Hardwood Market
Trends and Outlook

What a difference 6 months makes

Dan Meyer
Price Indices

Kiln-Dried

Green

$/MBF Gross Tally

“Yes”
Housing Markets

Existing SF Home Sales (Thous. SAAR)

SF Home Starts (Thous. SAAR)
• Recent Hardwood Market Trends
  – Production, consumption, major demand shifts, prices

• Price Drivers

• Outlook:
  – Domestic Grade Markets
  – Low-grade Markets
  – Export Markets
### Import/Export Data

#### U.S. Hardwood Lumber Exports (view import data)

Data is sorted in descending current YTD volume.

<table>
<thead>
<tr>
<th>Country</th>
<th>Vol (m³)</th>
<th>Value ($)</th>
<th>$/M³</th>
<th>Previous YTD</th>
<th>Current YTD</th>
<th>Change</th>
<th>Value ($)</th>
<th>$/M³</th>
<th>Previous YTD</th>
<th>Current YTD</th>
<th>Change</th>
<th>Unit Value: $/M³</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>32,504</td>
<td>$20,903,151</td>
<td>$643</td>
<td>161,302</td>
<td>229,222</td>
<td>+42.1 %</td>
<td>$91,337,061</td>
<td>$141,016,793</td>
<td>+54.4 %</td>
<td>$566</td>
<td>$615</td>
<td>+8.7 %</td>
</tr>
<tr>
<td>Canada</td>
<td>12,839</td>
<td>$4,579,251</td>
<td>$354</td>
<td>105,456</td>
<td>99,008</td>
<td>-6.1 %</td>
<td>$35,540,708</td>
<td>$35,000,455</td>
<td>-4.2 %</td>
<td>$347</td>
<td>$354</td>
<td>+2.0 %</td>
</tr>
<tr>
<td>Mexico</td>
<td>7,137</td>
<td>$3,199,016</td>
<td>$448</td>
<td>27,074</td>
<td>32,404</td>
<td>+19.7 %</td>
<td>$11,243,407</td>
<td>$14,164,075</td>
<td>+26.0 %</td>
<td>$415</td>
<td>$437</td>
<td>+5.3 %</td>
</tr>
<tr>
<td>Vietnam</td>
<td>566</td>
<td>$302,483</td>
<td>$534</td>
<td>5,335</td>
<td>7,349</td>
<td>+37.6 %</td>
<td>$2,681,684</td>
<td>$4,000,121</td>
<td>+36.8 %</td>
<td>$540</td>
<td>$544</td>
<td>+0.7 %</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>774</td>
<td>$534,702</td>
<td>$691</td>
<td>4,347</td>
<td>4,689</td>
<td>+7.9 %</td>
<td>$2,726,935</td>
<td>$3,145,976</td>
<td>+15.4 %</td>
<td>$627</td>
<td>$671</td>
<td>+7.0 %</td>
</tr>
<tr>
<td>Egypt</td>
<td>258</td>
<td>$217,664</td>
<td>$944</td>
<td>2,656</td>
<td>3,529</td>
<td>+32.9 %</td>
<td>$1,727,793</td>
<td>$2,543,190</td>
<td>+47.2 %</td>
<td>$651</td>
<td>$721</td>
<td>+10.8 %</td>
</tr>
<tr>
<td>Japan</td>
<td>547</td>
<td>$406,811</td>
<td>$744</td>
<td>2,833</td>
<td>2,778</td>
<td>-1.9 %</td>
<td>$2,342,798</td>
<td>$2,295,961</td>
<td>-2.0 %</td>
<td>$827</td>
<td>$826</td>
<td>-0.1 %</td>
</tr>
<tr>
<td>Taiwan</td>
<td>389</td>
<td>$207,272</td>
<td>$533</td>
<td>1,088</td>
<td>2,681</td>
<td>+146.4 %</td>
<td>$580,340</td>
<td>$1,423,269</td>
<td>+145.2 %</td>
<td>$533</td>
<td>$531</td>
<td>-0.4 %</td>
</tr>
<tr>
<td>Jordan</td>
<td>373</td>
<td>$246,999</td>
<td>$662</td>
<td>2,346</td>
<td>2,144</td>
<td>-8.6 %</td>
<td>$1,501,054</td>
<td>$1,508,877</td>
<td>+0.5 %</td>
<td>$640</td>
<td>$704</td>
<td>+10.0 %</td>
</tr>
<tr>
<td>Malaysia</td>
<td>255</td>
<td>$152,893</td>
<td>$600</td>
<td>1,448</td>
<td>2,087</td>
<td>+44.1 %</td>
<td>$768,422</td>
<td>$1,118,266</td>
<td>+45.5 %</td>
<td>$531</td>
<td>$536</td>
<td>+0.9 %</td>
</tr>
<tr>
<td><strong>Oak, Red Total</strong></td>
<td><strong>57,496</strong></td>
<td><strong>$32,335,501</strong></td>
<td><strong>$562</strong></td>
<td><strong>333,272</strong></td>
<td><strong>400,634</strong></td>
<td><strong>+20.2 %</strong></td>
<td><strong>$164,960,813</strong></td>
<td><strong>$217,381,531</strong></td>
<td><strong>+31.0 %</strong></td>
<td><strong>$495</strong></td>
<td><strong>$543</strong></td>
<td><strong>+9.7 %</strong></td>
</tr>
</tbody>
</table>
Recent Hardwood Market Trends:

