Zacks Small-Cap Research

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# India Globalization Capital (IGC-NYSE MKT)

**IGC:** Initiate coverage with an Outperform rating and price target of $2.70

| | |
|---|---|
| **Current Recommendation** | **Outperform** |
| Prior Recommendation | N/A |
| Date of Last Change | 09/05/2013 |
| Current Price (09/05/13) | $0.99 |
| **Six- Month Target Price** | **$2.70** |

## OUTLOOK

India Globalization is an infrastructure materials company, primarily through the beneficiation of iron ore in Inner Mongolia for delivery of high-grade iron ore to steel mills in China. Through an acquisition and operational growth strategy, the company is accumulating iron ore mining assets and complementary beneficiation plants in Inner Mongolia to fulfill the growing infrastructure needs of the growing Chinese economy. India Globalization is also positioned to benefit from infrastructure-related projects in the developing economy of India. Coverage is initiated with an Outperform rating and a price target of $2.70.

## SUMMARY DATA

| | |
|---|---|
| **52-Week High** | **$3.15** |
| **52-Week Low** | **$0.91** |
| **One-Year Return (%)** | **-50.50** |
| **Beta** | **3.44** |
| **Average Daily Volume (shrs.)** | **18,317** |
| **Shares Outstanding (million)** | **7.0** |
| **Market Capitalization ($ mil.)** | **$7.0** |
| **Short Interest Ratio (days)** | **0.36** |
| **Institutional Ownership (%)** | **32** |
| **Insider Ownership (%)** | **8** |
| **Annual Cash Dividend** | **$0.00** |
| **Dividend Yield (%)** | **0.00** |
| **5-Yr. Historical Growth Rates** | |
| **Sales (%)** | **-33.8** |
| **Earnings Per Share (%)** | **N/A** |
| **Dividend (%)** | **N/A** |
| **P/E using TTM EPS** | **N/M** |
| **P/E using 2014 Estimate** | **N/M** |
| **P/E using 2015 Estimate** | **19.8** |
| **Zacks Rank** | **3** |

| | |
|---|---|
| **Risk Level** | **Above Average** |
| **Type of Stock** | **Small-Value** |
| **Industry** | **Bldg.-Heavy Constr.** |
| **Zacks Rank in Industry** | **15 of 36** |

## ZACKS ESTIMATES

**Revenue**
(in millions of $)

| | Q1 (Jun) | Q2 (Sep) | Q3 (Dec) | Q4 (Mar) | Year (Mar) |
|---|---|---|---|---|---|
| 2012 | 1.06 A | 0.91 A | 0.98 A | 1.24 A | 4.20 A |
| 2013 | 1.27 A | 1.35 A | 3.93 A | 1.48 A | 8.03 A |
| 2014 | 1.12 A | 1.10 E | 4.20 E | 1.60 E | 8.02 E |
| 2015 | | | | | 12.50 E |

**Earnings per Share**
(EPS is operating earnings before non recurring items)

| | Q1 (Jun) | Q2 (Sep) | Q3 (Dec) | Q4 (Mar) | Year (Mar) |
|---|---|---|---|---|---|
| 2012 | -$0.43 A | -$0.38 A | -$0.89 A | -$0.97 A | -$2.66 A |
| 2013 | -$0.14 A | -$0.02 A | $0.05 A | -$0.22 A | -$0.32 A |
| 2014 | -$0.09 A | -$0.05 E | $0.10 E | -$0.01 E | -$0.06 E |
| 2015 | | | | | $0.05 E |

Zacks Projected EPS Growth Rate - Next 5 Years % **12**

EPS adjusted for 1-for-10 reverse split effective April 19, 2013

## KEY POINTS

- India Globalization Capital, Inc. (IGC: NYSE) is **an infrastructure materials company,** primarily through the beneficiation of iron ore in Inner Mongolia for delivery of high-grade iron ore to steel mills in China. The company also has potential for supplying rock aggregates in India, along with the capability of fulfilling construction contracts (mainly road-related) also in India.
- **IGC has been positioned to capitalize on the high-grade iron ore demands of the steel industry in China.**
- Managements goals for fiscal 2014 include:
  - close the acquisition and operationalize the Inner Mongolian iron ore mine and beneficiation plant in which IGC will have a 25% interest
  - utilize the shipping hub between Mongolia and China to generate incremental revenue after completing the processing of the test shipment
  - bring the four Linxi mines to production upon receipt of mining licenses
  - resume iron ore trading operations through IGC Mining and Trading Ltd as iron ore mines in India begin to reopen after the monsoon season
  - continue to seek and close infrastructure-related acquisitions, especially low-grade iron ore assets and beneficiation plants in northern China
- Thus far during fiscal 2014, India Globalization
  - has established a logistics and supply chain to transport iron ore from Mongolia and China through a shipping hub located on the border at Erlian. After the optimizing the beneficiation process for this particular source of iron ore, management foresees ramping up shipment volume to between 8,000 and 12,000 tons per month.
  - has signed a Letter of Intent for the acquisition of a **25% interest in an Inner Mongolian iron ore mine and beneficiation plant** located in Aohan Banner.
- We **initiate coverage** of India Globalization Capital with an Outperform rating and target of $2.70.

## OVERVIEW

Headquartered in Bethesda, Maryland, India Globalization Capital, Inc. (IGC: NYSE) is **an infrastructure materials company** (primarily iron ore in China). Currently, the company's predominate operations are three iron ore beneficiation plants (one of which is fully operational with the other two having been tested with trial runs this year, but all are in need of raw iron ore to process) and four iron ore properties (on which mining licenses are being sought) all in Inner Mongolia, a province of the People's Republic of China (PRC). The beneficiation plants and iron ore properties were obtained through the acquisition of H&F Ironman Limited (Ironman) at the end of 2011. The iron ore sands on the properties can be beneficiated through purification processes and then the resultant high-grade iron ore will be sold to steel companies operating in China (86% of IGC's revenues in fiscal 2012). Management estimates Ironman's iron ore reserves to be worth approximately $600 million (based on 4.8 million tons of 66% grade iron ore at $127 per ton). IGC also has developed the physical facilities, along with the logistical and organizational structures, required to export iron ore from southern India to China and other Asian countries. Furthermore, IGC is positioned to benefit from the infrastructure development in India, specifically from the demand for rock aggregates as well as from providing civil construction services, primarily for roads and highways through the company's TBL subsidiary.

**Management's mission is to benefit from the rapidly developing economies of China and India,** both of which are being stimulated, especially in the infrastructure sector, by the national governments. India Globalization should profit from China's growing economy through the supply of iron ore to China's steel industry. The company is positioned to benefit from the end of the moratorium on overseas shipments of iron ore from southern India and also to take advantage of modernization and development of India's infrastructure, especially transportation systems. As the infrastructure in India is improved, the

demand for basic raw materials, like stone aggregate (for road and railroad beds) and iron ore (for steel), is expected to increase. China and India are two of the faster growing emerging economies in the world.

Originally IGC was set up in 2005 as a blank check company[1], which was formed to acquire businesses with operations in India. Initially, management targeted the expanding construction and mining industries in that country. After completing an initial public offering in March 2006[2], IGC incorporated a wholly-owned subsidiary in Mauritius as a holding company for future acquisitions in India[3]. After much due diligence, two years later in 2008, India Globalization Capital acquired 100% interests in both Sricon Infrastructure Private Limited (Sricon) and Techni Bharathi Limited (TBL), two engineering and construction (E&C) companies poised to benefit from the modernization of India's infrastructure. Sricon provides E&C services for the operation of high temperature cement plants and steel facilities; TBL focuses on civil construction and structural engineering projects related to the development of transportation-related infrastructure in India, especially roads, tunnels and canals. Subsequently, IGC wrote-down its investment in Sricon and is in the process of exchanging the remaining assets for five acres of land in Nagpur to be used as a logistical depot for transport and delivery of infrastructure-related material. TBL is qualified to bid on medium-sized contracts for the construction in India of highways, tunnels, canals, airports, bridges, ports, jetties, factories and commercial buildings as well as hydroelectric and irrigation projects.

**Timeline**

- April 29, 2005 — India Globalization Capital, Inc. formed
- March 8, 2006 — IGC completed initial public offering (IPO)
- February 19, 2007 — Incorporated India Globalization Capital, Mauritius, Limited
- March 7, 2008 — Acquired 63% of Sricon Infrastructure Private Limited
- March 7, 2008 — Acquired 76.87% of Techni Bharathi Limited (infrastructure development)
- February 19, 2009 — Incorporated IGC India Mining & Trading Private Limited (shipper)
- July 4, 2009 — Incorporated IGC Materials Private Limited (quarrying business)
- July 4, 2009 — Incorporated IGC Logistics Private Limited (transport of materials)
- October 1, 2009 — Ownership in Sricon impaired down to 22.3%
- December 31, 2011 — Acquired 100% of H&F Ironman Ltd (owns 95% of Linxi HeFei)
- February 2012 — Acquired adjacent property in Inner Mongolia containing 1.8 Mt of iron ore
- June 18, 2012 — MOU to acquire another adjacent property containing 0.5 Mt of iron ore
- June 27, 2012 — Announced exchange of 22.3% of Sricon for five acres of land in Nagpur
- March 31, 2013 — Acquired remaining 23.13% of Techni Bharathi Limited (TBL)
- April 19, 2013 — Reverse 1-for-10 split
- April 29, 2013 — Established shipping hub at border between Mongolia and China
- June 11, 2013 — Completed test shipment of 300 tons of iron ore through shipping hub
- July 1, 2013 — LOI to acquire 25% of iron ore mine & beneficiation plant in Inner Mongolia

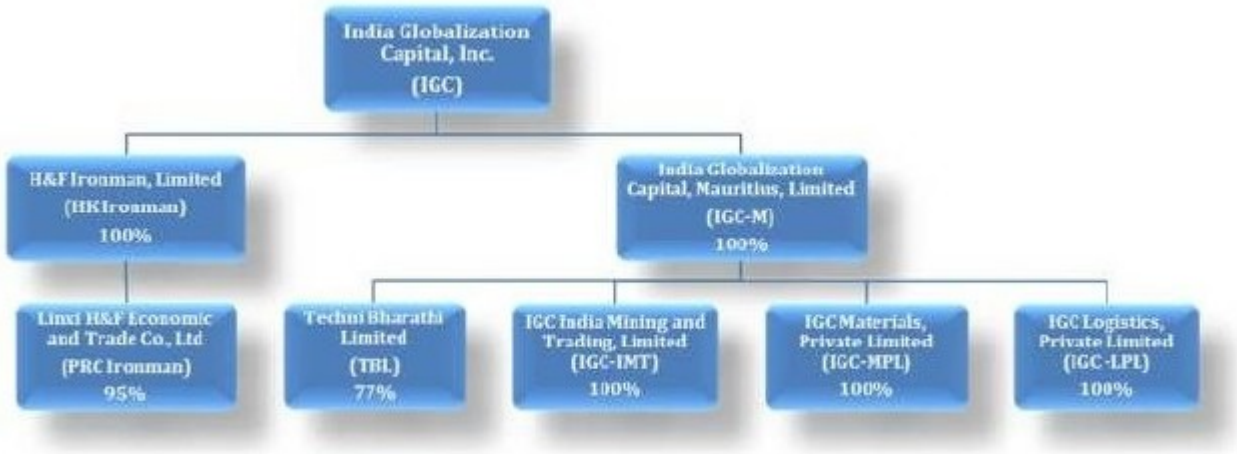
[1] A blank check company is a development stage company which has indicated that its business plan is to acquire unidentified companies through merger, acquisition or similar combinations and that it will be issuing penny stock as defined in Rule 3a51-1 of the Securities Exchange Act of 1934. After the IPO, India Globalization Capital qualified as a Special Purpose Acquisition Company.
[2] The Initial Public Offering (IPO) consisted of the issuance of 11,304,500 units at $6.00. Each unit was composed of one common share and two warrants. Each warrant entitled the holder to purchase another common share at $5.00 through March 3, 2011. However, in March 2008, the company purchased and redeemed 6,159,346 shares of the IPO. As a result, the net proceeds from the IPO process were $25,814,325. Also, prior to expiration of the warrants (in January 2009), a tender offer for 50% of the warrants outstanding (or 11,943,878 warrants) resulted in the issuance of 1,311,064 common shares and the receipt of $297,698.50 in net proceeds as (under new terms of receiving one common share for either 12 warrants or 5 warrants and $0.55).
[3] Mauritius and India have an investment protection treaty, which includes favorable tax treatment of income, dividend and capital gains.

