



Forest2Market[®]

THE WOOD & FIBER SUPPLY CHAIN EXPERTS

Washington Hardwoods Commission Mt Vernon 2015

Coastal Hardwoods:
Understanding Global Markets and
Regional Supply to
Ensure Local Success

Presentation Outline

- Introduction
- Economic Contribution
- Timber Supply
- Uses and Markets for Western Hardwoods
- Lumber Production
- Economic Factors
- International Growth
- Opportunities and Challenges for the Western Hardwood Industry



Forest2Market serves industries that consume wood raw materials.

- Wood products, pulp and paper products and lumber manufacturers
- Bioenergy, biofuels and biochemical producers

These industries rely on Forest2Market's market price reports, performance benchmarks, resource studies and supply chain expertise to make high value decisions and measure the results.



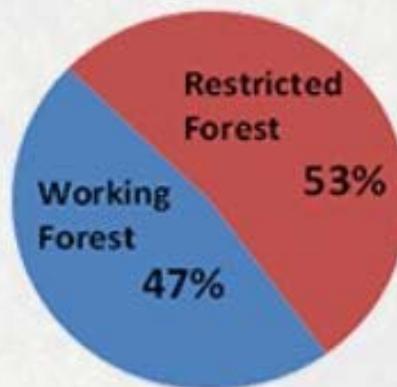
Our customers make better-informed decisions and thrive because they have reliable and consistent measures of their performance compared to the broader market.

Our commitment is to deliver the most accurate, credible and quantitative market insight to our customers.

Northwest Territory



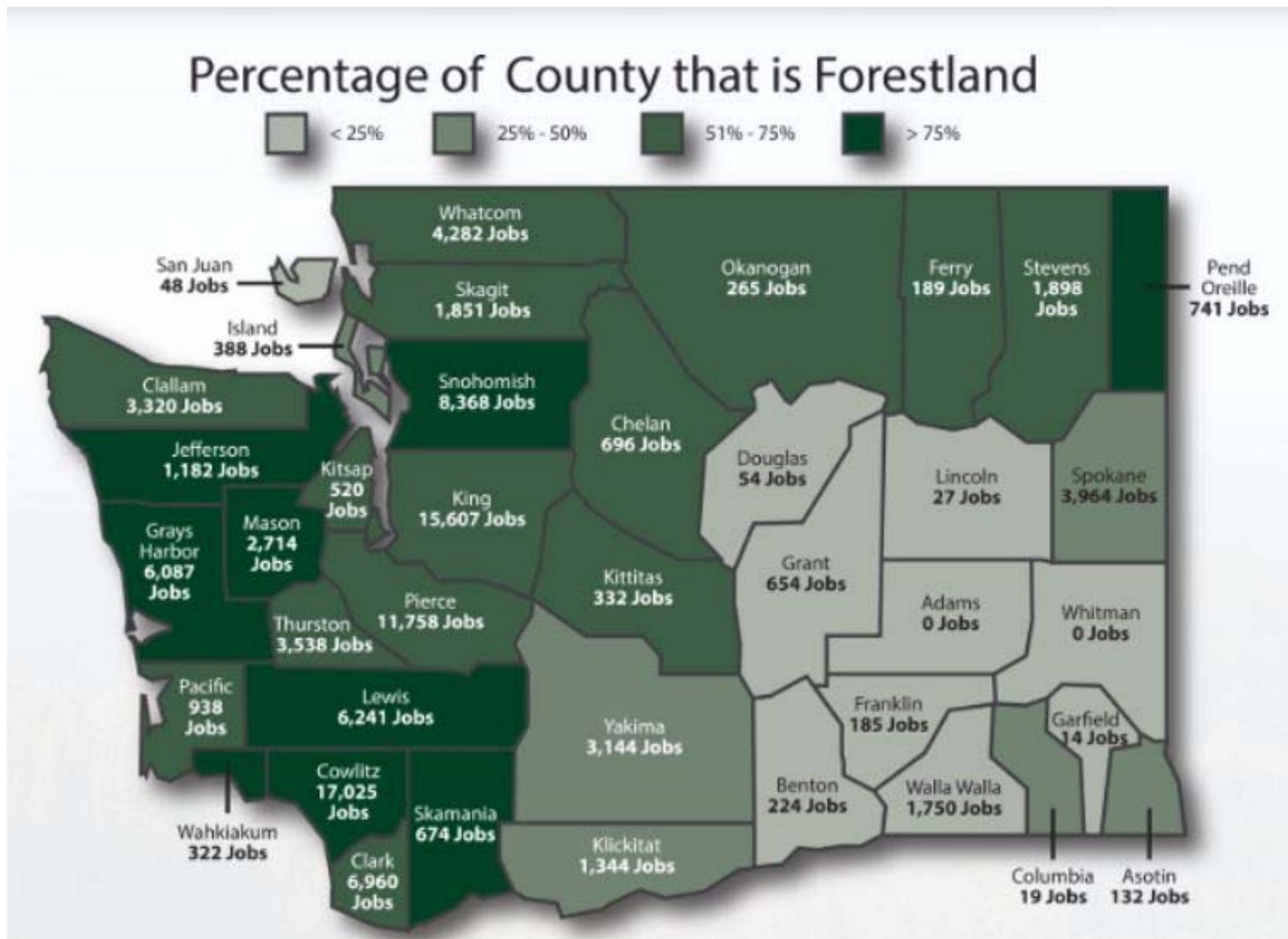
Washington State Forestland
22,983,438 acres



Washington State - 2011	
Economic Impact of Forestry-Related Activities	
Stumpage Sales	\$820,743,215
Direct Jobs	39,732
Total Direct, Indirect and Induced Jobs	107,455
Direct Wages	\$1,939,819,801
Total Direct, Indirect and Induced Wages	\$4,455,996,258
Total Revenue	\$21,795,712,628
Total Taxes	\$175,264,618

From: *Contribution of Working Forests to the Economy of Washington State, by County*;
 produced by Forest2Market for the Washington Forest Protection Association