Supply and Demand
## Lumber Supply and Demand

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic Production</td>
<td>9.71</td>
<td>9.94</td>
<td>9.75</td>
<td>8.75</td>
<td>7.22</td>
<td>7.50</td>
<td>8.25</td>
<td>8.67</td>
<td>9.08</td>
<td>9.98</td>
<td>BBF</td>
</tr>
<tr>
<td>Imports</td>
<td>0.80</td>
<td>0.68</td>
<td>0.52</td>
<td>0.36</td>
<td>0.21</td>
<td>0.25</td>
<td>0.24</td>
<td>0.25</td>
<td>0.28</td>
<td>0.31</td>
<td></td>
</tr>
<tr>
<td>TOTAL SUPPLY</td>
<td>10.51</td>
<td>10.62</td>
<td>10.27</td>
<td>9.11</td>
<td>7.43</td>
<td>7.75</td>
<td>8.49</td>
<td>8.92</td>
<td>9.36</td>
<td>10.29</td>
<td></td>
</tr>
<tr>
<td>Exports</td>
<td>1.28</td>
<td>1.32</td>
<td>1.16</td>
<td>0.94</td>
<td>0.80</td>
<td>1.07</td>
<td>1.19</td>
<td>1.32</td>
<td>1.46</td>
<td>1.58</td>
<td></td>
</tr>
<tr>
<td>Furniture</td>
<td>1.51</td>
<td>1.45</td>
<td>1.30</td>
<td>1.01</td>
<td>0.96</td>
<td>0.99</td>
<td>1.02</td>
<td>1.00</td>
<td>0.95</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>Cabinets</td>
<td>0.81</td>
<td>0.88</td>
<td>0.77</td>
<td>0.62</td>
<td>0.44</td>
<td>0.43</td>
<td>0.42</td>
<td>0.45</td>
<td>0.53</td>
<td>0.56</td>
<td></td>
</tr>
<tr>
<td>Components/Millwork/Moulding</td>
<td>0.90</td>
<td>0.97</td>
<td>0.85</td>
<td>0.69</td>
<td>0.49</td>
<td>0.47</td>
<td>0.46</td>
<td>0.50</td>
<td>0.59</td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>Residential Flooring</td>
<td>1.22</td>
<td>1.09</td>
<td>1.04</td>
<td>0.83</td>
<td>0.58</td>
<td>0.67</td>
<td>0.70</td>
<td>0.73</td>
<td>0.76</td>
<td>0.80</td>
<td></td>
</tr>
<tr>
<td>Truck Trailer Flooring</td>
<td>0.18</td>
<td>0.20</td>
<td>0.16</td>
<td>0.10</td>
<td>0.05</td>
<td>0.09</td>
<td>0.15</td>
<td>0.17</td>
<td>0.17</td>
<td>0.18</td>
<td></td>
</tr>
<tr>
<td>Pallets/Crating</td>
<td>3.10</td>
<td>3.10</td>
<td>2.80</td>
<td>2.50</td>
<td>2.49</td>
<td>2.60</td>
<td>2.98</td>
<td>3.15</td>
<td>3.30</td>
<td>3.91</td>
<td></td>
</tr>
<tr>
<td>Railroads</td>
<td>0.84</td>
<td>0.95</td>
<td>0.91</td>
<td>0.93</td>
<td>0.88</td>
<td>0.87</td>
<td>0.98</td>
<td>1.03</td>
<td>1.08</td>
<td>1.13</td>
<td></td>
</tr>
<tr>
<td>Mats/Board Road/Timbers</td>
<td>0.62</td>
<td>0.62</td>
<td>0.63</td>
<td>0.64</td>
<td>0.68</td>
<td>0.72</td>
<td>0.75</td>
<td>0.83</td>
<td>0.92</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Other Industrial/Misc.</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>TOTAL CONSUMPTION</td>
<td>10.51</td>
<td>10.62</td>
<td>9.67</td>
<td>8.31</td>
<td>7.43</td>
<td>7.95</td>
<td>8.70</td>
<td>9.22</td>
<td>9.81</td>
<td>10.73</td>
<td></td>
</tr>
</tbody>
</table>
# Lumber Supply and Demand

