Chinese Steel Industry – Light at the End of the Tunnel?

**Summary**

<table>
<thead>
<tr>
<th>Category</th>
<th>Industry Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>China</td>
</tr>
<tr>
<td>Industry</td>
<td>Steel</td>
</tr>
<tr>
<td>GICS</td>
<td>1510</td>
</tr>
<tr>
<td>Outlook</td>
<td>Stable</td>
</tr>
<tr>
<td>Date</td>
<td>23/NOV/2016</td>
</tr>
</tbody>
</table>

**Highlights**

- Stabilizing credit profiles from steel price recovery
- Shrinking crude steel production and demand for 2016 – 2020
- Consolidation led by large SOEs as a result of supply-side reform

**Overview**

The precise production capacity figure is mysterious in China’s steel industry. However, it is factual that both utilization rate and average steel prices have been declining substantially in recent years, owing to softening demand excessively aggressive expansion.

The government’s push on capacity cut has made some progress in 2016, but it is still far from being enough. Assuming China can achieve its capacity cut target by 2020, we still think an optimal supply and demand balance may not be restored in China’s steel industry as the current weakening demand trend could persist into the future. Furthermore, we believe the large steel manufacturers, mostly state-owned enterprises (SOEs), will lead the process to consolidate the industry as China boosts up the enforcement on the environmental standards.

We expect the steel industry’s credit profiles to mostly stabilize in 2016 and may improve slightly in 2017. On average, most of the top steel makers’ credit profiles have deteriorated substantially over the past two to three years with a substantial increase in leverage and profitability squeezed to loss territory for some companies, but we believe the finished steel prices had touched the bottom at the end of 2015 in China, after five years of continuous deterioration, and the price recovery in 2016 will sustain to 2017.

Since China’s finished steel product prices have rebounded, on average, about 60-70% so far this year from the all-time low level in November 2015, we do not expect any further substantial and sustainable price recovery in the next 12 months as the oversupply issue continues to overhang the industry. We project China’s finished steel product prices, on blended average basis, to increase about 5% in 2017 over 2016 as a result of stabilizing economy, cooling property market, flattish automobile industry and continuous effort on capacity cuts.

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We also expect China’s crude steel consumption and production volume to shrink about 3-5% each year for 2016-2018 as the country’s economy struggles to fight with lower growth. We think the country’s crude steel consumption has peaked already in 2013 and is unlikely to experience any material growth in the near future. We estimate China’s total crude steel consumption will gradually decline during the period of 2016-2020 to be about 620-630 million tons in 2020 from about 700 million tons in 2016. However, we believe China’s steel exports will continue to grow and make up the shortfalls.

In our view, China’s top steel SOEs will benefit from the current supply-side reform measures over the long-term and will be the driving force during the industry consolidation in the next two to three years. Even though we believe the business positions of the large SOEs will be strengthened as the industry capacity cut continues, we do not think the industry average financial leverage will improve materially in the next 12-24 months.

We have identified five steel companies that will most likely outperform the industry and maintain or improve their credit profiles over the next two to three years. These companies are Baosteel Group, Shagang Group, Shandong Steel Group, Shougang Corporation and HeSteel Group. In addition, Taiyuan Steel may also have a better chance than other smaller steelmakers to excel in 2017–2018. Dagong Global Credit Rating (Hong Kong) Co., Ltd. has a solicited public rating on Shougang Corporation (A/Stable/--).

**Furnaces and Technologies**

We believe the Chinese steel makers need further improvement in their ironmaking and steelmaking equipment, as well as technologies.

Whether an ironmaking process is advanced and economical or not, it can be judged by many factors such as the size and life span of the blast furnace, capacity factor, coke and fuel usage per ton, and emission level. The rule of thumb is the larger the blast furnace, the better the efficiency and emission. As of today, Shagang Group has the world’s largest blast furnace currently in operation with the stand-alone capacity of 5,800m³, followed by Shougang’s two 5,500m³ blast furnaces. Even though China is the largest ironmaking country and accounts for about half of the world’s production, we estimate that 50-55% of the iron productions in 2015 were made in the small and less efficient blast furnaces with size of less than 1,000m³.

