United States Housing Market and Hardwoods

The Future of the Hardwood Lumber Industry

Wood Education Resource Center
Princeton, WV
November 3, 2016

Delton Alderman
Forest Products Marketing Unit
Forest Products Laboratory
Madison, WI
Northern Research Station-01
Princeton, WV
USDA Forest Service
304.431.2734
dalderman@fs.fed.us
United States Housing Market and Hardwoods

Outline

• Where we’re at
• Demographics
• GDP projections
• Summary
“Never make predictions, especially about the future.”

The late, great Casey Stengel

and

“It's tough to make predictions, especially about the future.”

The late, great Yogi Berra
United States Housing Market and Hardwoods

Housing Units and Starts – 1880 to September 2016

1946: US population: 141.4 mm
2016: US population: 324.1 mm

Source: US Census & DOC-Construction
United States Housing Market and Hardwoods

September 2016 – Housing Stock & Age

Total: 132,741,033 units

97% of houses built: 2009 and earlier

Built 2014 or later: 19,541,438 units (14.5%)
Built 2010 to 2013: 18,890,642 units (14.0%)
Built 2000 to 2009: 18,363,586 units (13.6%)
Built 1990 to 1999: 20,924,027 units (15.5%)
Built 1980 to 1989: 14,547,538 units (10.8%)
Built 1970 to 1979: 14,182,503 units (10.5%)
Built 1960 to 1969: 6,865,918 units (5.1%)
Built 1950 to 1959: 17,484,363 units (13.0%)
Built 1940 to 1949: 3,349,216 units (2.5%)
Built 1939 or earlier: 644,434 units (0.5%)

Source: http://factfinder.census.gov/; 10/31/16
United States Housing Market and Hardwoods

NAHB - Housing's USD Percentage Contribution to GDP

Q2 2016 US GDP: $18.6 trillion

Q2 2016: $652.8 billion

United States Housing Market and Hardwoods

September 2016 – Total Housing Starts

Total starts 57-year average: 1,443 mm units
SF starts 57-year average: 1,025 mm units
MF starts 52-year average: 420 m units

SAAR = Seasonally adjusted annual rate; in thousands

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/19/16
United States Housing Market and Hardwoods

New SF Housing Starts – Civilian Non-Institutional Population

1959-2006 average: 0.0066

Sources: http://www.census.gov/construction; 10/1916h; https://fred.stlouisfed.org; 10/31/16
United States Housing Market and Hardwoods

September 2016 – Total Housing Permits

SAAR; in thousands

Source: http://www.census.gov/construction/nrc/pdf/newresconst.pdf; 10/19/16
# United States Housing Market and Hardwoods

## Building permits by region: 2015

<table>
<thead>
<tr>
<th>Region</th>
<th>Total</th>
<th>1-unit</th>
<th>2-unit</th>
<th>3-4 units</th>
<th>≥ 5 units</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>572,779</td>
<td>378,203</td>
<td>5,864</td>
<td>4,625</td>
<td>184,087</td>
</tr>
<tr>
<td>West</td>
<td>277,235</td>
<td>160,707</td>
<td>3,702</td>
<td>4,357</td>
<td>108,469</td>
</tr>
<tr>
<td>Midwest</td>
<td>170,584</td>
<td>104,673</td>
<td>4,238</td>
<td>3,363</td>
<td>58,310</td>
</tr>
<tr>
<td>Northeast</td>
<td>161,984</td>
<td>52,415</td>
<td>3,178</td>
<td>2,750</td>
<td>103,641</td>
</tr>
<tr>
<td>United States</td>
<td>1,182,582</td>
<td>695,998</td>
<td>16,982</td>
<td>15,095</td>
<td>454,507</td>
</tr>
</tbody>
</table>

United States Housing Market and Hardwoods

United States Housing Market and Hardwoods

September 2016 – Total New SF Housing Sales

SAAR; in thousands

1963-2015 average: 652,679 units
1963-2000 average: 633,895 units
September 2016, 609,000