## PERIOD OF REPOSITIONING (2009 – 2011)

In late 2008 and early 2009, the government of India began to suspend many long-term construction contracts as a result of the global credit crisis. **Management strategically repositioned IGC towards being a materials company** (iron ore and stone aggregates) by partially withdrawing from the heavy construction business, which was heavily dependent on contracts funded by the national and state governments of India. Initially, the company refocused on 1) securing recurring contracts for the maintenance of cement and steel plants, 2) ramping up production of rock aggregates in India and 3) shipping iron ores to steel producers in China. Management advanced the development of the rock aggregate quarrying business, along with shipping network in southern India utilizing three seaports (Krishnapatnam, Goa and Karwar) to export iron ore to China.

IGC deepened its infrastructure-footprint by commissioning the formation and incorporation of three entities and then acquiring 100% of them at cost (INR 100,000 or only $2,100 each):

1) IGC Materials Private Limited (owner and operator of aggregate quarries in India)
2) IGC Logistics Private Limited (transport of iron ore, cement, aggregates, etc.)
3) IGC India Mining & Trading Private Limited (resale of iron ore in India and export of iron ore)




## IRON ORE

In mid-2009, IGC secured two orders totaling 70,000 metric tons (MT) of iron ore (worth $4.7 million), which were shipped from two ports in Karnataka India to China. In November 2009, IGC Materials Private Limited was awarded a three-month contract by Indian Railways to supply 200,000 metric tons of rock aggregate worth approximately $1 million. However, in July 2010, the government of the Indian state of Karnataka imposed a moratorium on iron ore exports from 10 ports in order to halt illegal mining and also to preserve iron ore for local steelmakers. IGC's facilities at all three of the company's ports were affected. Though progress has been made through the Karnataka High Court, the moratorium on exportation of iron ore is still in effect.

Just before the government of Karnataka imposed the shipping ban, IGC received a large $160 million order from the Chinese steel manufacturer for high-grade iron ore to be delivered over five years. The order was temporarily suspended under *force majeure,* and the company expects to fulfill the contract once the export ban is lifted. Management flexibly adapted and pursued a plan of action of acquiring iron ore sand deposits in China and employing a value-added strategy of upgrading the raw sands through beneficiation processes to high-grade iron ore. In December 2011, IGC closed on the **acquisition of HK Ironman Limited**, which owns and operates four iron ore mine sites (sand deposits) and three beneficiation plants in Inner Mongolia, China. During calendar 2012, management concentrated on the development of its iron ore assets in China and nurtured relationships with other Chinese steel companies in contemplation of acquiring additional iron ore deposits and beneficiation plants in the PRC.

Also, after the export ban is lifted in Karnataka, IGC is expected to begin fulfilling the $160 million order and pursue the acquisition of iron ore mining licenses in India.

Also during calendar 2012, management focused on the reduction of overhead costs in its construction businesses in India (Sricon and TBL) and reduced interest and other expenses by retiring $3.79 million in high interest debt and liabilities, which management believes will reduce expenses by over $700,000 annually. India Globalization is in the process of selling its remaining ownership interest in Sricon and currently is not bidding on new construction contracts through TBL. However, TBL has road construction equipment (including rollers, hot mix plant, etc.) worth several million dollars, and management is considering leasing the equipment to other construction contractors.

**BUSINESS STRATEGY (FY 2014)**

For the current fiscal year (March 2013 – March 2014), **management's strategy is to build a profitable revenue stream by utilizing Ironman's beneficiation plants with low-grade iron ore sourced from Mongolia** while simultaneously pursuing 1) mining licenses for the further development of the company-controlled mining properties and 2) the acquisition of additional iron ore mines in northern China. Management is targeting the procurement of three-to-six incremental mines near Ironman's present facilities. In addition, management is pursuing the development of a business model that would allow Ironman's beneficiation facilitates in China to process iron ore shipped from India once the mining production in India ramps up and the moratorium on shipping is lifted. The driving factor is that **each beneficiation plant** has the **annual capacity** to produce approximately **70,000 MT** of high-grade iron ore and generate about **$9.7 million in revenues** at current iron prices of $138 per MT. **Management's long-term goal is to operate 10 beneficiation plants in northern China.**

**CORE COMPETENCIES**

Due to the efforts to benefit from the growing economies of the developing nations of China and India, management has gained in-depth knowledge of the construction, rock aggregate, iron ore and material logistics industries in the southern and central states of India and, through the acquisition of Ironman, also the iron ore and beneficiation industries in Inner Mongolia, northeastern China and Mongolia. In addition, IGC has developed relationships with several construction companies and mine operators in southern and central India, along with government officials of Inner Mongolia. As opportunities arise to benefit from infrastructure-related industries in China and India, IGC is prepared and management has the skill set to take advantage of these situations, especially in the iron ore, stone aggregate and transportation-related construction industries of southern and central India and northern China.

IGC's operational currency is the Renminbi (RMB) in China and the Rupee (INR) in India.

## H&F IRONMAN - IRON ORE – INNER MONGOLIA PRC

***Mining and Beneficiation of Iron Ore in China (*H&F IRONMAN - INNER MONGOLIA PRC)**

In December 2011, IGC acquired **H&F Ironman Limited** (which owns of a 95% equity interest in Linxi Hefei Economic and Trade Co., Ltd. **aka PRC Ironman**[i]). PRC Ironman controls approximately 3.0 million tons (Mt) of iron ore and three beneficiation plants in Inner Mongolia. After beneficiation, the resultant high-grade iron ore (65%+ Fe content) can be sold to steel mills, predominately in northern China. Through both dry and wet magnetic separation processes, the beneficiation plants convert low-grade to high-grade iron ore. At the time of acquisition PRC Ironman was generating approximately $13.5 million in revenues and $5.9 million in net income.[ii] Subsequently, in February 2012, IGC acquired additional property, which added approximately 1.8 Mt of iron ore to reserves. In June 2012 entered into a MOU to acquire an adjacent property (for stock) with 0.5 Mt of iron ore grading 66% Fe worth over $50 million. In July 2013, IGC entered into a LOI to acquire a 25% interest in an iron ore mine and nearby

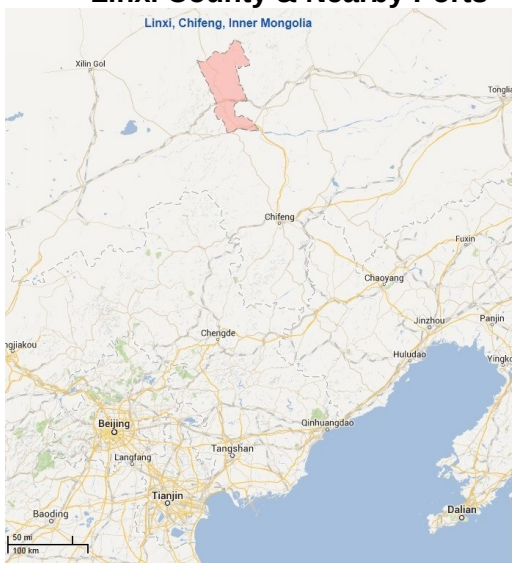
beneficiation plant located in Aohan Banner, Inner Mongolia for consideration of 1.35 million newly issued shares.

PRC Ironman now controls **four mining properties** and **three beneficiation plants**, one of which is operational. At acquisition, PRC Ironman held three mining properties encompassing approximately 2.2 square kilometers. Subsequently, an adjacent mining property was acquired in early February 2012. The acquisitions announced in June 2012 and July 2013 have not yet closed.

The mining properties and beneficiation plants of PRC Ironman are located in the hills of southwestern Linxi, a county of the autonomous region of Inner Mongolia in the People's Republic of China. The area is effectively linked to heavy industry and ports by both roads and railroads. The port of Tianjin is approximately 285 miles from the facilities while the port of Jinzhou is only about 125 miles away. The main office is located in Linxi's capital city, Chifeng. Chifeng is also the name of the Administrative Division that is composed of 12 counties, one of which is Linxi.

**Chifeng Administrative Division**


**Linxi County & Nearby Ports**




The seasonal climate of Linxi County usually allows for six-to-seven months of production during the year. The area has a continental climate characterized by very cold, long, dry winters and hot summers, which are prone to monsoon rains and winds between June and August. Generally, mining and beneficiation are conducted between mid-April and October. The rains during the summer can disrupt production, for example, in 2011, abnormally heavy rains closed PRC Ironman's operations for over four months.


**The Economist**

**The acquisition of H&F Ironman provides IGC not only with China-based iron ore mining and beneficiation operations, but also with a platform for further capacity additions, particularly through bolt-on acquisitions** of complimentary iron ore mines/deposits. Management plans on further developing each mine with a dedicated beneficiation processing plant. Also, H&F Ironman fulfills management's goal of creating an integrated iron ore business, from mining assets to value-added processing operations. Finally, management perceives that there is an opportunity to export low-grade iron ore from India to its beneficiation plants in Inner Mongolia for ultimate sale to Chinese customers.

***Acquisitions***

India Globalization acquired H&F Ironman Limited[iii] on December 30, 2011 after shareholders approved the acquisition of the Hong Kong-based company which holds a 95% equity interest of PRC Ironman. The remaining 5% is owned by Zhang Hua, a Chinese citizen. At acquisition, H&F Ironman's balance sheet had total assets of approximately $15.2 million and stockholders' equity of roughly $6.9 million. The purchase price was 31,500,000 shares of IGC valued at $9.135 million. [iv] On February 7, 2012, India Globalization announced the acquisition of additional mining land adjacent PRC Ironman's facilities, adding 1.8 Mt of iron ore to its reserves. Management plans to build a beneficiation plant on the property. The total cost for the mining land and new plant was approximately $5.0 million. On June 18, 2012, IGC entered into a MOU to acquire an adjacent iron ore mine site containing 0.5 Mt of iron ore grading 66% Fe worth over $50 million. The purchase price for this property is $4.4 million. Based on agreement, the purchase price is $4.4 million payable in two years in either cash or stock.

***Iron Ore Reserves***

The low-grade iron ore sand deposits controlled by Ironman are projected to contain approximately 4.8 Mt of 66% grade iron ore, of which IGC would own 4.56 Mt. At the time of acquisition, in December 2011, PRC Ironman controlled roughly 3.0 million metric tons of 66% grade iron ore. Subsequently, in February 2012, an additional mining property was acquired containing 1.8 Mt of iron ore, bringing the total reserves to 4.8 Mt of 66% grade iron ore. Though the iron ore sands grade between 2% or 3% iron (Fe) content, India Globalization conveys the reserve estimate in terms of 66% grade iron ore. The reserve estimate is not 43-101 compliant, but rather has been determined by geological studies that involve drilling and excavating exploratory holes.

India Globalization also has two pending acquisitions of mine sites that cumulatively will increase the company's reserves by 1.5 Mt of iron ore grading 66% Fe. The mine acquisition announced in June 2012 would add 0.5 Mt of iron ore grading 66% Fe, and the acquisition of a 25% interest in an iron ore mine located in Aohan Banner would add 1.0 Mt of iron ore grading 66% Fe to IGC's possession.