We consider any blast furnace of less than 2,000m³ per unit in size less efficient and advanced according to modern-day criteria, and any furnace bigger than 4,000m³ per unit operationally competitive even though the newly constructed blast furnaces are usually bigger than 5,000m³ per unit nowadays. Among the top Chinese steelmakers, Baosteel has the largest total blast furnace processing capacity of 60,459m³ as of 2015, of which 38% are large blast furnaces with size bigger than 4,000m³ per unit (EXHIBIT 1).

We also think Shougang’s ironmaking processing capability is advanced and competitive in China when factoring in both the total capacity volume and the technological advancement of furnaces. Being the largest steel producer in China, HeSteel’s ironmaking capacity is only second to that of Baosteel, but the company does not have any blast furnace larger than 4,000m³ per unit.
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EXHIBIT 1
Chinese Steel Industry Players – Iron-Making Blast Furnace Breakdown by Volume

Even though the steelmaking process has many different technology variations, by and large, the size of basic oxygen converter furnace (BOF) and electric arc furnace (EAF) is also one of the major indicators for the efficiency and advancement of the process. Similar to ironmaking, close to 60% of China’s oxygen converter furnaces are smaller than 120t per unit, which indicates large room for improvement. We consider any oxygen converter furnace with size less than 120t per unit as inefficient capacity and bigger than 200t per unit as operationally competitive (EXHIBIT 2). We also think any electric arc furnace with size less than 60t per unit as inefficient equipment and bigger than 100t per unit as the advanced capacity (EXHIBIT 3).

In our view, Baosteel again has the most competitive steelmaking capability in China, followed by Shougang and Ansteel. HeSteel’s steelmaking capacity is large and reasonably competitive but less advanced than other industry leaders. In addition, Taiyuan Steel and Shagang also have quite large EAF capacity which will allow them to utilize the scrap steel inputs and compete in the highly-specialized alloy and carbon steel product segment.

EXHIBIT 2
Chinese Steel Industry Players – Steelmaking BOF Breakdown by Volume

Source: Company data
In conclusion, when combing both ironmaking and steelmaking facilities, we believe Baosteel, Shougang and Ansteel have the most advanced processing capabilities in China, followed by HeSteel and Shagang as the not-too-far distant fourth and fifth. Taiyuan Steel has its specialized strength but lacks in size and volume. Most other steel companies, whether SOEs or private, are usually less competitive with somewhat outdated processing facilities and technologies by international standards.

**Finished Steel Product Portfolio and R&D Expense**

We think Baosteel leads its peers in high value-added product portfolio but still needs more improvement.

In our view, China’s steelmakers mainly focus on producing mid-end and low-end steel products compared to other top western steel manufacturers. The country still heavily relies on imports for some high-quality steel products such as cold-rolled steel sheet used in high-end automobile and home appliance, tool steels, food packaging used steels, as well as some special steels used in challenging construction projects. Since the finished steel product category and variety are so wide, it is extremely difficult to precisely rank the product quality among the steelmakers.

However, if we consider some general grouping of the finished steel products, we believe Baosteel in general have the highest value-added product sales compared to its peers in China, whilst Ansteel, Wuhan Steel, Hesteel, Shougang are in the second-tier group (EXHIBIT 4). It is clear that vast majority of other Chinese steelmakers still crowd around the lower end of the product spectrum as of today.

**EXHIBIT 4**

Chinese Steel Industry Players – Production Volume of Finished Steel by Product Category (Mt)

