



Supply-side constraints expected to continue impacting domestic steel companies despite demand outlook being positive

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Summary

- The global financial crisis in the second half of 2008-09 pulled down international steel demand significantly, abruptly reversing the uptrend in international steel prices prevailing till then. Steel producers around the world responded to the emerging scenario by sharply rationalising production levels. India however remained one of the least affected countries during this period of industry weakness.
- Following the crisis, various Governments in major economies in the world announced large economic stimulus packages, thereby propping up demand. Consequently, steel production in the major steel producing countries improved in calendar year (CY) 2009. Prices also stabilised and thereafter reported some recovery towards the end of CY2009.
- The domestic steel industry reported rapid growth during the period between 2003-04 and 2007-08, and steel producers responded positively to this by announcing large greenfield or brownfield expansion projects. While the long-term demand outlook for the Indian steel industry remains favourable, ICRA believes that some steel projects in India could get delayed because of various reasons, the key among which have been discussed in this report.
- In addition, since September 2008, the relatively lower steel price levels have had an adverse impact on the profitability and cash accruals of domestic steel companies, the improvement in recent quarters notwithstanding. This, along with uncertainties over the ability of some companies to secure adequate equity funding for their projects, may adversely affect their capital structure, were they to resort to aggressive debt funding of their expansion projects. This in turn could lead to some weakening of their credit profile, especially if the commissioning of these expansion projects coincided with the onset of a cyclical downturn.

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Background

As is well known, the steel industry has strong linkages with the underlying economic conditions in the host country. Demand conditions for the steel industry in a country depend primarily on the strength of the local economy although local prices move largely in tandem with international prices, steel being a freely traded commodity globally.

The steel industry is also highly material intensive. Generally, 1 tonne of steel output requires handling and transportation of around 4 tonnes of bulk materials. Therefore, logistics play a critical role in determining the operational efficiency and cost structure of a steel producer. According to industry estimates, these costs account for over 15% of the total costs of Indian producers of steel. In addition, the specific investment (rupees per tonne of capacity) requirement for a steel project is high and therefore the capital outlay for a typical steel project is quite large. Consequently, success or failure in executing projects may impact the financial health of steel companies quite significantly.

Buoyed by a strong demand outlook in India, domestic steel players had announced large expansion projects, both greenfield and brownfield, till the middle of CY2008, when the global financial crisis broke out. During the second half of 2009-10 also, many companies have announced large capacity addition plans.

This note examines the current outlook for the domestic steel industry in the aftermath of the sharp industry downturn since the second half of 2008-09, the challenges for future growth, and the credit quality implications for Indian manufacturers of steel.

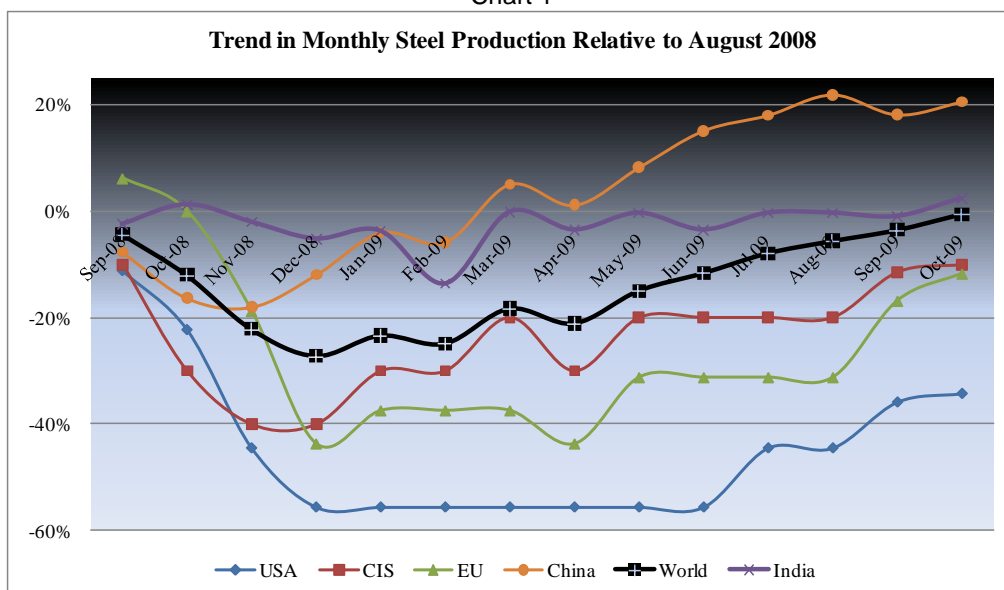
Past trend of healthy international growth rate reversed in CY2008; mild recovery witnessed in CY2009