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Imports</td>
<td>0.80</td>
<td>0.68</td>
<td>0.52</td>
<td>0.36</td>
<td>0.21</td>
<td>0.25</td>
<td>0.24</td>
<td>0.25</td>
<td>0.28</td>
<td>0.31</td>
</tr>
<tr>
<td><strong>TOTAL SUPPLY</strong></td>
<td>10.51</td>
<td>10.62</td>
<td>10.27</td>
<td>9.11</td>
<td>7.43</td>
<td>7.75</td>
<td>8.49</td>
<td>8.92</td>
<td>9.36</td>
<td>10.29</td>
</tr>
<tr>
<td>Exports</td>
<td>1.28</td>
<td>1.32</td>
<td>1.16</td>
<td>0.94</td>
<td>0.80</td>
<td>1.07</td>
<td>1.19</td>
<td>1.32</td>
<td>1.46</td>
<td>1.58</td>
</tr>
<tr>
<td>Furniture</td>
<td>1.51</td>
<td>1.45</td>
<td>1.30</td>
<td>1.01</td>
<td>0.96</td>
<td>0.99</td>
<td>1.02</td>
<td>1.00</td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td>Cabinets</td>
<td>0.81</td>
<td>0.88</td>
<td>0.77</td>
<td>0.62</td>
<td>0.44</td>
<td>0.43</td>
<td>0.42</td>
<td>0.45</td>
<td>0.53</td>
<td>0.56</td>
</tr>
<tr>
<td>Components/Millwork/Moulding</td>
<td>0.90</td>
<td>0.97</td>
<td>0.85</td>
<td>0.69</td>
<td>0.49</td>
<td>0.47</td>
<td>0.46</td>
<td>0.50</td>
<td>0.59</td>
<td>0.62</td>
</tr>
<tr>
<td>Residential Flooring</td>
<td>1.22</td>
<td>1.09</td>
<td>1.04</td>
<td>0.83</td>
<td>0.58</td>
<td>0.67</td>
<td>0.70</td>
<td>0.73</td>
<td>0.76</td>
<td>0.80</td>
</tr>
<tr>
<td>Truck Trailer Flooring</td>
<td>0.18</td>
<td>0.20</td>
<td>0.16</td>
<td>0.10</td>
<td>0.05</td>
<td>0.09</td>
<td>0.15</td>
<td>0.17</td>
<td>0.17</td>
<td>0.18</td>
</tr>
<tr>
<td>Pallets/Crating</td>
<td>3.10</td>
<td>3.10</td>
<td>2.80</td>
<td>2.50</td>
<td>2.49</td>
<td>2.60</td>
<td>2.98</td>
<td>3.15</td>
<td>3.30</td>
<td>3.91</td>
</tr>
<tr>
<td>Railroads</td>
<td>0.84</td>
<td>0.95</td>
<td>0.91</td>
<td>0.93</td>
<td>0.88</td>
<td>0.87</td>
<td>0.98</td>
<td>1.03</td>
<td>1.08</td>
<td>1.13</td>
</tr>
<tr>
<td>Mats/Board Road/Timbers</td>
<td>0.62</td>
<td>0.62</td>
<td>0.63</td>
<td>0.64</td>
<td>0.68</td>
<td>0.72</td>
<td>0.75</td>
<td>0.83</td>
<td>0.92</td>
<td>1.00</td>
</tr>
<tr>
<td>Other Industrial/Misc.</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>TOTAL CONSUMPTION</strong></td>
<td>10.51</td>
<td>10.62</td>
<td>9.67</td>
<td>8.31</td>
<td>7.43</td>
<td>7.95</td>
<td>8.70</td>
<td>9.22</td>
<td>9.81</td>
<td>10.73</td>
</tr>
</tbody>
</table>

