World Steel Dynamics

ISRI Convention & Expo
Steel Indexing & Price Transparency

Patrick A. McCormick
Managing Partner
April 20, 2007
Price Indexing & Price Transparency
New Tools for A New World Economy

The global steel industry continues to power on

Global steel production has maintained strong growth since the “pick up” ~2000, with growth rates of 5%pa from 1996 and 7.6%pa from 2001

The emerging age
pre 1945 2.8%pa

The golden age
1945 – 1973 6.2%pa

Rise of Japan

Rebuilding of Europe

The efficiency age
1974 – 1995 0.2%pa

Oil Shocks

Fall of Berlin Wall

New golden age

The China Effect

The China age?
1996 >4.6%pa

Privatisations
Consolidation

High Rates of Steel Demand Growth Are Likely to Continue
Price Indexing & Price Transparency

Why Is It Needed?

- Customers Want to Know Their Cost
- Businesses Want to Know that Margins are Secure
- How can This be Accomplished in Volatile Markets?
  - Requires a Measurement of Market Value Over Time

Price Transparency

- Indexing prices in Physical Contracts and Financial Contracts Can Achieve Stable Pricing/Cost

Price Indexing
The SteelBenchmarker™ Process
Achieving Price Transparency

- Easy internet access
- All market participants can become a price opinion provider
- Collecting price opinions from mills, end-users, traders, distributors, scrappies, etc.
- WSD has experience in collecting price opinions
  - WSD PriceTracker series initiated in 1981
  - SteelBenchmarker™ carried on in April 2006
- Steel products include HRB, CRC, Plate, and Rebar
- Steel scrap prices for #1 HM, shredded, and #1 busheling

You Too Can Become a Price Opinion Provider at
www.steelbenchmarker.com
World Steel Dynamics

Robust SteelBenchmarker™ Prices Will be Used to Settle Steel Futures Contracts

SteelBenchmarker Hot Rolled Band

Safety in Numbers

Number of Price Opinions vs. Price per Metric Tonne

Price and Date:
- 05-Apr-06
- 19-Apr-06
- 03-May-06
- 17-May-06
- 31-May-06
- 14-Jun-06
- 28-Jun-06
- 12-Jul-06
- 26-Jul-06
- 05-Aug-06
- 19-Aug-06
- 23-Aug-06
- 30-Aug-06
- 06-Sep-06
- 20-Sep-06
- 04-Oct-06
- 18-Oct-06
- 01-Nov-06
- 15-Nov-06
- 29-Nov-06
- 13-Dec-06
- 18-Dec-06
- 01-Jan-07
- 15-Jan-07
- 29-Jan-07
- 12-Feb-07
- 26-Feb-07
- 09-Mar-07
- 23-Mar-07
- 06-Apr-07
- 20-Apr-07
Hot Rolled Band Prices
Larger Price Spreads Between Regions

SteelBenchmarker™ HRB Price
USA, China, Western Europe and World Export

April 9, 2007

Dollars per metric tonne

USA FOB mill
Western Europe ex-works
China ex-works
World Export FOB port of export
The ABC’s of Price Indexing and Financial Hedge Accounting

A. The buyer and seller agree to use a price index such as the SteelBenchmarker™ in their supply contract

- Base price adjustments are driven by index changes
- Adders/deducts are negotiated and are typically held constant in the price calculation

B. Use OTC or trading exchanges to achieve fixed pricing via financial swaps or futures contracts

C. FAS 133 “effectiveness” measurement must be met to avoid booking unrealized future gains and losses to income

- Use the same settlement index in the physical and financial contracts
Trading Market Structure

Exchange Market

Producer

Futures Exchange

End User

OTC

OTC Market

Producer

$ Steel

Index

Swap Price

End User

Index

Swap Price

Koch
OTC Financial Swaps
The Opportunity and The Math

USA Hot Roll Prices & Forecast

- WSD Med-High FC
- WSD Med-Low FC
- WSD Hot rolled Band
- Koch January FC
- Koch Apri FC
## OTC Financial Swap Calculation (Buyer)

