacific-rim countries by acquiring Corus, Millennium

Steel (renamed TSL Thailand) and NatSteel Asia, Singapore. Corus, with a manufacturing capacity of 18.3 MT, has operations in the UK, the Netherlands, Germany, France, Norway and Belgium. TSL (Thailand) with a manufacturing capacity of 1.7 MT is the largest producer of long steel products in Thailand. NatSteel Asia with a manufacturing capacity of 2 MT has regional operations in Singapore, Australia, China, Malaysia, Philippines, Thailand, and Vietnam.

Other Ventures

The steel building and construction applications market has been entered by the company through getting into a joint venture with Tata BlueScope Steel Limited. In order to procure low ash coal from Australia and coking coal from Mozambique, the company has set up joint ventures for the development of limestone mines in Thailand. These ventures provide for the development of iron ore deposits in Ivory Coast and also for setting up a deep-sea port in coastal Orissa. It is also looking forward for the titanium dioxide business in Tamilnadu.

Financial Performance

In the centenary year, the performance of the company has been best ever with the robust Indian economy, firm steel prices, higher volumes and contribution of several improvement initiatives taken up by the company. Ratan Tata, CEO, TSL was proud to state "As we celebrate the hundredth year of existence of the Company in 2007, it is a matter of great pride to reflect on and recognize the enormous progress made by Tata Steel over the years."

The net sales of the company for the year 2006-07 increased by 15.94% to Rs.1,75,520.20 million as the year witnessed increase in volumes and price almost all products of the Company. While for the year 2005-06, the sales only increased by 4.42% to Rs.1,51,393.9 million.

The staff cost for the year 2006-07 increased by 7.5% to Rs.14,548 million when compared to Rs.13,530 million in year 2005-06. Annual increments, dearness allowance and consequential increase in provisions for gratuity and leave salaries have mainly contributed to the increase. The raw materials consumed for the year 2006-07 increased by 7.5% to Rs.34,895 million when compared to Rs.29,194.7 million in years 2005-06. With the higher consumption of raw materials on account of increased production of saleable steel, and price of imported coal, zinc and imported coke resulted in the increase in raw materials consumed for the year 2006-07 by 19.5% to Rs.34,895 million when compared to Rs.29,194.7 million in year 2005-06.

The net interest charged has increased around 46% to Rs.1,739 million in the year 2006-07 largely as a result of increase in interest on forex loans, swap charges for hedging currency and interest rate risks and higher working capital loans. As a result of this, EBIDTA margins for the year 2006-07 increased by 17.56% to Rs.69,732.7 million and net profit margin increased by 22.9% to Rs.43,742.5 million. Similarly; the earnings per share of the company for the year 2006-07 is Rs.72.74.

Company has been performing steadily by consolidating its financial position in the last few years. It has not undertaken major borrowings and the complete capital expenditure fund has been adjusted internally. In order to facilitate liquidity, company has invested all its cash reserves in the money market mutual funds.

Future Outlook of the Company

Experts are of the view that TSL's product mix and strategies could act as key triggers for

future growth of the company. It produces almost complete range of high end products for automobile industry and it is expected that Indian automobile industry will grow at 15% over the next 5 to 10 years. International automakers like Volkswagen and Nissan Renault purchase steel from the company for its Indian projects. Other major companies, which rely on TSL, are Maruti-Suzuki, Ford, Hyundai and Toyota. The construction industry is expected to grow at 10% over the next 5 to 10 years. In order to meet the increasing demand, TSL plans to import steel from Corus, which has the proficiency to produce steel for high-rise buildings. Construction sector and automobile sector account for 55 percent of steel consumption for TSL. This clearly states that the company has enough headroom to improve its product mix.

(The acquisition of Corus has not only given visibility and market access to the company, but also assisted to attain scale and ownership of cutting edge technology. According to Muthuraman, Managing Director of TSL, acquisition of Corus gave TSL the required scale, a larger market and, most importantly, a high quality Research and Development setup. Corus owns a technology that employs a little over a thousand metallurgists, engineers and doctorates to produce steel.)

