

A TIMO PERSPECTIVE OF WEST COAST AND SOUTHERN US SOFTWOOD SAWLOG MARKETS

Dr. Bruce P. Glass, Senior Forest Economist

November 6, 2018



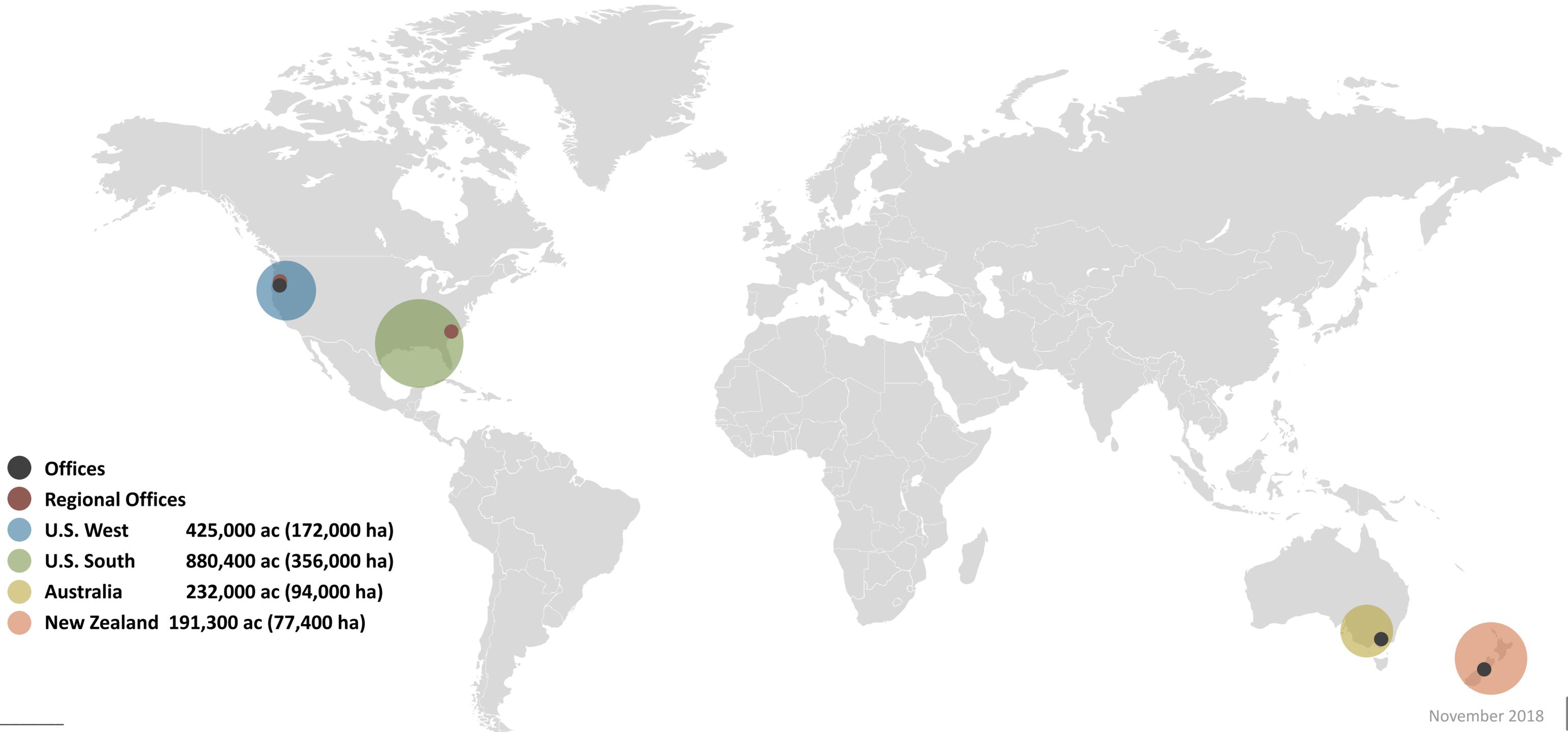
CampbellGlobal
FOREST & NATURAL RESOURCE INVESTMENTS

Overview of Campbell Global, LLC

- **Founded in 1981 and headquartered in Portland, Oregon, USA**
- **Business focus: Timber and timberland resources**
- **Employ more than 165 staff members in 13 US states, Australia and New Zealand**
- **Timber Industry Management Organization (TIMO):**
 - **Source and structure timberland investments for clients**
 - **Manage client-owned timberland**
 - **Market and sell clients' timberland investments**