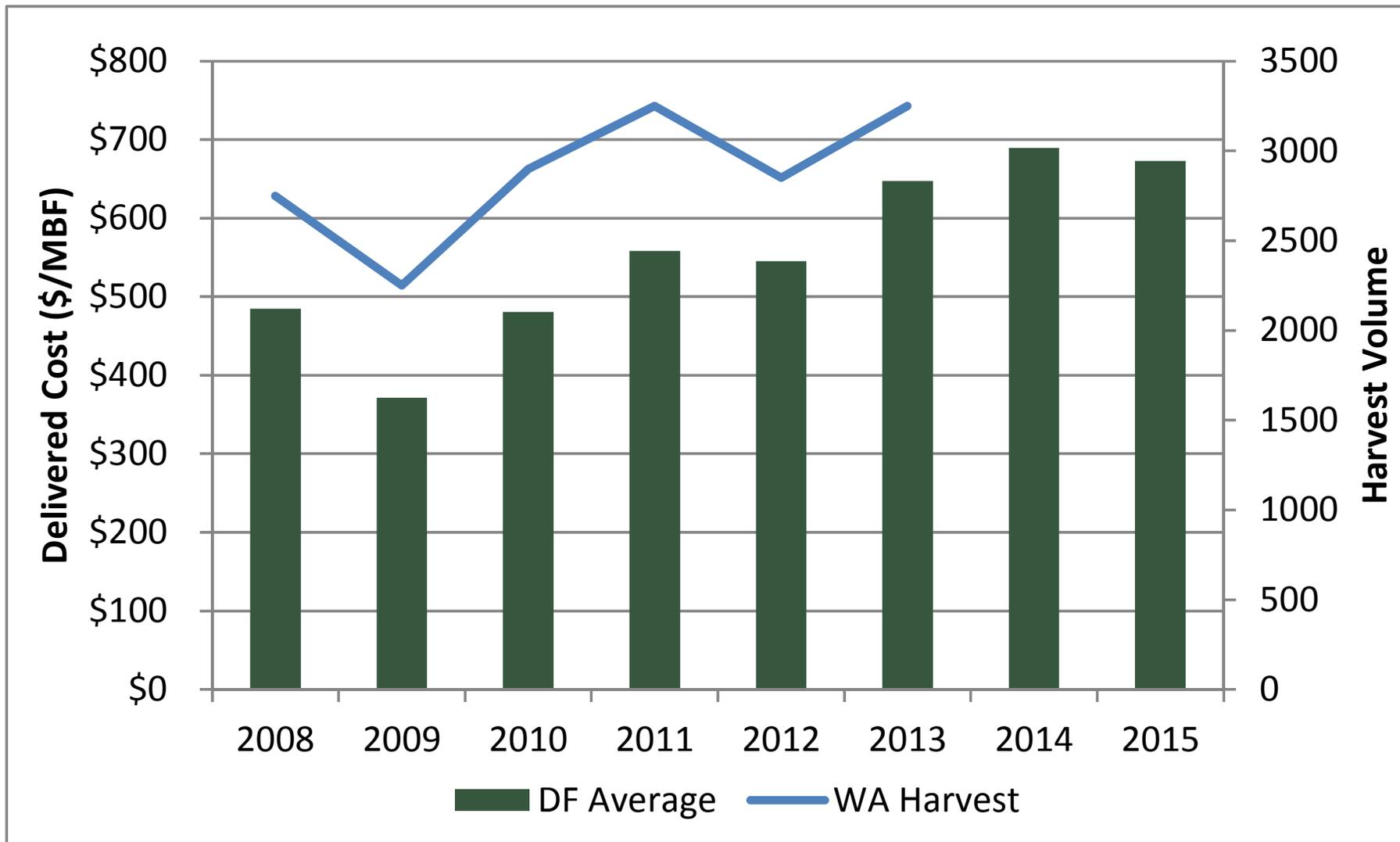
Washington Forestry Jobs Impact



Washington Hardwood Log Supply

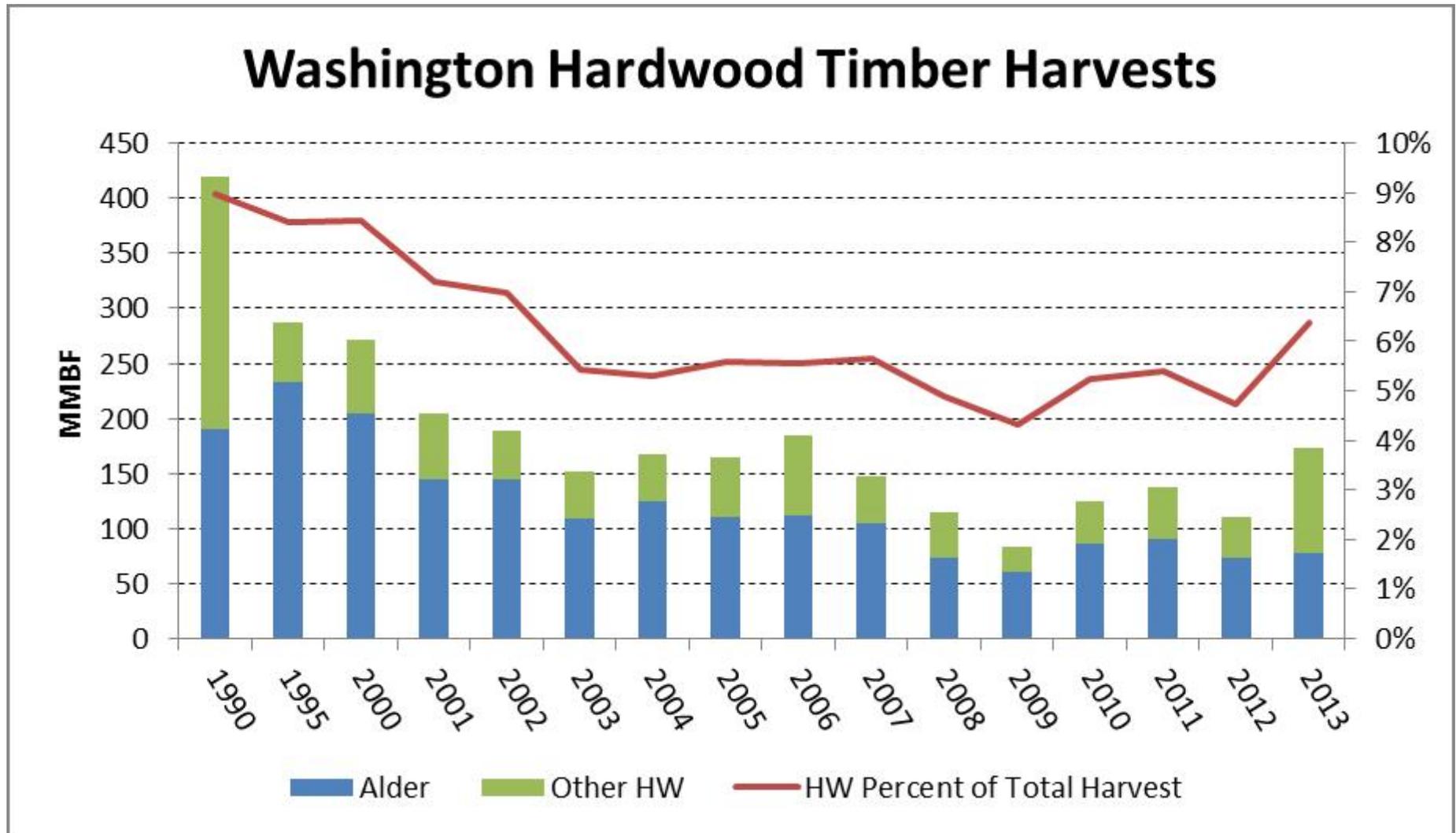


Conifer Values Drive Harvest Levels



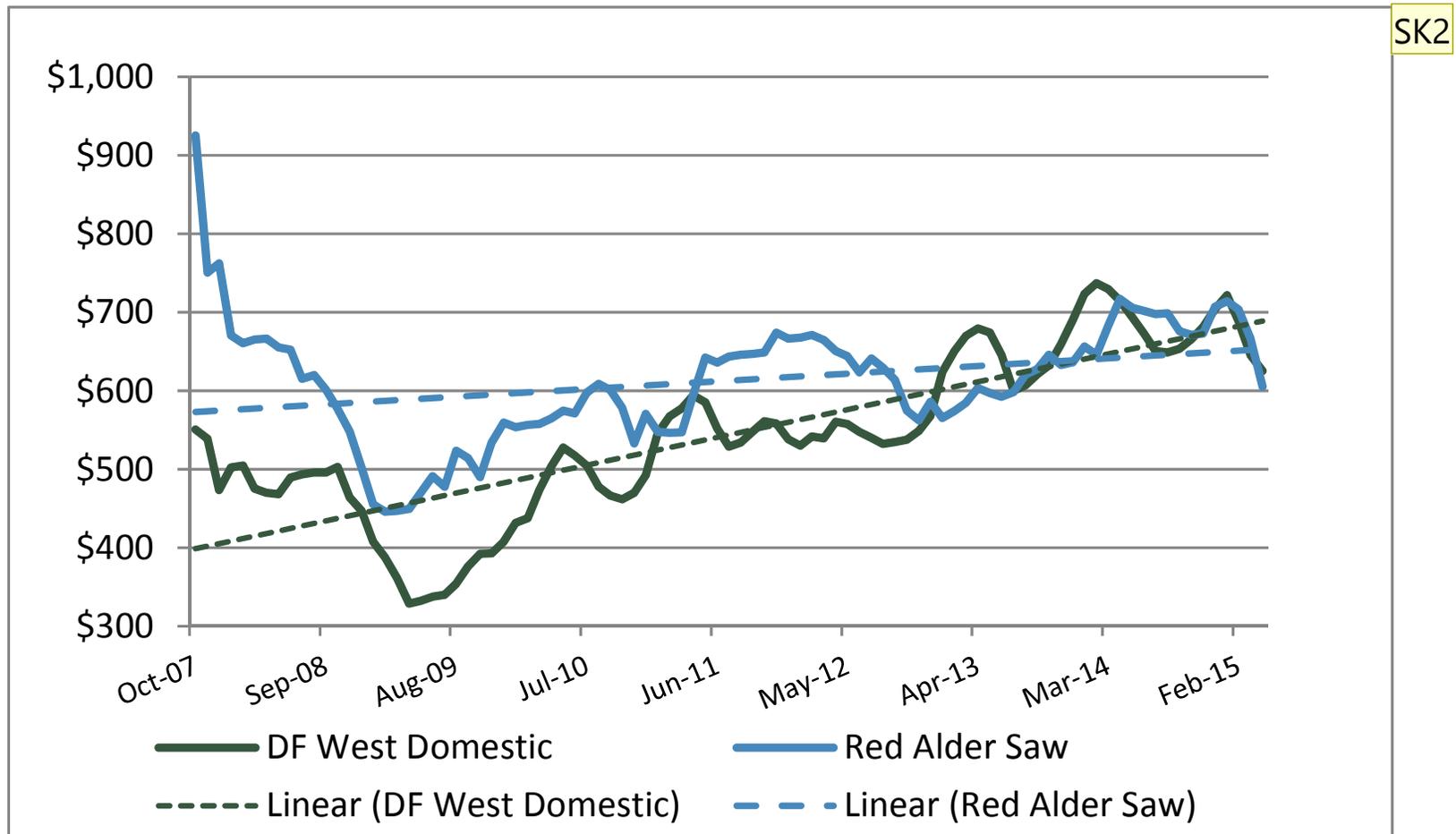
Price Data from Forest2Market's Northwest Delivered Raw Material Benchmark Service

Washington Hardwood Harvests



Alder vs. Douglas Fir

Value Comparison: Alder and Douglas Fir Sawmill Logs



Price Data from Forest2Market's Northwest Delivered Raw Material Benchmark Service

Slide 12

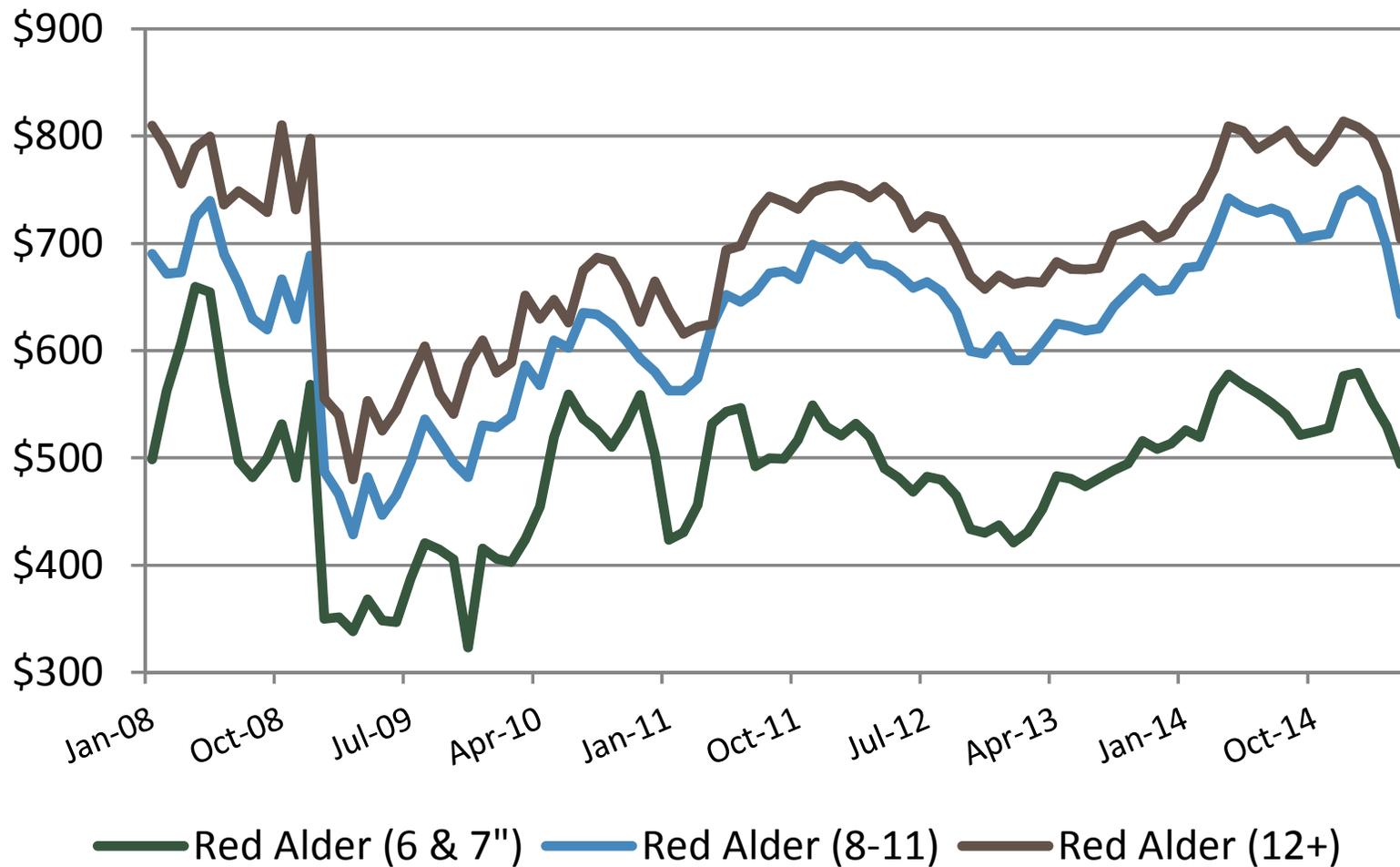
SK2

Is source correct?

Suz-anne Kinney, 6/8/2015

Premium for Larger Diameter Alder Logs

SK3



Price Data from Forest2Market's Northwest Delivered Raw Material Benchmark Service

Slide 13

SK3

Is source correct?

Suz-anne Kinney, 6/8/2015

Supply Challenges and Opportunities



Challenges:

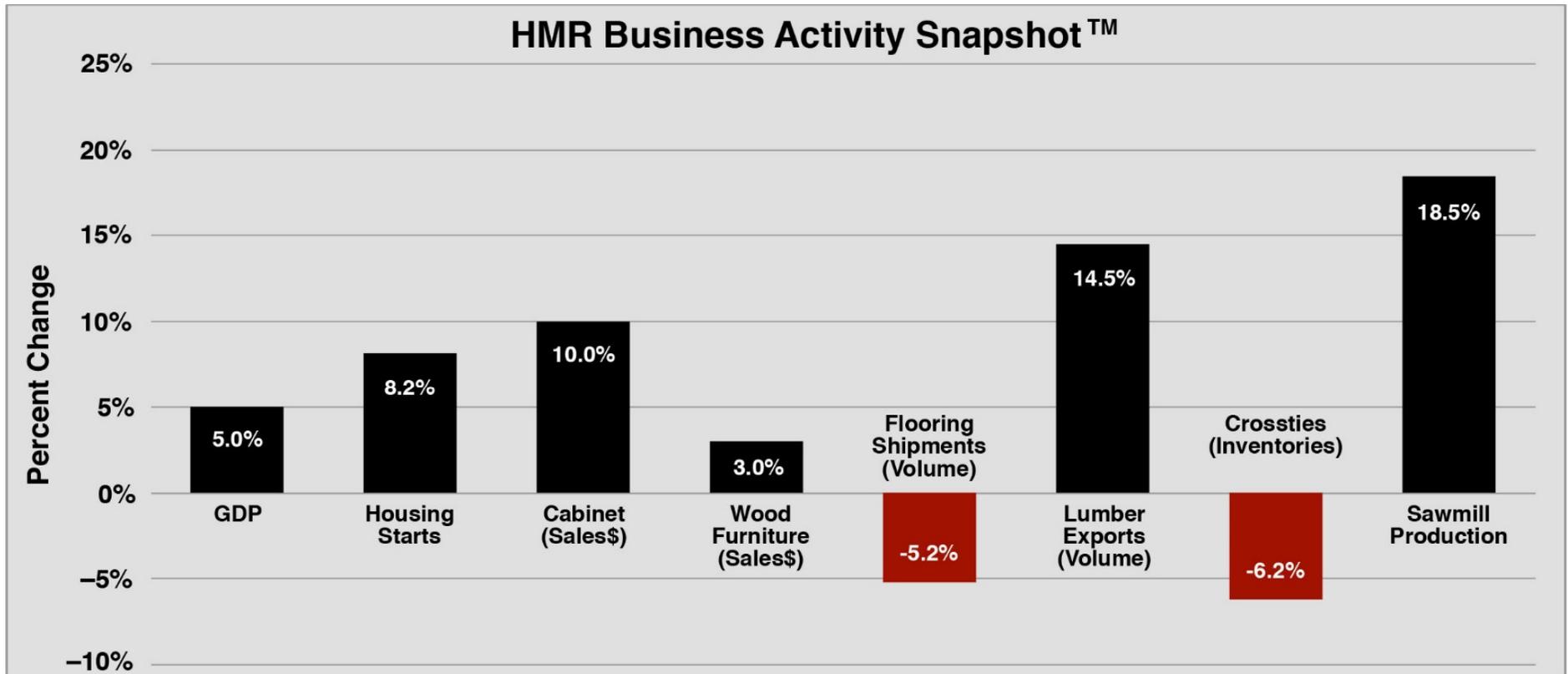
- Riparian regulations are subject to increase
- Availability of higher percent hardwood stands
- Harvest timing subject to conifer operations
- Wetter sites limited in winter (seasonal)--haul restrictions

