Introduction to: International WOOD MARKETS Group

• We are wood products industry consultants and we assist companies around the world to develop operational, marketing & business strategies.

• We are known as global market & industry experts/analysts on timber, lumber, panels & many millwork products sold in the U.S. market & key export markets.

1. Global Timber & Lumber Supply Issues

The biggest wildcards impacting markets:

**Short Term to Mid Term Demand (2011-2013):**

- U.S. housing starts – to a “normal” 1.5 million units when?
- Slow & steady growth expected in U.S. market.
- EU (global) debt crisis (and other emerging crises?).
- China’s supply shortage (emerging gap vs. demand).
- Rising demand in Middle East & North Africa markets
- Japan – rebuilding after the earthquake & tsunami
- Other Asian markets – steady demand (Korea, Taiwan)
- Other wildcards: Markets in India, Other Asia, etc.
- Conclusion: Rising demand, strong at times and then it will soar!
Global Timber & Lumber Supply Issues

The biggest wildcards impacting markets:

Mid to Longer Term Supply (2011+):

• China’s ongoing timber supply “gap” and need for imports
• Russia log export tax: WTO & going from 25% to 12.5%?
• Role of Timberland Investment Management Organizations (TIMO) in the U.S., New Zealand and other markets
• Rising sawlog and low grade log prices in Europe
• BC mountain pine beetle (and its expansion east).
• Quebec (2nd largest region in Canada) – 25% reductions in timber supply + 10% further reduction expected by 2013.
• US/global timber lumber supply gap looming by 2015?
• Other wildcards: Sawmill competitiveness between regions and in export markets.
• Ocean freight rates & currency fluctuations
2. China: Key Growth Trends & Issues

Economic Growth & Wood Products Demand:

• Strong economic growth in China = has rebounded quickly and strongly since early 2009 and is expected to continue at ~9%.

• China’s domestic wood products demand growing at about 9-10% per year and this huge growth trend is forecast to continue to at least 2015 (Source: WOOD MARKETS’ The China Book).

• China consumes about 75-85+% of its domestic production, so the GDP growth and wood products growth are tied closely.

• But China is RAW MATERIAL CONSTRAINED!
Russia still dominates, but NZ, US & Canada exports rising
GLOBAL LUMBER/SAWN WOOD COST BENCHMARKING REPORT

Featuring:
- A profile of the major sawn wood-producing regions in North America, Europe and the Southern Hemisphere
- Benchmarking of log costs, sawmilling costs, lumber revenues and margins for over 25 key countries or regions
- Includes full-year costs/revenues for 2008, with a timely update on cost structures occurring in Q1/2009 (just before the release date)
- Assessment of currency fluctuations and transportation on delivered costs to market by exporting country
- Cost summaries and analyses based on information gathered directly from sawmill visits
- Enhancements for this report include sawmill proformas at actual and “normal” operating rates

Available April 30, 2009

Global Sawnwood/Lumber Benchmarking Report:
2008 Costs Excerpts related to Chinese costs

2011 Report: Out in May 2011
# Global Lumber Cost Benchmarking

## Global Benchmarking: Countries Surveyed

<table>
<thead>
<tr>
<th>USA:</th>
<th>Europe (cont)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. USA – South – West</td>
<td>15. Estonia</td>
</tr>
<tr>
<td>2. USA – South – Central</td>
<td>16. Latvia</td>
</tr>
<tr>
<td>3. USA – South – East</td>
<td>17. Lithuania</td>
</tr>
<tr>
<td>4. USA – West – Oregon</td>
<td>18. Czech Republic</td>
</tr>
<tr>
<td>5. USA – West – Washington</td>
<td>19. Austria</td>
</tr>
<tr>
<td>6. USA – West – Inland</td>
<td>20. Germany</td>
</tr>
<tr>
<td>13. South Sweden</td>
<td>27. Brazil</td>
</tr>
<tr>
<td>14. Finland</td>
<td>28. South Africa</td>
</tr>
<tr>
<td>29. China</td>
<td>29. China</td>
</tr>
</tbody>
</table>

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**Note:** The list above provides a summary of the countries surveyed for global lumber cost benchmarking. The countries are divided into regions: USA, Canada, and Europe, with further subdivisions for regional lumber production and consumption. The list includes specific regions and locations within each country to provide a comprehensive overview of the survey scope.
China = Highest Delivered Log Costs

China = strong log demand + imports = high prices

Global Delivered Log Costs - Average Mill 2008

US$/Net m3 - Lumber Basis

Total Delivered Log Costs

Global Avg Delv’d Log Cost

Int'l WOOD MARKETS Group
/Pwc/ Beck; Copyrighted by Int'l WOOD Markets Group *Logs at Cost
China’s Lumber Imports = Soaring

Canadian softwood lumber has overtaken Russia.