Source: http://www.census.gov/construction/nrs/xls/newressales.xls; 10/26/16
United States Housing Market and Hardwoods

New SF Housing Sales Ratio of \( \geq 400\text{m}: \leq 400\text{m} \)

Source: http://www.census.gov/construction/nrs/xls/newressales.xls; 10/26/16
New SF Housing Sales: Civilian Non-Institutional Population

1963-2006 average: 0.0039

Sources: http://www.census.gov/construction/nrs/xls/newressales.xls; 10/26/16 https://fred.stlouisfed.org; 10/31/16
United States Housing Market and Hardwoods

Existing House Sales

United States Housing Market and Hardwoods

Housing Inventory: Civilian Non-Institutional Population

United States Housing Market and Hardwoods

Homeownership Rate Claws Back Up, But Wait . . .

“On the optimist’s side, household formation – whether it’s from new renter or new owner households – is good for both the housing market and the general economy, as some renters eventually become owners and new households drive demand for home-related goods and services. On the pessimist’s side, there are headwinds for those that want to own a home but can’t: prices and rents have outpaced incomes, credit standards are higher, and a high share of young households are still living with their parents. On the neutral side, the homeownership rate is not different from last year or last quarter when seasonally adjusted.”

– Ralph McLaughlin, Chief Economist, Trulia

Sources:
1 http://www.census.gov/housing/hvs/files/currenthvspress.pdf; 10/27/16
Since Q2 2000 – 59.6% of all household formations are/were renters.

Source: http://www.census.gov/housing/hvs/files/currenthvspress.pdf; 10/31/16
United States Housing Market and Hardwoods

Demographics
United States Housing Market and Hardwoods

**U.S. HOMEOWNERSHIP RATES**

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890</td>
<td>47.8%</td>
</tr>
<tr>
<td>1900</td>
<td>46.7%</td>
</tr>
<tr>
<td>1910</td>
<td>45.9%</td>
</tr>
<tr>
<td>1920</td>
<td>45.6%</td>
</tr>
<tr>
<td>1930</td>
<td>47.8%</td>
</tr>
<tr>
<td>1940</td>
<td>43.6%</td>
</tr>
<tr>
<td>1950</td>
<td>55.0%</td>
</tr>
<tr>
<td>1960</td>
<td>61.9%</td>
</tr>
<tr>
<td>1970</td>
<td>62.9%</td>
</tr>
<tr>
<td>1980</td>
<td>64.4%</td>
</tr>
<tr>
<td>1990</td>
<td>64.2%</td>
</tr>
<tr>
<td>2000</td>
<td>66.2%</td>
</tr>
<tr>
<td>2010</td>
<td>66.5%</td>
</tr>
</tbody>
</table>

EXHIBIT 4

Homeownership Rate by Demographics (Race/Ethnicity)

Source: U.S. Census Bureau Current Population Survey/Housing Vacancy Survey

Source: http://www.freddiemac.com/finance/report/20161012_why_are_experts_pessimistic.html; 10/12/16
United States Housing Market and Hardwoods

EXHIBIT 7

Projected Homeownership Rates

### United States Housing Market and Hardwoods

**EXHIBIT 6**

#### Homeownership: Will Millennials Resemble Boomers in the Future?

<table>
<thead>
<tr>
<th>Age</th>
<th>Homeownership rate (%)</th>
<th>Age</th>
<th>Homeownership rate (%)</th>
<th>Age</th>
<th>Homeownership rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 to 39</td>
<td>63</td>
<td>35 to 39</td>
<td>55</td>
<td>35 to 39</td>
<td>?</td>
</tr>
<tr>
<td>60 to 64</td>
<td>80</td>
<td>60 to 64</td>
<td>76</td>
<td>60 to 64</td>
<td>?</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau Current Population Survey/Housing Vacancy Survey

Source: [http://www.freddiemac.com/finance/report/20161012_why_are_experts_pessimistic.html; 10/12/16](http://www.freddiemac.com/finance/report/20161012_why_are_experts_pessimistic.html; 10/12/16)
United States Housing Market and Hardwoods

Projected U.S. Households

Sources: Census Bureau, author’s calculations.

