

International and Domestic Outlook for the Hardwood Industry

Lake States Lumber Association Winter Meeting

Green Bay, WI

January 14, 2016



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 **VirginiaTech**
Invent the Future

 **VirginiaTech**
College of Natural Resources
and Environment

The Speakers

- Urs Buehlmann
 - **Professor, Virginia Tech**
 - Former General Manager Enkeboll Designs
- Delton Alderman
 - **Research Forest Products Technologists, U.S. Forest Service**
 - Focuses on the U.S. housing market
- Matt Bumgardner
 - **Research Forest Products Technologists, U.S. Forest Service**
 - Focuses on hardwood supply and demand

Acknowledgements

- **Al Schuler**
 - Research Economist, retired
- **Mark Barford**
 - CEO NHLA
- **Mike Snow**
 - CEO AHMI
- **WI DATCP**
- **LSLA**

Announcements

- **NHLA/VT "state of the industry" survey**
 - electronic survey from NHLA/VT – out soon (February '16)
- **Wood Industry Week @ WERC**
 - future of our industry conference in Princeton, WV; November 2 – 3, 2016
- **Housing report**
 - free monthly housing report – to sign up email: buehlmann@gmail.com

Agenda

- Innovation
- U.S. hardwood industry
- U.S. housing markets
- Opportunities
- Questions / Comments

Innovation I



Innovation II



The Challenge

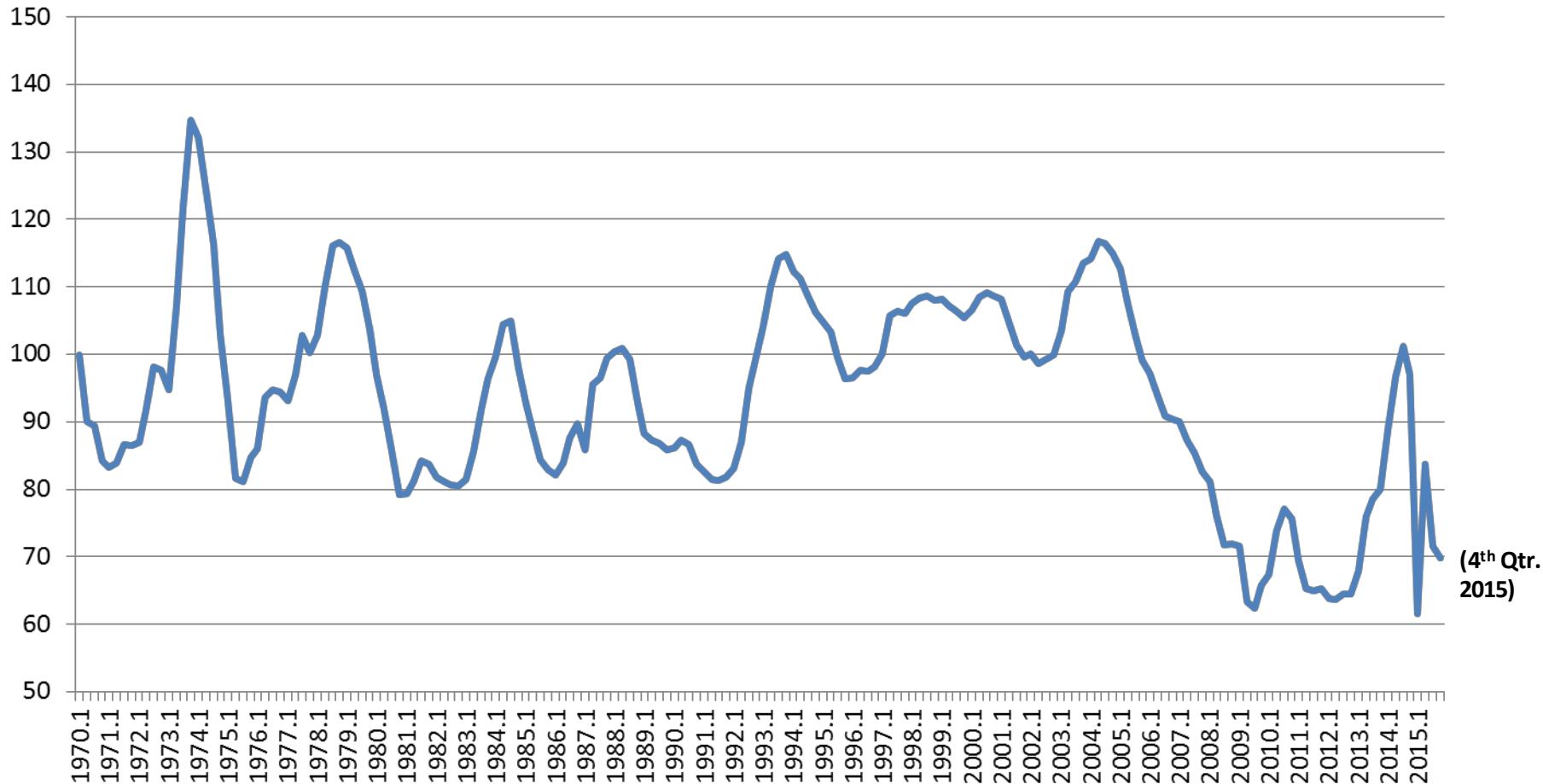


U.S. Hardwood Industry

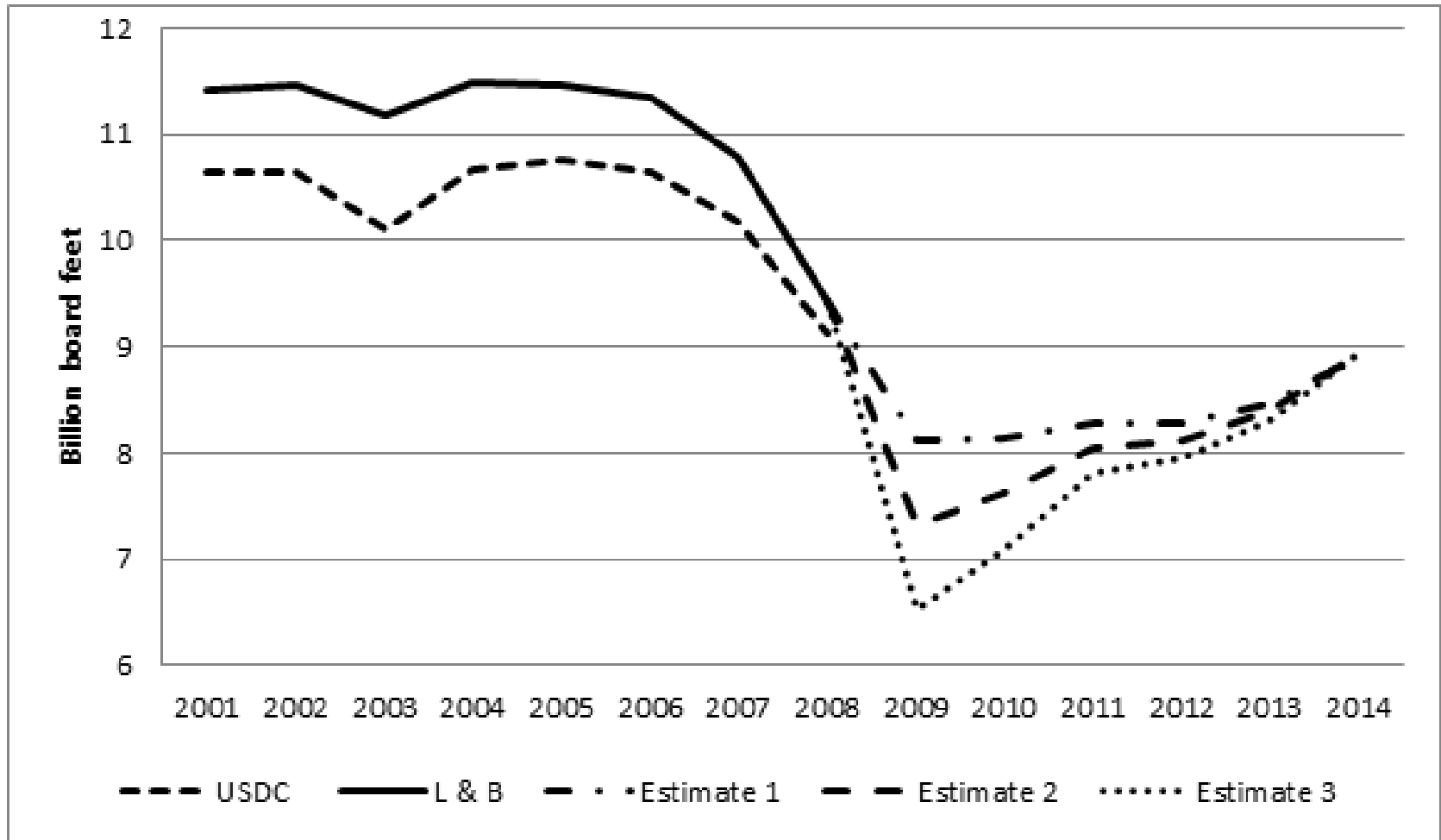


Aggregate price index for green No. 1 Common Appalachian hardwood lumber

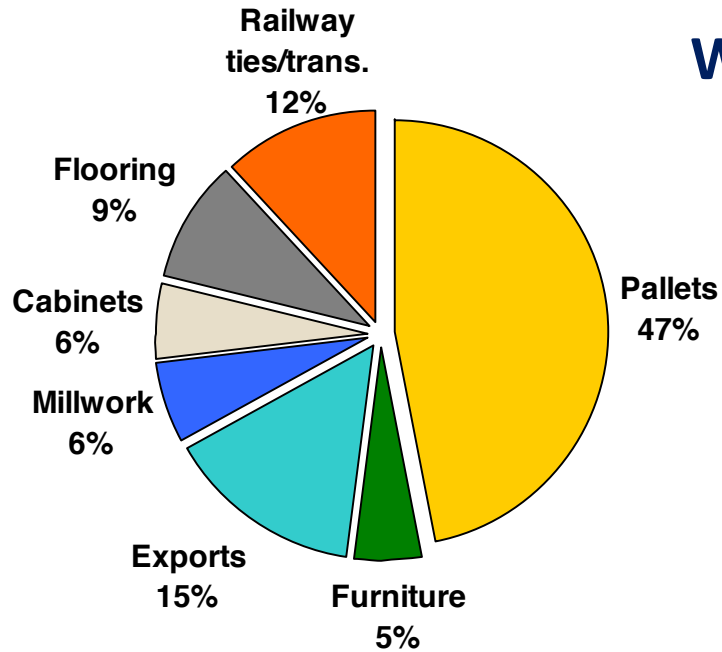
(inflation-adjusted and indexed, 1970.1 = 100)