MANAGED TIMBERLANDS

1.7 million acres (0.7 million hectares) | U.S. \$4.8 B*

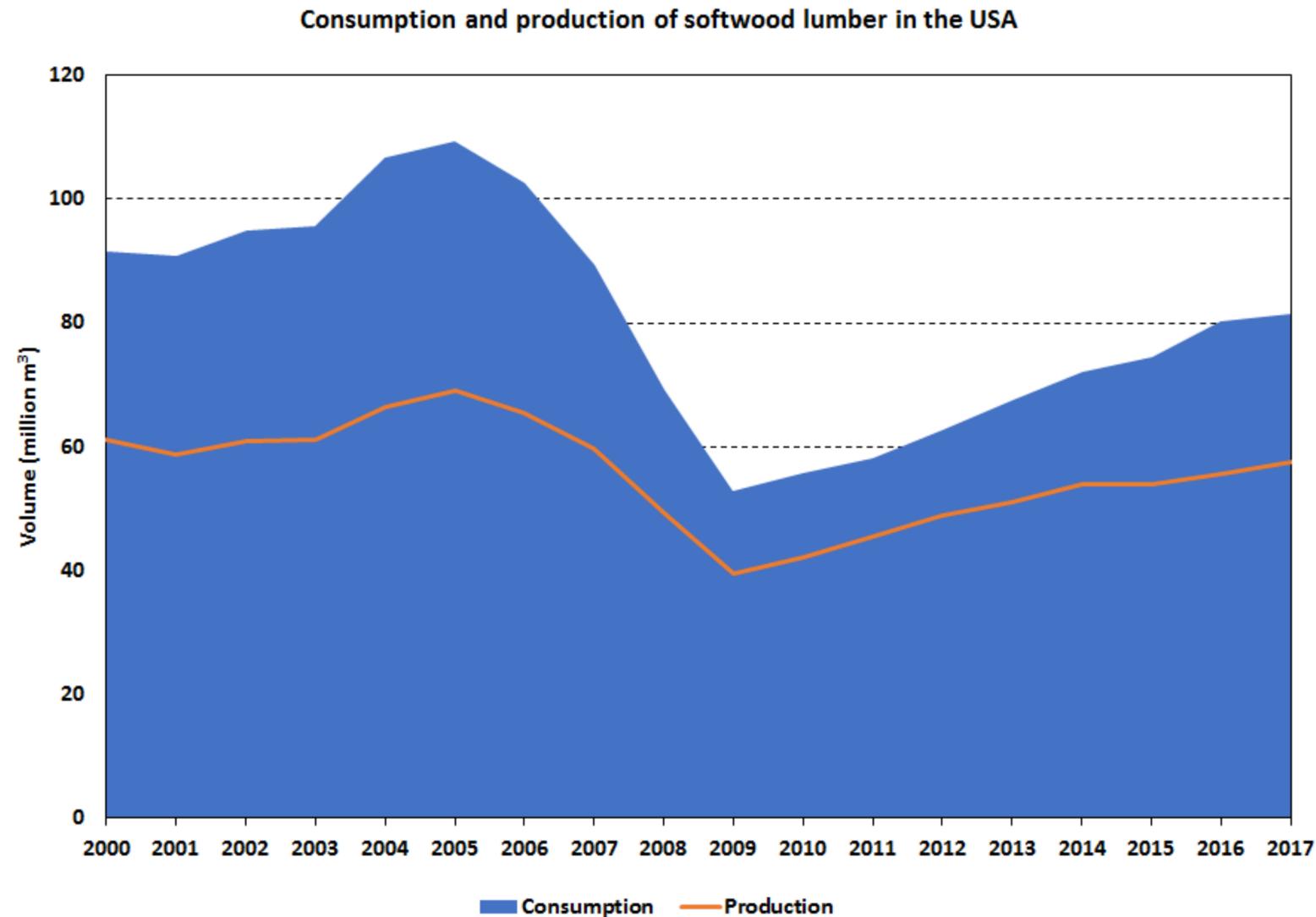


*Source: Campbell Global (as September 2018). All numbers are approximate values.

Some major themes

- **Sources of future demand**
 - **Mass wood construction technology**
- **The US South: A rising nexus of North American timber supply**
 - **Changes in growing stock**
 - **Attractive sawmill margins**
 - **Vigorous processing investment**
- **Potential impacts of China's import tariffs**
- **Timberland transaction activity**

USA is a net importer of softwood lumber



Data are in units reported by source. 1 Mbf sawn timber equals 2.36 m³ full sawn volume or 1.57 m³ actual volume. 1 Msf (3/8" basis) equals 0.89 m³.

US softwood lumber consumption on an expansion path

- **Income growth and demographics underpin future consumption**
 - Remodeling share increases as housing stock ages
- **Consumption to expand fastest in US South**

Changes in regional production and consumption

- Demand in US South moves to balance supply
- Canadian imports increasingly directed to US Central and Northeast regions

