

# October 2013 Housing Commentary



**Urs Buehlmann**

Department of Sustainable Biomaterials

Virginia Tech

Blacksburg, VA

540.231.9759

buehlmann@gmail.com

and

**Al Schuler**

Economist (retired)

Princeton, WV

# Table of Contents

Slide 3: [Housing Scorecard](#)

Slide 4: [New Housing Starts](#)

Slide 5: [Housing Permits and Completions](#)

Slide 6: [New and Existing House Sales](#)

Slide 8: [Construction Spending](#)

Slide 9: [Conclusions](#)

Slide 10 - 18: [Additional Comments&Data](#)

Slide 19 - 63: [ANC Wood Expo presentation](#)

Slide 64: [Disclaimer](#)

# October 2013

## Housing Scorecard

	M/M	Y/Y
Housing Starts <sup>A</sup>	--	--
Single-Family Starts <sup>A</sup>	--	--
Housing Permits <sup>A</sup>	△6.2%	△13.9%
Housing Completions <sup>A</sup>	--	--
New Single-Family House Sales <sup>A</sup>	△25.4%	△21.6%
Existing House Sales <sup>B</sup>	▽4.4%	△6.0%
Private Residential Construction Spending <sup>A</sup>	▽0.6%	△17.8%
Single-Family Construction Spending <sup>A</sup>	▽0.6%	△17.8%

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

# New Housing Starts

	Total Starts*	Single- Family Starts	Multi-Family 2-4 unit Starts	Multi-Family 5 or more unit Starts
2012				
M/M change				
Y/Y change				

\* All start data are presented at a seasonally adjusted annual rate (SAAR)

# New Housing Permits and Completions

	Total Permits*	Single-Family Permits	Multi-Family 2-4 unit Permits	Multi-Family 5 or more unit Permits
October	1,034,000	620,000	27,000	387,000
September	974,000	615,000	28,000	331,000
2012	908,000	570,000	26,000	312,000
M/M change	6.2%	0.8%	-3.6%	16.9%
Y/Y change	13.9%	8.8%	3.8%	24.0%
	Total Completions*	Single-Family Completions	Multi-Family 2-4 unit Completions	Multi-Family 5 or more unit Completions
2012				
M/M change				
Y/Y change				

# New and Existing House Sales

	New Single-Family Sales*	Median Price	Month's Supply	Existing House Sales <sup>B*</sup>	Median Price <sup>B</sup>	Month's Supply <sup>B</sup>
October	444,000	245,800	4.9	5,120,000	\$199,500	5.0
September	354,000	257,400	6.4	5,290,000	\$198,500	4.9
2012	365,000	247,200	4.8	4,830,000	\$176,900	5.2
M/M change	25.4%	-4.5%	-23.4%	-4.4%	-0.2%	2.0%
Y/Y change	21.6%	-0.5%	2.1%	6.0%	12.8%	-3.8%

\* All sales data are SAAR

# Existing House Sales

National Association of Realtors (NAR®)<sup>B</sup>

October 2013 sales data:

Distressed house sales: 14% of sales –  
(9% foreclosures and 5% short-sales)

Distressed house sales: 14% in September  
and 25% in October 2012

All-cash sales: decreased to 31%; 33% in September

Investors are still purchasing a substantial portion of  
“all cash” sale houses – 19%;  
19% in September 2013 and 20% in October 2012

First-time buyers: unchanged at 28% (28% in September 2013)  
and were 31% in October 2012

# October 2013 Construction Spending

October 2013 Private Construction: \$326.86 billion (SAAR)

-0.6% less than the revised June estimate of \$328.73 billion (SAAR)

17.8% greater than the July 2012 estimate of \$278.28 billion (SAAR)

October SF construction: \$170.34 billion (SAAR)

-0.5% less than September: \$171.43 billion (SAAR)

17.8% greater than October 2012: \$144.59 billion (SAAR)

October MF construction: \$34.46 billion (SAAR)

2.2% greater than September: \$33.70 billion (SAAR)

37.8% greater than October 2012: \$25.06 billion (SAAR)

October Improvement <sup>D</sup> construction: \$122.06 billion (SAAR)

-1.2% less than September: \$123.60 billion (SAAR)

12.3% greater than October 2012: \$108.68 billion (SAAR)

<sup>D</sup> The US DOC does not report improvements directly, this is an estimation. All data is the SAAR and is reported in nominal US\$.

# Conclusions

Unfortunately, due to the incomplete data available, observations are sketchy. However, the housing market appears to be flat; permits increased slightly and existing home sales decreased marginally. Construction spending data was negative – with substantial revisions downward in the improvement sector for July, August, September, and October. New home sales in October increased substantially. However, one should also note the significant downward revisions for June, July, August, and September reported.

As in previous months, the near-term outlook on the U.S. housing market remains unchanged – there are potentially several negative macro-factors at this point in time for a robust housing recovery (based on historical long-term averages).

Why?