***Iron Ore Purchases For Beneficiation***

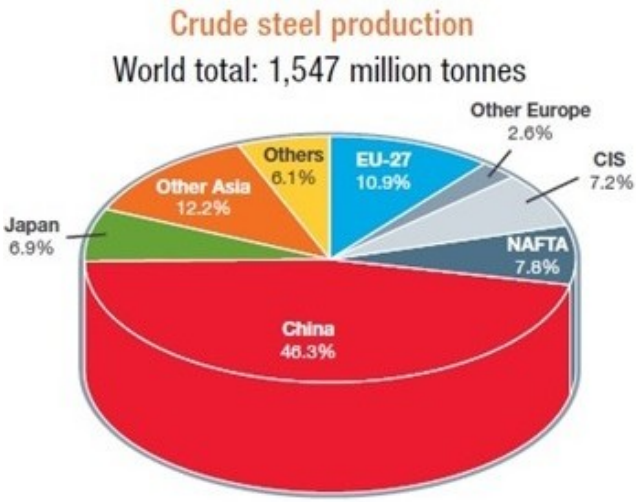
In April 2013, India Globalization established a shipping hub at the border of Mongolia and China, and later, in June, completed a test shipment from Mongolia to China of 300 tons of iron ore grading between 54% and 55% Fe content. Sourced from Mongolia relatively close to the border with Inner Mongolia, the iron ore passed through Erlian, the shipping hub previously established by IGC in April, and has been tested in order to determine the optimal beneficiation process to employ. After the process is fine-tuned, management hopes to ramp up shipment volume between 8,000 and 12,000 tons per month.

In July 2013, IGC signed an agreement with Mon Resources International LLC for the delivery of up to 126,000 Mt of 54% Fe content ore, which management will generate revenues between $10 million and $12 million after beneficiation.

## IRON ORE - CHINA

***China's Steel Industry Drives Demand for Iron Ore***

**China is** the **world's leading steel producer** and **largest global importer of iron ore**. Not only is iron ore a key raw material for the production of steel, but also the world's second-largest commodity market by value (after crude oil). Demand for Chinese steel is being driven largely by the rapid development of China through domestic stimulus programs by the government (principally for construction, buildings, infrastructure, machinery, automobiles, home appliances and shipbuilding) as well as international demand, predominantly from countries in Oceania, along with America and the Middle East.




WORLD IRON ORE TRADE BY AREA 2012

million tonnes actual weight

| Destination \ Exporting Region | European Union (27) | Other Europe | CIS | NAFTA | Central and South America | Africa and Middle East | Asia | Oceania | Total imports | of which: extra-regional imports* |
|---|---|---|---|---|---|---|---|---|---|---|
| European Union (27) | 21.4 | 2.8 | 31.0 | 10.4 | 57.0 | 12.2 | 0.2 | 10.7 | 145.7 | 124.3 |
| Other Europe | 1.2 | 0.0 | 1.7 | 0.5 | 3.9 | 0.4 | - | - | 7.7 | 7.7 |
| CIS | 0.0 | 0.0 | 3.1 | - | 0.0 | 0.0 | - | - | 3.1 | 0.0 |
| NAFTA | 0.2 | 0.0 | 0.0 | 10.7 | 1.3 | 0.1 | 0.0 | 0.0 | 12.4 | 1.6 |
| Central and South America | 0.0 | - | - | 1.9 | 10.1 | 0.0 | 0.0 | - | 12.1 | 1.9 |
| Africa and Middle East | 5.6 | 0.0 | 0.1 | 1.0 | 23.8 | 0.1 | 0.0 | - | 30.6 | 30.5 |
| China | 2.3 | 1.6 | 35.7 | 24.2 | 189.2 | 65.2 | 68.3 | 366.8 | 745.4 | 685.0 |
| Japan | 0.0 | - | 1.2 | 1.4 | 39.3 | 5.6 | 2.7 | 80.9 | 131.1 | 128.4 |
| Other Asia | 14.1 | 1.6 | 0.5 | 0.9 | 28.6 | 7.4 | 0.5 | 63.6 | 117.1 | 116.7 |
| Oceania | 0.0 | - | 0.0 | - | 0.1 | 0.0 | 0.8 | 0.2 | 1.2 | 1.0 |
| Total exports | 44.9 | 6.0 | 73.4 | 51.0 | 353.4 | 91.0 | 64.6 | 522.2 | 1,206.4 | 1,097.2 |
| of which: extra-regional exports* | 23.4 | 6.0 | 70.3 | 40.2 | 343.3 | 90.9 | 1.1 | 522.0 | 1,097.2 | |
| Net exports (exports - imports) | -100.9 | -1.8 | 70.3 | 38.6 | 341.4 | 60.4 | -52.5 | 521.0 | | |

excluding intra-regional trade marked — World Steel Association

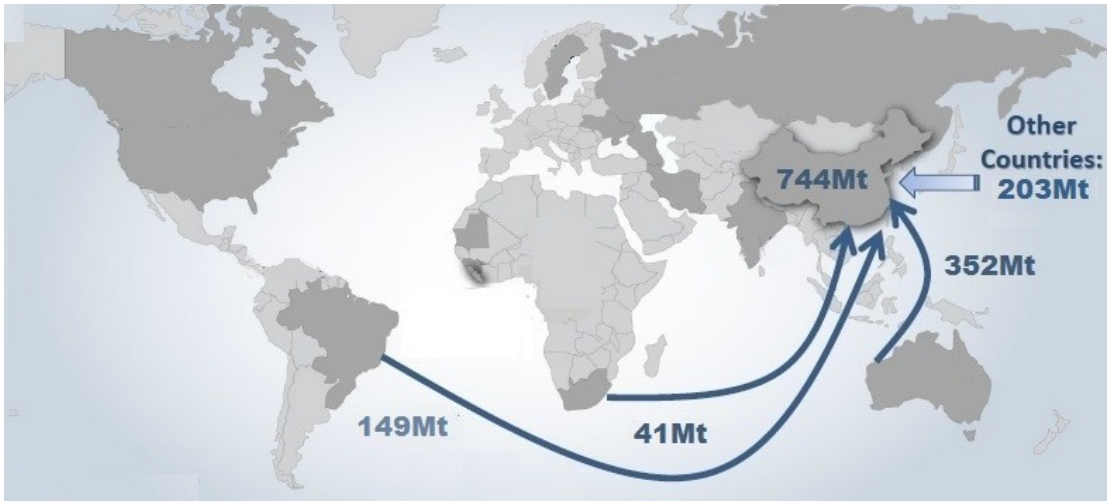
In 2012, the 716.5 million metric tonnes (Mt) of steel produced by the People's Republic of China accounted for 46.3% of the 1,546.8 Mt of global steel production.[v] Of the 716.5 Mt produced, China exported 54.8 Mt, making the country also the world's largest exporter of steel, primarily to South Korea, Vietnam, Thailand, Singapore and the Philippines.[vi] In 2000, China accounted for 39% of Asia's crude steel production, which has risen to 71% in 2012.[vii]

***Demand for Imported Iron Ore by China***

Although China domestically produced approximately 1,300 Mt of crude iron ore in 2012[viii], the economy of the PRC still required an additional 743.6 Mt of iron ore (an 8.4% increase over 2011)[ix] to be imported, mostly from Australia (47% of China's iron ore imports) and Brazil (about 20%). India has traditionally been China's third largest supplier of iron ore; however, in 2012, South Africa overtook India to become China's third largest providing 40.6 Mt, a 12% increase compared to 2011, while India's share of total imports to China declined to 4.4%. In 2011, India accounted for 10.6% of China's imported iron ore; but in 2012, due to governmental actions outlined below, Indian imports declined 54.7% year-over-year to only 33 Mt.[x]

**China - Total Iron Imports**
**(Mt)**

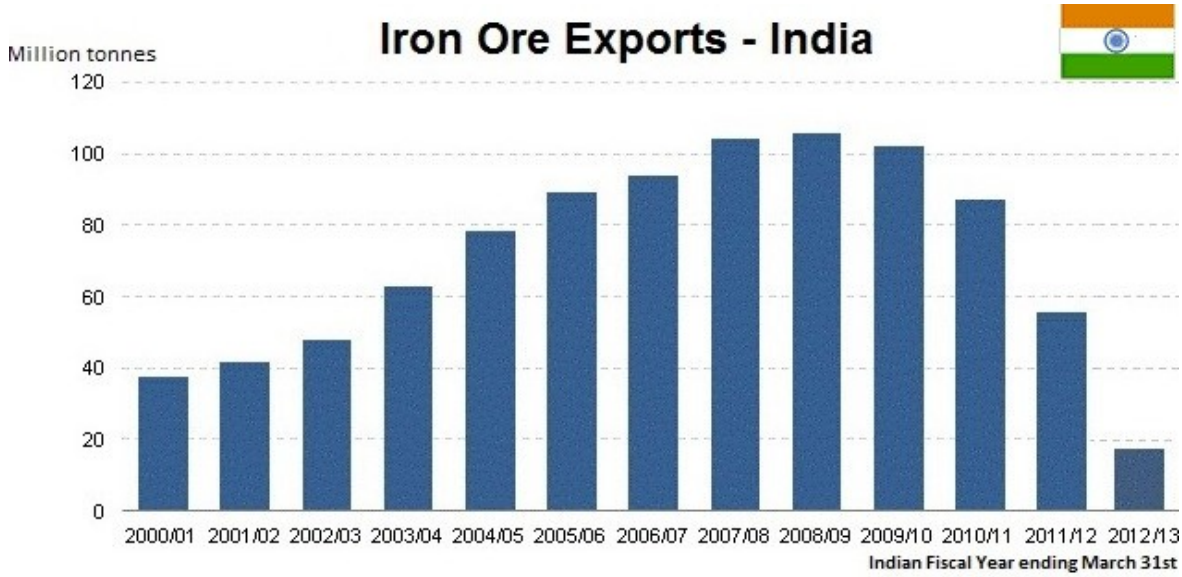
| 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70.0 | 93.0 | 111.0 | 148.0 | 208.0 | 275.0 | 326.0 | 383.1 | 443.6 | 627.8 | 618.6 | 686.1 | 743.6 |
| | 32.9% | 19.4% | 33.3% | 40.5% | 32.2% | 18.5% | 17.5% | 15.8% | 41.5% | -1.5% | 10.9% | 8.4% |




***<u>The Iron Ore Mining Industry of India</u>***

Since late-2009, the industrialization policies of India have exhibited a tendency towards domestic industrial support, which has included trade-restrictive measures, especially in regards to the iron ore industry. Some within the government are pursuing reform in the mining industry with provisions that address domestic development, specifically regarding the conservation of iron ore resources for the anticipated output increase of the national steel industry. Effective December 24, 2009, an export tax of 5% was re-introduced on iron ore and subsequently increased to 15% on April 29, 2010. Thereafter, certain measures were implemented to restrict exports. In July 2010, the export of iron ore was banned from 10 ports in the state of **Karnataka**, India's second largest iron ore producing state. In the following year, on March 1, 2011, the export was raised again to a rate of 20%.[xi] Then, in May 2011, the Supreme Court of India appointed a Central Empowered Committee for the purpose of surveying and inspecting 99 iron ore mines to check on any potential irregularities. The Committee reported that rampant illegal mining and pervasive ecological damage was occurring. Consequently, in late July 2011, the Supreme Court of India banned the mining of iron ore in Karnataka in order to prevent illegal mining and further environmental harm, followed by the Indian government implementing measures (effective December 30, 2011) to discourage the export of iron ore by increasing the **export duty to 30%.** Both measures severely impacted the level of iron ore traffic to China from India. In September 2012, the mining of iron ore in the state of **Goa**, India's third largest iron ore producing state, was banned for the same reasons after a report by the government panel (Shah Commission Report[xii]) found several instances of illegal mining. Also, the Environment and Forest Ministry suspended environmental clearances for all of the 80 mines operating in Goa. In addition, the state government of **Odisha** (formerly Orissa), India's largest iron ore producing state, limited the level of iron ore production to 52 Mt. In fiscal 2011, Odisha had produced 76.3 Mt. Therefore, the availability of iron ore for export was severely constrained since these three states normally accounted for approximately 70% of India's iron ore exports.