Global steel production reported a compounded annual growth rate (CAGR) of around 5.50% during the decade between 1998 and 2008 (6.26% till 2007), driven primarily by the growth in Chinese production (CAGR of 15.8%), which alone accounted for around 70% of the incremental world-wide production over this period. Indian production also posted significant growth, accounting for around one-third of the incremental Asian production, excluding China's.

The unprecedented global financial crisis in the second half of CY2008 led to the rapid destruction of steel demand internationally, the main sectors affected being construction and automobiles. The immediate reaction of leading international steel companies including ArcelorMittal, Nippon Steel, Tata Steel Europe (erstwhile Corus), Posco and Baosteel was to cut down their output significantly, in some cases by as much as 35%-40% to protect steel prices. A number of Indian steel majors, especially in the private sector, also calibrated their capacity utilisation to match supply with the rapidly declining demand levels.

The monthly statistics on steel production in the major steel producing regions relative to the respective levels of August 2008—just before the global meltdown—are presented in Chart 1. As the chart shows, the steel industry in the USA was one of the worst affected by the downturn, with monthly production crashing by almost 55% by December 2008. Production in the European Union (EU) and the Commonwealth of Independent States (CIS) also suffered a contraction of around 40% during this period. India however was one of the least affected countries, with the drop in production being restricted to just around 10% in the fourth quarter (Q4) of 2008-09.

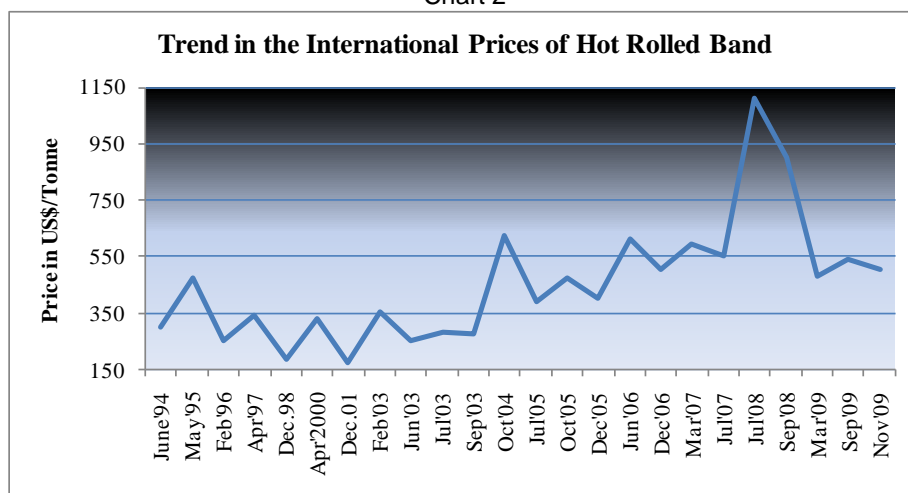
Chart 1



Source: World Steel Association (worldsteel)

While the response of the steel producers to the declining demand levels was to reduce output, various Governments around the world rolled out massive economic stimulus packages to prevent their respective economies from going into deep recessions. The steel industry started responding to these packages, aided further by a gradual easing of the global liquidity condition. As Chart 1 shows, the rate of decline in steel production was largely arrested by the end of CY2008 and the beginning of CY2009. Chinese production, driven by higher demand from the construction, automotive and consumer durable industries in that country, again led the global recovery process, accounting for almost half the world-wide production since April 2009. Apart from the actual underlying demand, restocking of steel by service centres/consumers also helped arrest the downside in steel demand.