<table>
<thead>
<tr>
<th>Finished Steel Category</th>
<th>Examples of Finished Steel</th>
<th>Ansteel</th>
<th>Baosteel*</th>
<th>Baotou Steel</th>
<th>Benxi Steel</th>
<th>Huanan Valin</th>
<th>HeSteel</th>
<th>Magang Group</th>
<th>Shagang</th>
<th>Shandong Steel</th>
<th>Shougang</th>
<th>Taiyuan Steel</th>
<th>Wuhan Steel</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>High-end</td>
<td>Cold Rolled, Galvanized, Electric sheets, Special Steel</td>
<td>9.5</td>
<td>9.7</td>
<td>2.0</td>
<td>2.4</td>
<td>1.1</td>
<td>10.7</td>
<td>2.8</td>
<td>4.6</td>
<td>1.1</td>
<td>6.8</td>
<td>3.6</td>
<td>7.1</td>
<td>151.2</td>
</tr>
<tr>
<td>Mid-end</td>
<td>Plate, Wire Rod, Seamless Pipe, Hot Rolled, Long, H-beam</td>
<td>3.1</td>
<td>2.9</td>
<td>2.6</td>
<td>4.8</td>
<td>4.8</td>
<td>5.0</td>
<td>0.4</td>
<td>6.7</td>
<td>2.5</td>
<td></td>
<td>-</td>
<td>0.9</td>
<td>162.6</td>
</tr>
<tr>
<td>Low-end</td>
<td></td>
<td>18.9</td>
<td>9.2</td>
<td>6.5</td>
<td>11.7</td>
<td>9.1</td>
<td>29.4</td>
<td>15.2</td>
<td>17.9</td>
<td>19.5</td>
<td>6.0</td>
<td>18.8</td>
<td>26.8</td>
<td>1,125.6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>29.6</td>
<td>21.8</td>
<td>11.2</td>
<td>14.8</td>
<td>15.0</td>
<td>45.2</td>
<td>18.4</td>
<td>25.2</td>
<td>21.3</td>
<td>7.2</td>
<td>26.8</td>
<td>27.2</td>
<td>9.7</td>
</tr>
</tbody>
</table>

Source: Company data (Shougang, Shagang & Shandong Steel's data as of year 2015, the remaining companies’ data as of year 2014)

Remarks: Baosteel herein referred to as ”Baoshan Iron and Steel Company Limited” rather than “Shanghai Baosteel Group Corporation”.

Source: Company data
We believe the top Chinese steelmakers have made substantial progresses at climbing the value chain over the last ten years but they still have not invested enough to be technically competitive to their western peers. Currently our sampled top Chinese steelmakers on average invest about 1.1% of their core operating revenues on research and development (R&D) every year, which is still below the target of 1.7% set by the Chinese central government. Large SOEs like Baosteel, Ansteel and HeSteel are leading the research effort in China’s steel industry (EXHIBIT 5). We expect Chinese steel companies to further increase their R&D spending rapidly in the future to eventually close the technology and product gap with the western peers.

EXHIBIT 5
FY2015 Comparison of Steel Makers’ R&D Expenditure

Environmental Performance and Energy Efficiency

Environmental standards have been raised and energy efficiencies have improved. China released eight sets of emission standards of air, water and other pollutants for steel industry in 2012, which was a big tighten-up for the industry, in our opinion. We believe the energy efficiency and emission control have improved on the new capacity added after 2012, particularly for those large SOEs, but the improvement is not even across all the companies. It seems that energy efficiency and emission control sometimes do not always come together.

In our view, Shagang and Taiyuan Steel have a better balance between these two areas than other companies in China (EXHIBIT 6). We also believe the lower the environmental protection performance is, the higher the pressure for capacity upgrades and future capital expenditure. We expect a large number of small and inefficient steel mills to be pushed out of the industry on the back of rising environmental standards in the next three to five years.

EXHIBIT 6
Chinese Steel Industry Players – Environmental Indicators and Energy Efficiencies