| Low-Grade Total (BBF)                     | 4.61  | 4.72  | 4.39  | 4.12  | 4.10  | 4.24  | 4.76  | 5.06  | 5.35  | 6.09   |
| % of Total Production                     | 47%   | 47%   | 45%   | 47%   | 57%   | 57%   | 58%   | 58%   | 59%   | 61%    |
## Lumber Supply and Demand

### Estimated Hardwood Production & Consumption

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Domestic Production</strong></td>
<td>9.71</td>
<td>9.94</td>
<td>9.75</td>
<td>8.75</td>
<td>7.22</td>
<td>7.50</td>
<td>8.25</td>
<td>8.67</td>
<td>9.08</td>
<td>9.98</td>
</tr>
<tr>
<td><strong>Imports</strong></td>
<td>0.80</td>
<td>0.68</td>
<td>0.52</td>
<td>0.36</td>
<td>0.21</td>
<td>0.25</td>
<td>0.24</td>
<td>0.25</td>
<td>0.28</td>
<td>0.31</td>
</tr>
<tr>
<td><strong>TOTAL SUPPLY</strong></td>
<td>10.51</td>
<td>10.62</td>
<td>10.27</td>
<td>9.11</td>
<td>7.43</td>
<td>7.75</td>
<td>8.49</td>
<td>8.92</td>
<td>9.36</td>
<td>10.29</td>
</tr>
<tr>
<td><strong>Exports</strong></td>
<td>1.28</td>
<td>1.32</td>
<td>1.16</td>
<td>0.94</td>
<td>0.80</td>
<td>1.07</td>
<td>1.19</td>
<td>1.32</td>
<td>1.46</td>
<td>1.58</td>
</tr>
<tr>
<td><strong>Furniture</strong></td>
<td>1.51</td>
<td>1.45</td>
<td>1.30</td>
<td>1.01</td>
<td>0.96</td>
<td>0.99</td>
<td>1.02</td>
<td>1.00</td>
<td>0.95</td>
<td>0.90</td>
</tr>
<tr>
<td><strong>Cabinets</strong></td>
<td>0.81</td>
<td>0.88</td>
<td>0.77</td>
<td>0.62</td>
<td>0.44</td>
<td>0.43</td>
<td>0.42</td>
<td>0.45</td>
<td>0.53</td>
<td>0.56</td>
</tr>
<tr>
<td><strong>Components/Millwork/Moulding</strong></td>
<td>0.90</td>
<td>0.97</td>
<td>0.85</td>
<td>0.69</td>
<td>0.49</td>
<td>0.47</td>
<td>0.46</td>
<td>0.50</td>
<td>0.59</td>
<td>0.62</td>
</tr>
<tr>
<td><strong>Residential Flooring</strong></td>
<td>1.22</td>
<td>1.09</td>
<td>1.04</td>
<td>0.83</td>
<td>0.58</td>
<td>0.67</td>
<td>0.70</td>
<td>0.73</td>
<td>0.76</td>
<td>0.80</td>
</tr>
<tr>
<td><strong>Truck Trailer Flooring</strong></td>
<td>0.18</td>
<td>0.20</td>
<td>0.16</td>
<td>0.10</td>
<td>0.05</td>
<td>0.09</td>
<td>0.15</td>
<td>0.17</td>
<td>0.17</td>
<td>0.18</td>
</tr>
<tr>
<td><strong>Pallets/Crating</strong></td>
<td>3.10</td>
<td>3.10</td>
<td>2.80</td>
<td>2.50</td>
<td>2.49</td>
<td>2.60</td>
<td>2.98</td>
<td>3.15</td>
<td>3.30</td>
<td>3.91</td>
</tr>
<tr>
<td><strong>Railroads</strong></td>
<td>0.84</td>
<td>0.95</td>
<td>0.91</td>
<td>0.93</td>
<td>0.88</td>
<td>0.87</td>
<td>0.98</td>
<td>1.03</td>
<td>1.08</td>
<td>1.13</td>
</tr>
<tr>
<td><strong>Mats/Board Road/Timbers</strong></td>
<td>0.62</td>
<td>0.62</td>
<td>0.63</td>
<td>0.64</td>
<td>0.68</td>
<td>0.72</td>
<td>0.75</td>
<td>0.83</td>
<td>0.92</td>
<td>1.00</td>
</tr>
<tr>
<td><strong>Other Industrial/Misc.</strong></td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>TOTAL CONSUMPTION</strong></td>
<td>10.51</td>
<td>10.62</td>
<td>9.67</td>
<td>8.31</td>
<td>7.43</td>
<td>7.95</td>
<td>8.70</td>
<td>9.22</td>
<td>9.81</td>
<td>10.73</td>
</tr>
</tbody>
</table>