Opportunities:

- Significant value add to forest inventory
- Increased yield using specific silviculture and improved seedlings
- Quicker, even-aged rotations vs. competing hardwoods

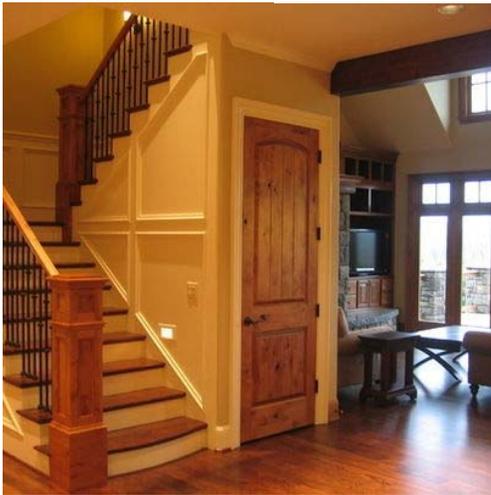
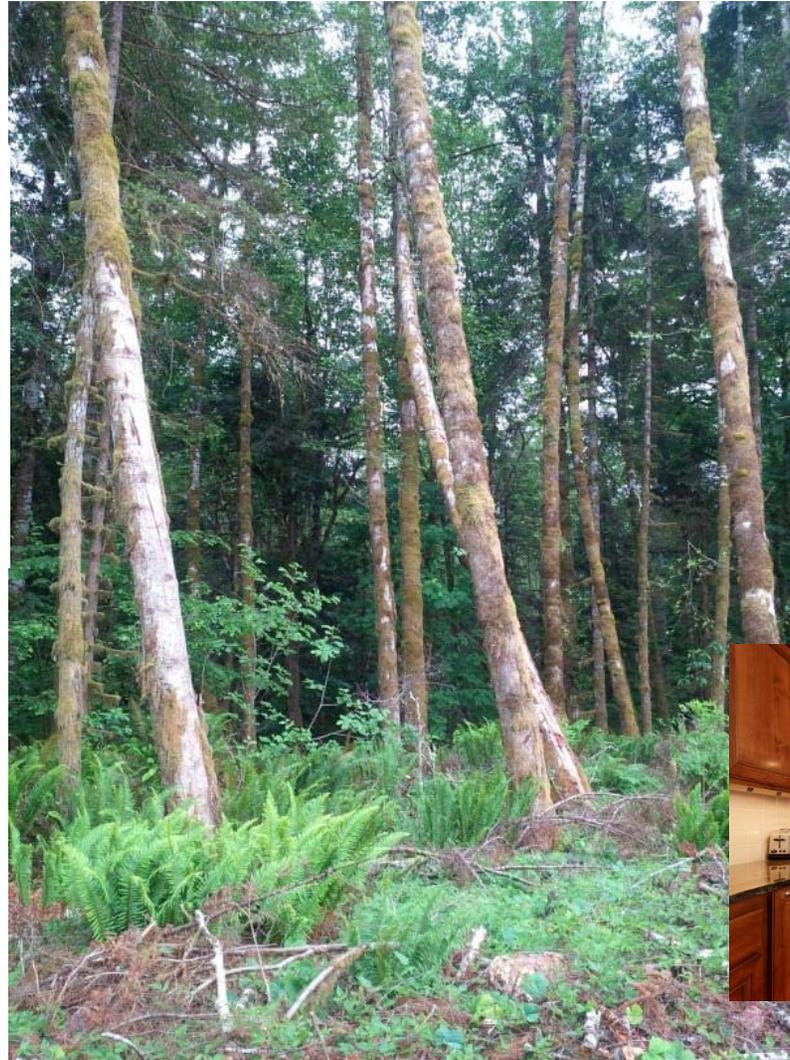


US Hardwood Market Summary for 2014



GDP – 2014 3Q, Third est. **Housing Starts** – Y-T-D November '14:'13 unadj. **Cabinets** – Y-T-D September '14:'13. **Furniture** – Y-T-D October '14:'13, Unadj. **Flooring** – Y-T-D December '14:'13. **Exports** – Y-T-D October '14:'13. **Crossties** – October 2014 vs 2013. **Sawmill Production** – 2014 annual rate vs 2013.

Red Alder – *Alnus rubra*

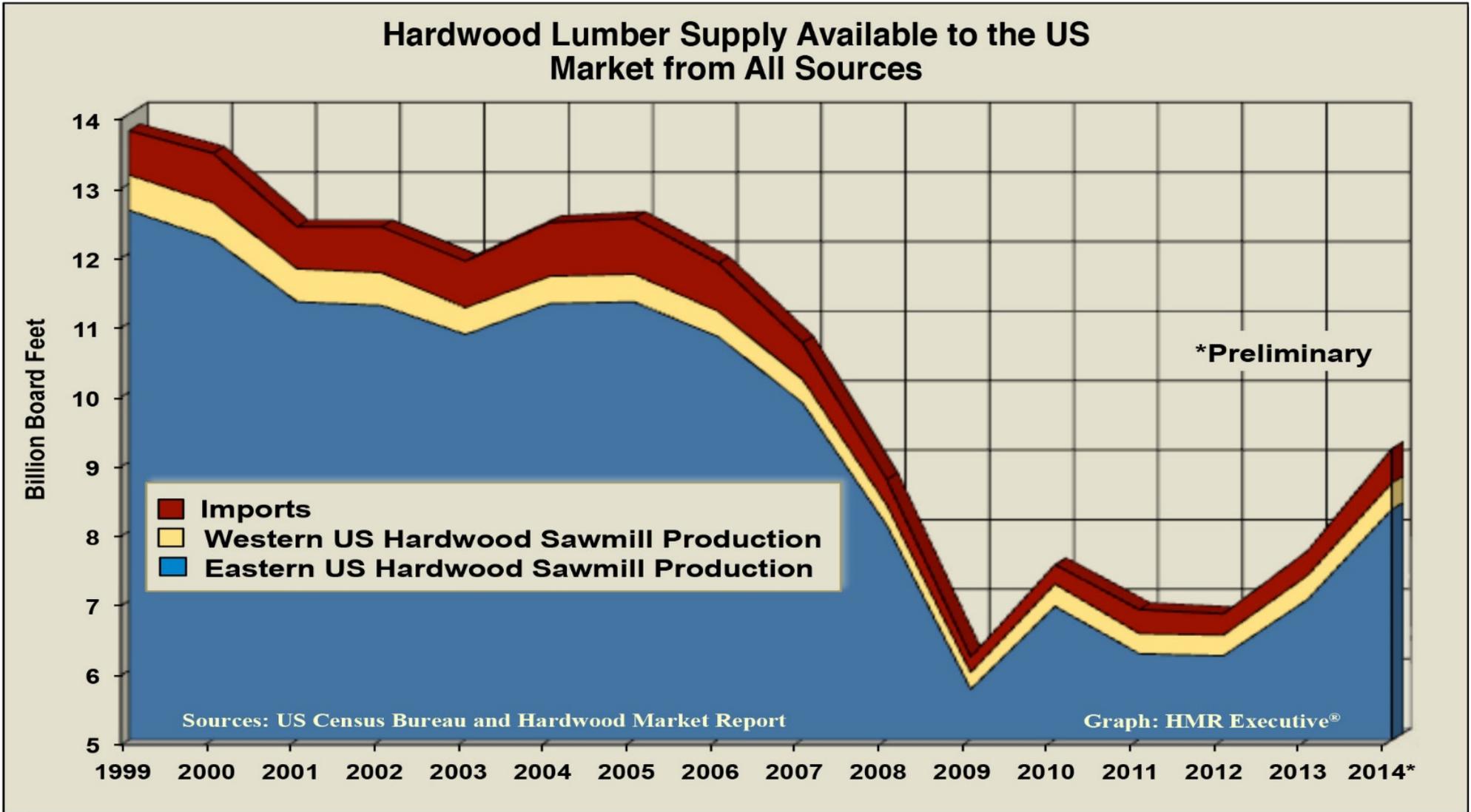


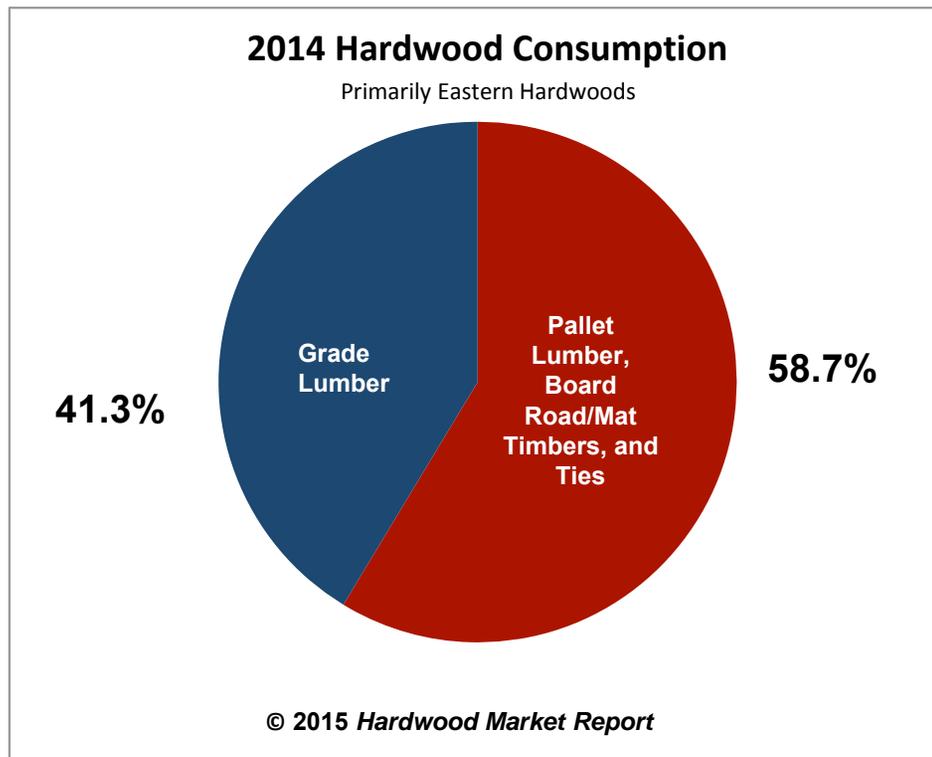
Big Leaf Maple – *Acer macrophyllum*



Hardwood Lumber Supply

Hardwood Lumber Supply Available to the US Market from All Sources





Industrial Products: 5.158B Bd Ft
Grade Lumber: 3.634B Bd Ft
Total: 8.792B Bd Ft

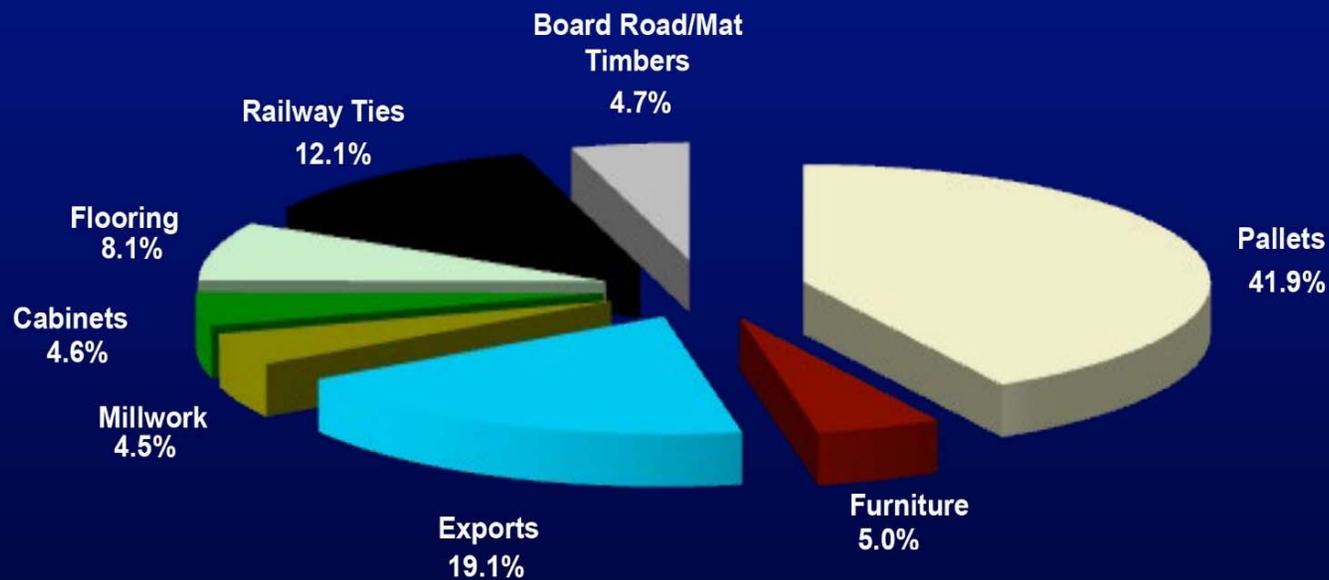
Western Hardwood Consumption

- Approximately 70% Grade Lumber (Grades Proprietary to Western Hardwoods)
 - Cabinetry
 - Millwork
 - Furniture
 - Specialty
- The remaining 30% used for pallet stock and industrials

Summary of US Hardwood Market

©2015 Hardwood Market Report

2014



Exports = 19.1% of the volume of all Eastern US hardwood consumption and 46.2% of all grade lumber usage.