Chart 2

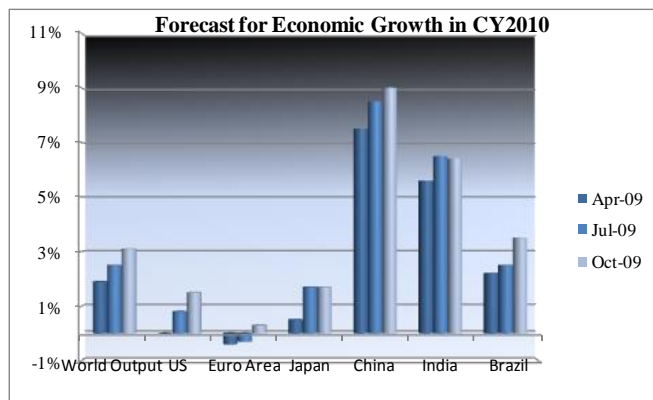


Source: ICRA research

Chart 2 depicts the trends in the international prices of hot rolled band. During the sharp industry upturn in the first half of CY2008, steel prices pierced the US\$1,000/tonne levels for the first time in history. However, following the economic turmoil, the prices crashed by over 50% to move below the US\$500/tonne mark by the end of 2008-09. In the current fiscal year, steel hot rolled band prices recovered to around US\$540/tonne in September 2009 and closer to US\$600/tonne in the beginning of 2010, responding to the large stimulus packages and some weakening of the US dollar against major currencies in the world. However, the recovery process remains somewhat shaky, and prices have shown high sensitivity to China's production levels.

Chart 3

Going forward, ICRA believes steel prices would hinge on the recovery outlook for the major economies around the world. Chart 3 shows the forecasts on the economic growth for CY2010 made by the International Monetary Fund (IMF) in its World Economic Outlook in the months of April, July, and October 2009 for the major economies in the world. As the chart shows, the projected growth level for the world economy has improved in every set of forecast over the previous levels, although in absolute terms, the projected levels for the developed countries remain low. It is uncertain at this stage whether the economic improvement now in display can be sustained after the inevitable withdrawal of the massive stimulus packages in all major economies in the world. ICRA believes that should the world economy slip back into another phase of weakness, international steel prices could be impacted adversely. Nevertheless, the global steel industry has started CY2010 on a positive note, being encouraged by the prospects of better performance of the global economy going forward, and the strength of demand in developing countries like India and China.

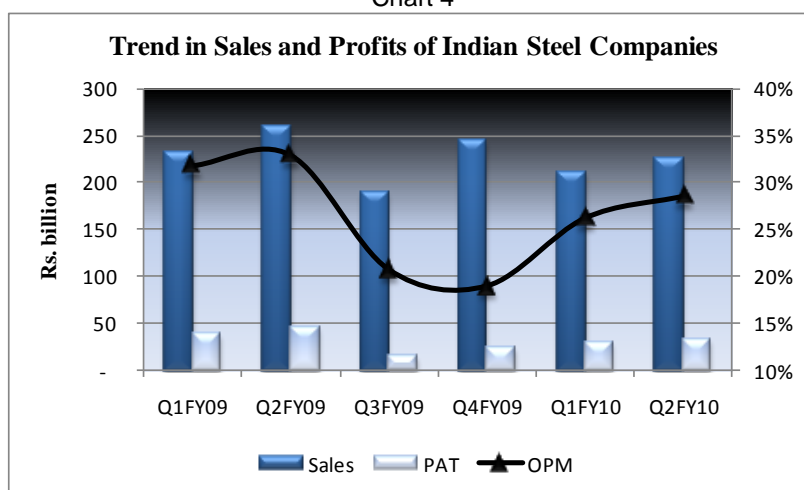


Source: World Economic Outlook, IMF

Profitability of Indian steel producers recovers partly from the lows of H2, 2008-09

Since Q3 of 2008-09, the profits earned by Indian steel companies have been adversely impacted by the continuing weakness in steel prices. To assess the extent of the impact, ICRA consolidated the quarterly financial performance indicators¹ (adjusted for changes in accounting policies in 2008-09 by some companies) of Steel Authority of India (SAIL), Tata Steel (TSL), JSW Steel (JSW) and Jindal Steel and Power (JSPL), which together account for over 45% of the total domestic steel capacity. Chart 4 brings out the trend in the income and profitability of this sample over the period April 2008 – September 2009. As the chart shows, the absolute profits of these four companies have displayed some improvement in the current fiscal year on the strength of lower raw material prices² and the commissioning of large brownfield expansion projects by both TSL and JSW. Nevertheless, profits have still been lower than those in the corresponding quarters of the previous fiscal.