### Exports as % of Grade Lumber Production

|                | 25%    | 25%    | 22%    | 20%    | 26%    | 33%    | 34%    | 37%    | 39%    | 41%    |
Recent Hardwood Market Trends:

Grade Lumber Prices
Price Trends

KD Index in Jan 1997 Dollars

- Feb-97
- Feb-99
- Feb-01
- Feb-03
- Feb-05
- Feb-07
- Feb-09
- Feb-11
- Feb-13
- Feb-15

Domestic furniture manufacturing peaking
Furniture market begins shift to Asia
Red Oak falls out of favor; prices drop
Exports sharply contracting
Housing market collapsing
Stock market crash
Supply driven price spike
Housing market rebounding
China
China & Supply

9/11 Attack
Housing boom fueling cabinet/flooring demand
Housing market collapse
Exports sharply contracting
Housing market collapsing
Stock market crash
Supply driven price spike
Housing market rebounding
China
China & Supply
Real Prices ($/MBF)

- **WALNUT**
- **Upper-grade**
- **#1 Com**
- **#2 Com**

10-yr From
- Low +35% +56%
- +41% +72%
- +24% +97%

Mar-05 Mar-07 Mar-09 Mar-11 Mar-13 Mar-15
HICKORY

Real Prices ($/MBF)

FAS/1F

#1 Com

#2 Com

Mar-05  Mar-07  Mar-09  Mar-11  Mar-13  Mar-15

10-yr
+1%
+35%

From
Low

+14%  +45%

+26%  +42%
Recent Hardwood Market Trends:

Low-Grade Prices
Nominal Prices ($/MBF)

- Cants
- Frame Stock
- Crossties
- #2&3A RO

Dates: 4/1/13, 4/1/14, 4/1/15
Take-Home Point

• Prices have come down during the last 6-8 months
• But…
  – Still better (for most items) than they’ve been for much of the last 10 years
  – Recent peaks/valleys higher than the last
  – Many items still at or near 10-year highs, even after adjusting for inflation
Price Drivers
What Drives Prices?

• Short term:
  – PRODUCTION (Supply/Oversupply)
  – Buyer/Seller Behavior (Panic v. restraint)
    • Over perceived demand shifts (China)
    • Over perceived supply shifts (build-ups, tightening)
    • Supplier cash-flow needs
  – Impact varies by species
    • Breadth of markets, demand
    • Speed of production response to demand
    • Price/availability of substitutes
    • Price sensitivity of buyers
Supply as Short-Term Price Driver

Housing Starts (Demand) vs. Red Oak Prices

Jan-00 to Jan-14

- Housing Starts (Demand)
- Red Oak Prices
What Drives Prices?

• Long term:
  – DEMAND
  – Relative to Production Capacity

• Long-term demand drivers are shifting
  – From housing to exports
Housing Less of LT Price Driver

- Housing Starts (Demand)
- Red Oak Prices
Shift to Exports as LT Price Driver

Red Oak Exports
Red Oak Prices

Jan-00 to Jan-14
What Drives Prices?

• This is True for Most Species:
  – Supply drives short-term price shifts
  – Demand drives long-term price trends

• For Some Lower-Priced Species:
  – Prices drive demand
Sometimes Price is Demand Driver

- Poplar Exports
- Poplar Prices
#1 Problem:

- Industry has historically oversupplied even high-demand markets
  - Fragmented nature of production
  - Each producer maximizing returns
  - Imperfect “feedback loop”
    - by the time individual mills sense oversupply, industry has collectively overshot demand

- Are we there again today?
- Are we headed back into recession?
Prices Falling for 8 months...