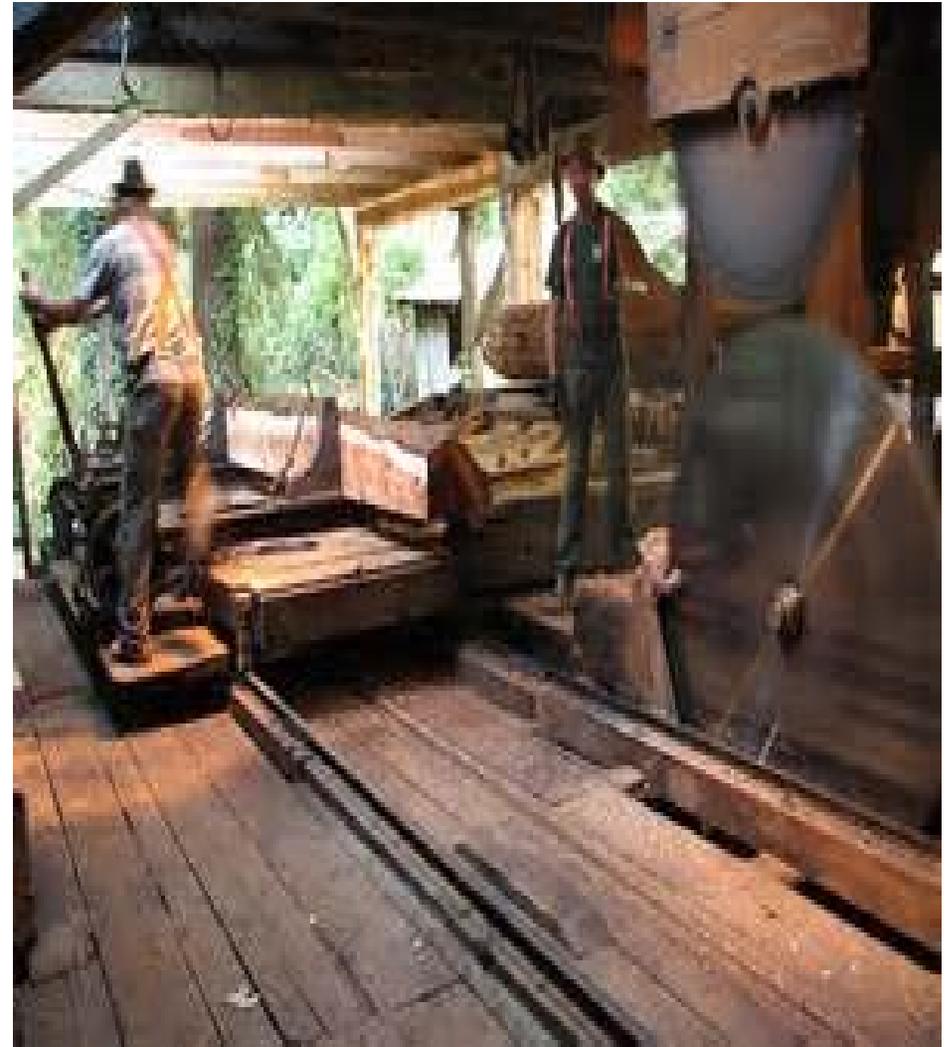
Pallets & Exports Drive Hardwood Consumption

Estimates of Consumption of US Hardwoods

© 2015 Hardwood Market Report										% Change 2013	% Change 2006
	2006	2007	2008	2009	2010	2011	2012	2013	2014		
Pallets	3.7	3.6	3.5	3.0	3.2	3.26	3.27	3.643	3.685	1.2%	-0.4%
Furniture	1.1	1.0	0.7	0.3	0.35	0.29	0.30	0.427	0.439	2.8%	-60.1%
Exports	1.3	1.2	0.9	0.8	1.07	1.2	1.32	1.462	1.679	14.8%	29.2%
Millwork	1.2	1.0	0.7	0.4	0.43	0.24	0.26	0.387	0.394	1.8%	-67.2%
Cabinets	1.5	1.3	1.2	0.7	0.4	0.34	0.36	0.392	0.407	3.8%	-72.9%
Flooring	1.4	1.3	0.8	0.5	0.59	0.51	0.55	0.753	0.712	-5.4%	-49.1%
Railway Ties	0.96	0.92	0.94	0.89	0.89	0.98	1.04	1.114	1.06	-4.9%	10.1%
* Board Road/Mat Timbers	N/A	N/A	0.286	0.175	0.198	0.243	0.267	0.424	0.413	-2.6%	N/A
Total Estimated Consumption	11.16	10.32	9.03	6.76	7.12	7.06	7.37	8.55	8.79	2.8%	-21.3%

* Board Road/Mat Timber footages revised

- Today's hardwood sawmill is state of the art: tooled to maximize the recovery of Grade Lumber while maintaining a high level of productivity.
- Mills have increased RTL value by reducing the green pallet grade production to around 20%. The same fiber that made pallet grade lumber has been diverted into higher value, kiln dried "Rustic Grade" products.
- Today's mills not only achieve high levels of production and grade recovery but embrace a culture of safety that is genetic to long-term success.