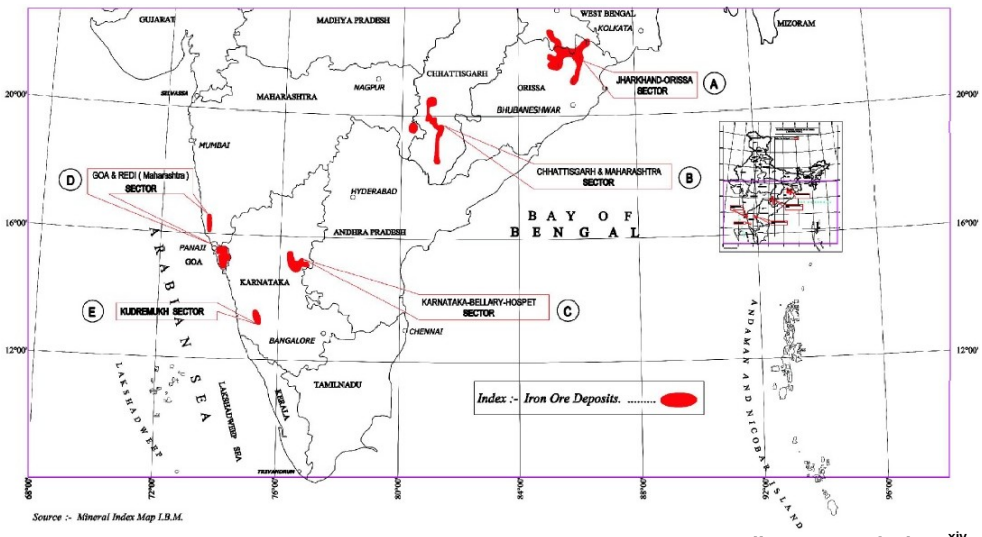
Progress has been made towards the reopening the iron ore mines in Karnataka and Goa. In September 2012, the Supreme Court lifted the ban on mining at 18 Category A iron ore mines in Karnataka. In April 2013, the remaining five Category A and 63 Category B iron ore mines in Karnataka were allowed to reopen, Category B mines being subject to implementing Reclamation and Rehabilitation plans.[xiii] The Supreme Court cancelled all the leases of Category C mines, where illegal mining was rampant and whose production had been predominately exported to China. The Monitoring Committee is expected to auction the inventory.




**Federation of Indian Mineral Industries (FIMI)**

The Head of Goa's Directorate of Mines and Geology, Prasanna Acharya, is optimistic that mining operations in Goa may be able to restart in November or December of 2013. In May, the cap on iron ore production in Odisha was increased 9.6% to 57 Mt for 2014 fiscal year. Current demand in India is being met largely through the extraction of iron ore located in the eastern states of Odisha, Jharkhand and Chhattisgarh and the southwestern states of Karnataka and Goa. The export restrictions at 10 ports in Karnataka have not yet been lifted, but, at some point, are expected to be removed under the strict supervision of the mines department.

IGC's management adapted and attained an alternative source of iron ore in Inner Mongolia, positioning the company to capitalize on the demands of the Chinese steel industry. Consequently, IGC can benefit not only by the beneficiation of iron ore in Inner Mongolia, but also with the capability of exporting iron ore from India once the Indian export market reopens. As a side-note, the Indian Bureau of Mines (IBM) elucidated a vision for the iron ore industry in a document published during 2011 entitled "Iron & Steel Vision 2020," which gives policy input on incentivizing beneficiation of low-grade iron ore. The Indian iron ore mining industry has not meaningfully advanced to add value to the iron ore fines through the use of beneficiation plants. IGC, with its opportunistic-minded management, could potentially benefit from this trend, though there are those who advocate that the export of iron ore from India should be banned altogether in order promote the Indian steel industry's future expansion

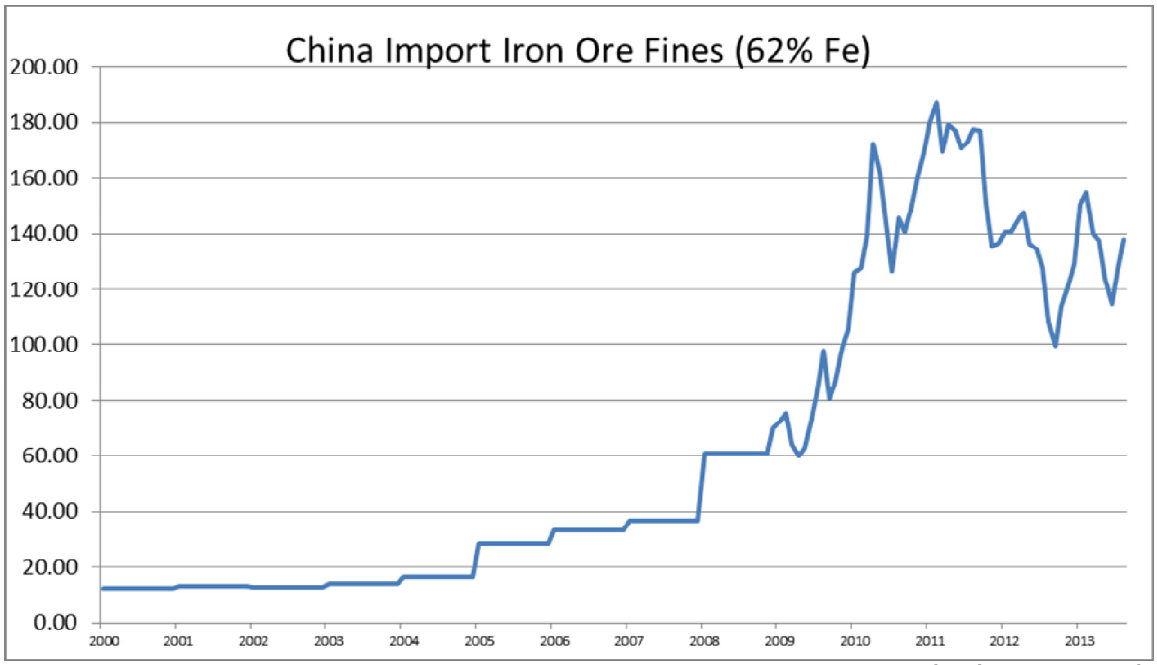



**India Bureau of Mines**[xiv]

***Pricing of Iron Ore in China***

Since the 1960s and up until 2008, for 40 years, an oligarchy composed of the three largest producers of iron ore (BHP Billiton, Rio Tinto and Brazil-based Companhia Vale do Rio Doce, aka Vale) determined the pricing of iron ore in China through an annual benchmark system. The "Big Three" were able to determine global iron ore price since their combined share of the seaborne iron ore export trade market exceeded 70%. Smaller producers, including those in India, sold at the Big Three posted rate, at spot market rates, through auctions or by private negotiations. However, in 2008, China took a leading role in the annual contract negotiations. At the time, China's share of global iron ore imports was approaching 70%, and the country's leaders opted to exert a controlling influence over the pricing mechanism in order to better plan and manage China's industrial growth. Concurrently, steel prices declined dramatically in late 2008 due to the global credit crisis. Starting in 2009 and continuing into 2010, despite months of negotiations, China and the Big Three could not come to an agreement on the pricing of long-term (annual) supply contracts. Consequently, now the larger Chinese steel mills are typically negotiating contracts on a quarterly, monthly or shorter-term basis based on the price indexes compiled by global providers of benchmark metals pricing information, like Platts, a division of McGraw Hill Financial.

Iron ore prices are delineated by fineness grades. Platts defines several levels of fineness, including 52%, 58%, 62%, 63%-63.5% and 65%, among others. For example, the quality of a Platts 65% Fe iron ore assessment reflects an iron content of 62%, moisture 8.00%, silicon dioxide 4.50%, alumina 2.00% and phosphorus 0.075% to be sold in a minimum quantity of 35,000 metric tons denominated in US Dollars per dry metric ton. Domestic market pricing in China is also available by domestic districts for low-grade (30%) iron ore at infodri.com.



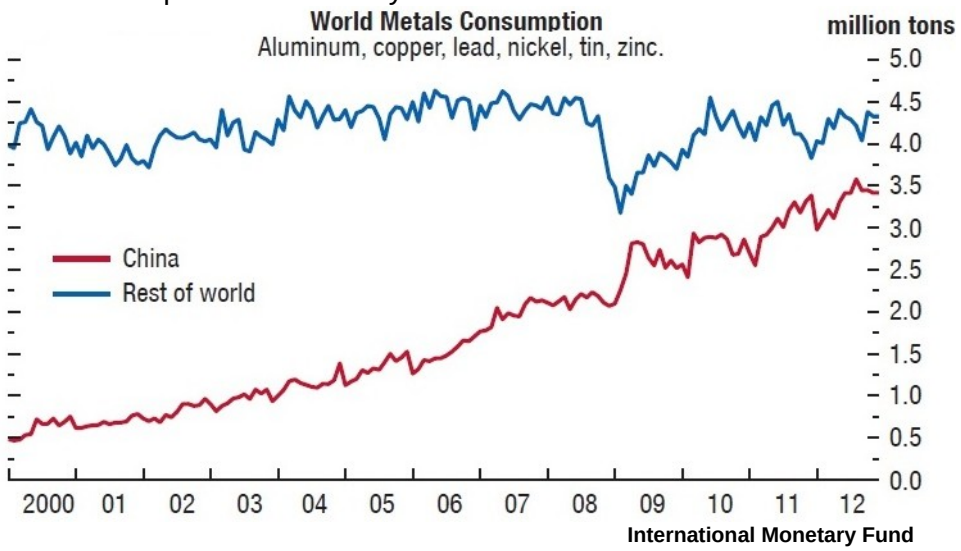

**International Monetary Fund**

Driven by the demand pressures of China's steel industry, prices for iron ore imported into China (62% Fe fine) surged from $12.45 per Mt in 2000 and to a high of $187.18 per Mt in February 2011 (an increase over 1,400%).[xv] Thereafter, imported prices steadily declined to $99.47 in September 2012, and then rallied to $154.54 in February 2013 until concerns over the deceleration of China's GDP growth rate pressured iron ore prices down to $124.01 per metric ton in May.

***Demand for Iron Ore by China***

Since implementing economic reforms in 1978, China has experienced extraordinary economic development through industrialization, urbanization and motorization. Despite the progress of developing

its internal production of commodities, China consumes more raw materials than it produces. Since the year 2000, the rising demands generated from internal stimulus programs and international markets have accelerated, leading China to source an increasing share of global commodities. Today, China consumes more than 40% of all metals produced annually.




The growth of the construction, manufacturing and automotive industries in China have stimulated strong demand for steel. As a result, Chinese steel production (and the associated demand for iron ore) is closely linked to GDP growth; therefore, any change in expected economic growth rate is closely monitored for insights about the performance of the iron ore industry and its impact on pricing.

## China - GDP Growth Rate

| 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 E |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 8.3% | 9.1% | 10.1% | 11.3% | 12.7% | 14.2% | 9.6% | 9.2% | 10.4% | 9.3% | 7.8% | 7.8% |

Recent concerns about the deceleration of China's economic growth rate to mid-single digit range have pressured the price of iron ore down to the range of $110-to-$130 per ton level. Though the IMF has recently lowered the estimated growth rate of Chinese GDP from 8.0% to 7¾%, the long-term outlook for the demand of iron ore in China continues to be strong driven by modest growth rates of advanced nations and the modernization of emerging and developing economies. The modest downward revision of medium-term prospects does not reflect a reassessment of China's relatively fast and still robust growth rate, but rather a reaction to projections of slower global economic growth, the demand environment into which Chinese exports sell. Though Chinese GDP growth forecasts for 2013 are being lowered to around 8%, many mining executives are optimistic about iron ore prices based on the positive secular trend of government-sponsored economic development driven by industrialization and urbanization. Any reacceleration of economic growth in China would support the region's exports and commodity prices, and the IMF continues to expect a mild pick-up in the global economy in the second half of 2013.