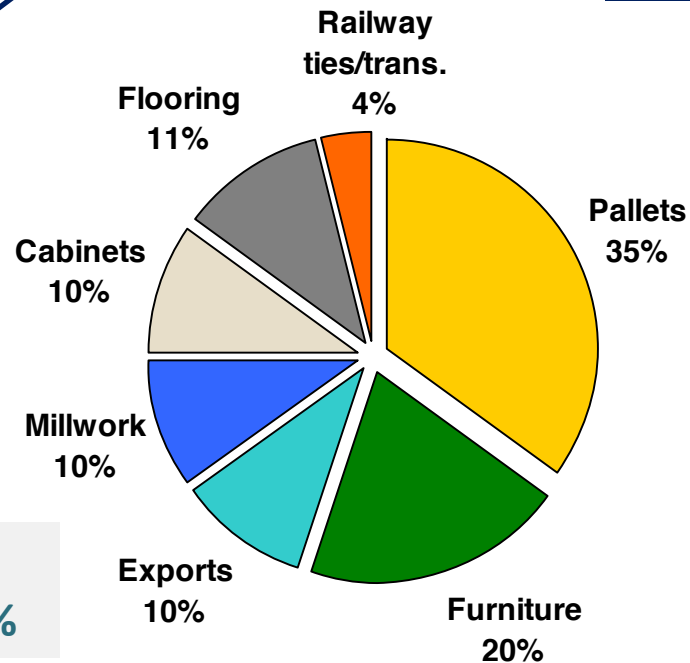
U.S. hardwood lumber production



Where the hardwood lumber went, 2010



Where the hardwood lumber went, 2000



Industrial uses ~ 59%

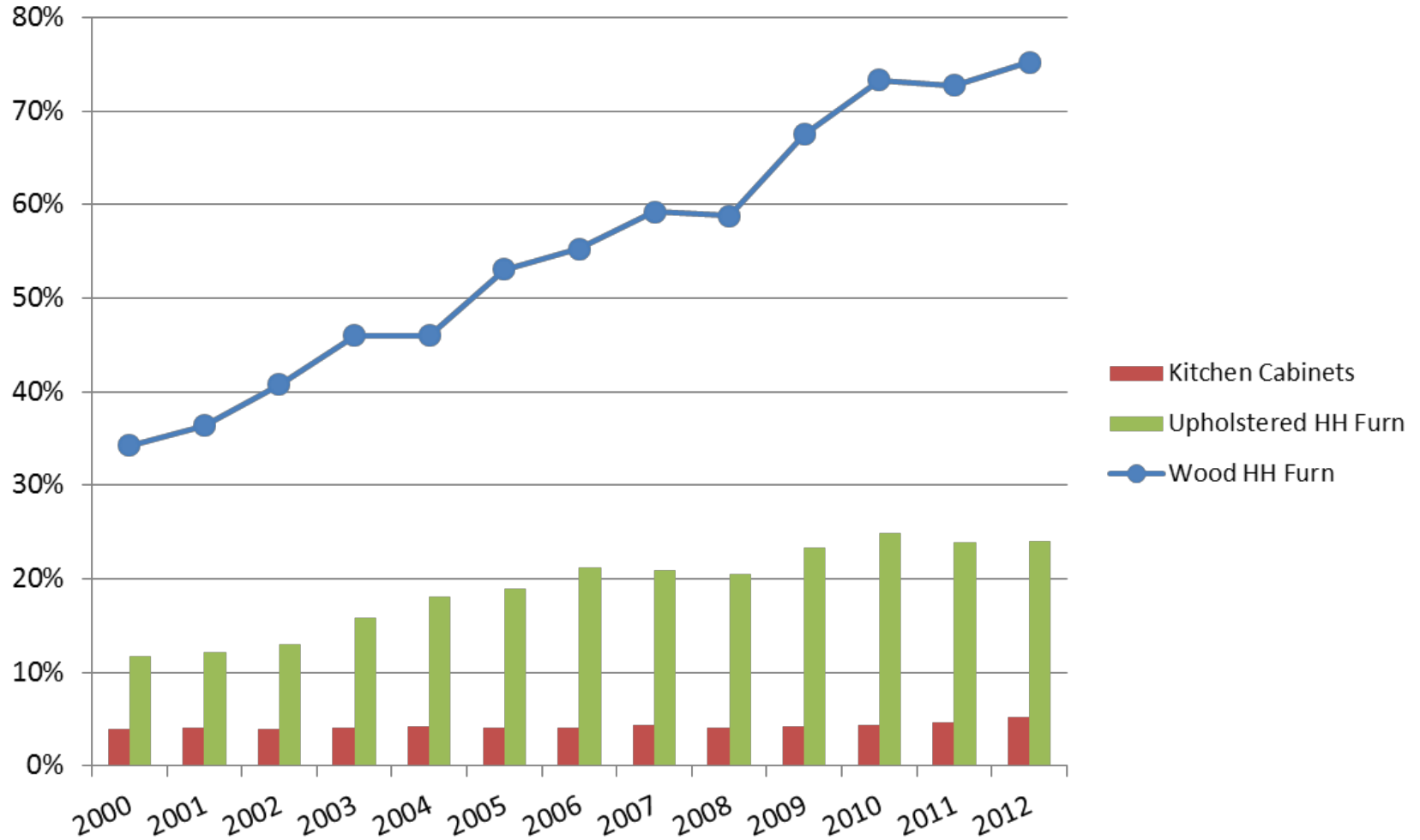
Appearance-based uses ~ 41%

Industrial uses ~ 39%

Appearance-based uses ~ 61%

Data source:
Hardwood Market Report

Market share estimates of imports in the U.S.

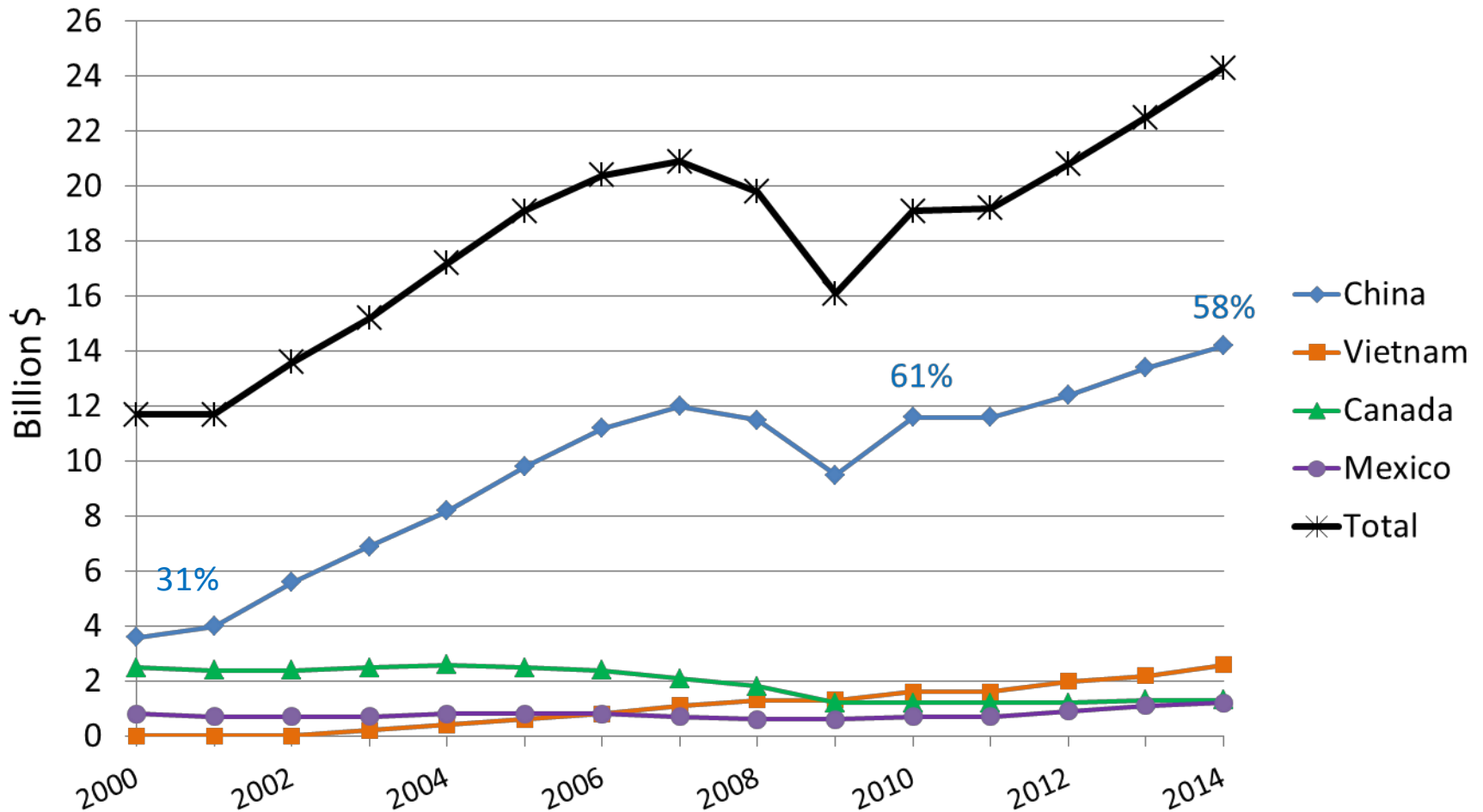


Consumption = value of shipments + imports – exports

Import share = imports/consumption

Major U.S. Import Sources

Household & institutional furniture & cabinets (NAICS 3371)