4 Economic Factors Affecting Hardwood Markets

- Construction Stats



- Oil Prices



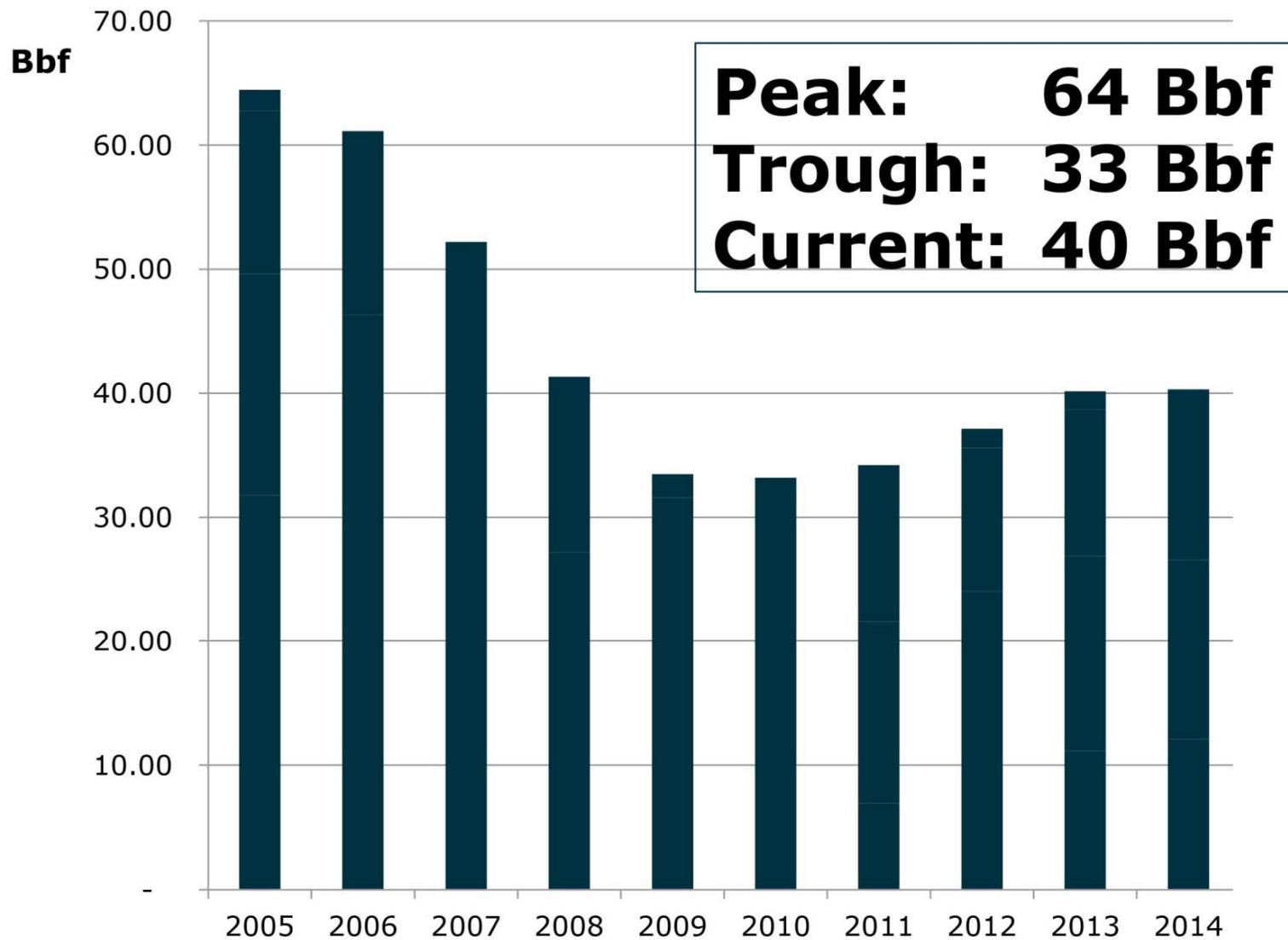
- US Currency



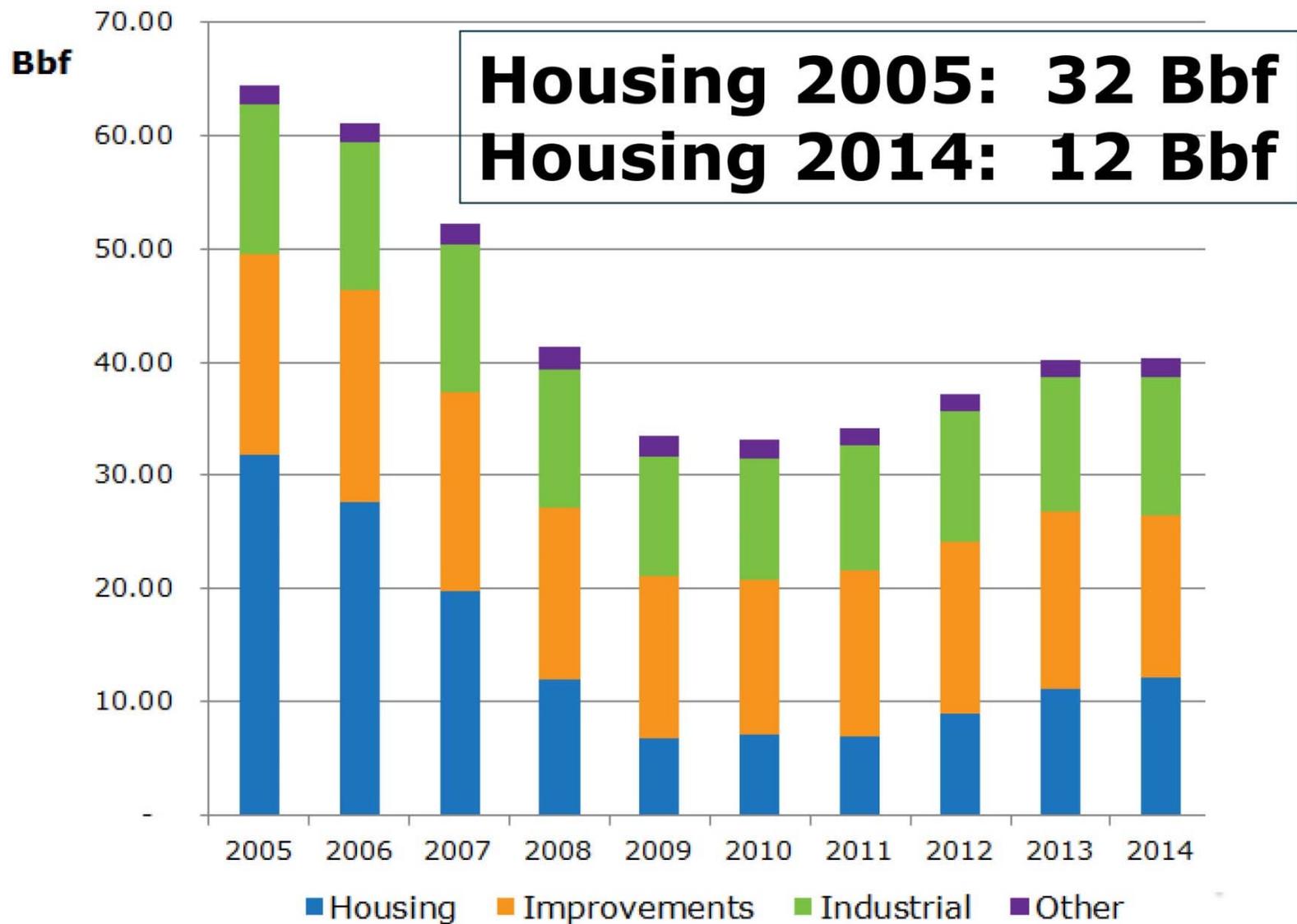
- International Growth



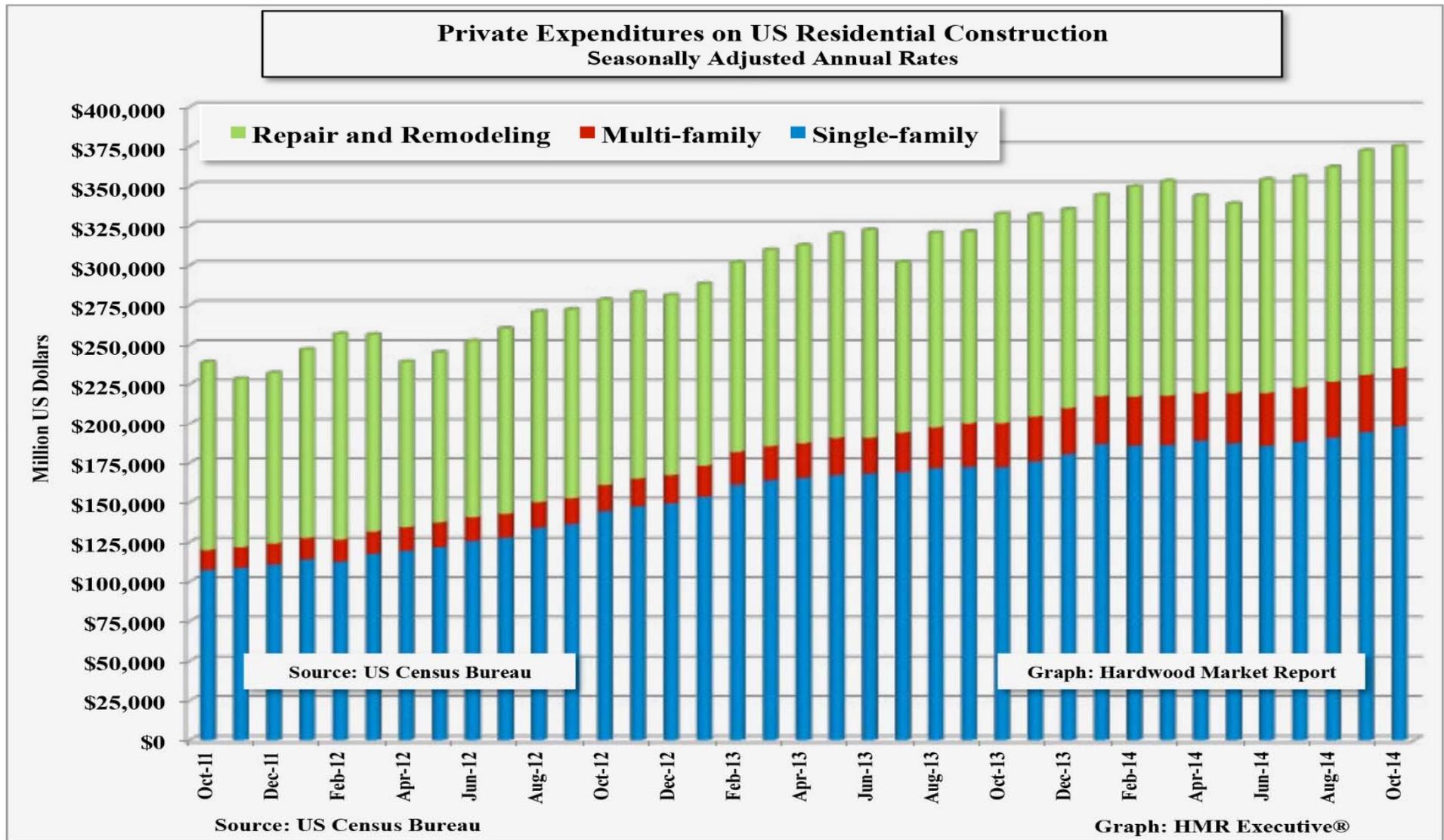
US Lumber Consumption – 2005 - 2014



US Lumber Consumption by End Use – 2005 - 2014

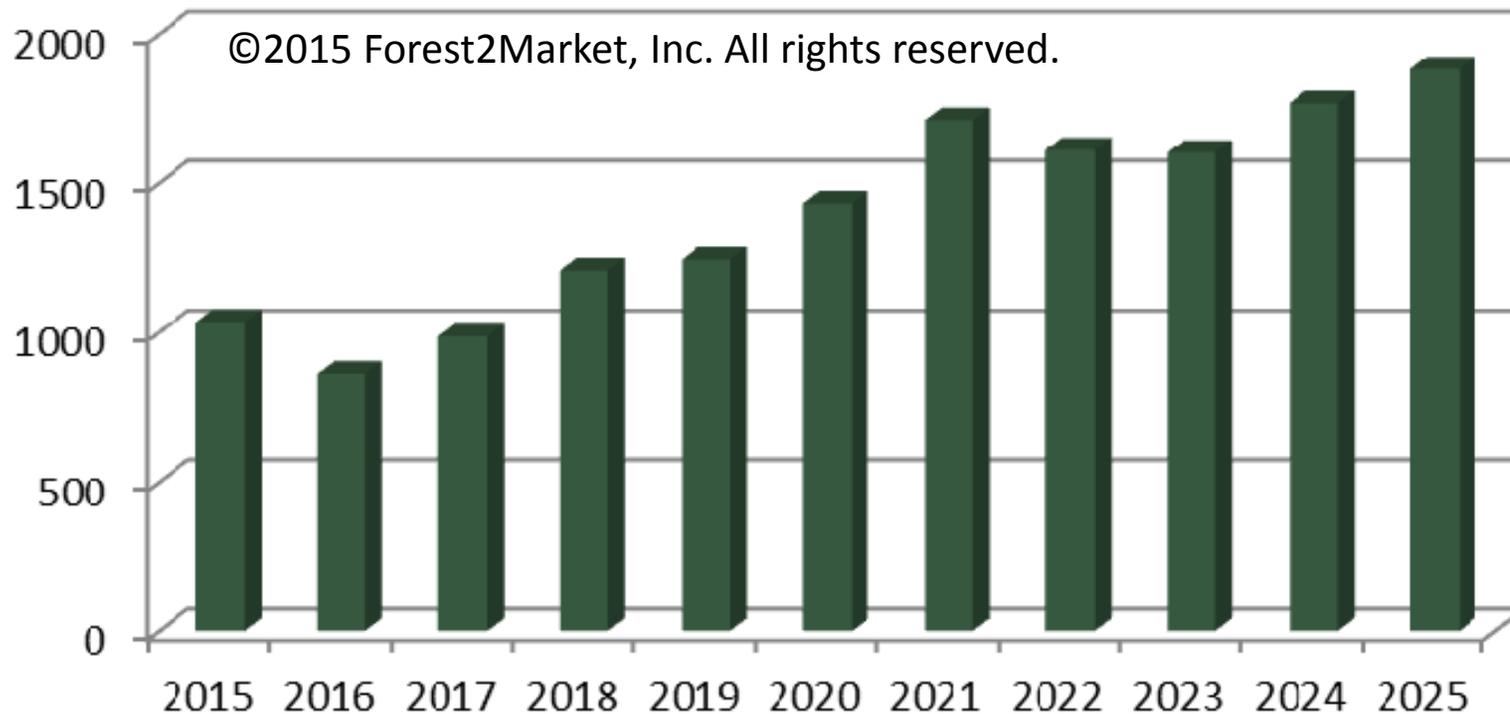


Residential Construction

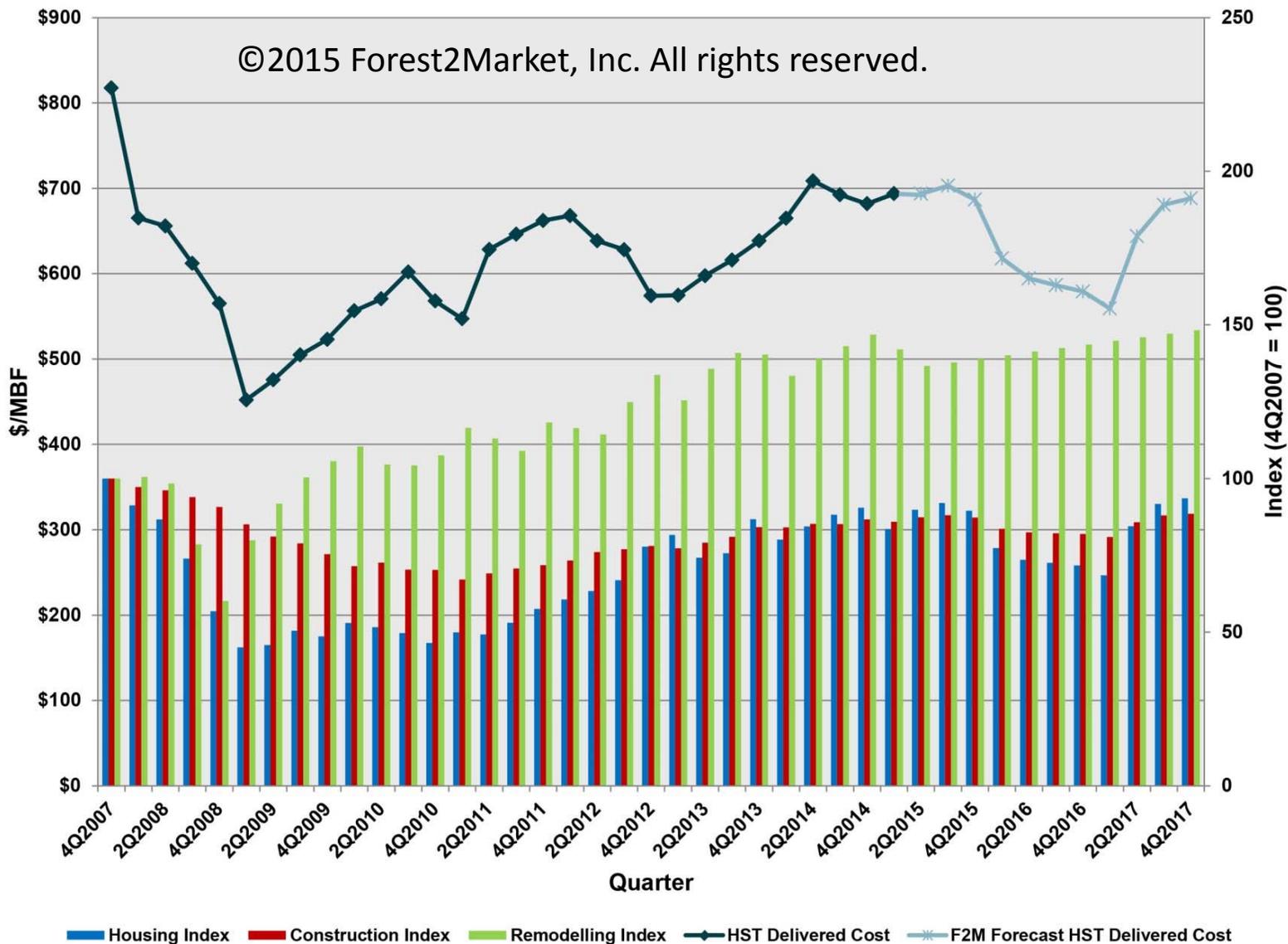


