Iron Ore Market Evolution and Risk Management

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Executive Summary

• Iron ore market – Our house view
  – Financial crisis and its contagious impact on world economy
  – Global steel product demand continues to slow down
  – Inventory at ports remains at near all time highs
  – Collapse of capsize freight to levels not seen in the last two years
  – China steel price continue to adjust southward
  – In near term, price weakness will persist

• Iron Ore market evolution
  – Globalization
  – Industry consolidation
  – Dominant price making power
  – Commodity community change – new commodity market structure
  – Functions of ET and OTC
  – Price discovery
  – Risk management
  – THE TREND IS IRREEVOCABLE
Executive summary

• Iron ore index pricing – our view
  – Transparency
  – Fairness and independence
  – Liquidity
  – Participants
  – Large market size
  – Price volatility
  – Standardization

• Risk management
  – OTC forward swap – a useful tool for Chinese steel mills
Iron Ore market - our house view

- Prevailing financial crisis and its contagious impact on the world economy.
  - Global economic structure – key reason of the crisis
  - USA government and citizen today spending tomorrow’s money
  - China and Japan saving culture
  - USA IT bubble burst extended by Allan Greenspan by lowering interest rate creating Mega Evil
  - The crisis will be enduring
  - Sub-prime mortgage /MBS/CDO/CDS/Capital tightness and liquidity ice age
  - The financial crisis will impact on world economy – recession in sight already?
Iron Ore market - our house view

- Inventory at Chinese ports remain at near all time highs
- Despite government pressure to reduce stock levels at the ports, domestic iron ore production stabilizing and a reduction of iron ore imports in August, stock levels are still hovering around the all-time high

China Iron Ore Supply

- Production
- Import
- Stocks

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• Collapse of capsize freight to levels not seen in the last two years

Iron Ore market - our house view
Iron Ore market - our house view

- China Steel price continues to adjust lower because of lack of demand
- Baosteel price adjustment
- Iron ore spot price continues its slides
- In near term, iron ore price weakness will persist.
Iron Ore market evolution

- Iron ore is the primary raw material for making steel and is part of a broader commodity community.

Iron ore (IO) is the primary raw material for making steel

~$75B global market in 2007 and growing

<table>
<thead>
<tr>
<th>Mining</th>
<th>Transport</th>
<th>Manufacturing</th>
<th>Steel Products</th>
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<tbody>
<tr>
<td>Mine</td>
<td>Rail</td>
<td>Steel mill</td>
<td>Pig iron</td>
</tr>
<tr>
<td>Iron ore</td>
<td>Seaborne</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Hot Rolled Coil
- Sheet
- Rebar
- Angle
- ...and other forms of steel

2007 global demand (Mt)
- Iron Ore: 1,500
- Steel: 1,300

2007 global market value ($B)
- Iron Ore: 75
- Steel: 800
Iron Ore market evolution

- Iron ore market $75 billion in 2007 and growing
- Since 2000, China has accounted for all growths in seaborne iron ore market

Since 2000, China has accounted for virtually all growth in the seaborne iron ore market

<table>
<thead>
<tr>
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<th>'03-'07</th>
<th>'07-'10</th>
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<td>Total</td>
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<td>6</td>
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<tr>
<td>China</td>
<td>28</td>
<td>12</td>
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<tr>
<td>Rest of world</td>
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</table>

Global seaborne Iron ore

MT

200 400 600 800 1000 1200

'00 '01 '02 '03 '04 '05 '06 '07E '08E '09E '10E
Iron Ore market evolution

• Globalization is the key feature of world economic activity and China entry WTO in 2001
• Iron ore industry consolidation as a result of globalization.
• BHP/RIO TINTO/VALE
• Dominant price making power. Vale new price enhancement demand
Iron Ore market evolution

• Commodity community change – new commodity market structure
Iron Ore market evolution

• Commodity Physical Market
  – Exploration
  – Mining
  – Smelting/Refining
  – Processing
  – Trading
  – Transportation

• Futures/Option Market
  – Exchanges
  – LME/COMEX/SHFE
  – ICE/NYMEX
  – CBOT/DCE

• OTC Market
  – Bank
  – Broker
Iron Ore market evolution

- Function of exchange & OTC Market
  - Price discovery
  - Risk management
Iron Ore market evolution

I. Rise of spot sales
- Trend for fixed priced commodities to break down to more 'market based' pricing
- Shift from fixed to spot pricing accompanied by greater volatility
- Single reference product emerges as the pricing standard to simplify trades

II. Supported by financial markets
- Development of financial market usually follows physical spot, driven by a volatile spot market
- Intermediaries enter to facilitate transactions
- As a liquid financial forward/futures market develops, larger suite of financial instruments developed by investment banks, e.g. options, swaps

III. Development of adjacent markets
- Vibrant spot and financial market further encourage adjacent markets to develop
  - Both upstream and downstream

Standardization, price transparency enable evolution

Indicative positions
- Steel
- Electricity
- Oil
- Gold
- Freight
- Coal
- Natural gas
- Copper
Iron Ore Index pricing our view

- Iron ore market is ready for the evolution
  - Large market size
  - Price volatility
  - Many market players
  - Standardization
  - Reliable price index
  - Reputable intermediary participants
Iron Ore Index prices

**Platts**
- A leading provider of energy and metals information, with nearly a century of business experience
- Strong reputation for its expertise in index creation and price reporting

**MB**
- Well known in ferrous/non-ferrous metals markets
- Currently publishing journalistic iron ore index price series via its publication/email/web service

**SBB**
- Specializes in steel trading information, reporting over 140 steel and raw material price series
- Publishing journalistic IO index
World class investment banks involvement

Credit Suisse

- Tradable forward curve based on CIF China Fines
- Avg price of MB/SBB
- By quarter for forward up to Q4 2009
- Updated on latest data available from the source
- “Price indications are good for up to 10,000 tonnes per quarter”

Deutsche Bank

- Tradable forward curve based upon CIF China Fines
- Avg price of MB/SBB
- By month for forward 12 months
- Intraday price frequency
Risk Management

- Many large China mills have exposure to the spot market
Conclusion

OTC forward swap - a useful tools for Chinese steel mills!
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