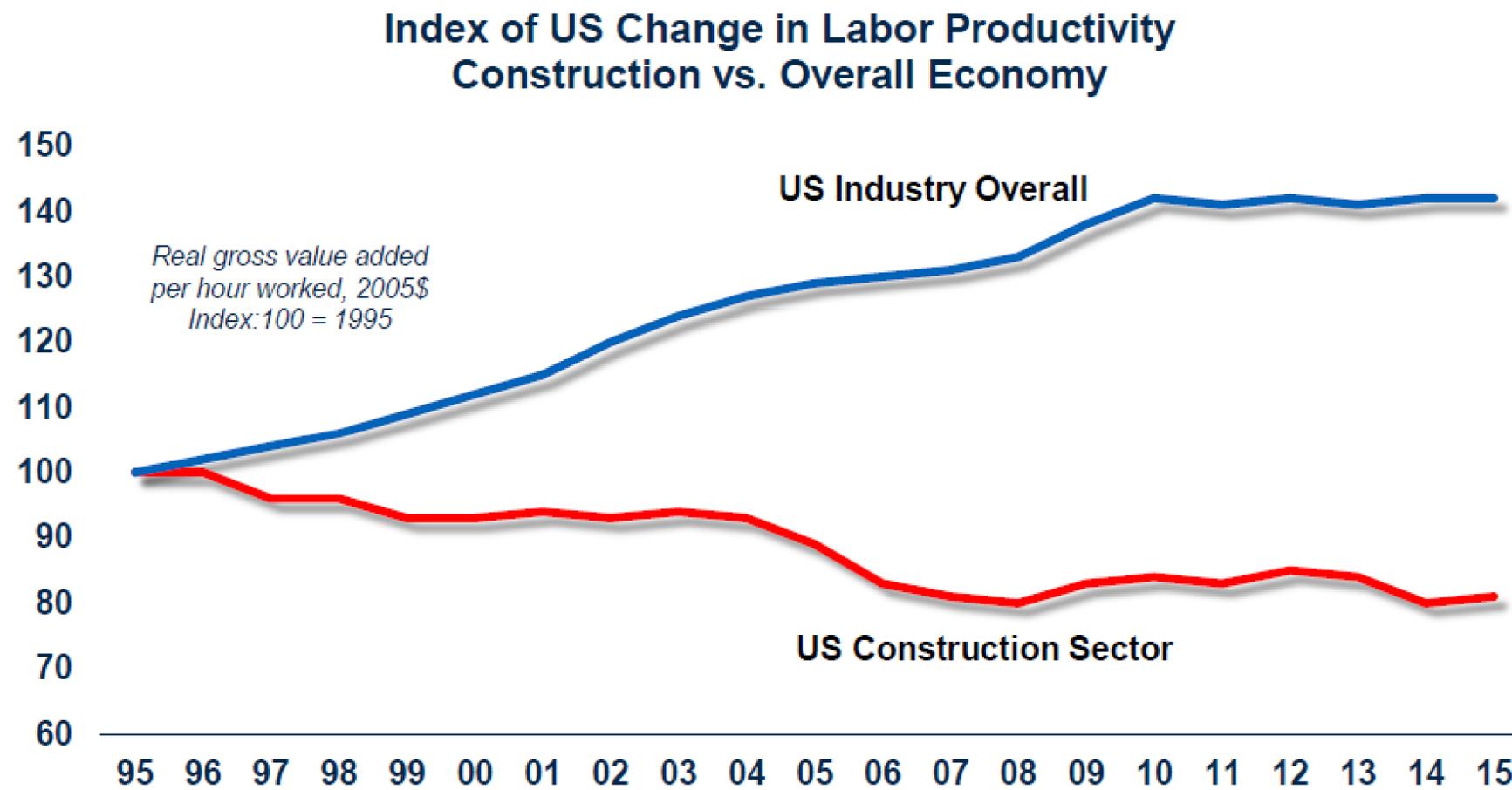
Mass timber construction: A source of potential sawlog demand?

- **What is mass timber construction?**
 - **Using solid wood panels and beams for structural framing, e.g.,**
 - › **Cross laminated timber ('CLT')**
 - › **Glue laminated timber ('Glulam')**
 - **May be used with steel and/or concrete**
- **Potentially accretive source of demand**
 - **Significant market penetration will take time**

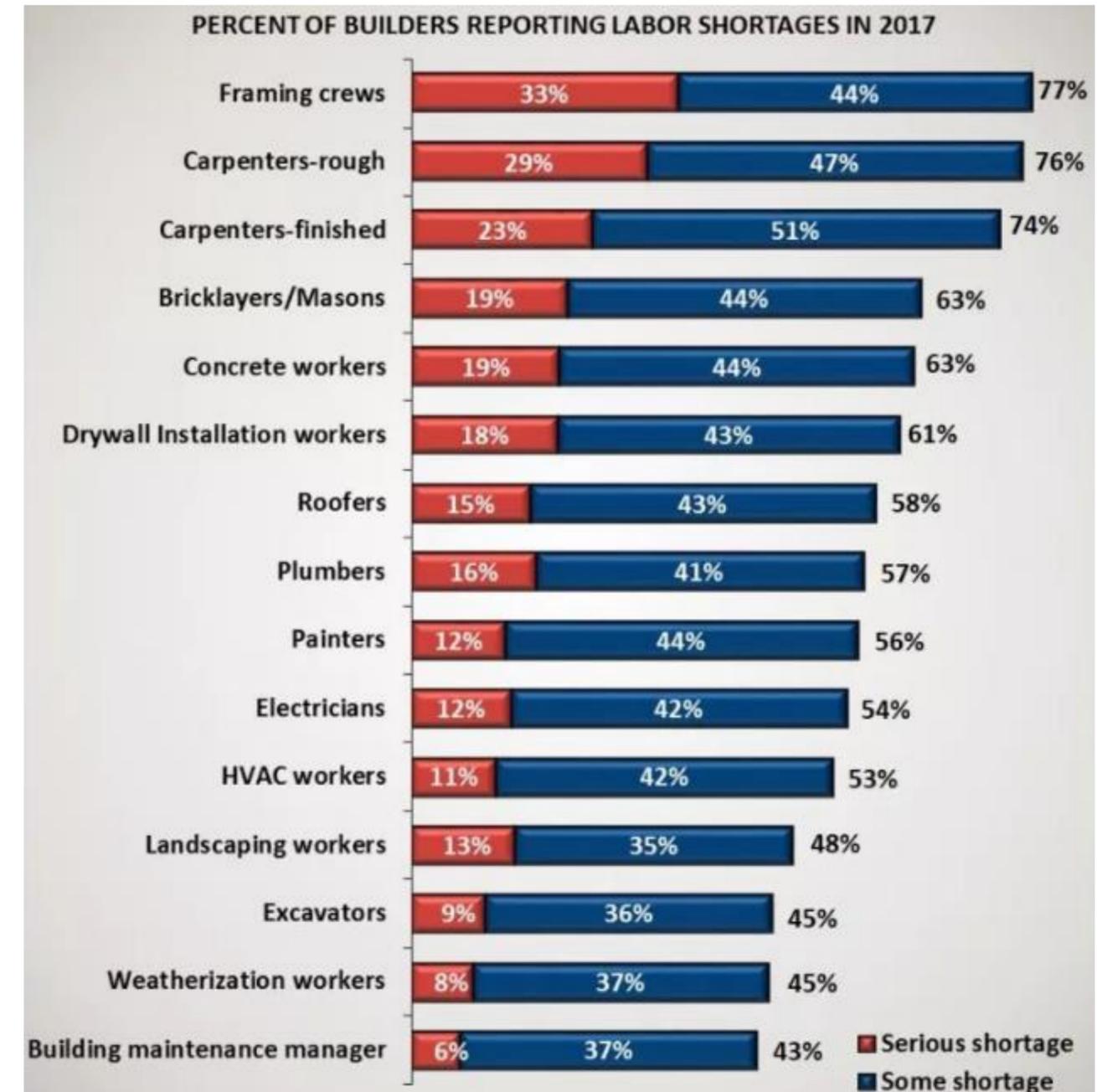
A developing story: Fully Integrated Offsite Construction