**Made in the
U.S.**

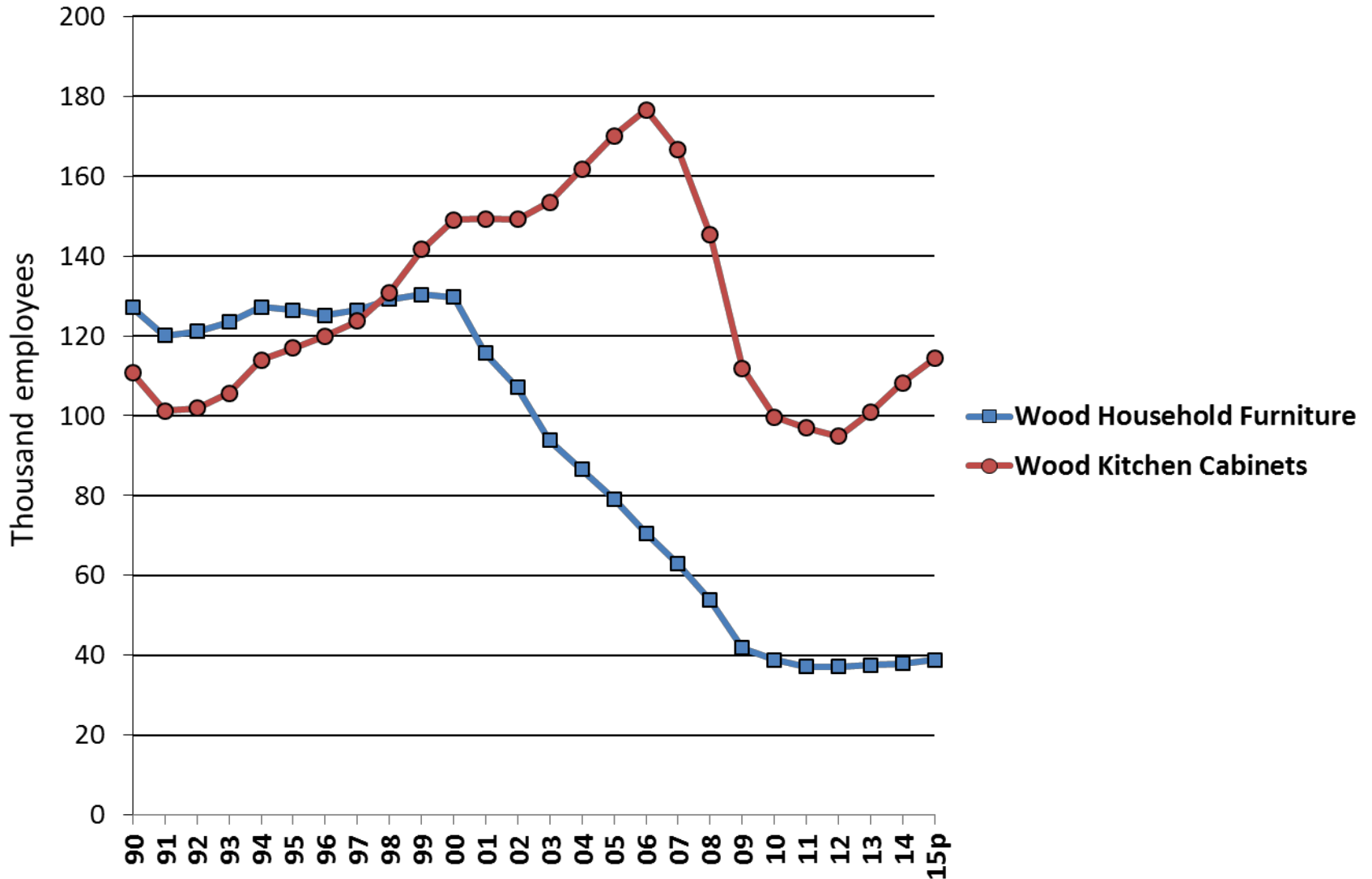
**Production
Cost:
US\$ 42.25**



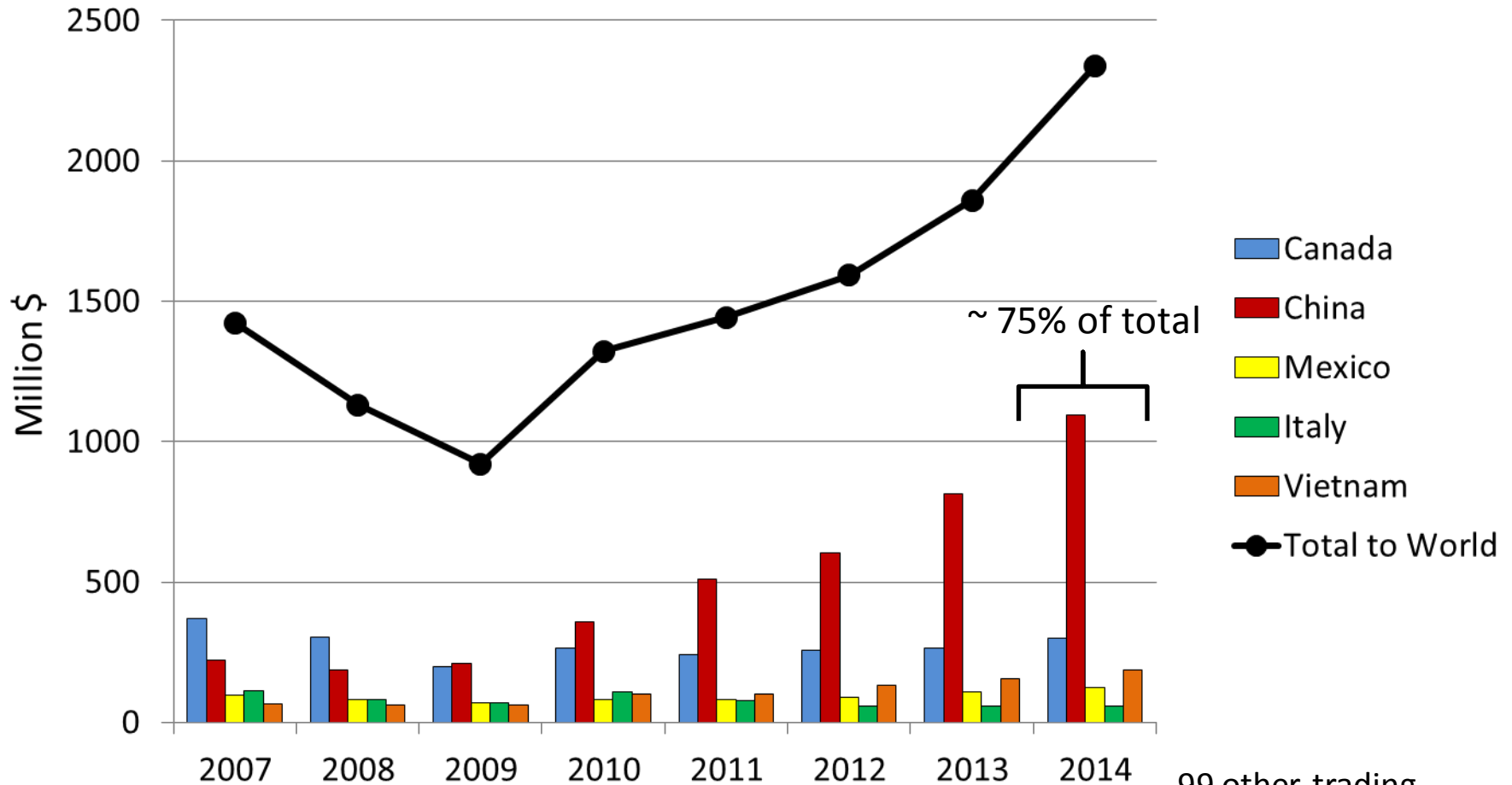
**Made in
India**

**Sales Price
in U.S.:
US\$ 4.50**

Employment trends – furniture vs. cabinets



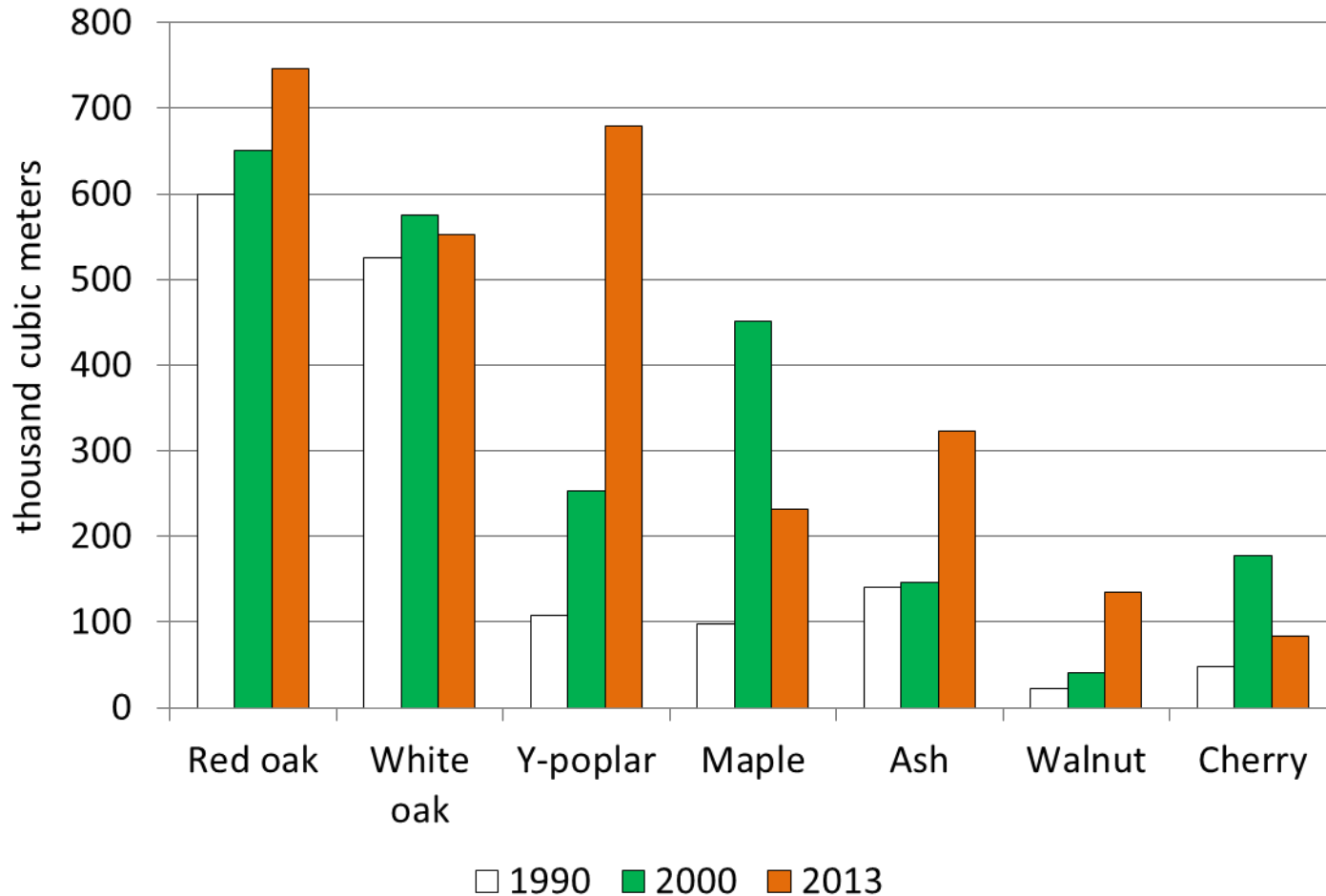
U.S. hardwood lumber exports (Top 5 destinations)



99 other trading partners account for the remaining 25%

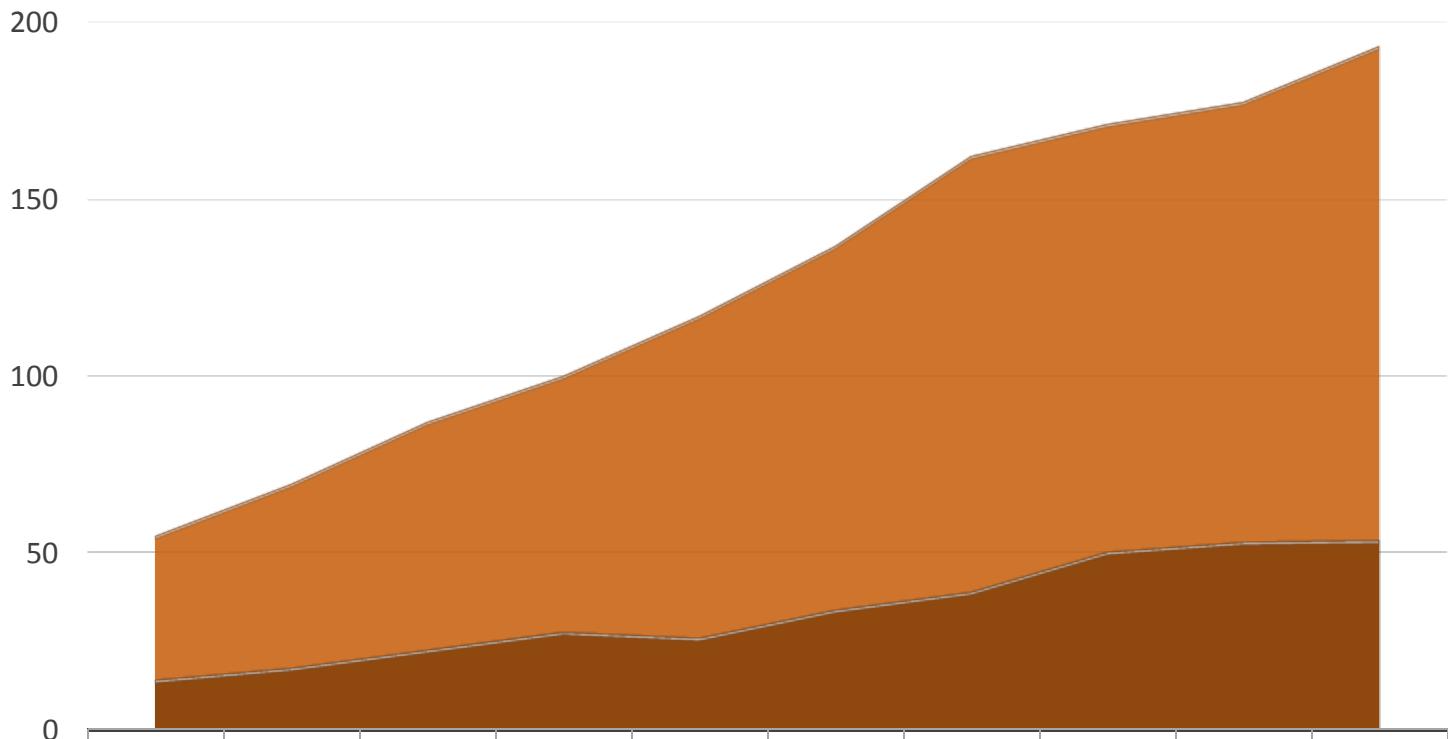
- Japan and the UK were slightly higher than Italy starting in 2012, dropping Italy to 7th

U.S. hardwood lumber exports by species



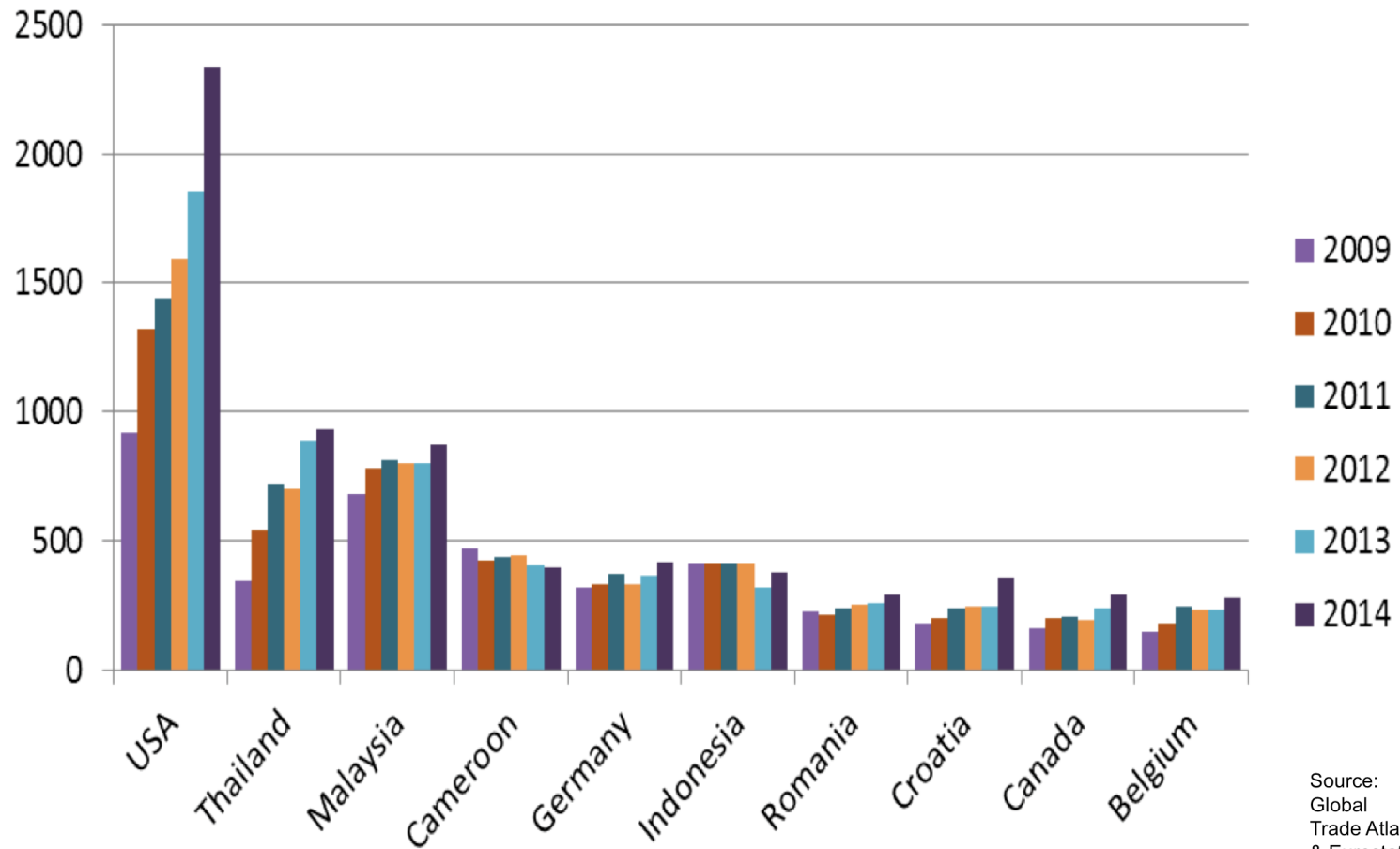
- Yellow-poplar increased by 535% from 1990 to 2013, rivaling the oaks
- Walnut increased by 500%
- Ash increased by 130%

China Furniture Production and Export Value 2005-2014 (US\$Billion)