Annual Housing Starts - Forecast

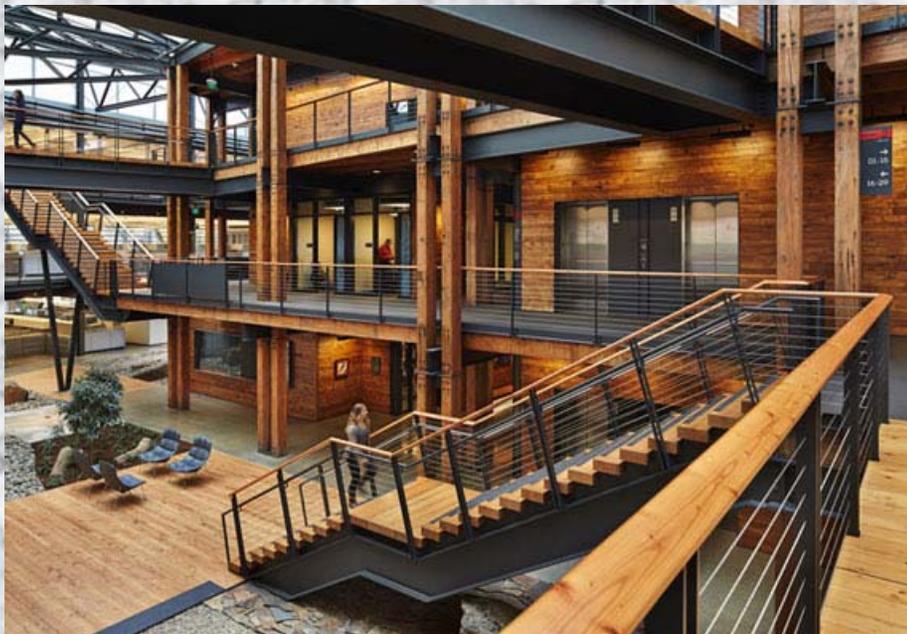
Housing Start Forecast (000s)



Western Hardwood Log Cost vs. HCR Index

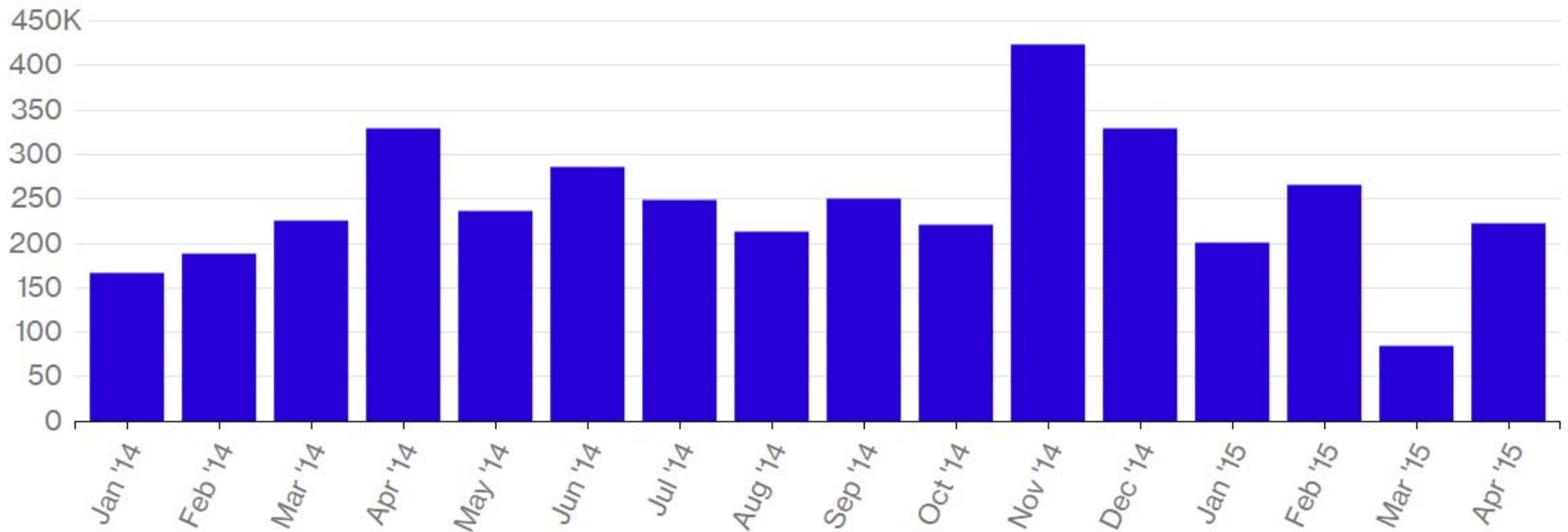


Wood Building Technologies LVL, CLT and Others to Increase Overall Use of Wood Products



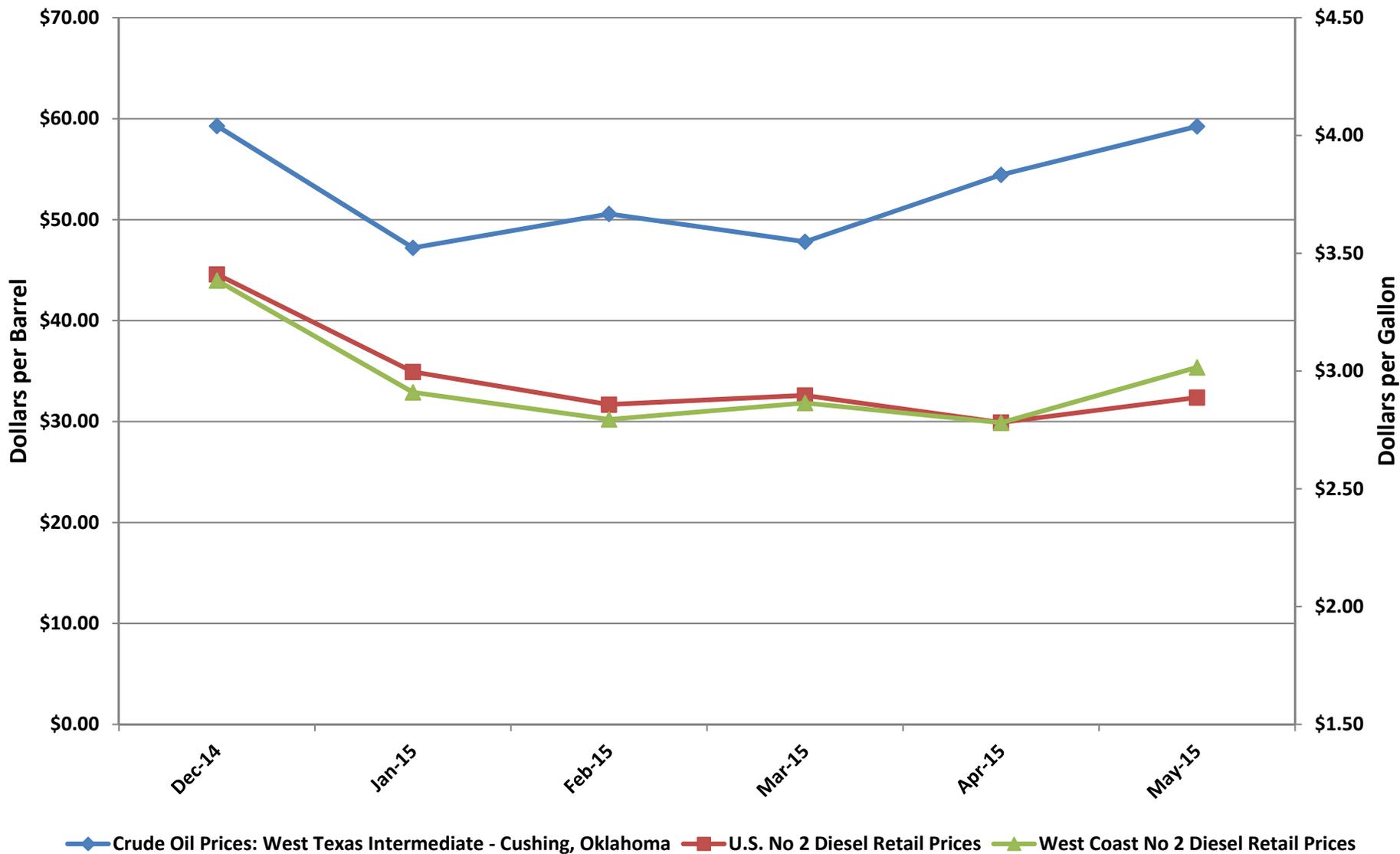
Finding Their Footing

Economists look for payroll gains that slowed in early 2015 to stabilize above 200,000 in May