Spans the entire construction supply chain

- Emerging as a potentially cost-effective solution to:
 - Shortage of skilled labor and declining labor productivity



Source: McKinsey Global Institute, Reinventing Construction Through a Productivity Revolution



Source: NAHB

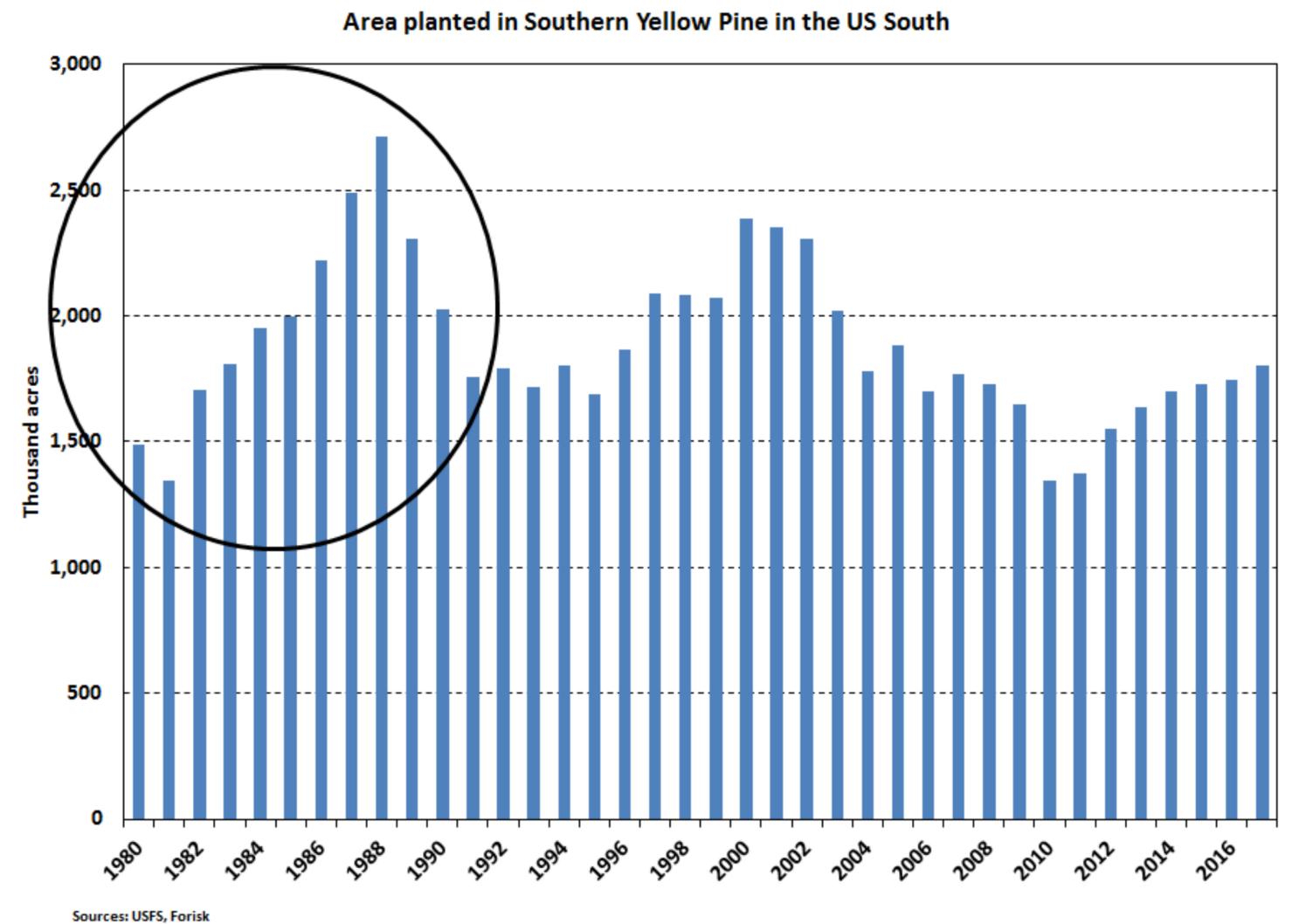
A developing story: Fully Integrated Offsite Construction (cont.)

- **Other advantages:**
 - **Automation = speed, consistency, less labor training**
 - **Waste reduction**
 - **Procurement efficiencies**
 - **Not subject to inclement weather conditions**
 - **Improved construction safety**
- **Not there yet though**
 - **Needs highly uniform lumber feedstock**

Significant inventory build in US South due to:

Deferred timber harvest, and ...