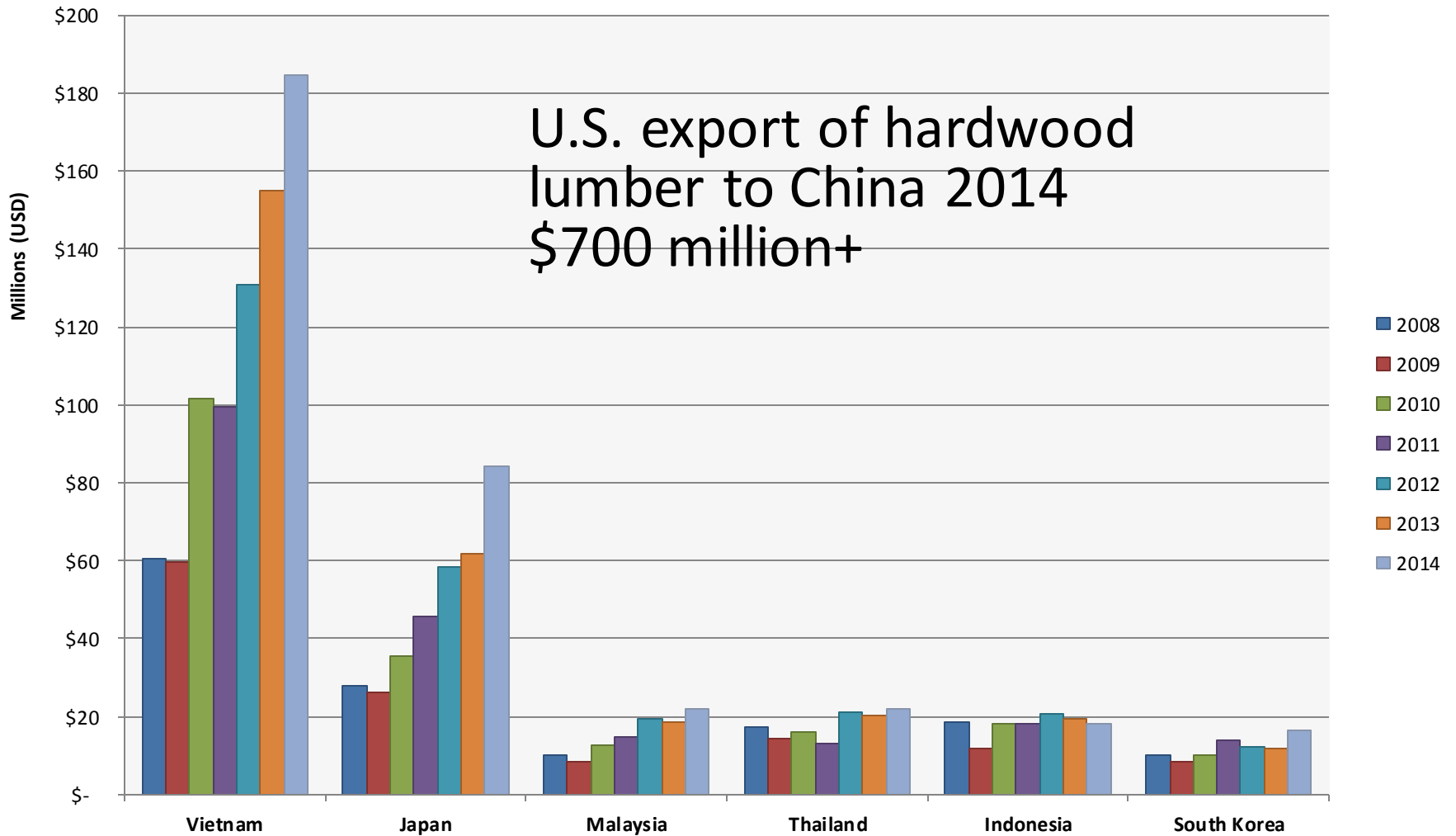
■ Production Value	54.8	\$69.40	\$87.10	\$100	\$117	\$137	\$162	\$171.40	\$177.40	\$193.50
■ Export Value	13.767	17.465	22.617	27.583	25.958	33.723	38.882	49.96	53.1	53.416

The world's 10 largest hardwood lumber exporters 2009-2014 (\$ million)

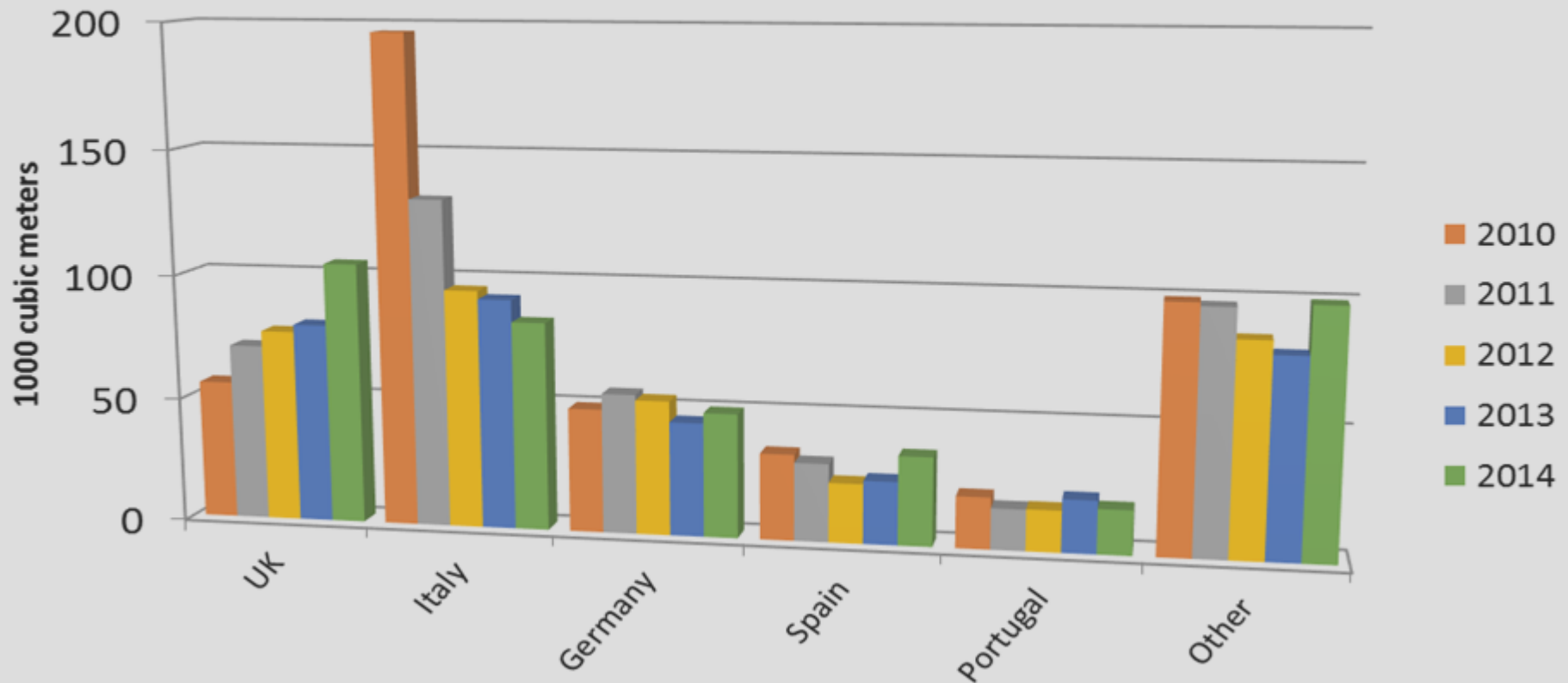


Source:
Global
Trade Atlas
& Eurostat

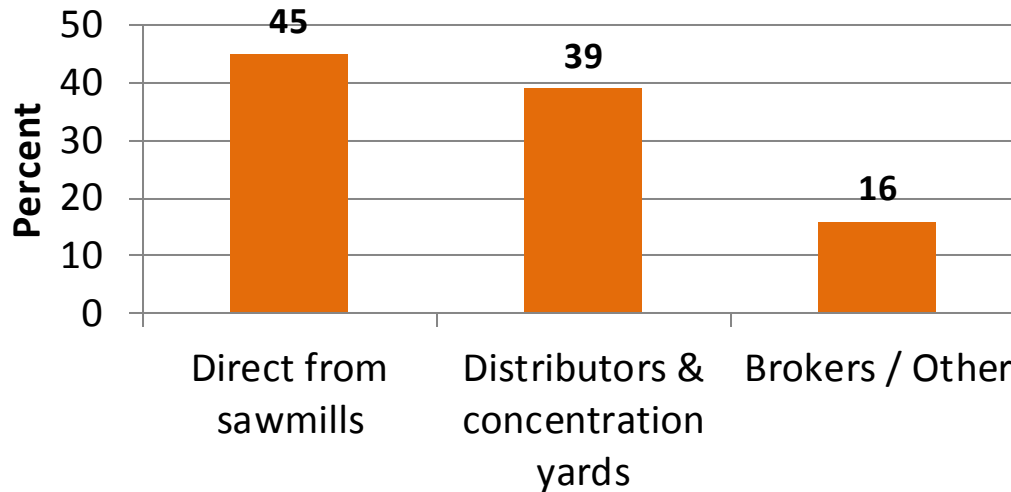
US Hardwood Lumber Exports to Other Asian Markets



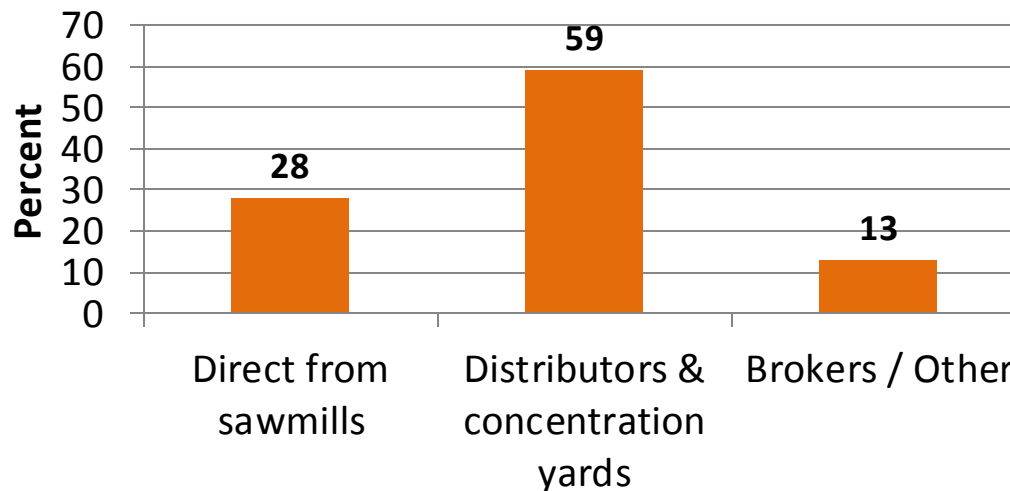
Exports of US sawn hardwood to main European markets 2009-2014



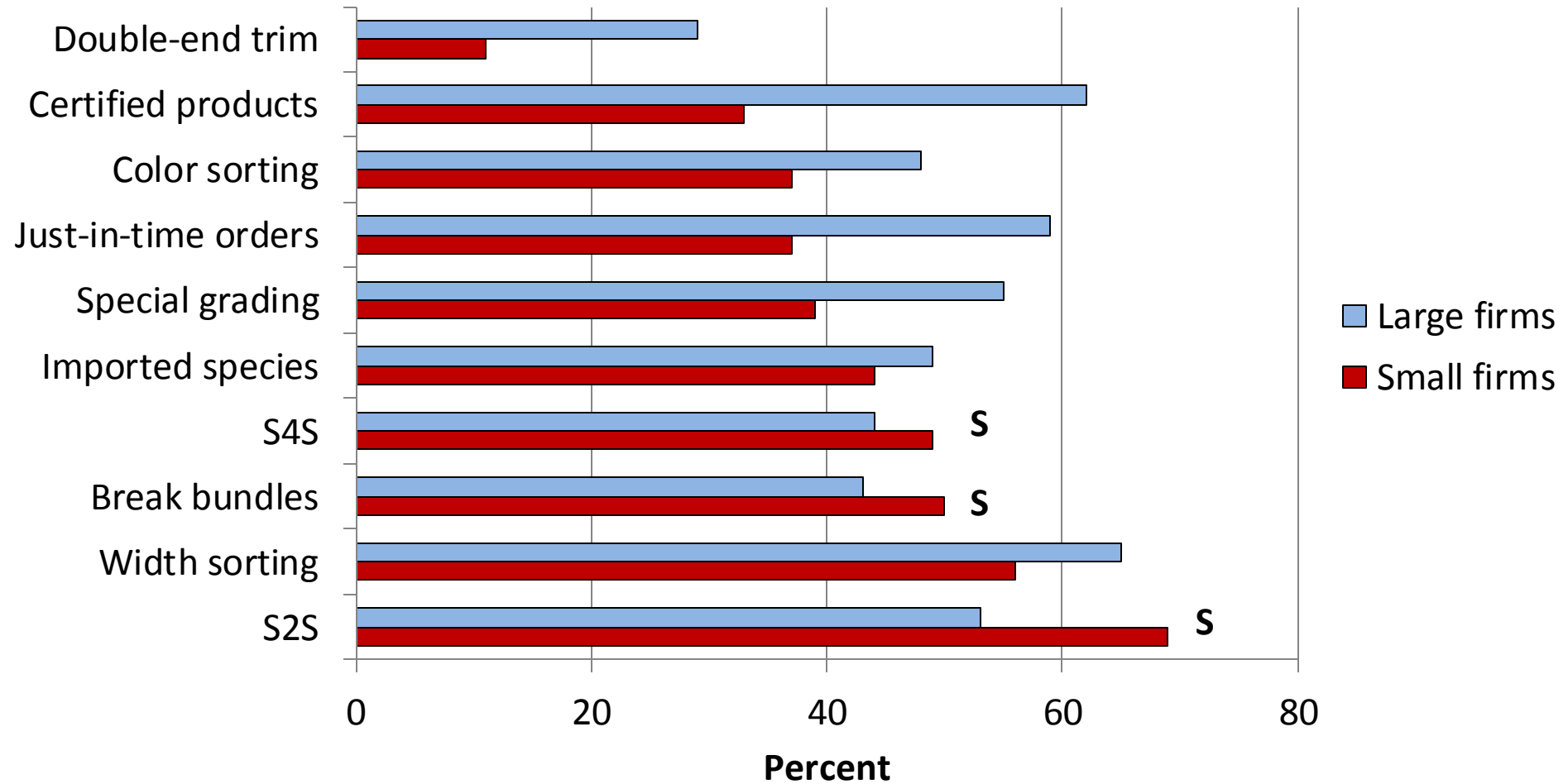
Sources of hardwood lumber (by volume) - Large firms