<table>
<thead>
<tr>
<th>Environmental Indicators and Energy Efficiencies</th>
<th>Ansteel</th>
<th>Baosteel</th>
<th>Baotou Steel</th>
<th>Benxi Steel</th>
<th>Benxi Valin</th>
<th>HeSteel</th>
<th>Shagang Group</th>
<th>Shagang</th>
<th>Shandong Steel</th>
<th>Shougang</th>
<th>Taiyuan Steel</th>
<th>Wuhan Steel</th>
<th>China Steel Corp.</th>
<th>ArcelorMittal</th>
<th>NSSMC</th>
<th>Nucor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated Energy Consumption (kg/t)</td>
<td>587</td>
<td>603</td>
<td>620</td>
<td>580</td>
<td>585</td>
<td>560</td>
<td>618</td>
<td>579</td>
<td>586</td>
<td>612</td>
<td>564</td>
<td>609</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh Water Consumption (m³/ton)</td>
<td>3.74</td>
<td>4.03</td>
<td>3.74</td>
<td>3.38</td>
<td>4.22</td>
<td>2.98</td>
<td>3.98</td>
<td>3.19</td>
<td>3.46</td>
<td>3.06</td>
<td>2.31</td>
<td>3.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Particulate emissions (kg/ton)</td>
<td>0.60</td>
<td>0.38</td>
<td>0.69</td>
<td>0.98</td>
<td>N/A</td>
<td>N/A</td>
<td>0.85</td>
<td>0.45</td>
<td>0.86</td>
<td>0.79</td>
<td>0.37</td>
<td>0.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SO₂ emissions (kg/ton)</td>
<td>0.75</td>
<td>0.30</td>
<td>0.72</td>
<td>1.72</td>
<td>N/A</td>
<td>N/A</td>
<td>1.20</td>
<td>0.69</td>
<td>0.69</td>
<td>0.90</td>
<td>0.35</td>
<td>1.23</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Company data
Profitability, Utilization Rate and Cash Conversion Cycle

Industry-wide profitability has been volatile and in decline over the period of 2011-2015 but again improved materially in 2016 on the back of price recovery (EXHIBIT 7). Despite the recent improvement, we think the industry’s average profitability will somewhat continue to be under pressure in the next two years.

Average EBITDA margin of our sampled companies declined to 5.6% in 2015 from 8.2% in 2014, and more or less stayed flattish in the first half of 2016 but improved in 3Q16. We think the industry average EBITDA margin will not further deteriorate materially given our view that the domestic steel prices have bottomed out in the end of 2015 and price recovery momentum of 2016 will sustain into 2017.

However, we do not believe the industry average profitability will improve materially either as we think any substantial rebound on the finished steel product prices in the near future is unsustainable and constrained by China’s supply and demand imbalance. Moreover, we are cautious that iron ore prices may hike faster than the steel price rebound in China, which then adding the pressures on steelmakers’ profitability.

EXHIBIT 7
5-year EBITDA Margin for Chinese and Non-Chinese Steel Makers

Out of our sampled companies, Shandong Steel had the biggest profitability improvement in 2014-2015 due to the strong growth of its financial services business, which is a proven story of Chinese steel company successfully reducing dependence on the cyclical metal business.

Furthermore, both Baosteel and Hesteel experienced slight profitability improvement in 2015 as the earnings from their financial services as well as agency and consulting businesses offset more than the profit declines on the main steel business. However, for other less diversified Chinese steel companies, their profitability is highly correlated to the metals cycle in China (EXHIBIT 8).

EXHIBIT 8
FY2014 and FY2015 EBITDA Margin for Steel Makers

Source: Company data
In our sampled companies, the majority of mid-sized and smaller Chinese steelmakers actually have lower cash production costs on per ton basis than their large domestic and international peers due to their low-end product mix (EXHIBIT 9), which is also the main reason that these companies can survive a prolonged low-pricing environment. However, once the finance costs are factored in, most of these smaller manufacturers would be cash flow negative in the depressed pricing of 2015, given their heavy debt burdens and high expense structure. As the iron ore and energy prices declined in 2015, so did the unit production costs. We believe market force alone may not be able to push out the inefficient and unproductive steel capacity in China, the strong administrative measures are necessary to restore the healthy supply and demand balance.

EXHIBIT 9
FY2014 and FY2015 Cash Cost Per Ton for Steel Makers

We believe utilization rates are low and may improve if the capacity cut can move ahead as planned. We estimate that industry’s overall capacity utilization rate was about 67% in 2015.

China’s crude steel production capacity is expected to stay close to 1.2 billion tons per annum in 2016, while we expect the actual annual production volume to decline at the rate of low single digit each year in 2016-2018 as the end market demand for finished steel products continues to shrink on the back of weak industrial activities and China’s economic structure shifts. We think the total crude steel consumption has already peaked in China and any substantial growth on demand is highly unlikely in the future.