In March 2011, the PRC National People's Congress approved China's Twelfth Five Year Plan (2011-2015) outlining the social and economic initiatives established by the Communist Party of China. Though intended to restructure China away from an export and infrastructure dominated economy to a more balanced, economy driven more by consumer consumption, the Five Year Plan still includes massive infrastructure projects and export driven growth programs. For example, the list of domestic infrastructure projects include spending on highways, conventional railroads, high speed rail, new airports, new ports, port upgrades, oil & gas pipelines, oil & gas field development, electric transmission lines, coal transport, mineral mining, new hospitals and new electrical power facilities (both nuclear and hydropower). In addition, there are plans to modernize the entire heavy industry sector, to expand mineral mining, to

enlarge oil refining capacity, to redevelop China's northeast industrial base, to construct/renovate 36 million apartments for urban low-income families and to create an entirely new industrial base focused on seven strategic industries (energy conservation/environment protection, new information technology, biology, high-end equipment manufacturing, new materials, new energy and new-energy cars). Obviously, the infrastructure-related spending of the Plan will stimulate demand for steel and iron ore. **The Twelfth Five-Year Plan targets 7% GDP growth between 2011 and 2015**. Even if the plan's estimate is high, the demand for iron ore should continue to be robust though oversupply conditions may pressure pricing. Long-term, the demand for iron ore demand in China is strong.

Although China has extensive iron ore reserves, [xvi] the quality and ferrous content are low and declining.[xvii] Over the course of the last two decades, most attractive iron ore deposits in China have been developed resulting in the average grade of ore mined dropping from 35% to 18% Fe compared to between 55% and 66% Fe from ore imported from Brazil, India and Australia[xviii]. As the average grades of domestically mined iron ore gradually fall, the demand for imported high-grade ore should remain resilient. In other words, the prior exploitation of the higher grade mines within the PRC enhances the value of not only imported iron ore, but also the high-grade beneficiated ore from IGC's Inner Mongolian operations.

The management of IGC believes that any uncertainty in the global steel/iron ore markets provides an opportunity for the company to increase its exposure to iron ore through the acquisition of additional reserves and mining facilities.

***Outlook Iron Ore Demand and Pricing***

In March 2013, Goldman Sachs and Australia's Bureau of Resources and Energy Economics (BREE)[xix] expressed concerns that moderating demand, particularly in China, coupled with production overcapacity expected from the increase in mining projects currently under construction, will pressure iron ore pricing for the next few years. Goldman Sachs lowered its forecast for average iron ore prices in 2013 from $144 to $139 a tonne, in 2014 from $129 to $115 and for 2015 from $88 to $80. Though BREE also expects demand to moderate, the rally in iron ore prices in mid-February to $145 per tonne induced the Australian bureau in the March Quarterly to raise its forecasted 2013 average contract and spot price from US$106 to US$119 per tonne. As of September 4, 2013, the price of 62% content iron ore being delivered to the Chinese port of Tianjin was $138 per dry tonne.

## BENEFICIATION

### *Beneficiation of Iron Ore*

The iron ore industry classifies iron ore by the concentration of the iron present. **High-grade iron ore** has a concentration of 65% iron or higher, **medium-grade** between 62% and 65%, and **low-grade** iron ore below 62%. Raw iron ore (ore received directly from a mine) may be suitable for direct use, but often is further processed or refined to a higher grade, which not only commands a higher price but also is less expensive to transport on an iron-content per tonne basis. India Globalization commissioned and constructed a new, technologically-advanced beneficiation plant that utilizes both dry and wet magnetic separating processes.

**Iron ore beneficiation** is a **multi-stage process** that purifies run-of-mine (ROM) ore by separating commercial-grade, iron ore from gangue[xx] (aka unwanted material) with the aim of producing high-value iron ore that is saleable for direct use by a smelter at a steel mill. There are several approaches to process flow of iron ore beneficiation. The beneficiation process employed by PRC Ironman involves the removal of native rock and minerals of lesser value through **comminution** (crushing and grinding) **separation** (screening and filtering) and **concentration** (magnetic separation). This **process method** is **well-suited to the liberation and recovery of iron from the magnetite sands of Inner Mongolia**.

The mined ore is composed material ranging from sand to large rocks. After transporting ROM ore by truck to the beneficiation plant, the material is delivered to an elevated receiving hopper. A vibrating feeder directs the raw material into the primary jaw crusher that resizes the larger rocks to a smaller size. Then, through a series of inclined conveyor belts and a range of screening and crushing systems, the ore is filtered and rendered down to particle sizes conducive to a dry magnetic separation process. Under the magnetic method of concentration, it is necessary to break the ore mechanically to such a size that the iron mineral particles can be separated from the gangue particles. Magnetite has very high magnetic susceptibility and is conducive to magnetic concentration. **PRC Ironman utilizes both dry and wet magnetic circuits.**

In the **dry magnetic separation** process, the broken ore is brought under the influence of magnetic fields and is removed from the nonmagnetic material. The ore passes through a series of 19 electro-magnets of alternating polarity that pulls away the magnetic, high-metal content ore and separates it from other material, some of which, specifically lumps and low-grade ore, are recirculated back for further refining. Lower-grade residues are removed as waste into tailing piles.

The material then can be further beneficiated through a **wet magnetic processing** circuit where magnets in rotary separator drums attract strongly ferro-magnetic constituents with high magnetization coefficients from a slurry solution composed of water and the finer-sized ore (less than 6 mm). The iron concentrate is then discharged (laundered) and collected. Often, the recovery of iron concentrate from finer-sized magnetite is achieved optimally through beneficiation by wet magnetic separation, specifically the low intensity magnetic separation (LIMS) process used by India Globalization.

Magnetic separation is an effective, inexpensive and relatively simple method of processing iron ore. Usually beneficiation plants using magnetic separation processes are not complicated in either layout or operation, but much of the attention is placed on crushing, grinding and materials handling so that large tonnages can be processed efficiently. Usually the highest cost item in processing low-grade magnetic iron ore is the crushing and grinding operation. Recently constructed in the spring of 2012, **a modern custom-designed comminution plant significantly aids in the efficiency of the magnetic separation operations.**

The final concentrate or end product that emerges from PRC Ironman's beneficiation process is an iron ore powder grading roughly 66%. PRC Ironman predominately sells the concentrate to steel mills in China, primarily located in the vicinity of the port of Tianjin. PRC Ironman has an agreement with the local authorities that allows for the operation of the beneficiation plants until August 2018.

Under normal operating conditions, the dry magnetic separation circuit produces two truckloads of iron ore grading roughly 33% Fe from approximately 70 truckloads of raw ROM material. Subsequent wet

magnetic processing beneficiates the material into one truckload of high-grade concentrate grading 66% Fe. Management has stated the PRC Ironman's reserves of raw iron ore grades between 2% and 3% Fe. Given that one truckload of 66% Fe ore is produced from 70 truckloads of ROM ore, the concentrate represents the recovery of 0.94% (66%/70) Fe from the ROM material. Therefore, it appears that the metal recovery ratio of the beneficiation process (ratio of recovered iron to iron available to be recovered) is roughly 38% (0.94%/2.50%).

***Iron Ore from Inner Mongolia***

**Inner Mongolia** was originally part of Mongolia, but is now the third largest province autonomous region of Peoples Republic of China (PRC). The weather is extremely seasonal: winters are long and harsh; spring often brings dangerous sand storms; and summers can be terribly hot. Inner Mongolia is a major mining area, primarily coal and iron ore.

The iron ore beneficiated by IGC in Inner Mongolia is highly competitive geographically in northern China. The steel mills of the northern Chinese provinces of Xinjiang, Gansu and Inner Mongolia were designed to receive **magnetite iron ore** deposits. Though high-grade hematite iron ore from Australia and Brazil can be shipped economically to China, the ore is less suitable for the northern Chinese steel mills. **The hills of Inner Mongolia and the iron ore sands deposits of Ironman are mostly sand mixed with magnetite iron ore**, which are conducive to the designed operations of the steel mills located in northern China.

***Iron Ore from Mongolia***

In April 2013, India Globalization established a **shipping hub at the border between Mongolia and China** in order to source and transport low-grade iron ore from Mongolia to the company's beneficiation plants in Inner Mongolia, PRC. In **June,** a test shipment of 300 tons of iron ore was transported from Mongolia to China from the shipping hub located at Erlian. Currently the company is trying to ascertain the optimal process of beneficiation. Management expects to ramp up shipment volume ultimately to between 8,000 and 12,000 tons per month.

Supplies of magnetite iron ore from the nation of Mongolia (northwest of the Chinese state of Inner Mongolia) may be curtailed due to concerns being articulated by the Parliament, President and the business council to the Government of Mongolia. The President has voiced concerns that Mongolia's best grade iron ore being transported to China and is pledging that the National Security Council will review the matter. In 2007, the Parliament included several iron ore deposits in the list of strategically important mineral deposits, though several deposits owned by Chinese companies were not present on the list. However, in January 2013, a letter from Mongolia's business council to the government became public. The document proposed that a new mining law be enacted that would mandate Mongolian citizens hold at least a 34% stake in all iron ore projects. In addition, the council recommended that state-owned be entitled to a pre-emptive right to mining or exploration licenses for sale. These concerns that iron ore, considered a strategic national reserve of Mongolia, is being transferred to China from Mongolia, may result in restricting Mongolian iron ore exports and add incremental value to the magnetite iron ore deposits of Inner Mongolia.

## INDIA

The economy of India is one of the faster growing emerging economies in the world, driven mainly by favorable demographics (a large youth population), healthy savings rates, increasing consumerism, an improving banking system, inflows of foreign investment, and an increasing integration into the global economy. Having experienced slightly negative (-1.7%) growth rate during the global financial crisis in 2008, the economy of India rebounded strongly in 2009 and 2010 by 11.5% and 25.3%, respectively. Growth moderated in 2011, when GDP increased 9.5% to approximately $1.87 trillion[xxi]. For 2012, India's

GDP is being estimated to have grown 6.5% despite the government's stimulus and official target for economic growth being 8.5%. Recent quarters indicate a modest slowdown in the growth rate of the economy, but nevertheless, the outlook for medium-term economic growth is positive in the mid-single digit range.

The Indian government, through the Indian Planning Commission, attempts to manage the growth of the Indian economy. The Eleventh Five-year plan (2007-2012) targeted $494 billion for the modernization of infrastructure while the Twelfth Five-year plan (2012-2017) has enhanced the promotion with the investment of $1.0 trillion towards transformation of India's infrastructure, especially the transport sector[xxii] and construction industry[xxiii]. Also, part of the Twelfth Five-year plan emphasizes the creation of "self-contained, state-of-the-art, industrial cities."[xxiv] These cities are planned to have world-class physical infrastructure (e.g. high-speed roads and railways, along with reliable power) for efficient for freight movement between the ports and production facilities and centers of consumption. According to the Planning Commission, the planned investment in infrastructure and growing urbanization should at result in a 16%-to-17% CAGR for the construction industry over the next 10 years.

The Planning Commission cites that agricultural and manufacturing enterprises involve the production and movement of material goods, which requires good physical infrastructure, namely a competitive transportation system and uninterrupted power. One of India's long-term challenges has been the lack of adequate transport infrastructure. While significant investments were made in transportation infrastructure in the Eleventh plan, the Twelfth Plan will continue to emphasize the upgrading of road, highway, railway, coastal shipping, seaport, and airport infrastructure. The Planning Commission recognizes that "Indian industries continue to suffer from severe infrastructure handicaps compared with the infrastructure available to manufacturers in other countries."[xxv] By one notable measure, the average speeds of movement of freight by rail, road and coastal shipping are significantly lower than those in more efficient economies. For example, the average speed of freight trains in India is 25 km per hour, which is less than half that of the U.S.

Substantial investments in the build-out and modernization of infrastructure are essential to bolster India's growing economy and support the Planning Commission's strategy and key recommendations for the creation of world-class infrastructure within India. As a supplier of stone aggregate and iron ore, IGC is well positioned to benefit from the built-out and modernization of India's infrastructure. Namely, IGC has strong relationships with several construction companies and mine operators in southern and central India, along with full knowledge of the licensing process for mines/quarries and of the logistics needed to move these commodities throughout these specific areas of India.