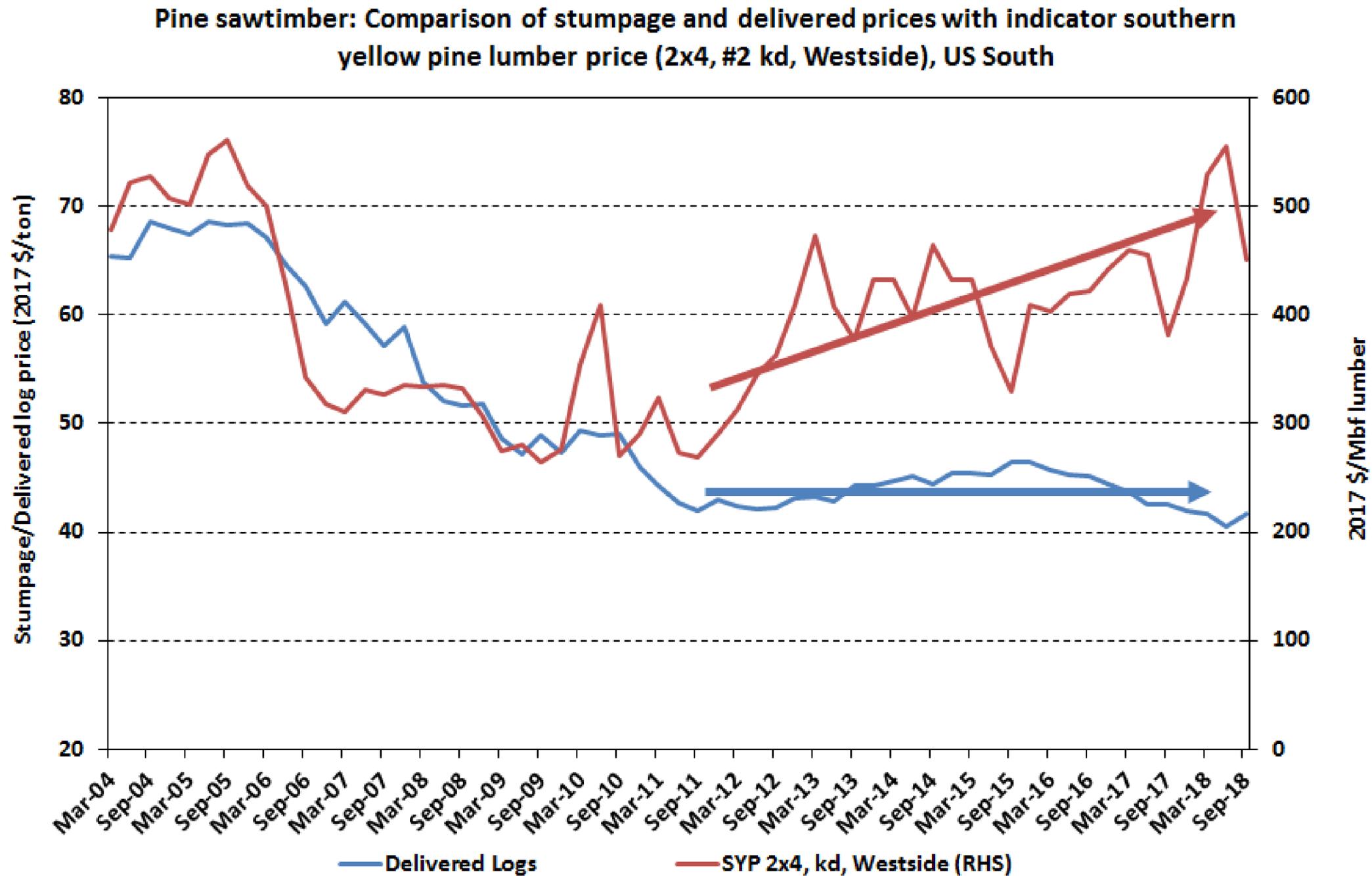
Maturing age classes



Data are in units reported by source. 1 Mbf International ¼" rule log volume equals approximately 5.8 m³.

Data are in units reported by source. 1 ha = 2.47 acres.