Source: CC

China: Lumber Imports by Country

- USA
- New Zealand
- Canada
- Russia

Source: CC

Thousands m3

2006 2007 2008 2009 2010
China’s total “wood” demand:

- Is expected to grow from 250 million m³ in 2010 to 350 million m³ by 2015 (a conservative 8% per year).
- The projected wood deficit (or the role of imports) is expected to grow from 100 million m³ to 150 million m³ – Roundwood Equivalent (10% per year).
- However, Chinese industry forecasts indicate that China’s wood demand should grow more at a rate of 10-15% per year to 2015, so the import gap could be up to double what is currently forecast.
- Where will the additional (100-200) million m³ (RWE) of imports come from over the next 5 years??
China’s demand is growing at 8-10% per year = requires huge raw material supplies to be sustained!

China future = tied to plantation forests – but there is a gap

Source: CNDRC & Chinese Society of Forestry
RUSSIA: Timber Export Tax

- For softwood logs, the tax has risen:
  - from 6.5% to 20% (euro 10/m3) in July 2007.
  - to 25% (euro 15/m3) in April 2008.
  - to 80% (euro 50/m3) in Jan. 2012 - DELAYED

- For hardwood saw/veneer logs, the export tax is already at euro 100/m3.

- For birch pulpwood, the tax has been delayed.

- Now the Russian log export tax may reduced by 50% to 67% after Russia joins WTO = an unknown

- Russian log prices have been driven higher and this has caused the Chinese industry to look for new log and lumber suppliers to fill the gap.
Domestic & Imported Lumber Prices Up

The timber supply gap is increasing lumber prices (in US$);
Source: WOOD MARKETS’ Monthly China Bulletin
Chinese Prices Look Better to NA Mills.

BC, Oregon, Washington mills now running for China as it is possible to make money selling to China!

Delivered Softwood Lumber: US vs China - Quarterly Prices

US$\text{/m}^3$ - net.

USA: BC W-SPF #2&Btr, 2x4 D'lvd Chicago

CHINA: SPF/Hem-Fir, Green, #3 & Btr 1-7/8x4-12 C&F

Source: WOOD Markets
China Impact on U.S. PNW Sawmills

• Logs are critical to China’s employment levels, GDP growth and (JIT) supply chain, so more logs will be imported from the U.S., Canada, NZ, etc.

• Russia log supply is a wildcard due to number of political issues.

• China is able to match or outbid US PNW mills for logs at today’s U.S. lumber prices. Current US PNW log price is about $100/m3 ($650/Mbf Scribner) or about $165-$175/m3 cif China port. Chinese mills are still profitable at this log price.

• Continuing pressure expected to continue on PNW log supply & prices, as China’s sawmilling industry is hungry for increased log supply!
## Comparison of Logs processed in U.S. PNW vs. China Sawmills

### US PNW Logs: Domestic Mills vs Logs Processed in China

<table>
<thead>
<tr>
<th>COST CATEGORY</th>
<th>US WEST COAST SAWMILL</th>
<th>CHINA SAWMILL (Imported US Logs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Cost - US$/Mbf - Scribner</td>
<td>650</td>
<td>650</td>
</tr>
<tr>
<td>Log Conversion - Scribner to m3</td>
<td>6.5</td>
<td>6.5</td>
</tr>
<tr>
<td>Log Cost - US$/m3</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Ocean &amp; Inland Freight Costs</td>
<td></td>
<td>55</td>
</tr>
<tr>
<td>Port and Handling Costs (both sides)</td>
<td></td>
<td>30</td>
</tr>
<tr>
<td>Total Delivered Log Costs - US$/m3</td>
<td>100</td>
<td>185</td>
</tr>
</tbody>
</table>

### ADVANTAGE

- Sawmill Recovery - Logs to Lumber
- Labour costs
- Other cash conversion costs
- Total Costs
- Average By-Product Revenue
- Average Lumber Revenue
- EBITDA Margin
- EBITDA Margin