## IGC MINING AND TRADING (TRANSPORT OF IRON ORE WITHIN AND OUT OF INDIA)

In late 2008, management began to pursue an opportunity being provided by a period of secular growth of the Chinese steel industry, namely the demand for high grade iron ore in China. Having sponsored the formation of **India Mining & Trading, Private Limited**, which was incorporated on December 16, 2008, India Globalization acquired the privately-held start-up company on February 19, 2009 for INR 100,000 (US$2,100). Located in Chennai, IGC India Mining and Trading is able to source iron ore from mine owners in southern India and operates seaport facilities for the export of iron ore to China. IGC set up three shipping hubs, namely in **Krishnapatnam** on the east coast and **Goa** (aka Mormugao) and **Karwar** on the west coast. Port facilities consist of land on which to store iron ore and an office. At the company's facilities in Goa, an ore grinder for crushing 10mm ore into fine ore was installed in order to add value through improved price realization.[xxvi] IGC also commissioned the formation of **IGC Logistics Private Limited**, an entity to aid in the transport iron ore within India. These physical facilities, along with the supporting logistical and organizational structures, were developed by IGC and enable the company to export iron ore from southern India not only to China, but also to other Asian countries. According to management, each shipping hub has the capacity to generate annual revenues between $10 million and $13 million, and with $4.0 million in capital improvements between $15 million and $20 million.[xxvii]


***Iron Ore Contracts***

Soon after acquiring India Mining & Trading in February 2009, IGC secured an order for 40,000 Mt of Fe ore grading 62.5% (worth $2.6 million) in May 2009. Subsequently, the company received another order for 30,000 Mt of iron ore grading 59% (worth $2.1 million). Other orders, including an order for 60,000 Mt grading 56% (worth at $3.0 million), were received. Ore was sourced from multiple small to mid-size mining companies. The high-grade ore was shipped from the **Krishnapatnam** shipping hub while the low-grade ore was predominately shipped from **Goa** and **Karwar**. All told, during fiscal 2010 (from April 2009 through March 2010), IGC Mining and Trading generated revenues of $10,022,783.

On April 27, 2010, IGC signed a significant multi-year contract for the delivery of 1,600,000 Mt of iron ore grading 63.5% to an unspecified Chinese steel manufacturer located near Shanghai. The price per tonne was to be determined at the market price on shipment with the customer paying for shipping separately. During the initial 12-month period, the contract called for the delivery of 320,000 Mt, which was expected to generate revenue of approximately $35 million. Management planned to secure the iron ore from several small- to mid-size mining companies and to export eight shipments of 40,000 Mt from the ports of **Karwar** on the west coast and **Visakhapatnam** on the east coast with delivery to the port of Jintang in northern China. The customer had the option to extend the contract for five years for an additional 1,280 Mt of ore. Management anticipated increasing the capacity of its port facilities to accommodate shiploads of 80,000 Mt in the second year. Over the life of the contract, revenues were estimated to be approximately $176 million. However, on July 26, 2010, in an effort to halt illegal mining and also to preserve iron ore for local steelmakers, the Indian state government of Karnataka instituted a moratorium on exportation of iron ore from 10 ports, which affected IGC's facilities at Karwar. The order was suspended under *force majeure,* and the company expects to fulfill the contract once the export ban is lifted.

During 2010, IGC sourced ore from Orissa (now Odisha), and in September, began exporting iron ore grading 62.5% from **Visakhapatnam** (aka Vizag), which is located in the state of Andhra Pradesh on the eastern coast of India. Through seeking alternative methods and ports, IGC Mining and Trading generated revenues of $2.16 million during fiscal 2011 (from April 2010 through March 2011) and 3.73 million during fiscal 2012; no revenues were recorded during fiscal 2013.

Though progress has been made with the reopening of some mines in India, the ban on the exportation of iron ore from 10 ports in Karnataka is still in effect. When lifted**,** IGC is well positioned to export iron ore from India to Chinese steel mills. The company has relationships and some agreements with mine

owners in the Indian states of Orissa and Karnataka in Orissa and Karnataka. In addition, IGC previously had applied for licenses to mine iron ore in India. In China, the company has contacts with potential customers who are interested in purchasing imported ore from India when the export ban is lifted.

***Shipment of High-Grade Iron Ore to China***

IGC's management continues to pursue an iron ore strategy of supplying high-grade ore to the steel industry in China. Initially, the planned course of action involved the acquisition of both high-grade and low-grade iron ore within India and then transporting it to China. In some cases, IGC planned to add value by crushing the ore prior to shipment. Though the strategy evolved into acquiring iron ore assets and beneficiation plants closer to China, namely Ironman in Inner Mongolia, management is now also pursuing the opportunity, if it arises, to facilitate the shipment of low-grade iron ore from India to China or Inner Mongolia, to process the low-grade ore into high-grade ore at its beneficiation plants and then to sell the upgraded ore to local traders and steel mills near the port of Tianjin in China. In addition, IGC is investigating the possibility of sourcing low-grade iron ore from other countries, specifically Mongolia.

## RECENT NEWS

On August 18, 2013, India Globalization announced **financial results for the first fiscal quarter** ending June 30, 2013. Revenues declined 19.6% to $1.12 million from $1.27 million in the comparable quarter this year. The revenues were generated from iron ore trading; the company is awaiting receipt of mining licenses for the Linxi mines before production can commence. The net loss attributable to shareholders was $633,487 (or $0.09 per diluted share) compared to a loss of $528,316 (or $0.14) in the first quarter of fiscal 2013.

On July 1, 2013**,** India Globalization announced the signing of a Letter of Intent (LOI) for the acquisition of a **25% interest in an iron ore mine and nearby beneficiation plant** located in Aohan Banner, **Inner Mongolia** for consideration of 1.35 million newly issued shares. Relying on geological studies, management estimates that the mine has reserves of 4.17 Mt of ore with iron (Fe) content between 20%-30% worth approximately $200 million at current iron ore pricing. Since the transaction expected to close relatively soon after the due diligence period, production is scheduled to begin in October 2013 at a processing rate of 200 Mt per day. The mine and beneficiation plant possess all necessary operating licenses, including a mining license, an iron ore processing license, environmental clearance and a business license. The beneficiation plant includes a wet magnetic separation processing circuit with a capacity 200-to-250 Mt per day. The beneficiation plant concentrates the 20%-30% ROM ore into 60% Fe content iron ore. Management expects to be able to increase daily production from 200 Mt per day to about 1,000 tons per day by expanding the capacity of the beneficiation plant. The mine is expected to be able to operate for 11 months of the year.

In July 2013, India Globalization signed an agreement with Mon Resources International LLC for the **delivery of up to 126,000 Mt of 54% Fe content ore**. After beneficiation, management projects that the concentrated high-grade iron ore will generate revenues between $10 million and $12 million.

On April 29, 2013**,** India Globalization announced that the company has established a **shipping hub at the border between Mongolia and China** in order to source and transport low-grade iron ore from Mongolia to the company's beneficiation plants in Inner Mongolia, PRC. On June 11, 2013**,** India Globalization announced that a **test shipment of 300 tons of iron ore has been successfully transported from Mongolia to China** from the shipping hub located at Erlian. Ultimately, management foresees ramping up shipment volume to between 8,000 and 12,000 tons per month.

***Financial***

On August 26, 2013, India Globalization Capital filed a **shelf offering** for gross proceeds of up to $4 million. Enclave Capital LLC will act as sales agent for the shares.

On June 28, 2013, India Globalization announced that the Audit Committee approved the engagement of **AJSH & Company** as the **public accounting firm** for the completion of the company's financial report (Form 10-K) for the 2013 fiscal year ending March 31, 2013.

Effective **April 19, 2013**, the stock of India Globalization Capital underwent a **1-for-10 reverse split** that the Board of Directors had unanimously approved on April 12,, 2013 in order to become compliant with all NYSE listing requirements. All outstanding warrant and option were similarly adjusted for the split.

## RISKS

- The operational currencies in China and India are the renminbi (RMB) and rupee (INR), respectively. Currency repatriation from both countries requires the permission from government authorities and is a lengthy process that usually requires months. Therefore, any profits achieved may be required to be reinvested in those countries. The value of the renminbi was pegged to the U.S. dollar until 2005 when the Chinese Government devalued the currency to increase the competitiveness of Chinese goods. Officials of the Chinese Government state that full convertibility of the renminbi is part of the country's planned overhaul of the exchange–rate system and are taking steps that are intended to establish the renminbi as an international reserve currency; however, the timing and certainty of increased flexibility of exchange rate are unsure.
- The iron ore transactions conducted by Ironman are predominated consummated with cash payments. Most transactions occur on the spot with cash rather than with invoices or payments by check, wire or credit card. Cash transactions are more vulnerable to corrupt practices. India Globalization has instituted controls over cash collections to mitigate the potential for fraudulent practices, but remains susceptible to the weaknesses of a cash business.
- As with any commodity-based enterprise, Ironman's revenue and profitability are affected by the price of iron ore. India Globalization does not hedge its exposure to the price of iron ore.

## VALUATION

Generally, the appropriate valuation methodology for infrastructure-related companies is based on price-to-sales (P/S) due the character of the enterprise, namely a company, sometimes with negative profitability, but with a sales profile that should grow and expand over time as management makes investments in the underlying businesses. Typically, a growing revenue stream manifests into positive earnings when the break-even point is superseded. The P/S valuation range for a small-cap, infrastructure-related company with a stable or moderately growing sales profile is usually between 1.1 and 3.2. Currently, the Big Three iron-ore mining companies are trading between 1.7 and 2.6 times trailing 12-month revenues, with a mean P/S valuation of 2.0 times.

India Globalization's revenue profile is expected to experience growth through management's execution of its iron ore beneficiation strategy in the PRC, which may be augmented by positive commodity pricing. Despite uncertainties concerning the timing of the beneficiation of the iron ore from Mongolia and the granting of mining permits for the Linxi properties, the company's 12-month trailing revenues of $7.88 million project a target of $2.25 when valued at the mean industry P/S ratio of 2.0. However, this valuation is depressed, since the average iron ore mining stock is down 27.8% this year.

On the other hand, India Globalization can also be viewed as a resource-based company which is supplying high-grade iron ore for steel mills operating in China. Management's strategy is to increase shareholder value through the beneficiation of low-grade iron ore sourced both from the properties the company has acquired and also from third-parties in Mongolia, China and potentially India. Therefore, **India Globalization has interests in iron ore sand resources in Inner Mongolia**, which allows for a **resource valuation methodology** to be applied to the company. Also, the importance of iron ore deposits to India Globalization is demonstrated by the fact that the production of beneficiated iron ore generates the vast majority of the company's revenues (83% in fiscal 2013).