### Med High Market Forecast

<table>
<thead>
<tr>
<th></th>
<th>May</th>
<th>Jun</th>
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<tbody>
<tr>
<td><strong>Market Price</strong></td>
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<td><strong>Base Price</strong></td>
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<td><strong>Variance (Pos = Bad)</strong></td>
<td>$46</td>
<td>$51</td>
<td>$46</td>
<td>$31</td>
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<td><strong>Net Variance</strong></td>
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### Financial Swap Cost

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### Med High FC
- **May – Dec’07**
  - $599 ST MKT
  - $559 ST Swap
  - $40 ST Savings
  - 8 Mo Fixed Price

### Med Low FC
- **May – Dec’07**
  - $550 ST MKT
  - $559 ST Swap
  - $9 ST Cost
  - 8 Mo Fixed Price
New Steel Financial Hedging Tools Are Coming

- NYMEX, LME and CME are all considering launching steel futures contracts
- The NYMEX has signed a letter of intent to use the WSD/AMM/MB SteelBenchmarker™ price series to settle steel futures contracts on its “Clearport” system
- Expected advantages
  - Electronic visibility of the forward traded price curve
  - Smaller contract size allows for more sophisticated hedging strategies
  - Exchange trading is expected to improve trading liquidity

Steel Futures contracts will not have the same exposure to speculative financial trades. Steel futures will be settled with a physical transaction price index, e.g. SteelBenchmarker™
Scrap price volatility has increased in price magnitude and frequency of price change
- Scrap exports seek to find the highest priced markets
- EAF expansion in CIS is impacting scrap exports
- Higher global growth rates of steel production have tightened metallics supply capabilities

Customers Want to Know Their Cost
Businesses Want to Know that Margins are Secure

Are Scrap Collectors and Processors Ready to Provide Fixed Price Solutions to Their Customers?
Record Prices for #1HM & Shredded

SteelBenchmarker™ Scrap Price
USA, delivered to steel plant

April 9, 2007

#1 Busheling

#1 Heavy Melting

Shredded Scrap

Dollars per gross ton

Jan-00 Apr-00 Jul-00 Oct-00 Jan-01 Apr-01 Jul-01 Oct-01 Jan-02 Apr-02 Jul-02 Oct-02 Jan-03 Apr-03 Jul-03 Oct-03 Jan-04 Apr-04 Jul-04 Oct-04 Jan-05 Apr-05 Jul-05 Oct-05 Jan-06 Apr-06 Jul-06 Oct-06 Jan-07 Apr-07

336
317
270
# SteelBenchmarker™ – AMM Scrap Prices

## Already Achieving Close Agreement

**Composite Prices ($/GT)**

<table>
<thead>
<tr>
<th>Date</th>
<th>WSD #1 HM</th>
<th>AMM #1 HM</th>
<th>WSD Shred</th>
<th>AMM Shred</th>
<th>WSD #1 Bush</th>
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<td>317</td>
<td>343</td>
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<td>359</td>
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</table>
WSD Does Not Believe China Will Return to Large Imported Quantities of Scrap

- China’s obsolete scrap reservoir doesn’t increase much until after 2010
- Over the cycle, iron based steelmaking cost remains lower than scrap based EAF steelmaking cost
- China is developing capabilities that allow greater use of low concentrated ores
- Large steelmaking capacity additions are best served by iron based steelmaking
Key Takeaways

- The world has transitioned to a higher economic growth
- Market price volatility is likely to continue
- Price series, such as the SteelBenchmarker™, are needed to track the rapid market changes
  
  Sign up at www.steelbenchmarker.com

- Customers and businesses want predictable cost and margins
- Emerging price risk management tools can provide a viable solution
  
  provided that:
  - Market participants understand price risk management tools
  - Price risk management strategies are tied to business objectives
  - Sufficient financial liquidity is available to make timely trades