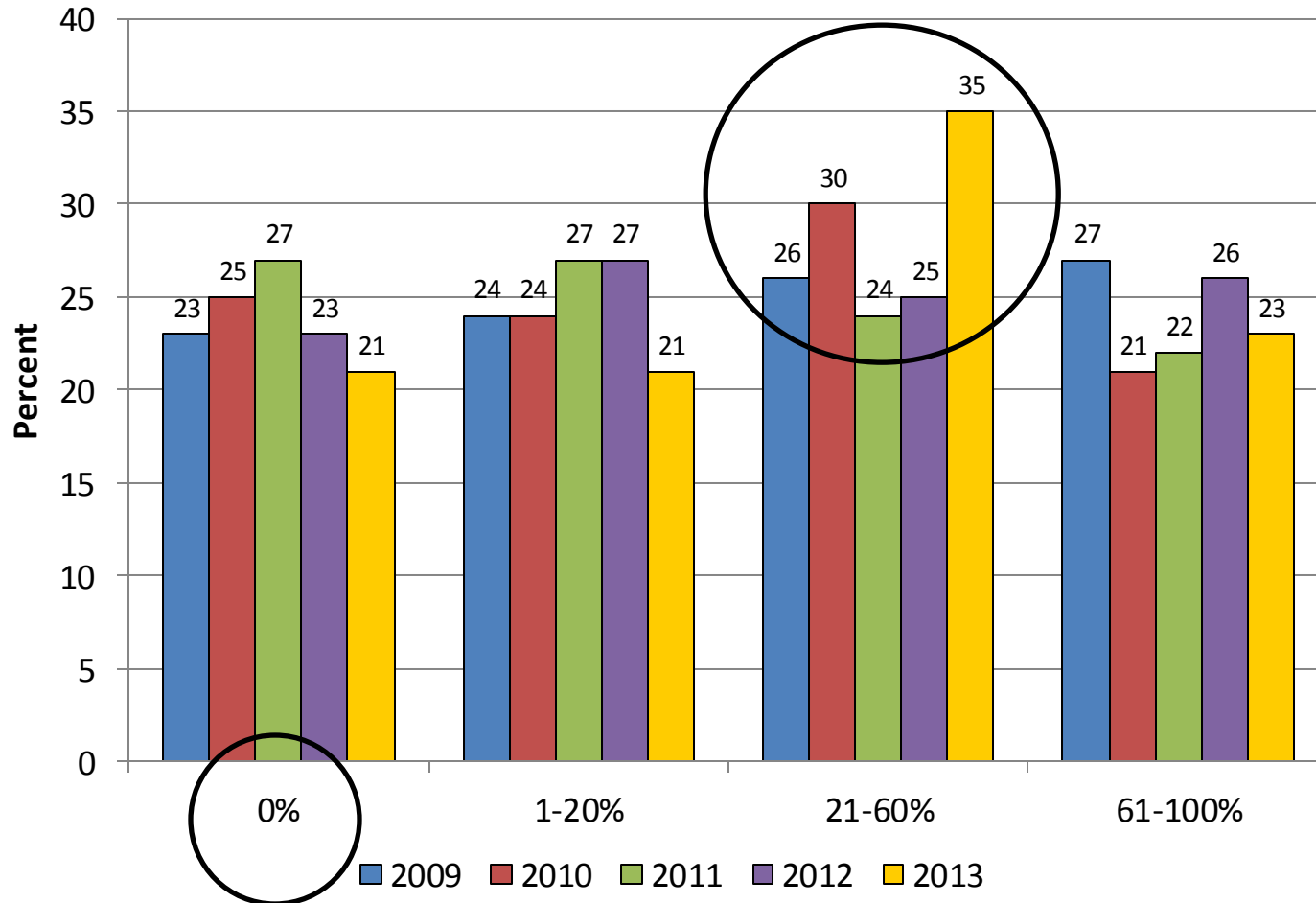
Sources of hardwood lumber (by volume) - Small firms



Services requested from hardwood lumber suppliers



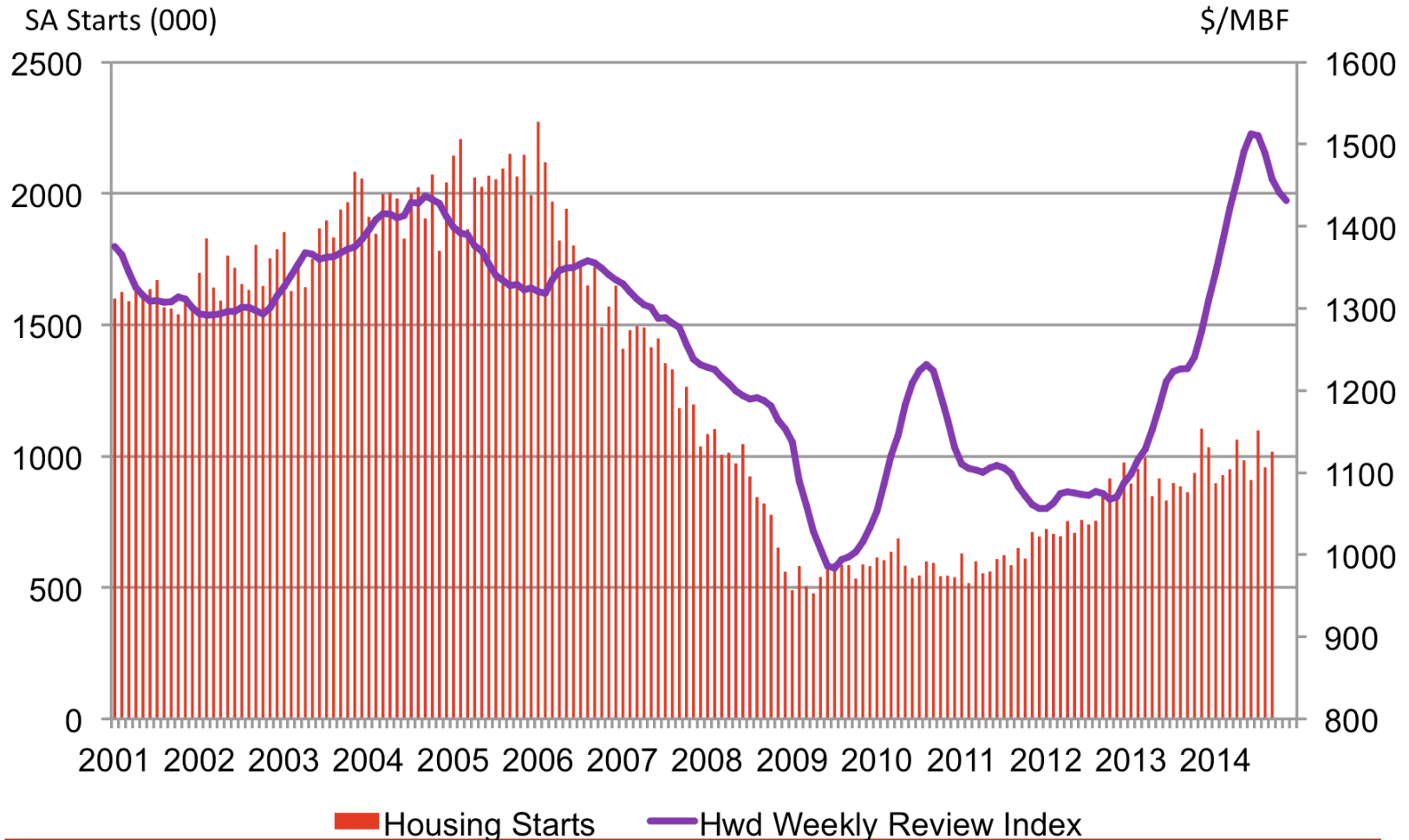
Proportion of production volume associated with the single family housing construction market



II. U.S. Housing



Housing Starts and Hardwood Prices



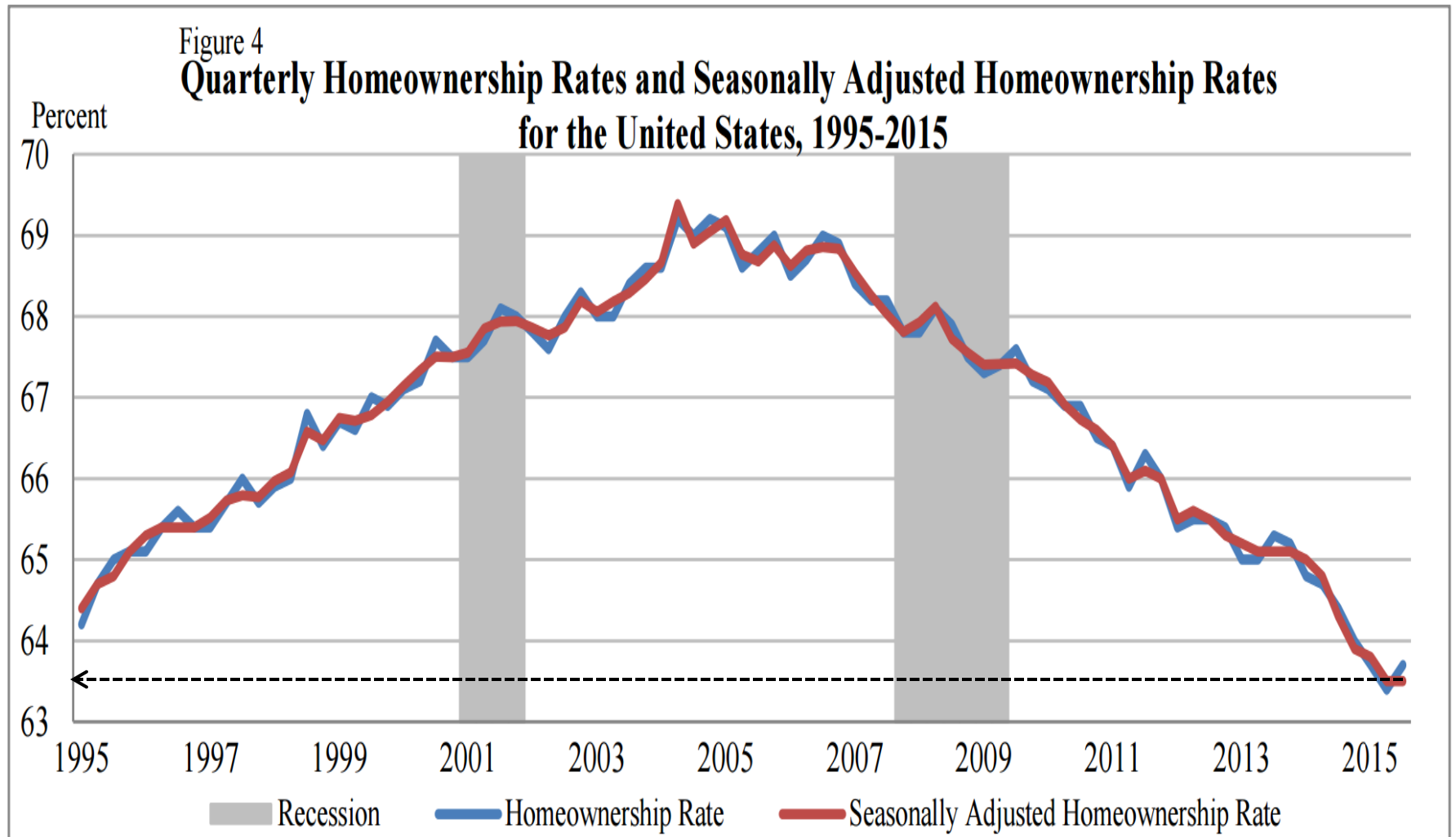
June/July 2014 Housing Scorecard

	M/M	Y/Y
Housing Starts	△ 10.5%	△ 16.5%
Single-Family Starts	△ 7.6%	△ 14.6%
Housing Permits	△ 11.0%	△ 19.5%
Housing Completions	▽ 3.2%	△ 9.2%
New Single-Family House Sales	△ 4.3%	△ 9.1%
Existing House Sales (NAR [®])	▽ 10.5%	▽ 3.8%
Private Residential Construction Spending	△ 0.3%	△ 10.8%
Single-Family Construction Spending	△ 0.6%	△ 9.3%