## Industry Comparables

| | Price Chg YTD | P/E Curr FY | EPS Growth 5Yr Est | Price/ Book | Price/ Sales | Price/ CF |
|---|---|---|---|---|---|---|
| **INDIA GLOBALIZATION** | -22.2 | N/M | 12.0 | 0.5 | 0.9 | N/M |
| Industry Mean | -26.1 | 19.0 | 16.3 | 2.2 | 12.3 | 9.2 |
| Industry Median | -27.8 | 16.0 | 12.0 | 1.1 | 2.0 | 9.6 |
| S&P 500 | 15.9 | 15.2 | 10.8 | 4.2 | 2.6 | 12.9 |
| BHP BILLITON LTD | -17.1 | 13.4 | 6.3 | 1.4 | 2.6 | 5.6 |
| RIO TINTO GROUP ADR | -16.8 | 10.2 | 12.6 | 1.2 | 1.8 | 5.0 |
| VALE SA | -26.9 | 7.5 | 20.4 | 1.6 | 1.7 | 5.3 |

Our calculation of the per-share **value of attributable resources** is based on the estimated value of the iron ore deposits, adjusted for balance sheet items, namely working capital and debt. The assessment of the iron ore properties is determined by adjusting the value of current *in situ* resources for the expected recovery rate, mining & processing costs and royalties, if any. The reserves/resources are assigned a confidence factor that attempts to take into account the risks of the mining projects, such as the locality of the deposits, the assurance level of the reserves/resources, various technical mining/production risks, etc. The current price of iron ore is utilized, and only the company's percentage interest is attributed to the company's value. The reserve/resource valuation methodology involves the following assumptions:

1) for the deposits of iron ore sands located in Inner Mongolia, a 75% confidence factor is applied to the reserves, which are estimated by management through geological studies but without benefit of a NI 43-101 report;
2) average production costs are being estimated through margin analysis of the profitability of the properties in the year prior to acquisition;
3) the Net Asset Value of the production stream is being estimated over six years as the number of operating beneficiation plants is expected to increase every year;
4) each beneficiation plant has an estimated capacity to produce 70,000 Mt of high-grade iron ore annually;
5) a discount rate of 20% is being utilized in the calculation of the NAV.
6) in the PRC, production is subject to a 17% VAT tax;
7) the resource value of the deposits is adjusted to the level of India Globalization's 95% interest; and
8) the value of the businesses in India (quarries, construction equipment, etc.) are not being evaluated until government restrictions are loosened and the operations are generating revenue.

Based on our calculation of share value of attributable resources (see table below), **our target for the stock of India Globalization is $2.70.**

## INDIA GLOBALIZATION CAPITAL, INC.

| Mine Sites | Month Acquired | Management Etimated Resource (MM Mt) | Estimated Grade (% Fe) | Recovery Rate | Average Production Costs (per Mt) | Current Price per Mt (62% Fe) | Taxes (VAT) | % Ownership | Net Value to IGC | Net Present Value to IGC |
|---|---|---|---|---|---|---|---|---|---|---|
| PRC Ironman | 12/2011 | 3.0 | 2.5% | 50% | 90 | 138.00 | 17.0% | 95% | 33,330,421 | |
| Adjacent Property | 2/2012 | 1.8 | 2.5% | 50% | 90 | 138.00 | 17.0% | 95% | 19,998,252 | |
| Adjacent Property | MOU | 0.5 | 1.9% | 50% | 90 | 138.00 | 17.0% | 95% | MOU | |
| **Total Production** | | | | | | | | | | 18,776,501 |
| **BALANCE SHEET ADJUSTMENTS** | | | | | | | | | | |
| Working capital | | | | | | | | | 2,067,223 | 2,067,223 |
| Notes payable | | | | | | | | | (1,800,000) | (1,800,000) |
| | | | | | | **Net Assets & Resources** | | | 53,595,896 | 19,043,724 |
| | | | | | | **Shares Outstanding** | | | 7,031,398 | 7,031,398 |
| | | | | | | | **Asset Value** | | 7.62 | |
| | | | | | | | **Discounted Asset Value** | | | **2.71** |

# BALANCE SHEET & PROJECTED INCOME STATEMENT

## INDIA GLOBALIZATION CAPITAL, INC.

Year ending March 31

| | 3/31/2011 | 3/31/2012 | 3/31/2013 | 6/30/2013 |
|---|---|---|---|---|
| **ASSETS** | | | | |
| Cash and cash equivalents | 1,583,284 | 562,948 | 1,064,421 | 651,465 |
| Accounts receivable, net of allowances | 3,312,051 | 1,641,868 | 1,066,650 | 961,837 |
| Inventories | 133,539 | 387,481 | 407,060 | 411,930 |
| Advance taxes | 41,452 | 41,452 | 0 | 0 |
| Prepaid expenses and other current assets | 1,474,838 | 2,586,514 | 1,730,514 | 1,696,845 |
| **Total current assets** | **6,545,164** | **5,220,263** | **4,268,645** | **3,722,077** |
| Goodwill | | | | |
| Intangible Assets and Goodwill | 410,454 | 4,803,828 | 592,274 | 606,639 |
| Property, plant and equipment, net | 1,231,761 | 8,491,796 | 8,184,230 | 8,126,473 |
| Investments in affiliates | 6,428,800 | 5,109,058 | 5,109,057 | 5,109,057 |
| Investments-others | 877,863 | 637,620 | 83,489 | 50,404 |
| Deferred acquisition costs | 0 | 0 | 207,338 | 207,337 |
| Deferred income taxes | | (14,076) | 341,455 | 326,237 |
| Restricted cash | 1,919,404 | 12,773 | 0 | 0 |
| Other non-current assets | 748,623 | 998,816 | 466,105 | 426,950 |
| **TOTAL ASSETS** | **18,162,069** | **25,260,078** | **19,252,593** | **18,575,174** |
| **LIABILITIES AND STOCKHOLDERS' EQUITY** | | | | |
| Short term debt | 901,343 | 210,010 | 0 | 0 |
| Trade payables | 1,311,963 | 337,145 | 600,702 | 615,386 |
| Accrued expenses | 349,149 | 916,710 | 466,960 | 308,883 |
| Notes payable | 3,920,000 | 1,800,000 | 0 | 0 |
| Dues to related parties | 0 | 310,681 | 0 | 0 |
| Deferred tax liabilities | 0 | 135,980 | 0 | 0 |
| Loans others | 0 | 222,389 | 446,694 | 446,803 |
| Other current liabilities | 94,892 | 563,105 | 310,619 | 283,782 |
| **Total current liabilities** | **6,577,347** | **4,496,020** | **1,824,975** | **1,654,854** |
| **Long-Term Liabilities** | | | | |
| Deferred income taxes | 0 | 713,897 | 0 | 0 |
| Notes payable | 0 | 0 | 1,800,000 | 1,800,000 |
| Other non-current liabilities | 1,209,479 | 4,233,978 | 653,388 | 656,868 |
| **Total liabilities** | **7,786,826** | **9,443,895** | **4,278,363** | **4,111,722** |
| **Stockholders' Equity** | | | | |
| Shares potentially subject to rescission rights | 3,082,384 | 0 | 0 | 0 |
| Stockholders' equity: | | | | |
| Common stock | 1,490 | 6,007 | 6,981 | 6,986 |
| Additional paid-in capital | 38,860,319 | 54,821,952 | 56,147,092 | 56,253,449 |
| Accumulated other comprehensive income | (2,502,596) | (2,542,453) | (2,020,764) | (2,005,590) |
| Retained earnings (Deficit) | (29,692,907) | (37,444,832) | (39,697,179) | (40,330,666) |
| Total equity attributable to the parent | 6,666,306 | 14,840,674 | 14,436,130 | 13,924,179 |
| Non-controlling interest | 626,553 | 975,509 | 538,100 | 539,273 |
| **Total stockholders' equity** | **7,292,859** | **15,816,183** | **14,974,230** | **14,463,452** |
| **TOTAL LIABILITIES & STOCKHOLDERS' EQUITY** | **18,162,069** | **25,260,078** | **19,252,593** | **18,575,174** |
| Shares outstanding | 14,890,181 | 60,061,737 | 69,800,980 | 7,031,398 |

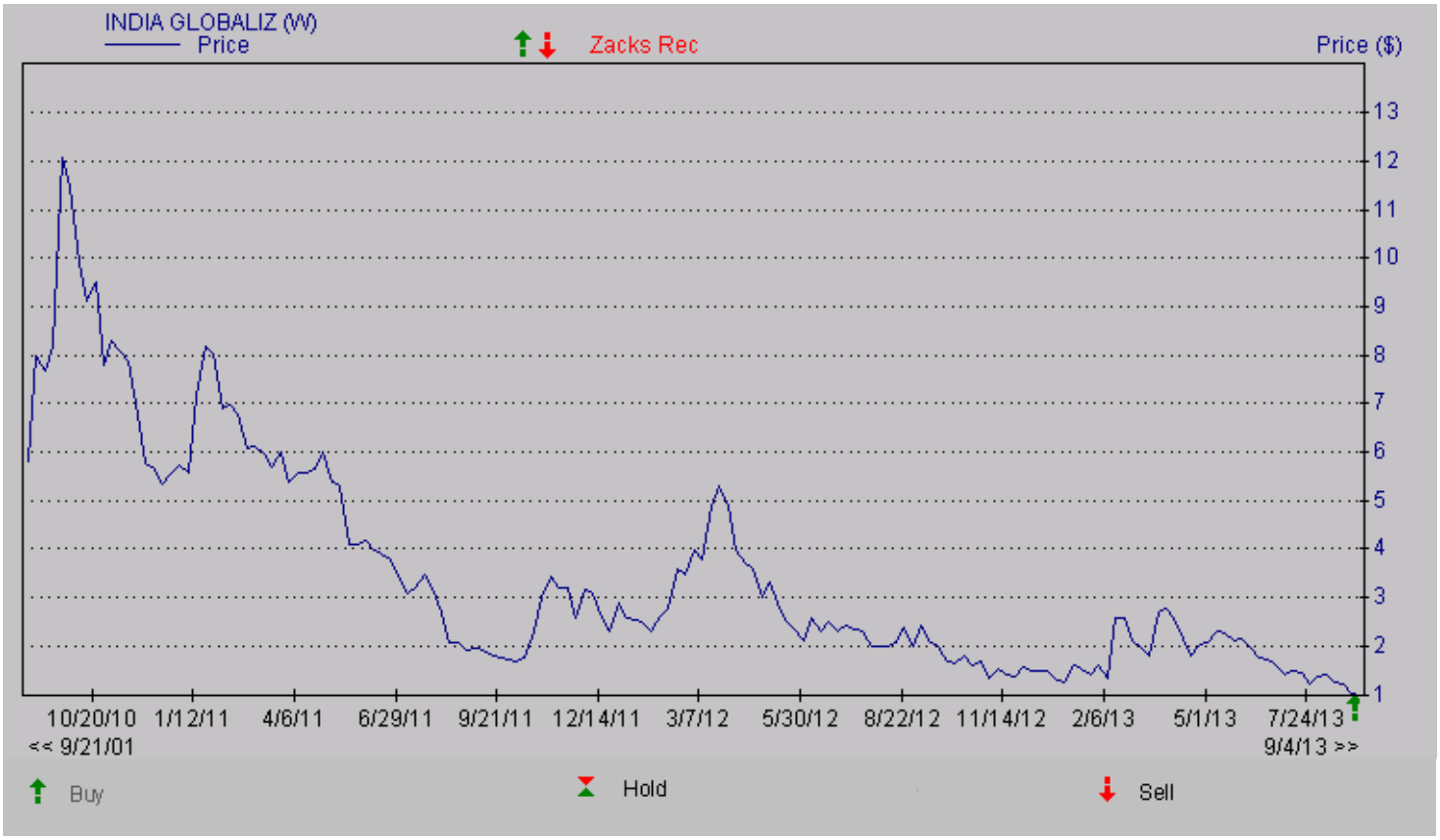
# INDIA GLOBALIZATION CAPITAL, INC.