Raw materials play a key role in steel industry, as many companies do not have sufficient raw materials to meet the demand for steel.

Company entered into 50:50 Joint ventures with SAIL for coal mining in India. This Venture will identify and mine coal blocks for securing assured coking coal supply. It has also entered a joint venture agreement with Riversdale Mining Limited for Benga and Tete coal tenements through 35% equity stake for A\$ 100 million. This Mozambique Coal company owns 25 thousand hectares of coal tenement with Inferred coal resource of around 1.225 billion tons in Benga. The production from this venture is expected to begin from 2010. TSL entered a Joint Venture agreement with State owned company Sodemi for exploring and developing Mt. Nimba iron ore mine in West Africa. Mt. Nimba has estimated reserves of around 500 million tons of Itabirite Iron ore. TSL entered into a 70:30 joint ventures with Al Bahja Group through participating in Al Rimal Mining LLC, which is its existing mining company. Production from this venture is expected to commence by the year 2010.

ANNEXURE I

Profit and Loss Statement of TSL

(Rs. in million)

Particulars	2004-05	2005-06	2006-07
Net Sales	144989.50	151393.90	175520.20
Growth (%)	35.47%	4.42%	15.94%
Total Revenue	144989.50	153941.50	179856.90
Growth (%)	33.18%	6.17%	16.83%
Total Expenditures	84535.90	92078.80	105787.50
% of Net Sales	58.30%	60.82%	60.27%
Staff Cost	12890.00	13530.10	14548.40
% of Net Sales	8.89%	8.94%	8.30%
Raw Material	27308.70	29194.70	34895.90
% of Net Sales	18.83%	19.28%	19.88%
Power Purchase	7120.00	8191.70	9216.90
% of Net Sales	4.91%	5.41%	5.25%
Freight and Handling	9366.80	10043.20	11174.50
% of Net Sales	6.46%	6.63%	6.37%
Other Expenditure	27850.40	31119.10	35951.80
% of Net Sales	19.21%	20.56%	20.47%
EBDITA	60453.60	59315.10	69732.70
% of Net Sales	41.70%	39.18%	39.73%
Growth (%)	72.95%	-1.88%	17.56%
Interest	1868.00	1184.40	1739.00
EBDT	58585.60	58130.70	67993.70
Depreciation and Amortization	6187.80	7751.00	8192.90
Other Income	1480.30	2547.60	4336.70
PBT	53878.10	52927.30	64137.50
Pre-tax Margin (%)	37.16%	34.96%	36.54%
Tax	18231.20	17335.80	20395.00
Effective Tax Rate (%)	33.84%	32.75%	31.80%
Reported Profit	35646.90	35591.50	43742.50
Net Profit Margin (%)	24.59%	23.51%	24.92%
Growth (%)	81.05%	-0.16%	22.90%
Extraordinary Items	-905.30	-527.70	-1521.00
Adjusted PAT	34741.60	35063.80	42221.50
Shares Issued	553.46	553.46	580.47
Adjusted EPS	62.77	63.35	72.74
Growth (%)	32.65%	0.93%	14.81%

Source: Adapted from Company Financial Reports, Icfai Research Team.

ANNEXURE II
Balance Sheet of TSL

(Rs. in million)

Particulars	2004-05	2005-06	2006-07
Gross Assets	149577.30	164707.10	184265.20
Accumulated Depreciation	58454.90	66056.60	73859.60
Net Fixed Assets	91122.40	98650.50	110405.60
Investments	24326.50	40699.60	61061.80
Cash	2467.20	2883.90	76813.50
Inventories	15233.40	17320.90	18275.40
Trade Debtors	5818.20	5394.00	6316.30
Interest Accrued on Investments	2.00	2.00	2.00
Stores and Spare Parts	3490.60	4426.60	5054.40
Loans and Advances	13824.40	12348.60	30557.30
Current Assets	40835.80	42376.00	137018.90
Current Liabilities	26898.30	28359.90	35232.00
Provisions	10101.60	9727.30	19304.60
Total Current Liabilities	36999.90	38087.20	54536.60
Net Current Assets Excl. Cash	1368.70	1404.90	5668.80
Miscellaneous Expenses	2148.20	2532.70	2025.30
Capital Deployed	121433.00	146171.60	255975.00
Equity Share Capital (Paid-up)	5536.70	5536.70	7277.30
Reserves and Surplus	65062.50	92016.30	133684.20
Shareholder's Fund	70599.20	97553.00	140961.50
Secured Debt	24681.80	21917.40	37589.20
Non Secured Debt	2715.20	3244.10	58864.10
Long-Term Debt	27397.00	25161.50	96453.30
Deferred Tax (Net)	8294.20	9570.00	7489.40
Provision for Employee Separation Compensation	15142.60	13887.10	11070.80
Capital Employed	121433.00	146171.60	255975.00
Contingent Liabilities	1911.12	2209.45	5072.96