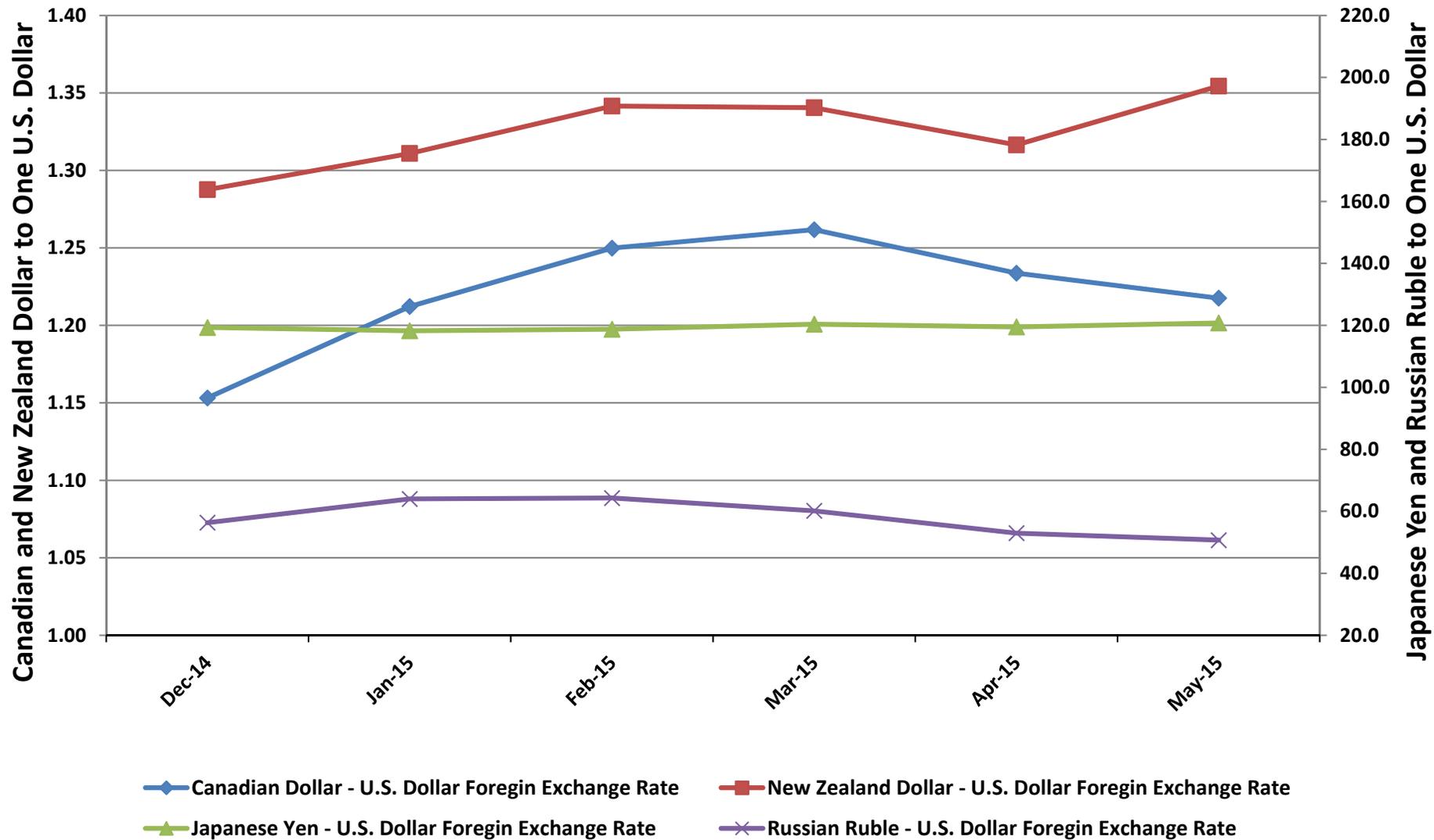


Charts monthly change in non-farm payrolls. Source: Bureau of Labor Statistics

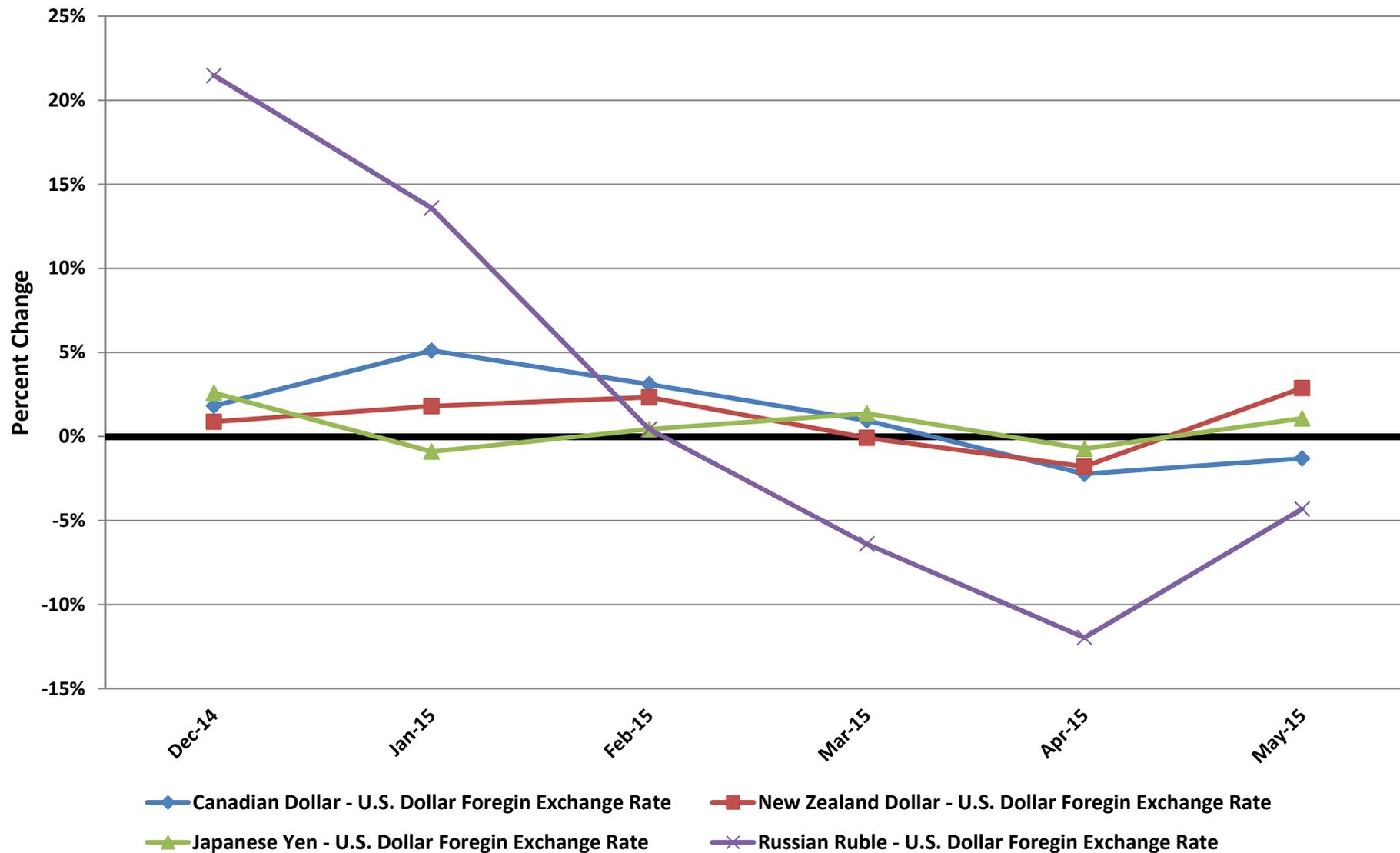
Oil Prices below \$60/Barrel



US Exchange Rates



Percent Change of Exchange Rates

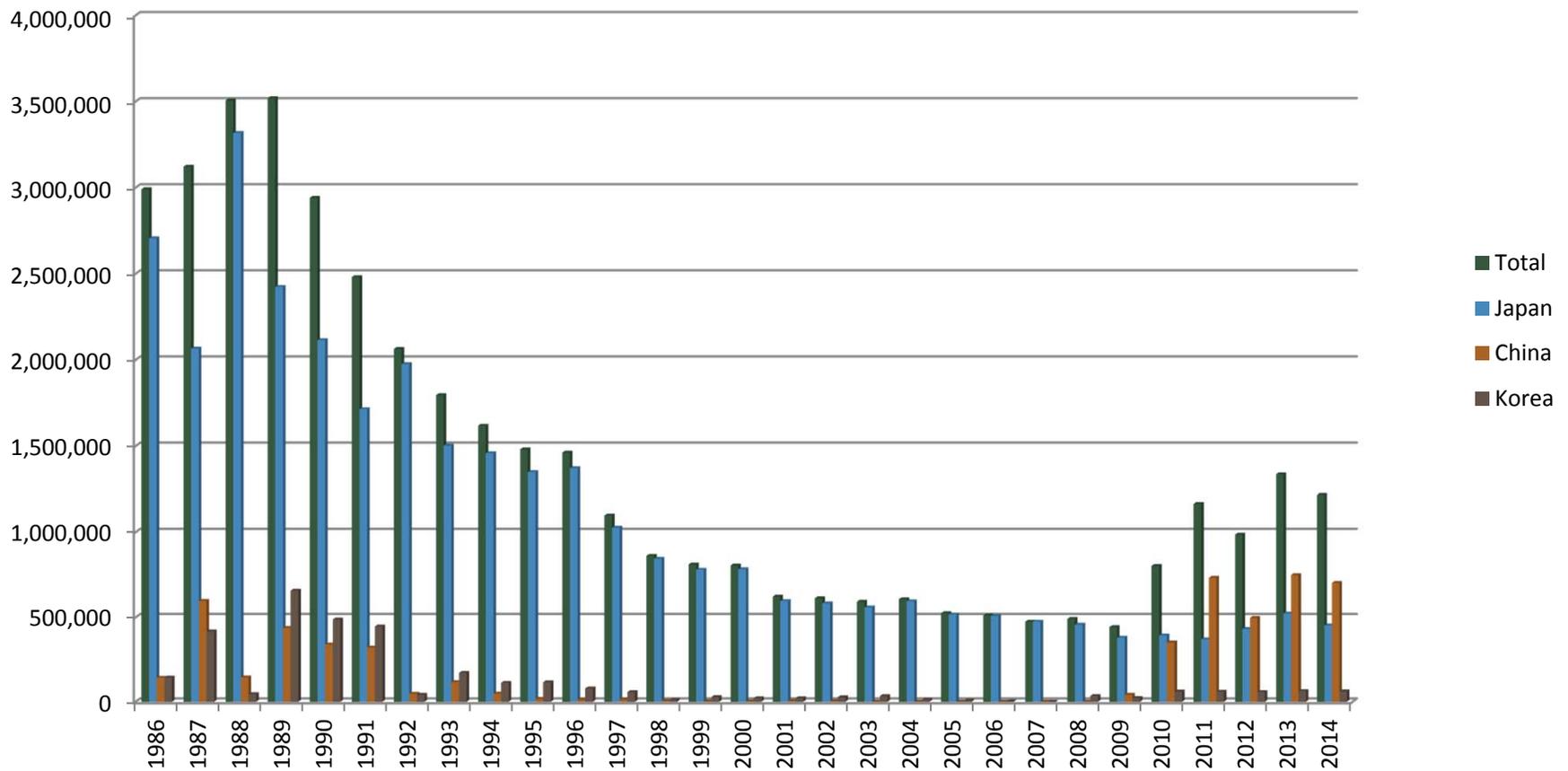


In China...

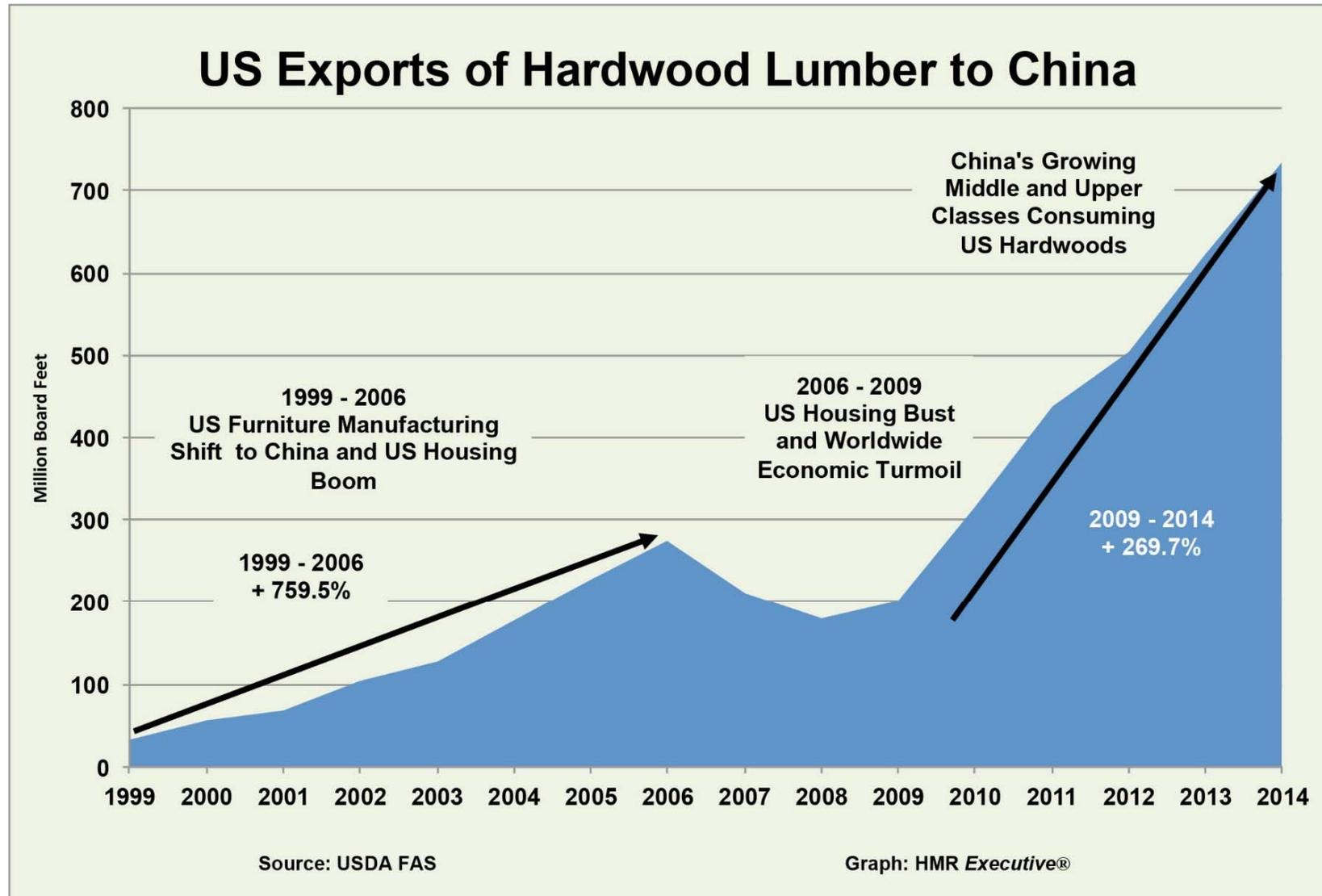


Log Imports by Country: 1986 – 2014

Breakbulk Log Export Volumes 1986 - 2014 (1 MBF Scribner Scale)