United States Housing Market and Hardwoods

Occupied U.S. Multi-Family Housing Units

United States Housing Market and Hardwoods

Projected U.S. Single-Family Starts

United States Housing Market and Hardwoods

Projected U.S. Multi-Family Starts

“... a gradual rebound in single-family housing starts, reaching the logarithmic trend line by 2020:

± 1.1 million

close to the long-run historical norm and within the range of current housing expectations but much lower than recent RPA scenarios with similar or higher population growth.”

“At the current pace, 52 million Americans, or one in seven residents, will be foreign-born by 2025… .

The pent-up demand for households for young adults will radically reshape land-use policy, according to Williams. The report predicts that a staggering 86 percent more households will form between 2015 and 2025 than the previous decade. That translates into 13.7 million new homes and apartments being built to meet the demand.” – Patrick Sisson, Senior Reporter, Curbed

“Demographic Strategies for Real Estate” – John Burns Real Estate Consulting for the Urban Land Institute

Source: http://www.curbed.com/2016/10/12/13255596/suburb-urban-planning-millennial-immigration-report-baby-boomer; 10/11/16
“Millennial buyers are coming, and they’re coming relatively soon.” – Frank Nothaft, Chief Economist, CoreLogic

“Among the 117 million households in 2015, 68% of those are white households, while 13% are Hispanic, 12% are black, and 7% are Asian or others. For the next 10 years referenced, 2015-2025, the household formation will shift to minorities, as 40% of the share of household growth during that time period will be from Hispanics, while 24% will come from whites, and 18% will come from each blacks and Asians.” – Frank Nothaft, Chief Economist, CoreLogic

# United States Housing Market and Hardwoods

## Economic Projections

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>Longer Run</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>United States</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board of Governors of</td>
<td>1.8</td>
<td>2.0</td>
<td>2.0</td>
<td>1.8</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td>the Federal Reserve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMF</td>
<td>2.6</td>
<td>1.6</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World Bank</td>
<td>2.4</td>
<td>1.9</td>
<td>2.2</td>
<td>2.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>World Economies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European Central Bank</td>
<td>3.2</td>
<td>3.0</td>
<td>3.5</td>
<td>3.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IMF</td>
<td>3.2</td>
<td>3.1</td>
<td>3.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>World Bank</td>
<td>2.4</td>
<td>2.4</td>
<td>2.8</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Summary

U.S Housing

• Aggregate market has improved
  • Beginner or starter home starts/sales lag below normal
• Demographic composition of house ownership is going to change
• U.S. cues to watch: Job creation & salaries and housing affordability
• Global cues to watch:
  • Will the Eurozone economies continue to improve?
  • Geopolitical tensions
  • Some large banks appear to be in trouble; and
  • Global debt – companies, countries, and personal
United States Housing Market and Hardwoods

Questions?

Thank you

Delton Alderman
Forest Products Marketing Unit
Forest Products Laboratory
Madison, WI
Northern Research Station-01
Princeton, WV
USDA Forest Service
304.431.2734
dalderman@fs.fed.us
U.S. Department of Agriculture Disclaimer

Disclaimer of Non-endorsement
Reference herein to any specific commercial products, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government, and shall not be used for advertising or product endorsement purposes.

Disclaimer of Liability
With respect to documents available from this server, neither the United States Government nor any of its employees, makes any warranty, express or implied, including the warranties of merchantability and fitness for a particular purpose, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

Disclaimer for External Links
The appearance of external hyperlinks does not constitute endorsement by the U.S. Department of Agriculture of the linked web sites, or the information, products or services contained therein. Unless otherwise specified, the Department does not exercise any editorial control over the information you may find at these locations. All links are provided with the intent of meeting the mission of the Department and the Forest Service web site. Please let us know about existing external links you believe are inappropriate and about specific additional external links you believe ought to be included.

Nondiscrimination Notice
The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202.720.2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call 800.795.3272 (voice) or 202.720.6382 (TDD). The USDA is an equal opportunity provider and employer.