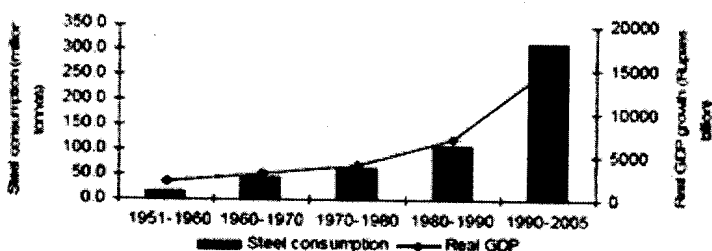
Source: Adapted from Company Financial Reports, Icfai Research Team.

ANNEXURE III
TSL Stock Prices and BSE Sensex for the Financial
Years 2005-06, 2006-07 and 2007-08

Year	Month	TSL (Rs.)	BSE
2005	March	400.90	6492.82
2005	April	340.80	6154.44
2005	May	362.85	6715.11
2005	June	340.10	7193.85
2005	July	368.15	7635.42
2005	August	390.65	7805.43
2005	September	423.50	8634.48
2005	October	339.05	7892.32
2005	November	349.20	8788.81
2005	December	380.30	9397.93
2006	January	404.25	9919.89
2006	February	430.70	10370.24
2006	March	536.40	11279.96
2006	April	645.35	12042.56
2006	May	516.70	10398.61
2006	June	533.30	10609.25
2006	July	496.80	10743.88
2006	August	496.20	11699.05
2006	September	535.65	12454.42
2006	October	490.45	12961.90
2006	November	467.95	13696.31
2006	December	482.30	13786.91
2007	January	463.95	14090.92
2007	February	442.50	13938.09
2007	March	449.60	13072.10
2007	April	549.60	13872.37
2007	May	632.20	14544.46
2007	June	707.20	14650.50
2007	July	853.40	15450.99
2007	August	689.70	15318.60
2007	September	850.35	17291.10
2007	October	905.05	19837.19
2007	November	825.70	19363.10
2007	December	934.80	20286.99
2008	January	733.50	17648.70
2008	February	801.55	16949.14

Source: www.bseindia.com

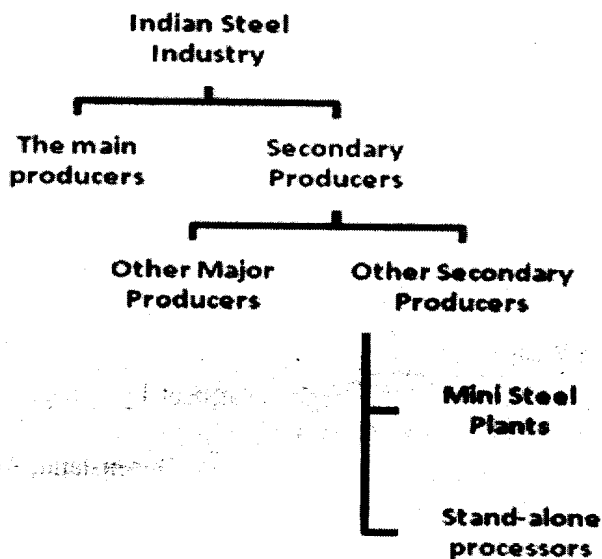
ANNEXURE IV



Source: www.steel.nic.in

ANNEXURE V

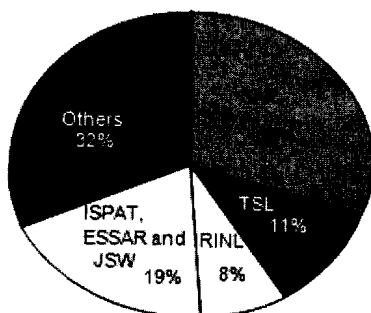
Indian Steel Industry Structure



Source: Icfai Research Team.