| Income Statement | FY | 1Q | 2Q | 3Q | 4Q | FY |
|---|---|---|---|---|---|---|
| | FY 2011 | FY2012 | FY201 | FY2012 | FY2012 | FY 2012 |
| Period ending | 3/31/2011 | 6/30/2011 | 9/30/2011 | 12/31/2011 | 3/31/2012 | 3/31/2012 |
| **Revenues** | **4,073,919** | 1,060,247 | 912,121 | 986,799 | 1,240,384 | **4,199,551** |
| Cost of revenues | (3,914,655) | | (903,523) | (1,024,817) | (2,889,640) | (4,817,980) |
| Selling, General & Administrative | (7,283,089) | (733,141) | (652,375) | (968,890) | (2,348,086) | (4,702,492) |
| Depreciation | (785,066) | (51,244) | (75,621) | (42,360) | (827,178) | (996,403) |
| Impairment Loss – Goodwill | (5,792,849) | 0 | 0 | 0 | 0 | 0 |
| Impairment Loss - Investment | (2,184,599) | 0 | 0 | 0 | (1,194,257) | (1,194,257) |
| Equity in loss (gain) of JV | 0 | 0 | 25,832 | (33,588) | 7,756 | 0 |
| **Operating income (loss)** | **(15,886,339)** | (698,447) | (719,398) | (1,049,268) | (5,044,468) | **(7,511,581)** |
| | | | | | | |
| Interest expense | (1,395,433) | (300,768) | (148,965) | (174,353) | (359,935) | (984,021) |
| Amortization of debt discount | (191,804) | 0 | 0 | 0 | 0 | 0 |
| Interest Income | 262,826 | 67,348 | 59,085 | 59,629 | 81,130 | 267,192 |
| Other Income, net | 301,182 | 36,219 | (14,770) | (716,364) | 1,176,400 | 481,485 |
| **Income before income taxes** | **(16,909,568)** | 24,694 | (798,216) | (1,913,944) | (5,059,459) | **(7,746,925)** |
| | | | | | | |
| Earnings in income from affiliates | 0 | (870,954) | 0 | 0 | 899,417 | 28,463 |
| Income taxes benefit/ (expense) | (4,100,385) | 0 | 0 | 0 | (172,828) | (172,828) |
| Net income | (21,009,953) | (870,954) | (798,216) | (1,913,944) | (4,308,176) | (7,891,290) |
| Non-controlling interests in earnings | 769,046 | 1,751 | 8,963 | 12,569 | 116,082 | 139,365 |
| **Net income attributable to shareholders** | **(20,240,907)** | (869,203) | (789,253) | (1,901,375) | (4,192,094) | **(7,751,925)** |
| | | | | | | |
| **EPS attributable to common stockholders:** | | | | | | |
| Basic EPS | (13.40) | (0.43) | (0.38) | (0.89) | (0.97) | (2.66) |
| Diluted EPS | (13.40) | (0.43) | (0.38) | (0.89) | (0.97) | (2.66) |
| | | | | | | |
| Basic Weighted Average Shares | 1,510,892 | 2,035,960 | 2,096,043 | 2,130,109 | 3,800,000 | 2,908,936 |
| Diluted Weighted Average Shares | 1,510,892 | 2,035,960 | 2,096,043 | 2,130,109 | 3,800,000 | 2,908,936 |

| | FY | 1Q | 2Q | 3Q | 4Q | FY |
|---|---|---|---|---|---|---|
| | FY 2012 | FY2013 | FY201 | FY2013 | FY2013 | FY 2013 |
| Period ending | 3/31/2012 | 6/30/2012 | 9/30/2012 | 12/31/2012 | 3/31/2013 | 3/31/2013 |
| **Revenues** | **4,199,551** | 1,267,680 | 1,351,466 | 3,933,906 | 1,476,964 | **8,030,016** |
| Cost of revenues | (4,817,980) | (937,444) | (1,108,357) | (3,189,950) | (1,261,140) | (6,496,891) |
| Selling, General & Administrative | (4,702,492) | (440,775) | (341,783) | (153,789) | (2,105,285) | (3,041,632) |
| Depreciation | (996,403) | (83,594) | (245,125) | (134,785) | (210,412) | (673,916) |
| Impairment Loss – Goodwill | 0 | 0 | 0 | 0 | (301,141) | (301,141) |
| Impairment Loss - Investment | (1,194,257) | 0 | 0 | 0 | 0 | 0 |
| Equity in loss (gain) of JV | 0 | 0 | | 0 | 0 | 0 |
| **Operating income (loss)** | **(7,511,581)** | (194,133) | (343,799) | 455,382 | (2,401,014) | **(2,483,564)** |
| | | | | | | |
| Interest expense | (984,021) | (10,557) | (15,740) | (2,651) | (390,488) | (419,436) |
| Amortization of debt discount | 0 | 0 | | 0 | 0 | 0 |
| Interest Income | 267,192 | 837 | 0 | 2,051 | 27,509 | 30,397 |
| Other Income, net | 481,485 | 0 | 204,375 | 43,641 | (7,952) | 240,064 |
| **Income before income taxes** | **(7,746,925)** | (368,611) | (155,164) | 498,423 | (2,607,187) | **(2,632,539)** |
| | | | | | | |
| Earnings in income from affiliates | 28,463 | (572,464) | 0 | 0 | 572,464 | 0 |
| Income taxes benefit/ (expense) | (172,828) | 31,710 | (9,735) | (453) | 343,594 | 365,116 |
| Net income | (7,891,290) | (540,754) | (164,899) | 497,970 | (2,059,740) | (2,267,423) |
| Non-controlling interests in earnings | 139,365 | 12,438 | 22,191 | (187,078) | 167,525 | 15,076 |
| **Net income attributable to shareholders** | **(7,751,925)** | (528,316) | (142,708) | 310,892 | (1,892,215) | **(2,252,347)** |
| | | | | | | |
| **EPS attributable to common stockholders:** | | | | | | |
| Basic EPS | (2.66) | (0.14) | (0.02) | 0.05 | (0.22) | (0.32) |
| Diluted EPS | (2.66) | (0.14) | (0.02) | 0.05 | (0.22) | (0.32) |
| | | | | | | |
| Basic Weighted Average Shares | 2,908,936 | 3,905,934 | 6,006,174 | 6,006,174 | 6,900,000 | 6,966,798 |
| Diluted Weighted Average Shares | 2,908,936 | 3,905,934 | 6,006,174 | 6,006,174 | 6,900,000 | 6,966,798 |

| | FY | 1Q | 2Q E | 3Q E | 4Q E | FY E |
|---|---|---|---|---|---|---|
| | FY 2013 | FY2014 | FY201 | FY2014 | FY2014 | FY201 |
| Period ending | 3/31/2013 | 6/30/2013 | 9/30/2013 | 12/31/2013 | 3/31/2014 | 3/31/2014 |
| **Revenues** | **8,030,016** | 1,123,904 | 1,100,000 | 4,200,000 | 1,600,000 | 8,023,904 |
| Cost of revenues | (6,496,891) | (936,239) | (916,326) | (3,276,000) | (1,248,000) | (6,376,565) |
| Selling, General & Administrative | (3,041,632) | (299,125) | (292,000) | (275,000) | (300,000) | (1,166,125) |
| Depreciation | (673,916) | (149,294) | (150,000) | (150,000) | (150,000) | (599,294) |
| Impairment Loss – Goodwill | (301,141) | 0 | 0 | 0 | 0 | 0 |
| Impairment Loss - Investment | 0 | 0 | 0 | 0 | 0 | 0 |
| Equity in loss (gain) of JV | 0 | 0 | 0 | 0 | 0 | 0 |
| **Operating income (loss)** | **(2,483,564)** | (260,754) | (258,326) | 499,000 | (98,000) | **(118,080)** |
| | | | | | | |
| Interest expense | (419,436) | (112,136) | (100,000) | (90,000) | (100,000) | (402,136) |
| Amortization of debt discount | 0 | 0 | 0 | 0 | 0 | 0 |
| Interest Income | 30,397 | 4,080 | 2,000 | 1,000 | 3,000 | 10,080 |
| Other Income, net | 240,064 | (261,908) | 0 | 100,000 | 50,000 | (111,908) |
| **Income before income taxes** | **(2,632,539)** | (630,718) | (356,326) | 510,000 | (145,000) | **(622,044)** |
| | | | | | | |
| Earnings in income from affiliates | 0 | 0 | 0 | 0 | 0 | 0 |
| Income taxes benefit/ (expense) | 365,116 | (1,596) | (1,600) | 149,700 | 25,000 | 171,504 |
| Net income | (2,267,423) | (632,314) | (357,926) | 659,700 | (120,000) | (450,540) |
| Non-controlling interests in earnings | 15,076 | (1,173) | (17,896) | 32,985 | (6,000) | 7,916 |
| **Net income attributable to shareholders** | **(2,252,347)** | (633,487) | (375,823) | 692,685 | (126,000) | **(442,625)** |
| | | | | | | |
| **EPS attributable to common stockholders:** | | | | | | |
| Basic EPS | (0.32) | (0.09) | (0.05) | 0.10 | (0.01) | (0.06) |
| Diluted EPS | (0.32) | (0.09) | (0.05) | 0.10 | (0.01) | (0.06) |
| | | | | | | |
| Basic Weighted Average Shares | 6,966,798 | 7,003,023 | 7,003,023 | 7,003,023 | 9,200,000 | 7,552,267 |
| Diluted Weighted Average Shares | 6,966,798 | 7,003,023 | 7,003,023 | 7,003,023 | 9,200,000 | 7,552,267 |

## HISTORICAL ZACKS RECOMMENDATIONS

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The current distribution of Zacks Ratings is as follows on the 1,029 companies covered: Buy/Outperform- 14.4%, Hold/Neutral- 78.4%, Sell/Underperform – 6.1%. Data is as of midnight on the business day immediately prior to this publication.

[i] Incorporated on January 8, 2008, PRC Ironman is a Sino-foreign Equity Joint Venture (EJV) established by Chinese (Sino) and foreign investors.
[ii] For Fiscal Year ending March 31, 2011.
[iii] Incorporated on December 20, 2010, HK Ironman is a Hong Kong-based company created to acquire PRC Ironman for India Globalization.
[iv] The acquisition deal also included certain contingent payments by IGC to PRC Ironman stockholders; however, the post-closing conditions were not met and additional consideration was not paid.
[v] World Steel in Figures 2013, World Steel Association, page 5.
[vi] Steel Industry Executive Summary: May 2013, U.S. Department of Commerce, International Trade Administration, page 5.
[vii] International Steel Statistics Bureau
[viii] U.S. Geological Survey, Mineral Commodity Summaries, January 2013, page 85.
[ix] World Steel in Figures 2013, World Steel Association, page 23.
[x] General Administration of Customs of the People's Republic of China, January 22, 2013.
[xi] HS 260111 and 260112
[xii] The Central Government of India appointed a Commission of Inquiry consisting of Shri Justice M.B. Shah, Retired Judge of the Supreme Court of India, based on Notification S.O. 2817 on November 22, 2010 for the purpose of inquiring into the large scale mining of iron ore and manganese ore without lawful authority in several states. The Commission submitted its first interim report to Ministry of Mines on July 14, 2011. The IBM initiated several actions based on the recommendations mentioned in the interim report.
[xiii] Few, if any, illegal mining incidents were observed at Category A mines; however, at Category B mines, significant illegal mining and/or illegal waste dumps were observed. After implementing assigned Reclamation and Rehabilitation plans, the Category B mines could start operations.
[xiv] The Indian Bureau of Mines (IBM) is the government agency that provides regulatory services to the mining industry in India, including for compilation of exploration data and mineral maps.
[xv] China import Iron Ore Fines 62% Fe spot (CFR Tianjin port), denominated in US dollars per metric ton, source IMF.
[xvi] China's iron ore reserves are concentrated in the northern and northeastern provinces of Hebei, Liaoning and Sichuan.
[xvii] Resources and Energy, Quarterly, March 2013, BREE, Commonwealth of Australia, page 51.
[xviii] Commodity Insights Bulletin – Iron Ore, KPMG, 2012 Q4, page 3.
[xix] Resources and Energy Quarterly, March 2013, Bureau of Resources and Energy Economics (BREE), Commonwealth of Australia, page 50.
[xx] Gangue is the commercially worthless material that is mixed with or surrounding the mineral being sought in ore.
[xxi] World Bank
[xxii] Twelfth Five Year Plan (2012–2017) Economic Sectors (Volume II), p.197.
[xxiii] Ibid, page 110.
[xxiv] Ibid, 13.190, page 94.
[xxv] Ibid, page 59.
[xxvi] To qualify as Platts 63.5/63% Fe iron ore, the granular size of at least 90% of the cargo must be 10 mm or smaller.
[xxvii] Company Press Release, India Globalization Capital Announces $160 Million, 5 Year Iron Ore Supply Contract with Leading Chinese Steel Manufacturer, April 27, 2010.