Kiln-Dried

Green

$/MBF Gross Tally

3/1/13  9/1/13  3/1/14  9/1/14  3/1/15
Production > Consumption

- Consumption
- Production
Outlook: Production

• U.S. hardwood lumber production rose
  – 5% in 2012
  – 5% in 2013
  – 10% in 2014
  – Another 10% in 2015?

• Grade lumber production capacity now exceeds demand
  – Mill expansions, upgrades over last two years
Market Outlook:

Housing
Single-Family Housing

[Graph showing trends in existing home sales, housing starts, and home sales from March 2005 to March 2015.]
# Housing Outlook

## Single-Family Housing Market Growth

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Home Starts</td>
<td>24%</td>
<td>15%</td>
<td>5%</td>
<td>15%</td>
</tr>
<tr>
<td>New Home Sales</td>
<td>20%</td>
<td>17%</td>
<td>2%</td>
<td>25%</td>
</tr>
<tr>
<td>Existing Home Sales</td>
<td>9%</td>
<td>9%</td>
<td>-3%</td>
<td>7%</td>
</tr>
</tbody>
</table>

• 5% growth in each is more realistic
Market Outlook:

Flooring
Flooring – 2-1/4” Unfin. Red Oak

*WO curves look very similar
Flooring Outlook

• Mills are full of lumber
• Mills sharply controlling receipts
  – Lower prices
  – POs for 2 weeks
  – Quotas of 1 TL a week
  – Cutting off smaller suppliers altogether
• Flooring sales should seasonally improve, but impacts will linger
• Imports?
Market Outlook:

Cabinets
Cabinet Outlook

- Manufacturing grew 10% in 2014
- Most manufacturers are projecting 0~5% growth in 2015
- Manufacturers are largely full of lumber, buying on replacement-basis only
Market Outlook:

Furniture
Furniture Outlook

Source of U.S. Furniture Consumed

DOMESTIC

IMPORTS

Mann, Armistead and Epperson
Furniture Outlook

• U.S. furniture factory shipments at 7-year high in 2014
  – BUT, most growth in mattresses/upholstered

• Housing/remodeling won’t be strong enough to bump up wood furniture demand in 2015
  – Even if they are, foreign mfrs. will reap benefit

• Currency flux makes U.S. prime target for foreign mfrs. in 2015
Market Outlook:

Low-Grade
Low-Grade Spiral

- Oil Prices Fell
- Board Road/Crane Mat Demand Fell
  - Mills shifted production to other low-grade
  - Tie production rose, availability improved
  - Tie prices falling even as demand is unmet
- Strip Flooring Demand Fell
  - #2&3A Com prices fell
  - Mills shifted production to other low-grade
- Housing Stagnated
  - Cant demand up but prices stalled
  - Pallet cant receipts climbed
Low-Grade Spiral

Mills try to saw more grade lumber out of center of log

Low-grade backs up and prices fall

As price spreads widen, some FAS/1F customers switch to #1 Com

#1 Com backs up and prices fall

As price spreads widen, some #1 Com customers switch to lower grades

More #2&3A Com
Low-Grade Outlook

• Crane mat and board road markets will remain subdued
  – Low oil prices, supply glut curbing exploration
  – Plenty of used mats to meet demand
• Crosstie demand will stay strong all year
• Higher production = lower prices ahead for entire low-grade sector AND for higher grades of lumber
Market Outlook: Exports
% of Grade Lumber Exported

U.S. Grade Lumber Markets

1999
- Export 14%
- Domestic

2009
- Export 26%
- Domestic

2014
- Export 41%
- Domestic
Inter-Regional Export Shifts

U.S. Lumber Exports by Region

- Europe
- North America
- East/SE Asia
- ME/NA
- Central/South Amer./Carib
- Other

Million Board Feet

Exports to Asia

2013

2014

USITC, Hardwood Review
Trends – Europe

USITC, Hardwood Review

Million Board Feet

UK

ITALY

SPAIN

BELGIUM

GERMANY

USITC, Hardwood Review

Exports to Latin America

- 2014
- 2013

Thousand Cubic Meters
Rising Importance of Mexico

- Among Top 3 Markets in 2014 for
  - Red Oak (3)
  - Poplar (3)
  - Hard Maple (3)
  - Soft Maple (3)
  - Birch (1)
  - Hickory (2)
Trends in China
U.S. Hardwood Lumber Exports