M/M = month-over-month; Y/Y = year-over-year

United States Housing

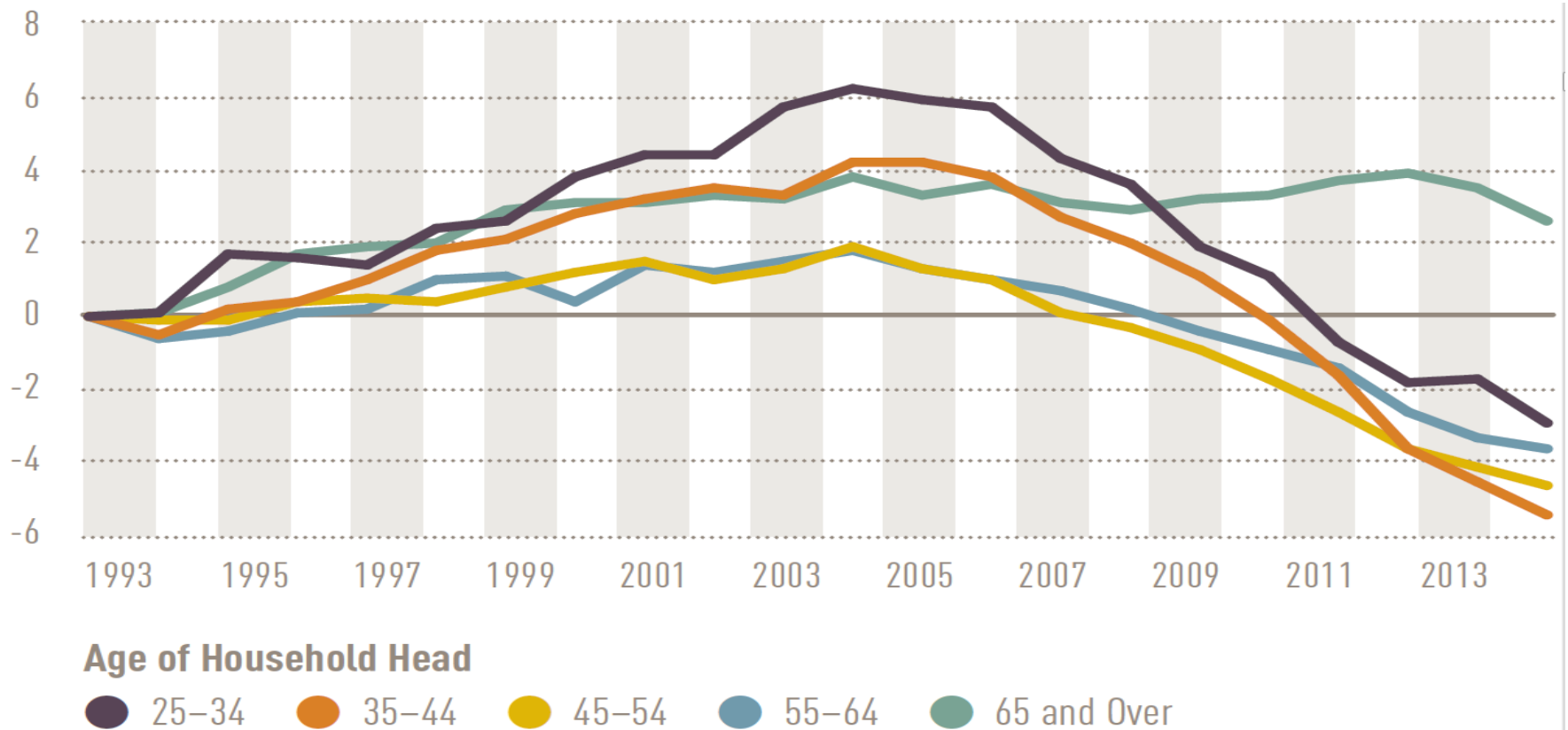
Home ownership rate: 63.7%



United States Housing

“... **BUT** Rates for Most Age Groups Are Well Below That Point.

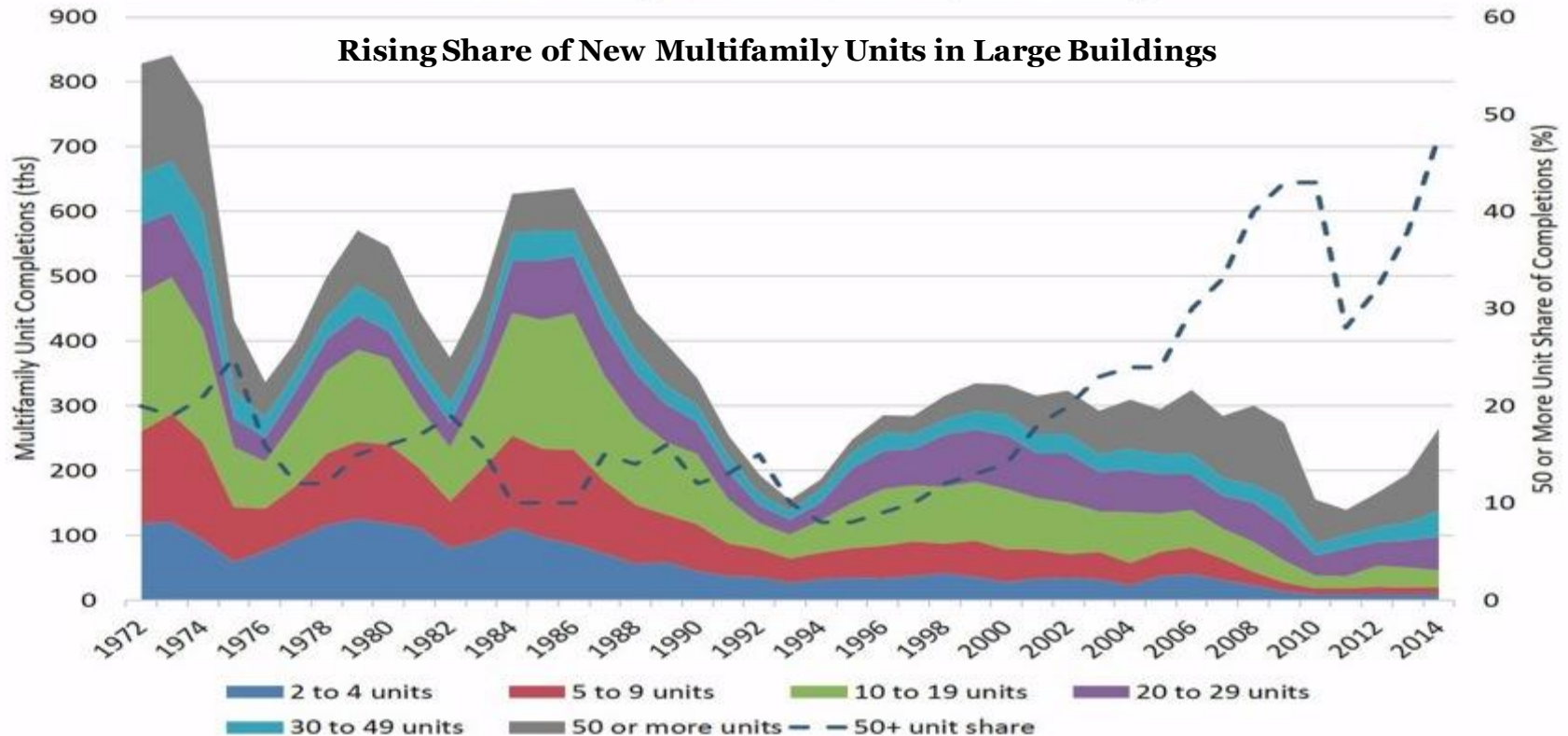
Change in Homeownership Rate (percentage points)”



Source: JCHS tabulations of US Census Bureau, Housing Vacancy Surveys.

Multifamily

Multifamily Completions:
Distribution by Number of Units per Building



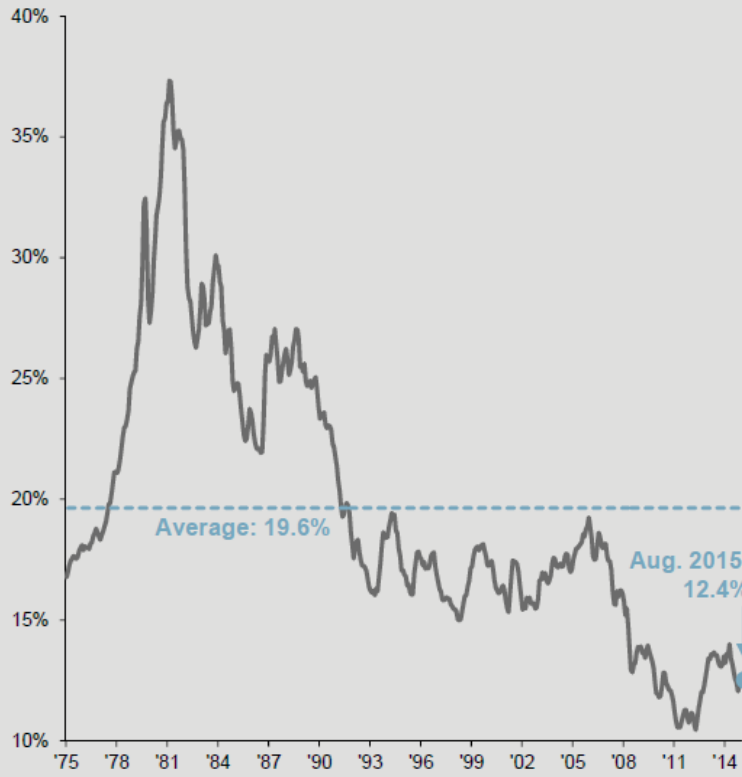
“An increasing number of newly-built multifamily units are found in larger buildings, as measured by the number of apartments per building. According to Census Bureau data of multifamily completions, the share of new multifamily units in buildings with 50 or more units reached a data series high of 48% during 2014 .

The share of new units in large buildings (50+ units or more) has been rising steadily since 1996, after reaching a data series low of 8% during 1994 and 1995, albeit with one exception. The share declined to 28% in 2011 after recording a 43% mark for 2010.” -- Robert Dietz, Ph.D., Vice-President, Tax and Market Analysis, NAHB

Demographics & Economics

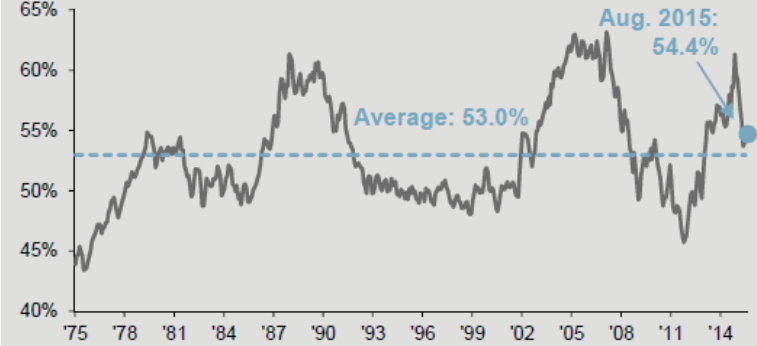
Housing Affordability Index

Average mortgage payment as a % of household income



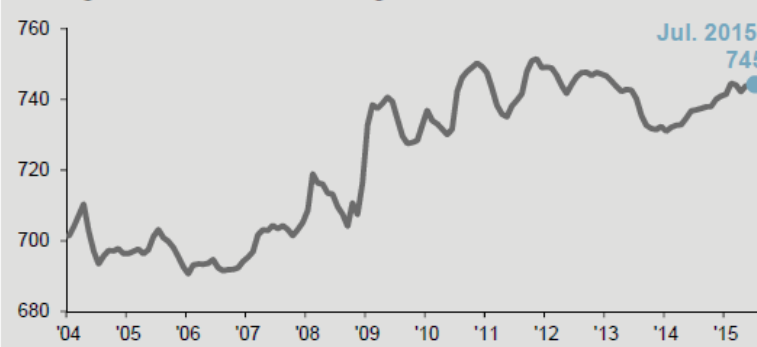
Down payment as a percent of household income

Assuming down payment is a constant 20% of home price



Lending standards for approved mortgage loans

Average FICO score based on origination date



Sources: J.P. Morgan Asset Management, (Left and top right) Census Bureau, Federal Reserve, (Bottom right) McDash, J.P. Morgan Securitized Product Research.

Monthly mortgage payment assumes the prevailing 30-year fixed-rate mortgage rates and average new home prices excluding a 20% down payment.