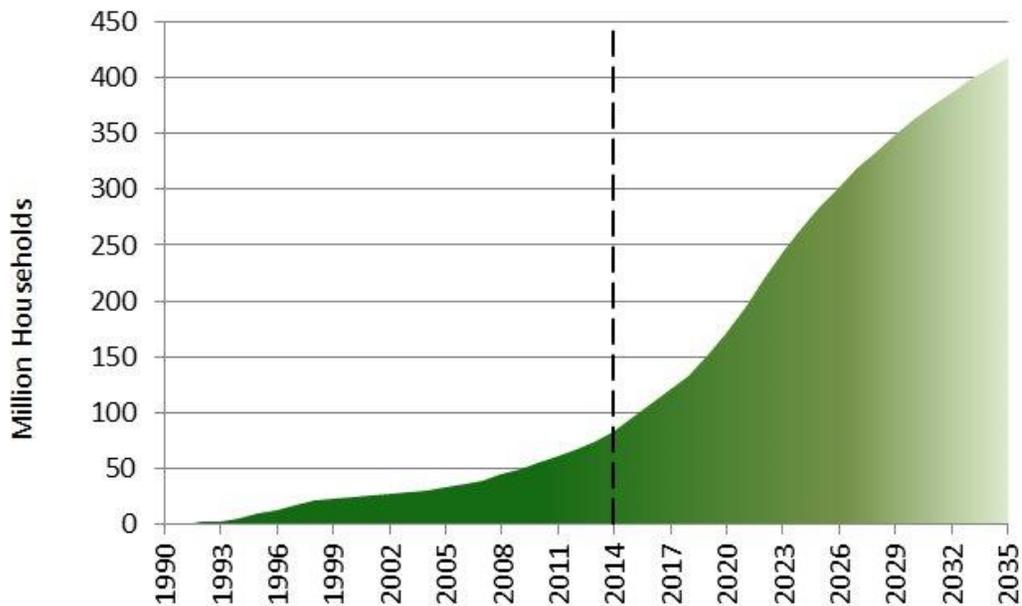


US Exports to China



China's Future Consumer Outlook

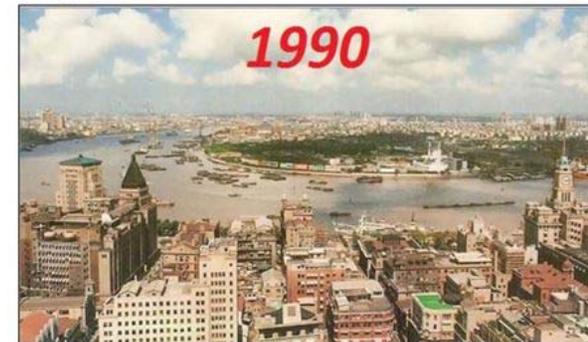
China's Growing Middle Class*



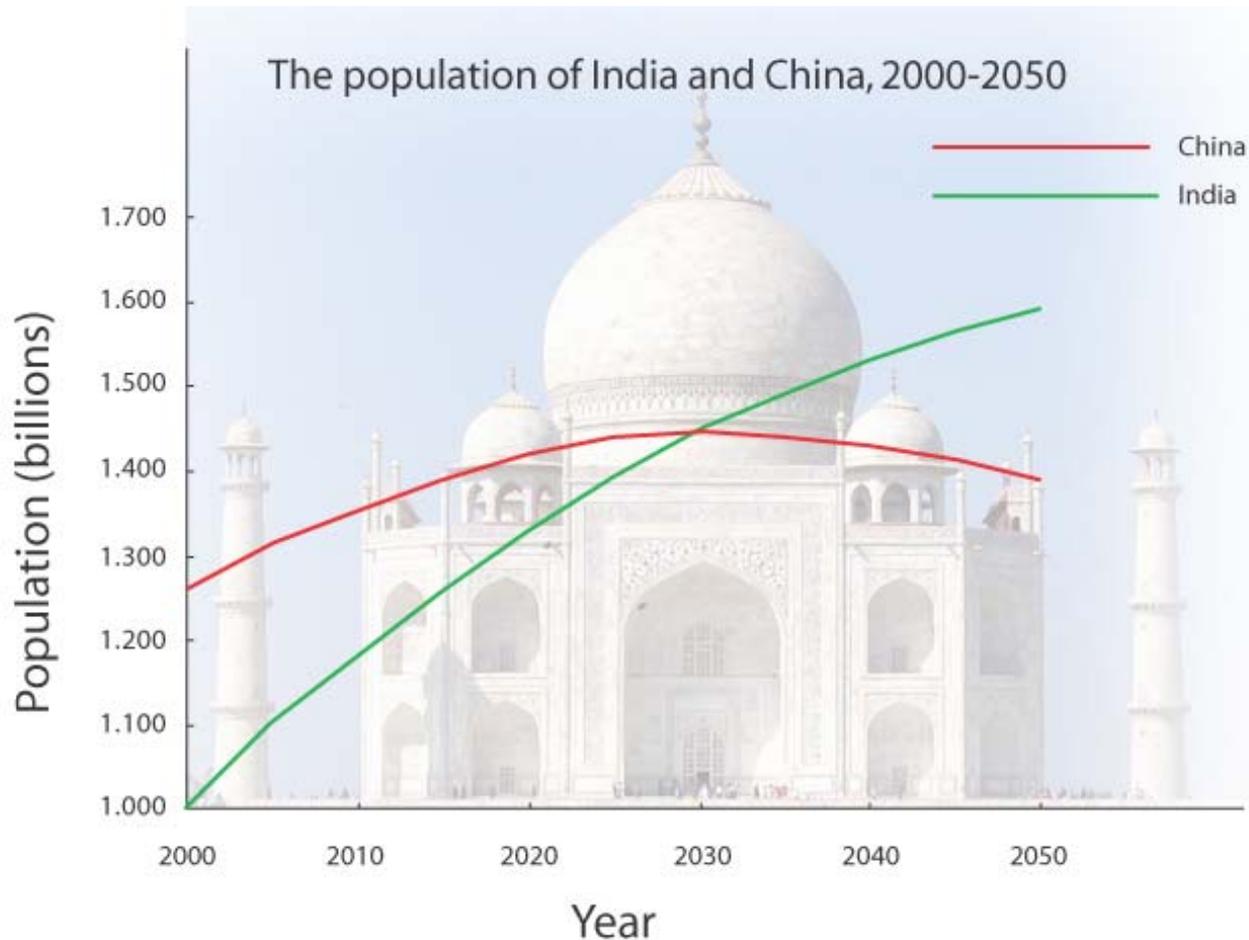
*Households with income above \$20,000 US.

Source: Global Insight

- One-third of all new buildings in 2013 were built in China.
- From rural to urban—10 million move to cities every year.
- Quality of significant portion of housing stock requires upgrading.



India's Growth to Outpace China's in 15 Years



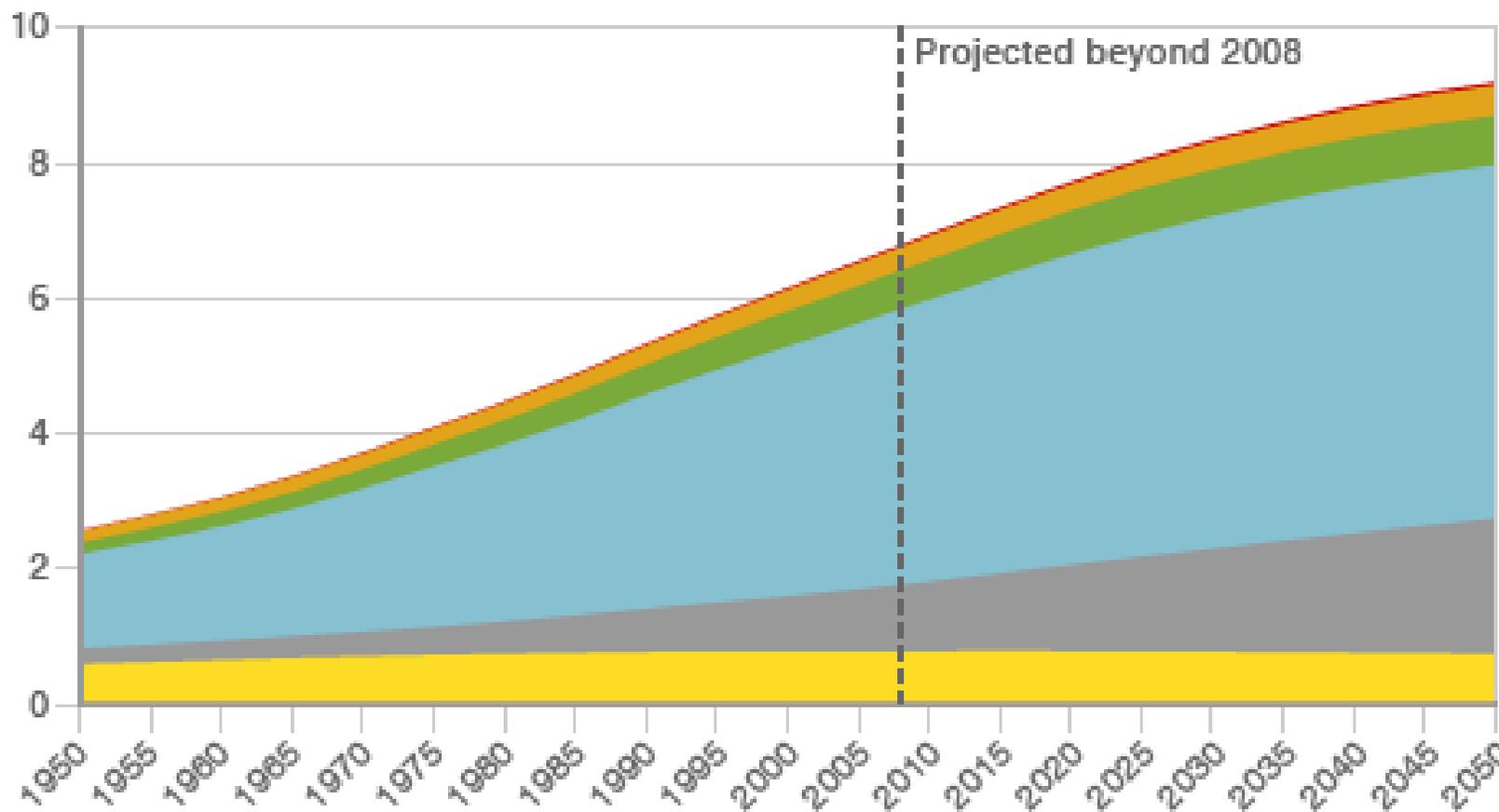
Source: UN Population Division, medium variant

“Developing Countries will be 80% of the global demand for agricultural and forest products over the next 15 years” (UN).

The world's rising population, 1950-2050



Billion



SOURCE: UN

Challenges and Opportunities



Challenges

- Red Alder competes with many other Species of Hardwood regionally, nationally and globally. Can be subject to fickleness of annual furniture trends similar to other hardwoods, yet the versatility of the species allows for adaptability.
- Regional supply can be seasonally and cyclically constrained due to:
 - Regional conifer market conditions
 - Increases in riparian protection measures
 - Winter harvest season restrictions

Opportunities

- An increasing preference for wood as a building product and other uses along with recognition of the valuable role forestry plays on our landscape.
- Western Hardwoods are intrinsically renewable and sustainable as compared to other Hardwood resources.
- A lumber shortage is certainly possible and will create “super cycle” pricing in the future as our economy improves.
- Asian markets will see continued growth and perhaps an increased demand for finer woodwork and case-goods.
- Red Alder’s versatile appearance applications and ease of workability will help capitalize on future home improvement and design trends;



The End - Thank You!



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- Delivered price benchmarks, transaction-based peer group comparisons
- Forecasts for economic drivers and delivered prices
- Supply chain optimization tools



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