Chart 4



Source: Quarterly results published by SAIL, TSL, JSW and JSPL

Notably, integrated companies with captive sources of raw materials are likely to have been impacted more by the large correction in steel prices, since mining costs are more rigid. On the other hand, less integrated companies, which are dependent on coal imports, suffered during the first few months of the downturn because of the timing mismatch between the reduction in steel prices and that in coking coal prices, since many of them had existing long-term coking coal contracts. Therefore, in ICRA’s opinion, the profitability of

¹ Sales, operating profit margin (OPM) and profit after tax (PAT)

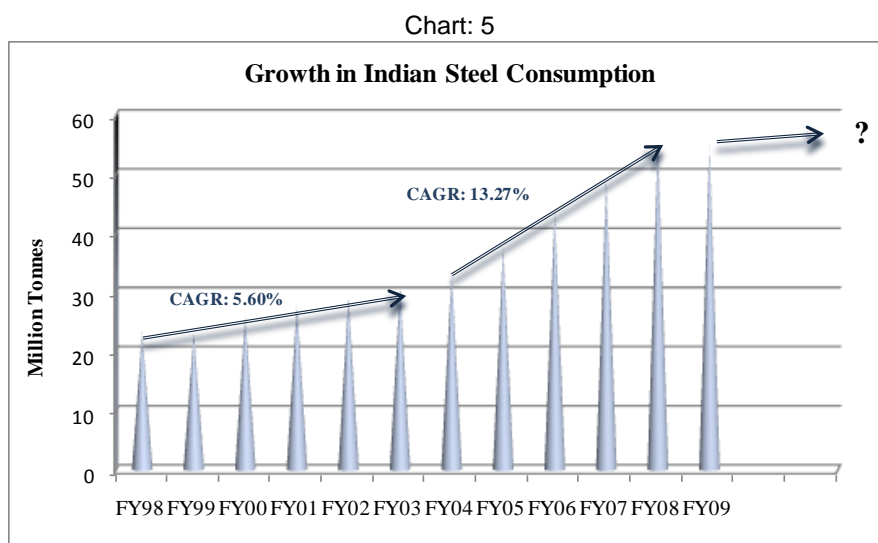
² Long term coking coal price declined to around US\$130/tonne in CY2009 from US\$300/tonne in CY2008

Domestic sized iron ore price at mine head declined to around Rs. 3,000/tonne from around Rs. 5,000/tonne in the first half (H1) of 2008-09

the non-integrated/partly integrated players would benefit more from the low in raw material prices than fully/largely integrated players although, at the absolute level, players with greater backward integration are likely to enjoy better profitability going forward.

Steel consumption in India grew rapidly till 2007-08; long-term outlook remains positive

Chart 5 highlights two distinct growth phases in India's steel consumption during the past one decade. The first phase, which ended in 2002-03, was characterised by a slower CAGR of 5.60%, as the Indian economy also reported a slower growth rate of 3.8% to 6.6% per annum. This also coincided with a period of depressed steel prices internationally (refer Chart 2), which led to many Indian steel companies reporting losses. The industry conditions improved significantly thereafter, when international prices gradually recovered and the Indian economy also shifted gear to clock growth rates of 8-9% per annum, causing a sharp pickup in steel demand, which reported a CAGR of 13.27% between 2003-04 and 2007-08. Steel consumption declined marginally in 2008-09 because of the extraordinary economic conditions prevailing in the second half of the year all over the world including India. In the current fiscal, steel consumption in India has been growing at around 7%.



Source: ICRA research

ICRA believes that the long-term demand outlook for the Indian steel industry remains positive, since the demand drivers are structural in nature. Some of the sectors that are likely to stimulate steel consumption going forward are discussed here.