### Source:
WOOD MARKETS - Global Timber / Sawmill / Lumber Cost Benchmarking Report 2011 - release date: June
The 5-year outlook; or monthly log/lumber prices/updates
WOOD MARKETS: 2 Conferences:

CHINA
Sept. 12-15:

China International
SOFTWOOD Log &
Lumber Trade
Conference
Tianjin, China
September 15-16

Plus: Optional 3-Day
Tour of Log Ports, Mills
and Distribution (Sept. 12-14)

VANCOUVER BC
May 9 2012:

G L O B A L
WOOD PRODUCTS
INDUSTRY & MARKET CONFERENCE
May 9, 2012
VANCOUVER, BC

FEATURING
One-day International wood products/markets
conference
A cross-section of North American and
international speakers
Discussions and analysis about challenges, new
opportunities, threats and outlooks

In conjunction with:
- PwC's 33rd Annual One-Day Global Forest & Paper
  Industry Conference: May 11, 2011
- The Pulp and Paper Producers Council Annual Meeting:
  May 9-11, 2011
- The Global Forest Products Leadership Summit 2011:
  May 9-11, 2011

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INTERNATIONAL WOOD MARKETS GROUP INC.
Vancouver, BC
2. Other Asian Market Impacts

- South Korea
  - Steady to increasing demand for logs and lumber.

- Japan
  - Rebuilding will increase demand for logs and lumber in 2012.

- India, Middle East, North Africa
  - Increasing demand but higher freight rates.

- Australia
  - New demand to rebuild flood damage.

- Outlook:
  - Strong demand drivers in Asia.
The future of BC’s harvest and wood products production:

- Gerry Van Leeuwen
- Russ Taylor
- Jim Girvan
- Murray Hall

Forecast to 2028

BC Timber Availability and Wood Products Production

Impact and Outlook on Mountain Pine Beetle Attack

March 2010

Published by WOODMARKETS

3. BC Interior: Mountain Pine Beetle Attack

A proprietary modeling of BC timber and panel production by year
- An annual projection of the likely supply of wood residuals for pulp, MDF, particleboard, bioenergy and wood pellets in BC
- Impact on the supply/demand balance in North America
- BCS declining lumber output and its
- An examination of how higher lumber or timber prices will be required to fill the looming North American deficit

Released: Late March 2010
**BC Mountain Pine Beetle**

- The mountain pine beetle damage:
  - ~ 675 million m³ dead in 2009 (50% of total BC pine) & 16.3 million hectares; = 14x B.C. Interior’s annual harvest.
  - Likely will peak by killing 900 million m³ by 2022 = 70% of B.C.’s total pine & reducing the log harvest & sawnwood output by 20-30% of historical levels.

- Is now in ALBERTA and is moving east…
- The MPB = some impact on structural lumber properties (MSR now an issue), but looks different - blue stain & checking = problem for Japan (and some US) sales.
BC Interior Lumber Production: Possible Outlook Scenarios

Declining lumber production forecast after 2014/15

Excerpts from our latest 5-year forecast

Outlook for Lumber & Panel Products

Released: Dec 2010
US Lumber Prices = Below Normal

Need US $250+/Mbf for profitable operations at “average” mill

Source: Random Lengths
US & Canada Sawmill Operating Rates

Need 80+% operating rates for stronger prices!

Source: WWPA/ WOOD MARKETS
Gradually accelerating growth, but 2011 probably flat vs. 2010
BC Lumber Exports to China = Soar

Huge upside for BC lumber in China until US market soars
OSB will rebound to its 2006 highs by 2015; Not lumber
No China factor with OSB; too much installed capacity!
Based on the US demand outlook, output + imports rise
Gap will require higher prices for logs, imported lumber, etc.
5. US Prices to Soar by 2013-14

W-SPF & Composite Lumber Price Forecast

Source: Random Lengths; Forecast: WOOD Markets

W-SPF Prices to spike as high as US$500/Mbf in 2014
North America Lumber Outlook

- Slow recovery in new residential housing market
- Tightening timber supplies:
  - BC, Quebec, role of TIMOs = tighter supply
  - Increased demand for logs in China, Asia
- Increased lumber demand:
  - Slowly in North America as new residential housing market slowly rebounds
  - High export demand in China = to continue
  - Increasing in Asia, Middle East, North Africa
- U.S. demand will start to outstrip supply ~2014
- Reduced sawmill capacity in the US and Canada
- Higher and very strong prices forecast!
Thank You!

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President

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