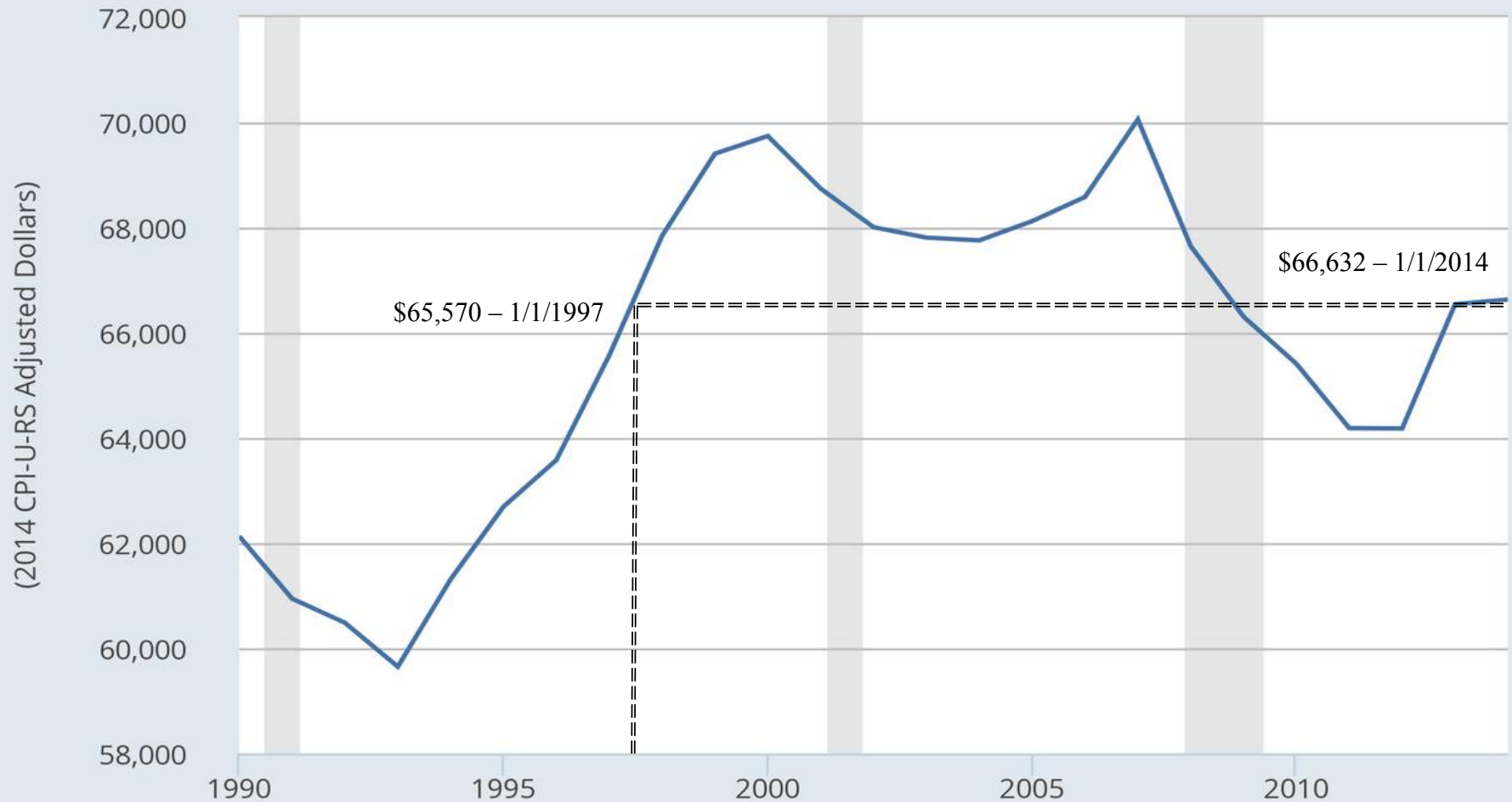
Down payment assumes 20% of home purchase price paid upfront.

Guide to the Markets – U.S. Data are as of September 30, 2015.

United States Housing



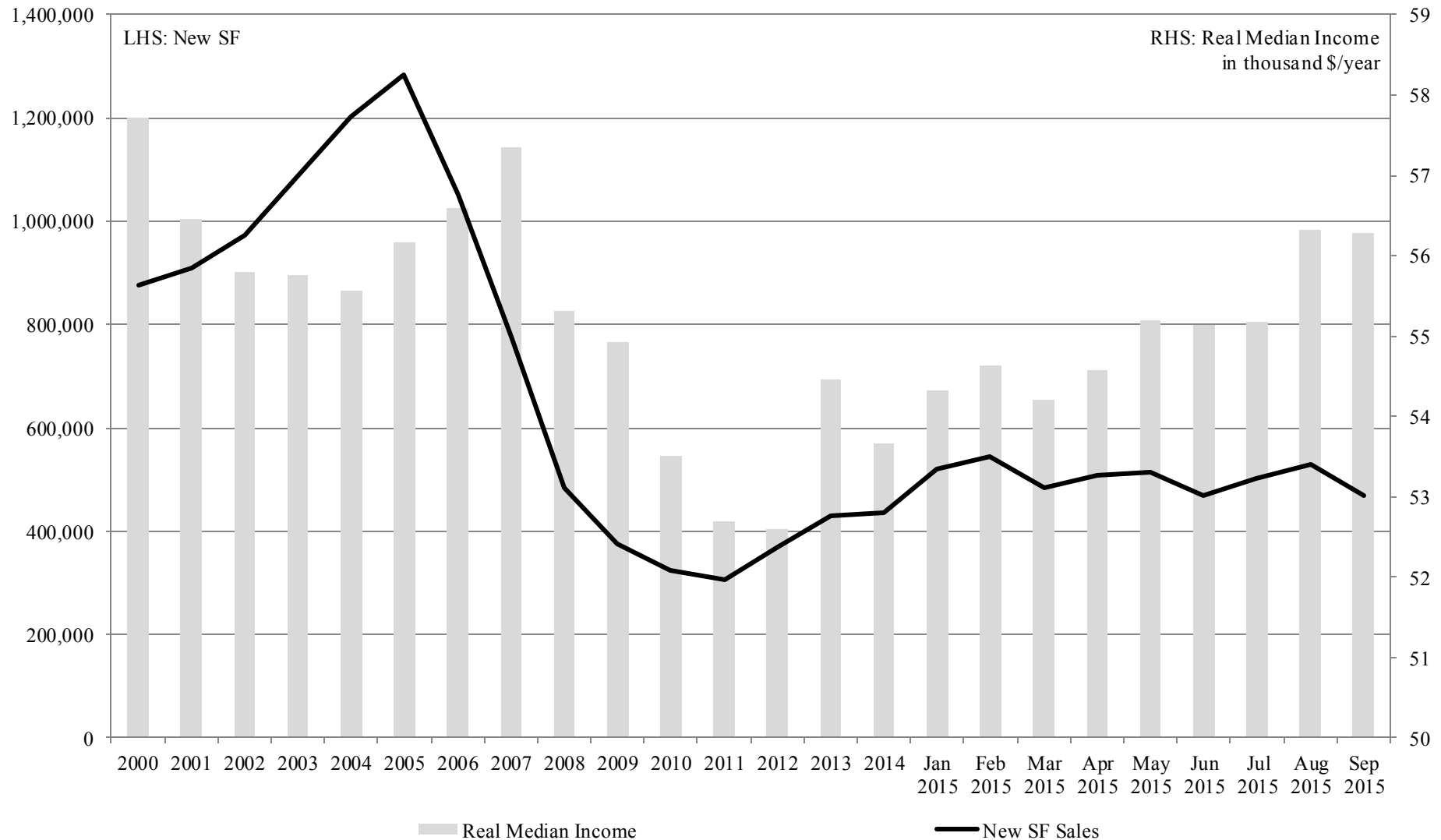
— Real Median Family Income in the United States



Source: US. Bureau of the Census
research.stlouisfed.org

myf.red/g/37uw

U.S. Housing: Income and Sales

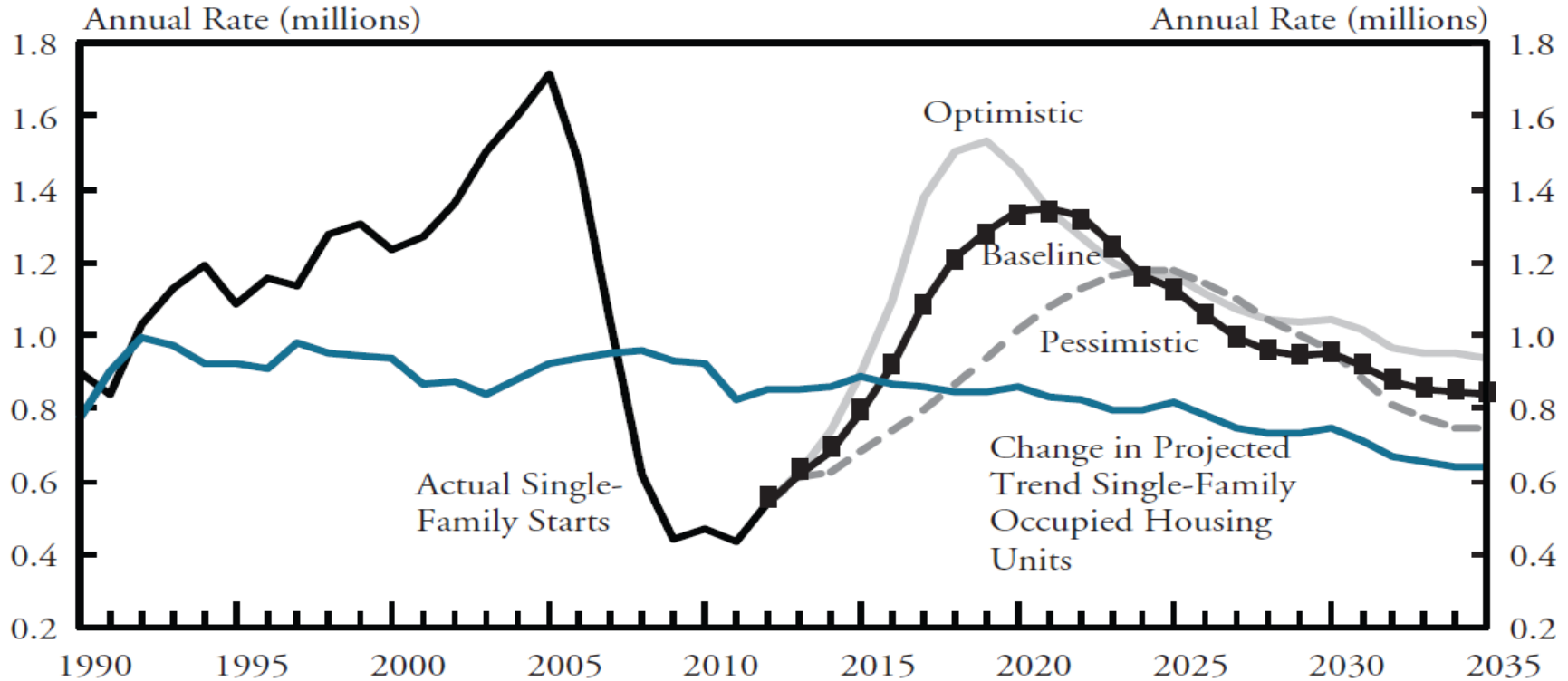


Note: 2000 – 2014 Federal Reserve Bank of St. Louis (not adjusted for inflation); Jan 2015 to Sep 2015 – Sentier Research LLC ©