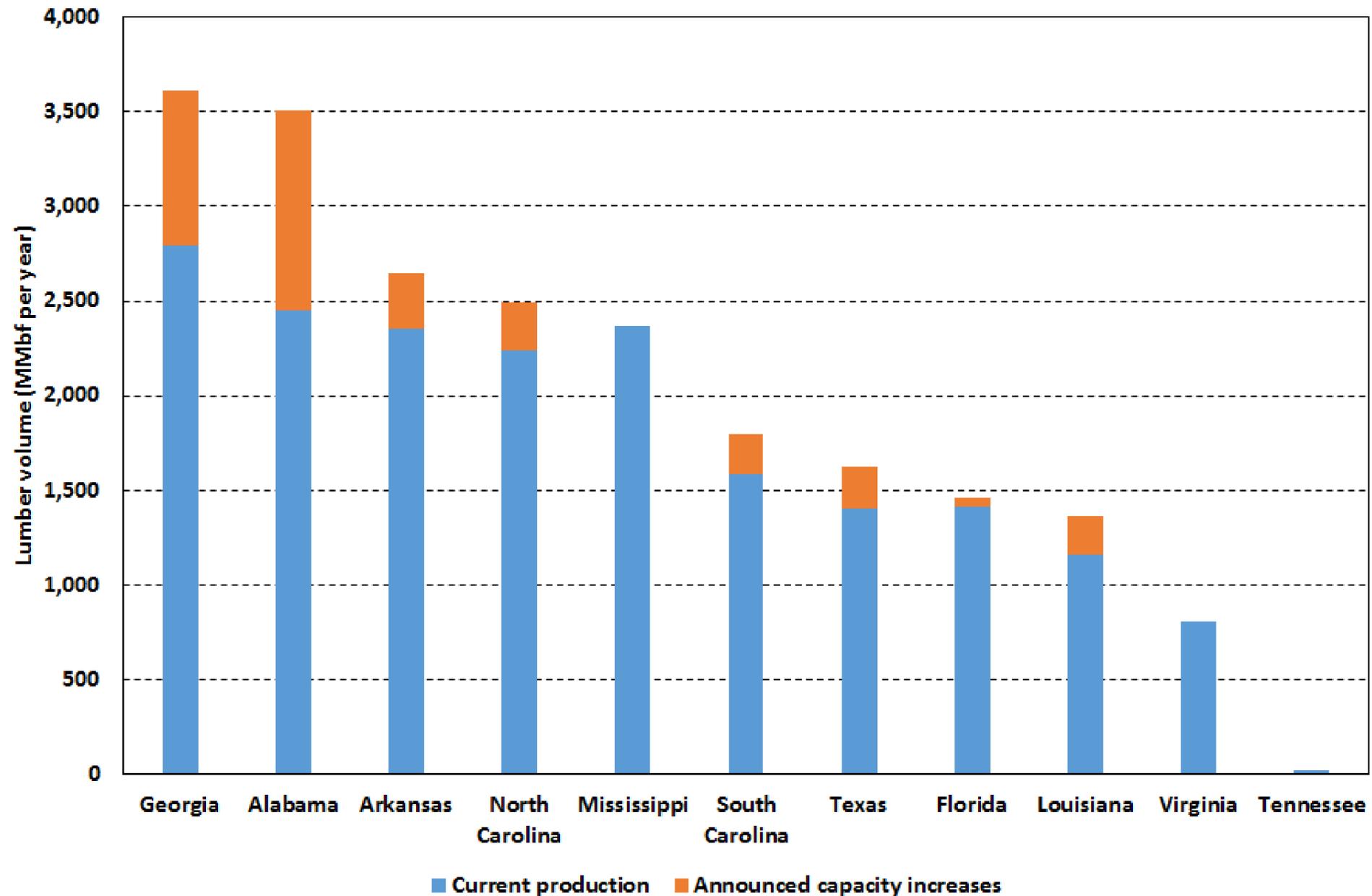
Cheap logs, high lumber prices: Boon for Southern sawmill margins



Sources: Timber Mart-South, Random Lengths

Both greenfield and brownfield capacity expansions

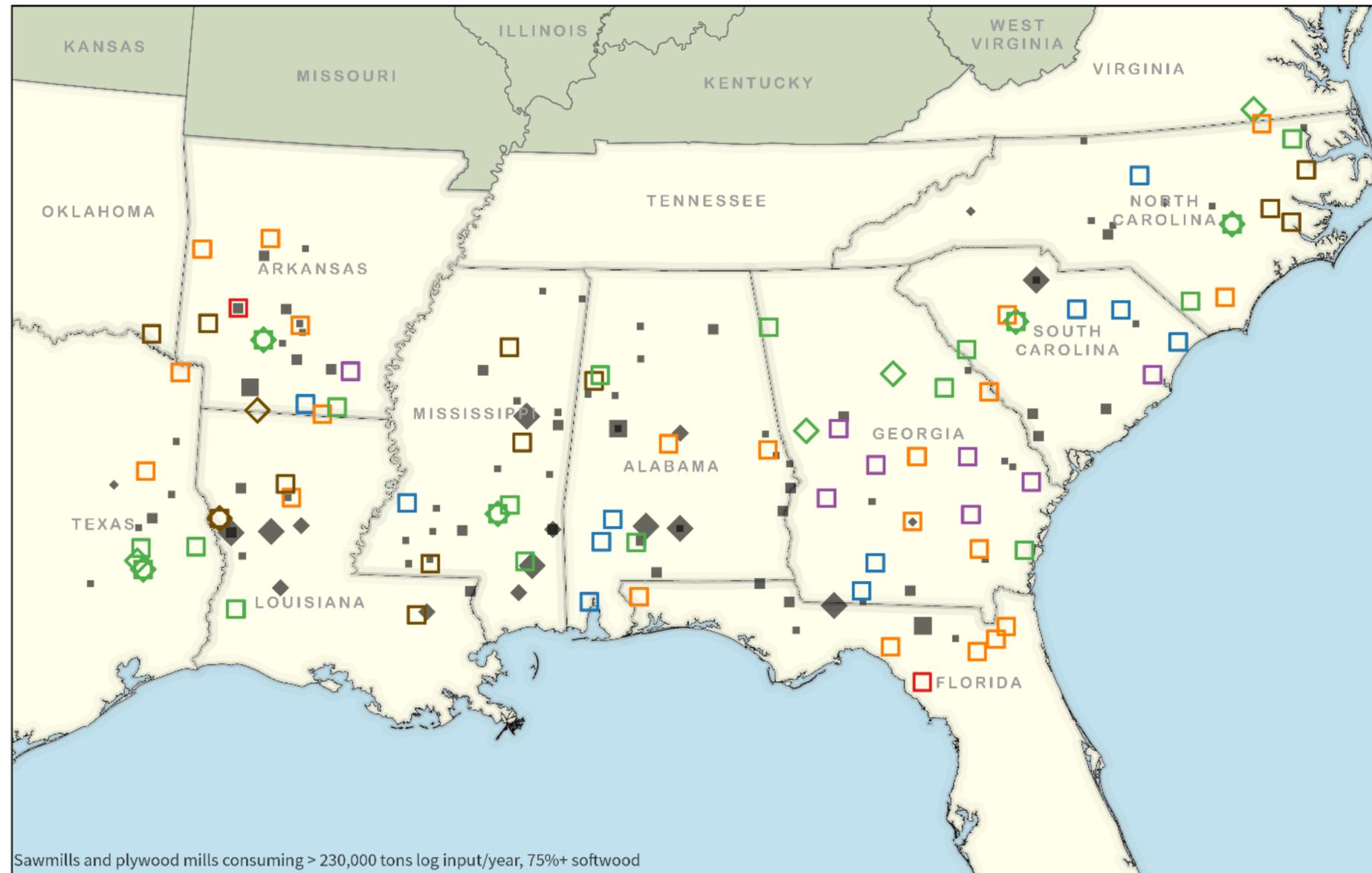
Current and announced increases in sawmill capacity in the US South