Chinese central government has set the target to cut 100-150 million crude steel production capacity for the industry by 2020 and various policy measures have also been rolled out. According to the Ministry of Industry and Information Technology (MIIT), the 2016 capacity cut target of 45 million tons have been achieved by the end of October despite the slow progress in the first half of 2016. However, we believe much of these capacities were already idled for years and easy to get rid of, the real challenge should sit ahead in 2017-2018.

Unlike many excessive capacity reduction plans observed in the past, we do believe the current administration is quite serious on the supply-side reform this time around, but we still think the healthy supply-demand balance (measured by industry-wide utilization rate to be above 85%) may not be restored even if the final capacity cut target is achieved. More aggressive measures may be needed.
In our view, the large steel SOEs will be the winners during this capacity reduction cycle because these SOEs usually have the capital or access to capital to upgrade or rebuild their capacity to meet the new emission standards even in an industry down cycle, while many of the smaller companies may not survive.

Overall Chinese steel companies have been managing their working capitals well compared to some of their global peers. Most of the domestic companies are able to stretch their suppliers and report negative cash conversion cycles. However, such practices are deviated and volatile across the industry (EXHIBIT 10).

**EXHIBIT 10**
**FY2013 – FY2015 Cash Conversion Cycles**

<table>
<thead>
<tr>
<th>Cash Conversion Cycle (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>125</td>
</tr>
<tr>
<td>Ansteel</td>
</tr>
<tr>
<td>FY2013</td>
</tr>
</tbody>
</table>

*Source: Company data*

**Financial Leverage and Liquidity**

Financial leverage soared in 2015 but start to stabilize in 2016-2017. We expect the financial leverage on industry average, measured by gross debt-to-EBITDA ratio, to further deteriorate moderately in 2016, but should stabilize and start to improve in 2017 and afterwards.

However, any meaningful improvement is unlikely in the immediate future. As the profitability and cash flows deteriorate, the average gross debt-to-EBITDA ratio of our sampled Chinese companies jumped to 22.7x in 2015 from 9.8x in 2014, which was mainly driven by the shrinking earnings (EXHIBIT 11 & 12).

Total gross debt of our sampled Chinese companies grew about 10.1% in 2015, which may continue to increase in 2016-2017. The average cash as a percentage of total gross debt stood at about 17.8% for our sampled Chinese steel companies in 2015, which has been fairly stable over the last three to four years.

**EXHIBIT 11**
**5-Year Financial Leverage for Chinese and Non-Chinese Steel Makers**

<table>
<thead>
<tr>
<th>Gross Debt/EBITDA (x)</th>
<th>Cash and Liquid Assets/Gross Debt (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>21</td>
</tr>
</tbody>
</table>

*Source: Company data*
As the leverage spikes to astonishing level, the debt and interest servicing capabilities become very important factors to judge the solvency of these companies. The average EBITDA interest coverage of our sampled Chinese companies has decreased to 1.3x in 2015 from 2.4x in 2014. The total interest expenses of these companies have been fairly stable over the last two years, which is the result of overall lowering interest rate environment and moderate total debt growth. Therefore, the weak EBITDA interest coverage ratio was almost solely driven by the declining earnings and profits.

We do not think the large steel SOEs will have problems servicing their debt and interests, given the liquidity supports from governments and state-owned banking system. However, we remain extremely cautious on the smaller private steel companies’ ability to cover their interest payments (EXHIBIT 13). Since the debt servicing margin has been so thin already, if the industry experiences another prolonged pricing dip for the next 12 months, we would expect a large number of smaller steel companies, SOE or private, to default.