Infrastructure: The Planning Commission has estimated a total investment requirement in infrastructure of over Rs. 20,115 billion at 2006-07 prices during the Eleventh Plan period. While all activities (segments) within infrastructure are unlikely to be equally steel intensive, the following would use steel in substantial quantities.

- Power generation:** Almost one-third of the estimated total infrastructure investment has been earmarked for the power sector. While a slippage is likely in terms of the fresh power capacity that would be created during the current Plan period versus the target, the deficit would need to be met in subsequent periods, given India's continuing double-digit energy deficiency levels. Apart from the power plants themselves, which would anyway require steel for construction, extensive pipelines and various electrical and mechanical equipment would also require substantial amounts of steel. Additionally, steel would be required to set up the transmission and distribution network for the power that a new power plant would generate.
- Logistics infrastructure:** Another one-third of the target investment, as envisaged by the Planning Commission, has been allocated to roads, ports, and railways. Construction of new ports/terminals in existing ports, railway network (including the Mass Rapid Transit System or MRTS) and roads, especially the ones involving construction of bridges/culverts, would be a key driver of steel demand.

- **Urban infrastructure:** Indian cities already account for around 30% of the country's total population and are experiencing rapid growth because of large scale migration. This is exerting enormous pressures on the civic infrastructure like water supply, sanitation, and sewerage. Since urban areas also account for around 60% of the country's economic activity, augmenting urban infrastructure is likely to be a priority for policymakers, which in turn would be an important demand driver for the domestic steel sector.
- **Real estate:** While the commercial real estate sector is yet to recover from the shock of 2008-09, the housing sector has of late been showing signs of recovery, as reflected by the healthy growth rates of housing loan sanction and disbursements posted by many domestic housing finance companies in the current fiscal. This recovery has been supported by an improved sense of job security among borrowers and the prevailing low lending rates. In addition, the Government of India (GoI) too has embarked upon housing schemes, including Rajiv Awas Yojana for a slum-free India in the next five years and Indira Awas Yojana for the rural poor.

Besides these, other sectors with potential to contribute significantly to future steel demand include gas transportation and automotives. While gas transportation would be driven by a significantly higher domestic gas availability³, the automotive sector is likely to benefit from India's emergence as an auto hub⁴, apart from some country specific factors like launch of new models by automotive companies, increasing aspirations of consumers supported by higher disposable incomes, and availability of easy credit terms; these factors have led to car sales reporting an over 20% growth in the current fiscal.

Steel industry's response to pickup in demand has been positive

Buoyed by the favourable demand outlook, both domestic and a few international steel producers have announced large steel projects in India. The Ministry of Steel (MoS), according to its Annual Report for 2008-09, estimates that projects for around 276 million tonnes per annum in cumulative capacity have been tied up till the end of the year through several Memoranda of Understanding (MoUs) between steel players and various State Governments. Tables 1 and 2 list the large projects announced by steel players and present the State-wise distribution of the steel MoUs signed.

Table 1: List of Some Large Steel Projects Announced in India

Steel Producer	Location	Capacity (Million Tonnes)
ArcelorM ittal	Orissa, Jharkhand, Karnataka	30.00
TSL	Jharkhand, Chhattisgarh, Orissa	26.30
JSPL	Jharkhand, Orissa	15.00
JSW	Karnataka and West Bengal	13.30
Posco	Orissa, Karnataka	18.00
SAIL	Existing locations	10.00
Bhushan Steel Limited	Orissa and West Bengal	8.00
Essar Steel Hazira	Gujarat	3.80
Rashtriya Ispat Nigam Limited	Andhra Pradesh	3.30
NMDC Limited	Chhattisgarh	3.00
Total of above		130.70

Source: ICRA research

³ For instance, Gas Authority of India has announced plans to almost double its transportation capability at an investment of around Rs. 300 billion over the next five years

⁴ Exports account for over 20% of the Indian car production currently

Table 2: State-wise Distribution of Steel MoUs

State	No. of MOUs signed	Capacity (Million Tonne)
Orissa	49	75.66
Jharkhand	65	104.23
Chhattisgarh	74	56.61
West Bengal	12	21.00
Others (includes Karnataka, Gujarat, Maharashtra, etc.)	22	18.20
Total of above	222	275.70

Source: MoS, Annual Report of 2008-09

Favourable demand conditions notwithstanding, steel producers likely to face significant challenges, going forward

ICRA believes that, going forward, steel companies intending to commission steel projects are likely to encounter several hurdles. While some issues apply to greenfield projects in many other sectors too, there are certain steel industry specific factors at play as well.