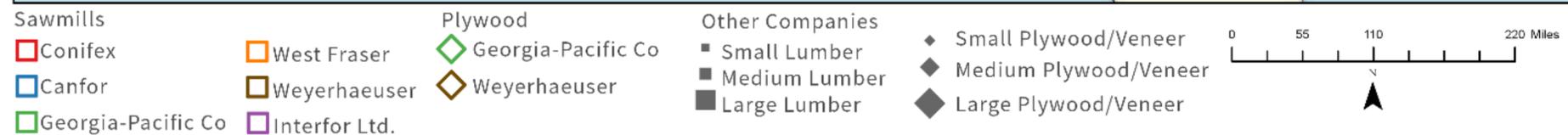
Sources: Forisk (2018Q2); Random Lengths; TMS (2018Q1)

The Canadian invasion: Merger and acquisition frenzy

SOUTHERN SOFTWOOD LUMBER & PLYWOOD MILLS



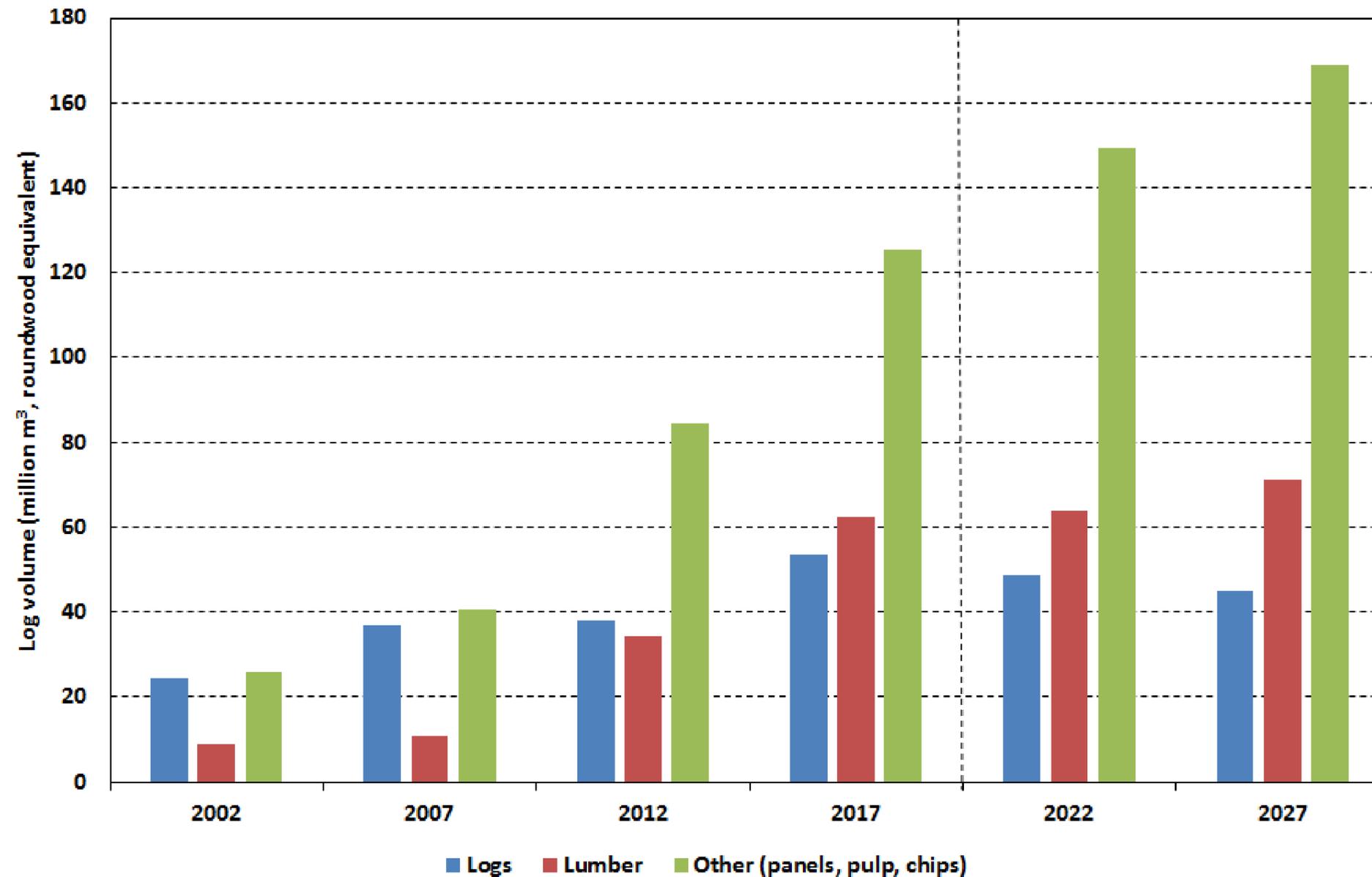
Sawmills and plywood mills consuming > 230,000 tons log input/year, 75%+ softwood