Exports

Without China
% of Grade Lumber Exported

1999
- Export 14%
- Domestic

2009
- Export 26%
- Domestic

2014
- Export 41%
- Domestic

U.S. Grade Lumber Markets
% of Hardwood Exports to China

1999:
- China: 8%
- Canada: 34%
- Other: 58%

2009:
- China: 26%
- Canada: 25%
- Other: 49%

2014:
- China: 46%
- Canada: 16%
- Other: 38%

U.S. Export Lumber Markets
Rising Importance of China

China’s Share of U.S. Grade Markets

1999
- China: 1%
- All Other Domestic & Global

2009
- China: 7%
- All Other Domestic & Global

2014
- China: 19%
- All Other Domestic & Global

1 in 5 grade lumber boards cut is for China.
Exports to China

U.S. Lumber Exports to China

- Alder
- White Oak
- Cherry

Million Board Feet

Year:
- 2000
- 2002
- 2004
- 2006
- 2008
- 2010
- 2012
- 2014
## Lots of Eggs in China Basket

<table>
<thead>
<tr>
<th></th>
<th>China's Share of Total U.S. Exports</th>
<th>China's Share of Total Exports (excl. Canada)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red Oak</td>
<td>62.8%</td>
<td>80.1%</td>
</tr>
<tr>
<td>Alder</td>
<td>70.2%</td>
<td>76.9%</td>
</tr>
<tr>
<td>Cherry</td>
<td>65.5%</td>
<td>75.7%</td>
</tr>
<tr>
<td>Ash</td>
<td>66.1%</td>
<td>68.3%</td>
</tr>
<tr>
<td>Soft Maple</td>
<td>32.8%</td>
<td>58.7%</td>
</tr>
<tr>
<td>Hickory</td>
<td>46.2%</td>
<td>51.2%</td>
</tr>
<tr>
<td>Poplar</td>
<td>42.4%</td>
<td>42.6%</td>
</tr>
<tr>
<td>Hard Maple</td>
<td>16.7%</td>
<td>38.3%</td>
</tr>
<tr>
<td>Walnut</td>
<td>25.1%</td>
<td>34.2%</td>
</tr>
<tr>
<td>White Oak</td>
<td>26.0%</td>
<td>31.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45.6%</strong></td>
<td><strong>54.3%</strong></td>
</tr>
</tbody>
</table>
Export Outlook

• Exports grew 14% in 2014
  – 15% to Asia
    • 19% to China
    • 6% to Vietnam
    • 27% to Japan
  – 14% to Europe
    • 32% to UK
    • 41% to Spain
  – 12% to Latin America (Mexico)
Export Outlook

• China growth will be 9-10% in 2015
  – Half as strong as in 2014
    • Slower housing
    • Slower economy

• Europe flat

• Mexico a little stronger

• Total growth 8-9%
  – A bit slower than in 2014
  – Most of growth in second half
Recap
Outlook Recap

• Export growth will slow
• Domestic demand will grow with economy
  – Not as quickly as in 2014
• Production on track for another 10% hike
• #1 and #2 Com markets already oversupplied
• Low-grade producers running out of products to shift into
• “Low-grade spiral” will trickle up
Outlook Recap

• Upper-grade supplies in relative balance, and prices will hold up better, but…

• Oversupply will dictate softer prices for most species, grades and thicknesses through Q3
  – Regardless of housing/export performance

• China should reignite purchasing in Q3
  – Not as worried about Chinese housing bubble as some…has been a recurrent fear since at least 2006
Outlook Recap

• Prices should stabilize and begin to rebound in Q4
  – IF China comes back on schedule
  – IF Domestic demand maintains 5% growth
    • Depends on modest growth in housing
  – IF Producers moderate output in response to oversupply
Outlook Recap

• Have we oversupplied market again? **YES**
• Are we headed back into recession? **NO**

**Real Prices ($/MBF)**

- **RED OAK**
  - Upper-grade
  - #1 Com
  - #2 Com


$400  | $600  | $800  | $1,000 | $1,200 | $1,400 | $1,600
Thank You!

Dan Meyer
dan@hardwoodreview.com
(704) 944-2148