Project execution: The domestic steel industry would need to double its installed capacity in the next three to four years to be able to hit its capacity target, which is in line with the revised Gol estimates⁵ as well. Essentially, this means replicating what the industry has done so far over decades. The ability of the industry to effectively manage these projects and thereby avoid significant delays/cost overruns would remain a key determinant of its future success.

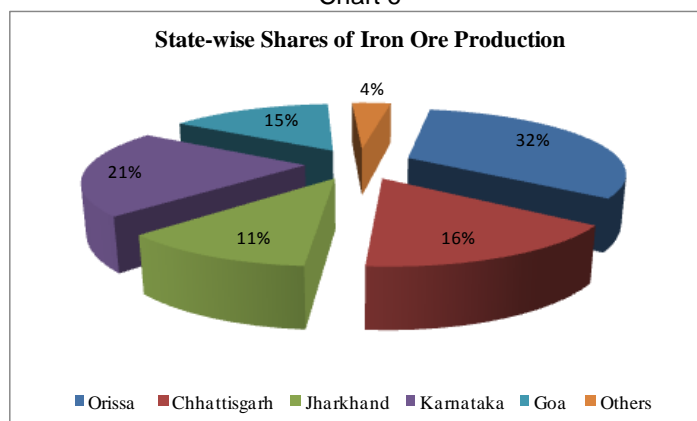
Land acquisition: This is a problem for not only steel projects but all projects in the country. The Bill for a standard policy on Rehabilitation and Resettlement (R&R) is yet to be introduced in Parliament. According to media reports, some steel projects including Posco's 12 million tonnes per annum (mtpa) and TSL's 6 mtpa greenfield projects in Orissa are running significantly behind schedule.

Award of mining linkages: Steel making being highly raw material (RM) intensive, the cost and timeliness of delivery of RM have a critical bearing on the profitability of steel producers. In the initial years of the last steel industry upturn, many of the international steel majors were drawn towards India because of the country's large iron ore and non-coking coal deposits, but are now facing problems with the award of mining licence proving to be a tedious and somewhat non-transparent process. According to media reports, the proposed 12 mtpa greenfield projects of ArcelorMittal in Orissa and Jharkhand are yet to take off because of the non-availability of mines. This has prompted a number of domestic steel companies including TSL and JSPL to secure mining assets overseas, while many others are on the lookout for the same.

Material handling and logistics: With 1 tonne of finished steel requiring handling and transportation of around 4 tonnes of bulk material, the anticipated expansion of steel capacity, even accounting for delays, would exert tremendous pressure on India's logistics infrastructure post-commissioning of projects. The problem would get aggravated if the future capacities show regional concentration, which is likely. As Chart 6 shows, five States in India—Orissa, Chhattisgarh, Jharkhand, Goa and Karnataka—accounted for almost 95% of the domestic iron ore production in 2008-09. Given the explicit or implicit policy of the State Governments to award mining licence to only those companies that are willing to set up steel projects within their respective States, steel capacities are likely to come up largely in these States, a fact also corroborated by the distribution of the steel MoUs (refer Table 2).

⁵ The Gol, in its National Steel Policy 2005 (NSP) had estimated a domestic steel production and consumption level of 110 million tonnes and 90 million tonnes respectively in the year 2019-20. Following the strong growth rate between 2003-04 and 2007-08, it subsequently revised its estimates upwards to forecast a demand of 124 million tonnes by 2011-12.