ANNEXURE VI

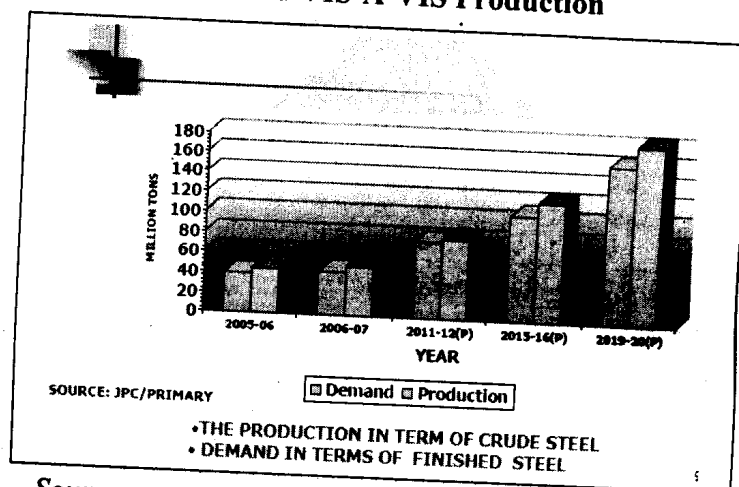
Crude Steel Production 2006-07



Source: www.sail.co.in

ANNEXURE VII

Indian Steel Scenario Demand VIS-À-VIS Production



Source: www.oecd.org

ANNEXURE VIII

Key Milestones of TSL

1907	The Tata Iron and Steel Company (now TSL) was established to set up India's first iron and steel plant in Jamshedpur. The plant started production in 1912.
1912	TSL introduced eight-hour working days, well before law implemented such a system in much of the West.
2005	TSL acquired Singapore-based steel company NatSteel by subscribing to 100 percent equity of its subsidiary, NatSteel Asia. TSL acquired stake in Carborough Down Coal Project, Queensland, Australia. TSL acquired Millennium Steel, Thailand.
2006	TSL ranked world's best steel maker for the third time by World Steel Dynamics. TSL began construction of Rs.670 million Ferrochrome plant in South Africa.
2007	Tata Refractories sets up Greenfield plant in China. TSL acquired Corus. TSL acquires Rawmet Industries in Orissa. TSL, through its subsidiary NatSteel Asia, acquires controlling equity stake in two rolling mills located in Vietnam. TSL celebrated its centenary on August 26, 2007.
2008	TSL performed the groundbreaking ceremony for expanding its Jamshedpur capacity to 10 million ton annually.

Source: www.tata.com and Icfai Research Team.