Sources: <http://research.stlouisfed.org/>; <http://www.sentierresearch.com/>

United States Housing

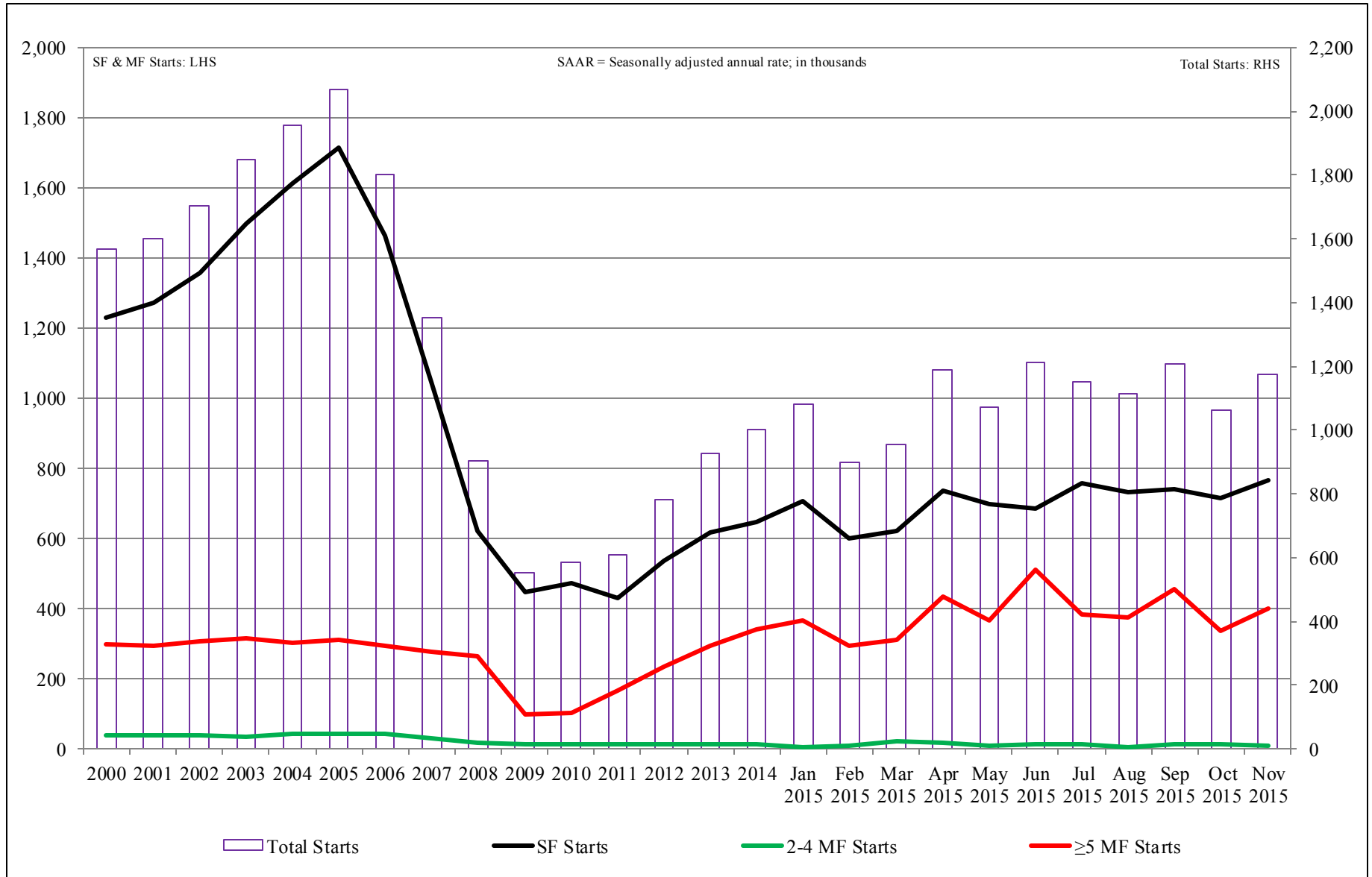
PROJECTED SINGLE-FAMILY STARTS



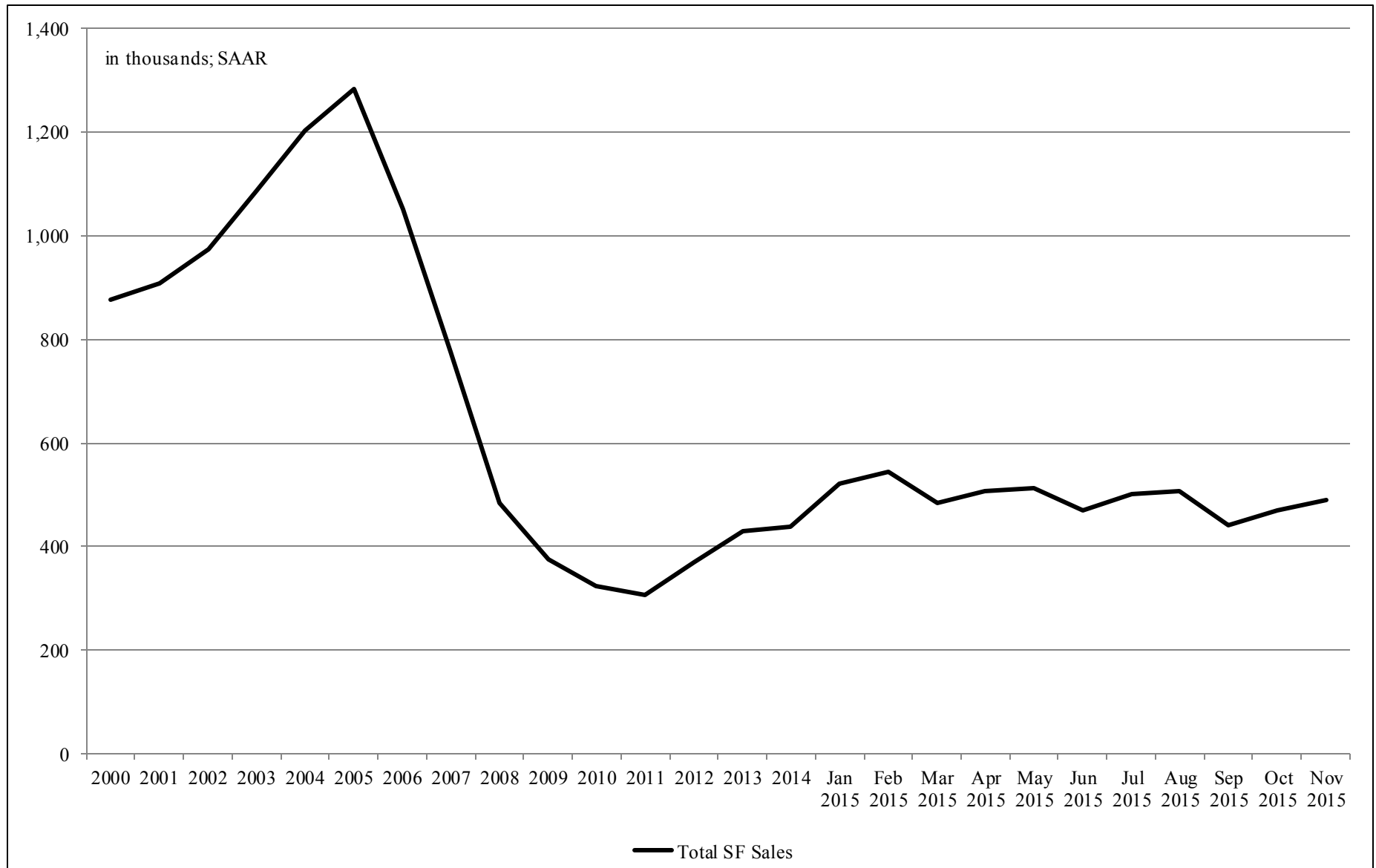
Sources: Census Bureau, author's calculations.

“Annual single-family starts peak at 1.35 million in 2021, nearly identical to their level at the start of the housing boom in 2002. Thereafter, starts contract. Their projected annual level in 2030, at 950,000, would be the lowest since 1991, a year in which starts reached a trough following a steep downturn. From 2031 onward, starts follow the downward contours of the trend change in occupied single-family units (blue line).” – Joel Rappaport, Economist, The Federal Reserve Bank of Kansas City

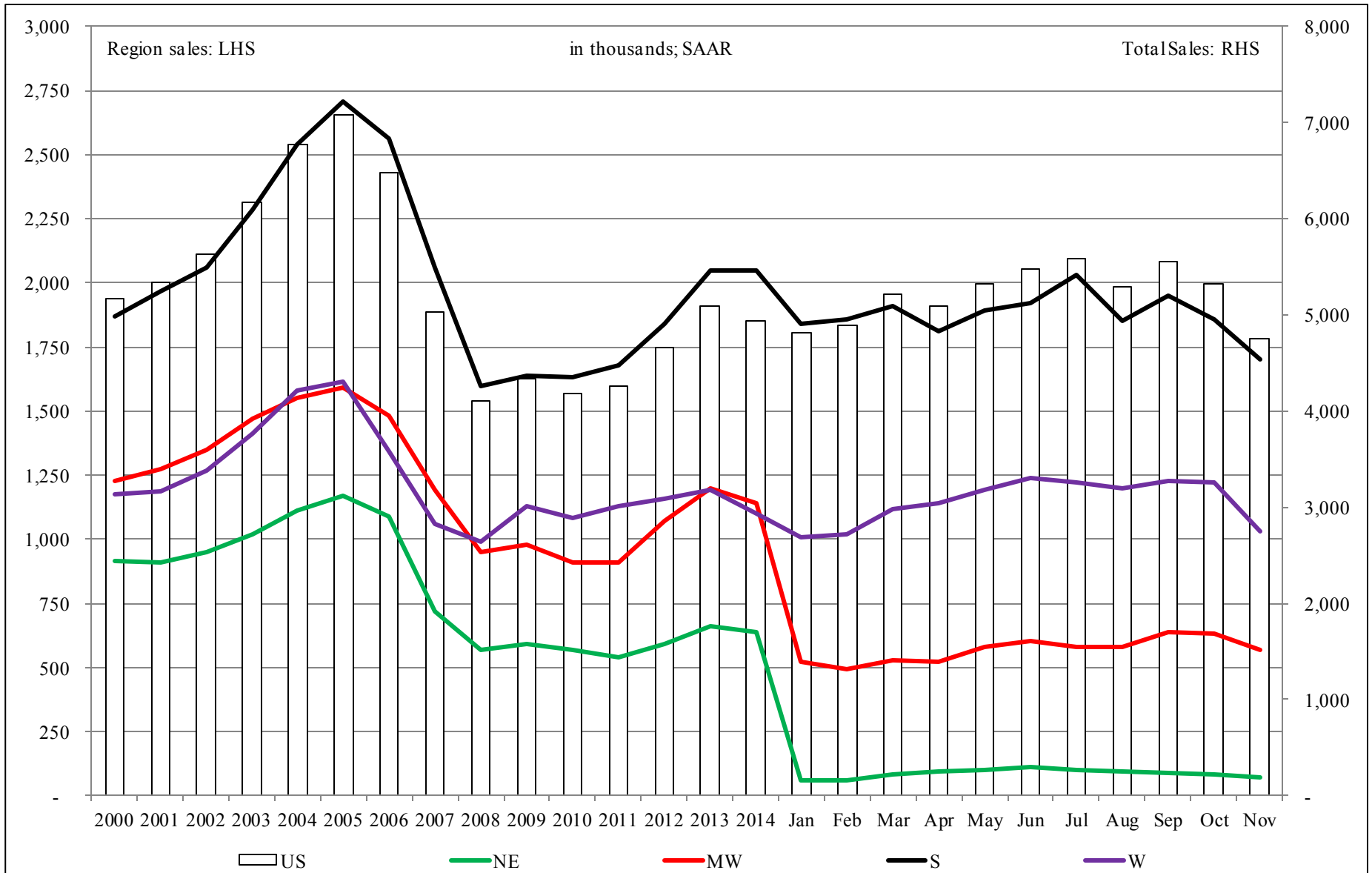
United States Housing Starts



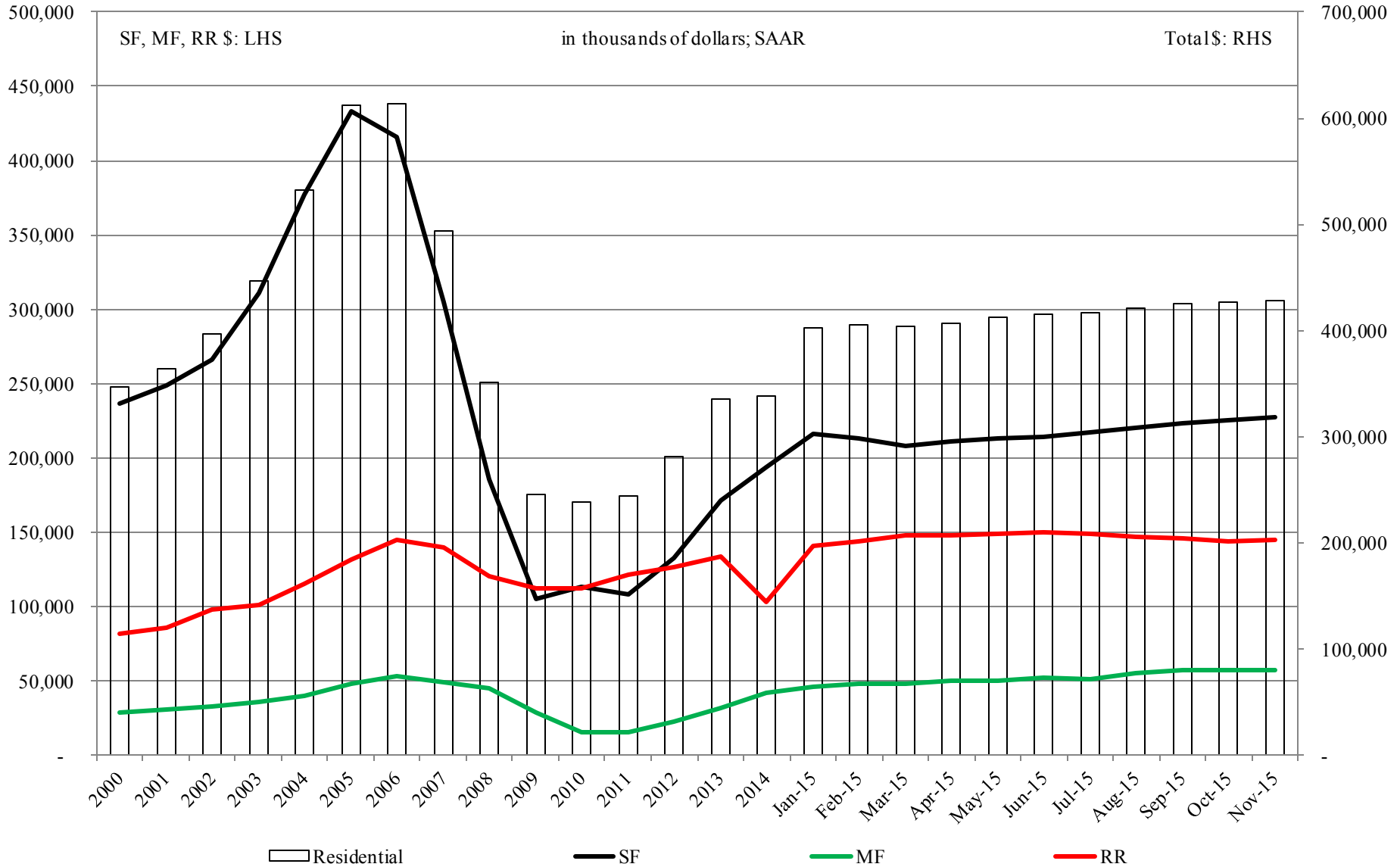
United States New SF House Sales



United States Existing House Sales



United States Construction Spending



Opportunities

Bigger homes for those who can afford them

We may see smaller homes – why?

Affordability for the average American
Stock houses with limited amenities?

If this occurs – how will producers position their products?

What products will be offered?

Manufactured housing could possibly make a comeback

The U.S. Economy

- Strong employment numbers, but lack of high paying jobs with benefits.
- Mostly positive housing numbers, however, at levels far below "normal."
- Not so favorable household income numbers (non-existent wage growth).
- Challenges with our debt (national, student).
- Political gridlock, no common sense present anymore.
- What will the rising Dollar exchange rate do to our exports?

The World Economy

- China's potential fiber supply gap (difference between demand and domestic supply) is estimated to be $150 \times 10^6 \text{ m}^3$., yet China is slowing and demand is cooling.
- Japan's 2011 triple disaster created replacement demand, but Japan is still stuck in its "lost decade."
- Europe is a "mixed" bag:
 - The Euro and the migrant crises
 - Scandinavia, Germany, Benelux and France are doing OK
 - Spain, Portugal, Greece, and some Eastern European countries are facing challenges
- South America is struggling, Brazil is in a deep recession
- Australia is, due to lackluster commodity markets, facing challenges

Thank you



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