Chart 6



Source: ICRA research

In the NSP 2005, the Gol had estimated that material handling by the Indian road and railways sectors for the domestic steel industry would need to almost treble between 2004-05 and 2019-20 to support the anticipated growth of the steel industry. Since the revised forecast now shows that the NSP's target production level of 110 million tonnes in 2019-20 is likely to be achieved much earlier, ICRA believes that logistics is likely to be a key constraint for the Indian steel industry, despite some momentum being witnessed recently in the road sector.

Financing of capital expenditure: To reach the anticipated production growth levels, steel projects of around 60 mtpa capacity would need to be commissioned in the next three to four years. Such large projects would need an investment of close to Rs. 2,500 billion, the final requirement depending on the exact nature (greenfield vs. brownfield) and structure (extent of vertical integration) of such projects.

As discussed earlier, the profitability of domestic steel makers has weakened since H2, 2008-09. This leads ICRA to believe that the total internal generation by the steel producers could be lower than what they had estimated at the time of announcing their respective projects. Were that to happen, the dependence of these steel producers on external financing would be larger for the same capital expenditure. Although the Indian equity market has posted a recovery in the current year, its ability to fund such large capital expenditure remains uncertain. On the other hand, the domestic corporate bond market is still sluggish. Bank financing however remains a possibility since the Indian banking system has some liquidity buffer at present and the credit spreads of Indian banks raising funds abroad have come down to more reasonable levels in recent months, indicating the possibility of external financing, assuming banks' sectoral exposure norms permit such large scale lending. Another imponderable in this context would be the willingness of lenders to finance large steel projects, particularly the weaker ones, especially in the event steel prices suffered another cyclical downturn in the meanwhile.

Given the likely lower internal generation of steel companies, ICRA expects their capital structure to undergo some deterioration if they were to resort to larger debt to fund their projects. Any material weakening in the capital structure may potentially impact their credit quality, especially if the projects suffer significant time and/or cost overruns or are commissioned during a period of cyclical downturn.

Some projects that have suffered because of one or more reasons as discussed above are listed in Table 3.

Table 3

Steel Producer	Project Details	Comments on Scheduled Completion
ArcelorMittal	12 million tonnes each in Orissa and Jharkhand	Not much progress made
Posco	12 million tonnes in Orissa	Not much progress made
TSL	6 million tonnes in Orissa 17 million tonnes in Chhattisgarh and Jharkhand	Deferred by 2 years Uncertain
JSW	10 million tonnes in West Bengal	Only Phase-I for 3 million tonnes is likely to be executed as of now; not much progress made
JSPL	6 million tonnes in Orissa 6 million tonnes in Jharkhand	Scaled down significantly Scaled down significantly

Source: ICRA research

Outlook

ICRA's outlook on the long-term growth prospects of the domestic steel sector is positive, given the favourable outlook on the Indian economy and the large infrastructural shortages that would have to be plugged to achieve the economic growth anticipated. ICRA also expects long products, which are used in the infrastructure and construction industries, to enjoy better demand conditions relative to flat products, which find use in automotives, appliances and pipelines, among other sectors.

The profitability of Indian steel companies has improved in 2009-10 on a quarter-on-quarter basis. Besides a somewhat improving steel price scenario, a significant softening of iron ore and coking coal prices has also contributed to this improvement. Going forward, ICRA believes that the profitability of Indian steel producers, especially non-integrated players, would be largely influenced by international trends in steel prices on the one hand, and raw material price levels on the other. Although international steel prices and production levels have recovered from the lows of early CY2009, the strength of the global economic recovery after the various economic stimulus packages are phased out would decide the future trend in steel prices. ICRA also expects raw material contract prices to increase in the near term, given the improved industry conditions at present, and the substantial industry concentration internationally in these raw materials. Any adverse mismatch between steel and raw material prices could have an adverse impact on the profits and cash flows of steel producers in CY2010.s

Almost all domestic steel companies, along with some international majors, have announced large expansion projects. While some of the projects are likely to be deferred or shelved, the capital expenditure for the industry would still be large, given the high capital intensity of steel projects. ICRA therefore expects project risks to be a key determinant of credit quality for domestic steel companies, going forward. While successful commissioning could strengthen the operating profile of the company concerned, any large time or cost overrun (especially in projects with an aggressive funding structure) could have a materially adverse impact on its financial health.

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