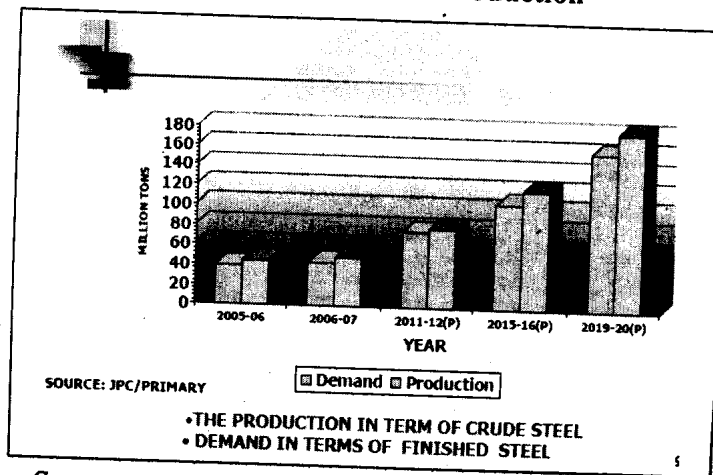
ANNEXURE IX

Products and Services	Products Description
Long Products	Wire Rods, Rebars.
Flat Products	Hot and Cold Rolled Sheets, Hot and Cold Rolled Coils, Galvanized Coils and Sheets, Hot Rolled Plates.
Semi Finished Steel Products	Billets, Slabs.
Tubes	Standard Pipes, ERW Precision Tubes, Closed Structural.
Bearings Wires	Rolled Rings, Forged Rings, Machines Rings, Bearings, Plain and Coated Steel Wires.
Minerals	Coal and Coke, Iron Ore, Dolomite, Chrome Ore and Chrome Concentrate.
Others	Ferro Alloys, Agriculture Implements, Services like Project Studies, Design and Engineering, Personnel and Technical Training, Automation, Information Technology, Power and Water.
Branded Products	<p>Tata Wiron – These are wire rods for farming and fencing segment.</p> <p>TSLium – These are cold rolled steel for auto ancillaries and the general engineering segments.</p> <p>Tata Shaktee – These are corrugated galvanized sheets for individual house builder segments.</p> <p>Tata Tiscon – These are re-bars for individual house-builder semi-urban segment.</p> <p>Tata Pipes – These are pipes for individual house builder and farming segments.</p> <p>Tata Bearings – These are bearings for original equipment manufacturer and replacement market.</p> <p>Tata Agrico – These are agricultural equipment for farming and construction segment.</p>

Source: www.tatasteel.com and Icfai Research Team.

ANNEXURE VII

Indian Steel Scenario Demand VIS-À-VIS Production



Source: www.oecd.org

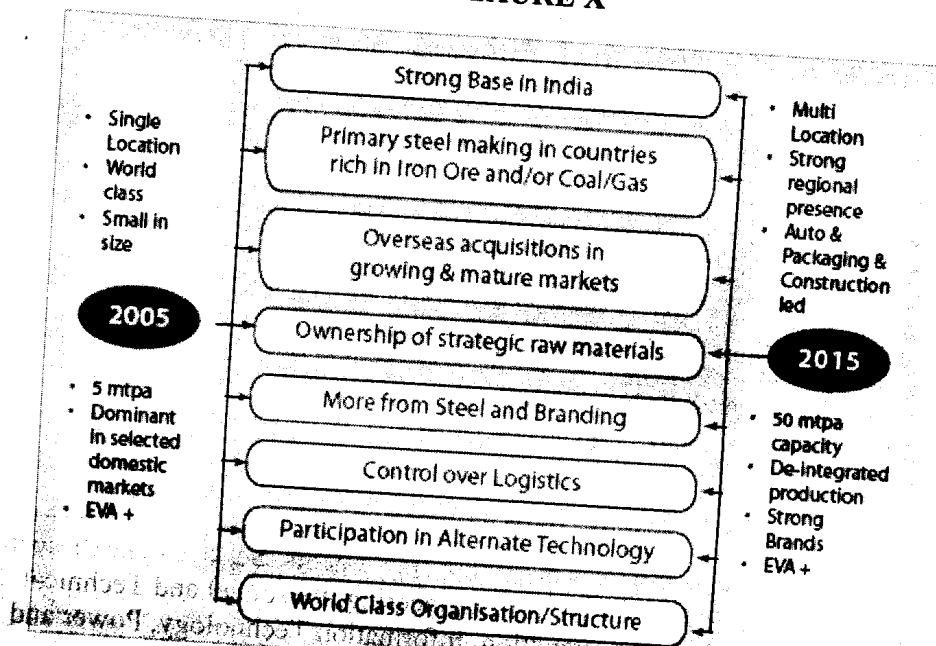
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Source: www.tata.com and Icfai Research Team.

ANNEXURE X



Source: TSL Annual Reports.

END OF SECTION B

END OF QUESTION PAPER