But US South timber supply moving back into balance with demand

Export logs: China's fiber demand likely not a passing fad

Historical and projected demand for imported timber in China:
Estimated supply deficits by major end use category



Source: RISI, 2017

Even with tariffs, US South remains cost-competitive supplier

Note: Full tariff rates are applied to US-sourced logs

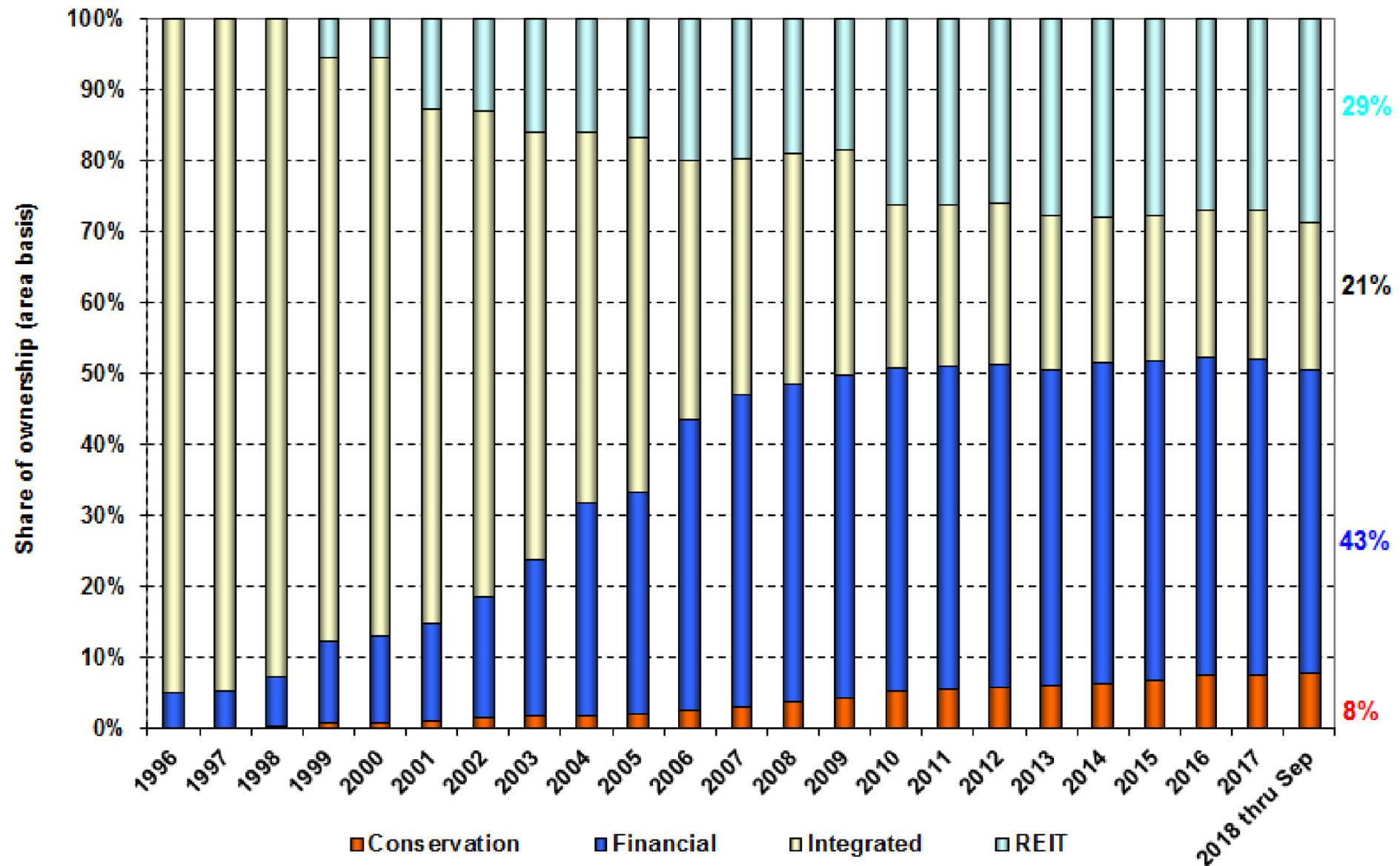
Positive log price outlook for US West Coast and US South

- Lumber demand driven by US housing recovery and remodeling
- Log demand and supply are balanced in US West Coast region
- Log demand and price recovery in the US South awaits:
 - Accelerating log demand, in conjunction with
 - Tightening SPF sawn timber supply from Canada
 - Timing could be closer than many think
- Export log demand
 - Tariffs expected to have only a modest impact

US timberland transactions: A very competitive market place!

- Discount rates are compressed
 - Product price expectations
 - Demand for/Availability of investment opportunities

Change in ownership status of timberland formerly owned by the US forest industry, by ownership category



Notes: (1) Includes REIT conversions; (2) Timberland data from USFS (GTR-NC241 & GTR-NRS-27); (3) Totals may not add due to rounding



Questions are welcome



LOCATION

Campbell Global, LLC
1 SW Columbia Street
Suite 1700
Portland, Oregon 97258



CONTACT US

www.campbellglobal.com
1 503 275 9675