Liquidity pressure is mounting in the industry even for some of large SOEs. In our view, the liquidity conditions have deteriorated substantially for the steel industry as a whole over the last two years, but we do not expect any near-term liquidity crunch for most large steel SOEs given the state-owned banking system and government supports.
However, the same cannot be said for much troubled smaller steel SOEs and private companies. If the industry pricing experiences another prolonged downturn in 2017-2018 (even though this is not our base case projection), we think the liquidity challenges could even spread to the largest SOEs in the country. Out of our sampled companies, Wuhan Steel, Benxi Steel and Taiyuan Steel have the largest liquidity shortages with the worst liquidity ratios, assuming no external supports from the state-owned banks. Ansteel and Shougang’s liquidity deficit (measured by the gap between liquidity sources and usages) are also fairly large, but we think their government supports are very strong at this moment (EXHIBIT 14).

**EXHIBIT 14**

FY2016 Projected Liquidity Assessment for Steel Makers

![Liquidity Assessment Graph](image-url)

*Source: Company data*
Trade Wars and Future

We expect China’s steel industry continue to expand their export markets in the next two to three years despite the increasing steel trade frictions between China and some of its trading partners. China’s steel exports grew about 20% in 2015 and 6.5% in the first eight months of 2016, according to General Administration of Customs of China (GACC), on the back of weak domestic pricing and demand. The rapid growth of Chinese steel exports has led about a dozen countries to impose anti-dumping measures on China’s steel exports as of November 2016. However, we do not expect the steel trade disputes between China and other countries to escalate harmfully as China steps up efforts on capacity cuts and negotiations. We estimate that China’s steel exports will grow at a pace of low single digit for 2016-2018.

Will China’s supply-side reform and capacity cut restore the balance of supply and demand in the next few years? We shall remain cautious on the potential outcome of the supply-side reform based on the past events. The challenges include but not limited to: the uncooperative local governments and self-interested small steel mills. However, we do believe the large steel SOEs will survive and excel over the long run compared to the massive number of smaller manufacturers in China.

We do believe the worst has passed for China’s steel industry as the domestic finished steel product prices had reached bottom in November 2015 (EXHIBIT 15) and steel price recovery in 2016 will be kept into 2017. Even though we do not expect any drastic and substantial improvement on profitability and financial leverage in 2017, we do think slight and mild improvements can be expected. As a result, we expect the industry average credit profiles to stabilize in 2016 and improve slightly in 2017.

EXHIBIT 15
Price Trends of Imported Iron Ore and Finished Steel Products in China

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Price Trends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hot Rolled (3mm)</td>
<td></td>
</tr>
<tr>
<td>Cold Rolled (1mm)</td>
<td></td>
</tr>
<tr>
<td>Galvanized (3mm)</td>
<td></td>
</tr>
<tr>
<td>Wire Rod (6.5mm)</td>
<td></td>
</tr>
<tr>
<td>Screw Thread (25mm)</td>
<td></td>
</tr>
<tr>
<td>Qingdao Imported Iron Ore (PB lumps, 62.5%)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Wind
### Exhibit 16

**Financial and Business Profile of Steel Industry Players**

#### Peer Comparison

<table>
<thead>
<tr>
<th>Company</th>
<th>Baosteel</th>
<th>Baotou Steel</th>
<th>Benxi Steel</th>
<th>Hunan Valin</th>
<th>HeSteel</th>
<th>Magang Group</th>
<th>Shagang</th>
<th>Shandong Steel</th>
<th>Shougang</th>
<th>Taiyuan Steel</th>
<th>Wuhan Steel</th>
<th>China Steel Corp.</th>
<th>ArcelorMittal</th>
<th>NSSMC</th>
<th>Nucor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues (USD)</td>
<td>13,261.7</td>
<td>31,231.4</td>
<td>29,268.1</td>
<td>18,551.4</td>
<td>19,400.9</td>
<td>20,820.3</td>
<td>13,983.3</td>
<td>15,659.3</td>
<td>8,674.3</td>
<td>63,578.4</td>
<td>43,594.5</td>
<td>16,439.3</td>
<td>8,029.1</td>
<td>6,933.9</td>
<td>1,151.6</td>
</tr>
<tr>
<td>Funds from Operations (FFO)</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Net Income</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Adjusted Financial Ratios</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
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### Legal Name

1. We defined the cash cost as cost of sales minus depreciation and amortization while cash cost per ton is defined by cash cost divided by crude steel production volume.
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