- 1) a lack of well-paying jobs,
- 2) a sluggish economy
- 3) strict home loan lending standards
- 4) new banking regulations
- 5) political gridlock

# Housing comments – October 2013

Still lots of problems to deal with:

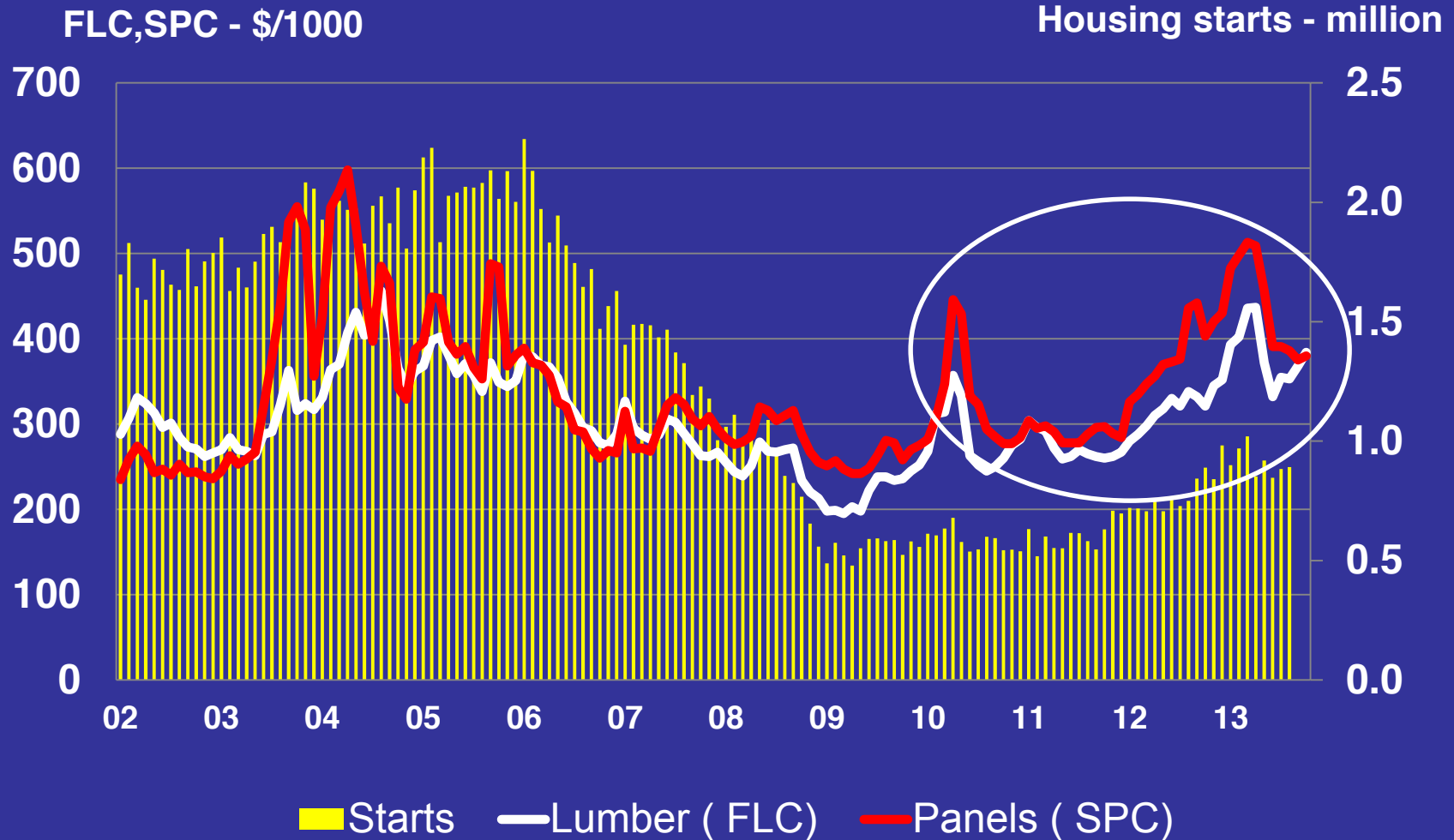
- economy is getting better, albeit very slowly
- government debt issues – all levels of government
- much of Europe in recession , but getting better – China is slowing
- housing's main problems: Weak domestic economy made worse by slowing world economy; weak job market; weak income growth; high debt levels; tight credit environment
- Demand , Debt and Uncertainty are some of serious problems that are impacting the economy – not sure it's getting better?

- Two major concerns –

- (1) Can the economy ( and housing) stand on its own ( without Fed stimulus)
- (2) Uncertainty is a key reason holding back job creating investments . Ex., impact of health care legislation; Dodd/Frank; dysfunctional “Washington”; ..... Also, demand is a problem - too many jobs are low income, no health care, no benefits

## Housing starts and wood product prices – Economics 101

Following housing bust in 2008, wood prices fell and production capacity was reduced. So, when housing starts increased, there was an imbalance between demand and supply of wood products. The price mechanism brings demand and supply into balance. Initially, prices fell almost 50% - this instigated production cutbacks of 50% or more – then, as housing begins to turn around, prices increase - this encourages Production increases for wood products – and the cycle starts over.



Sources: Prices – Random Lengths (<http://www.randomlengths.com/>); starts ( Bureau of Census ( <http://www.census.gov/construction/nrc/> )

**Employment situation - our biggest problem - it's getting better, but the jobs recovery remains weak by past standards, and many jobs don't include health care or retirement benefits ( because they are often part time jobs) – those kinds of jobs don't encourage people to buy houses**

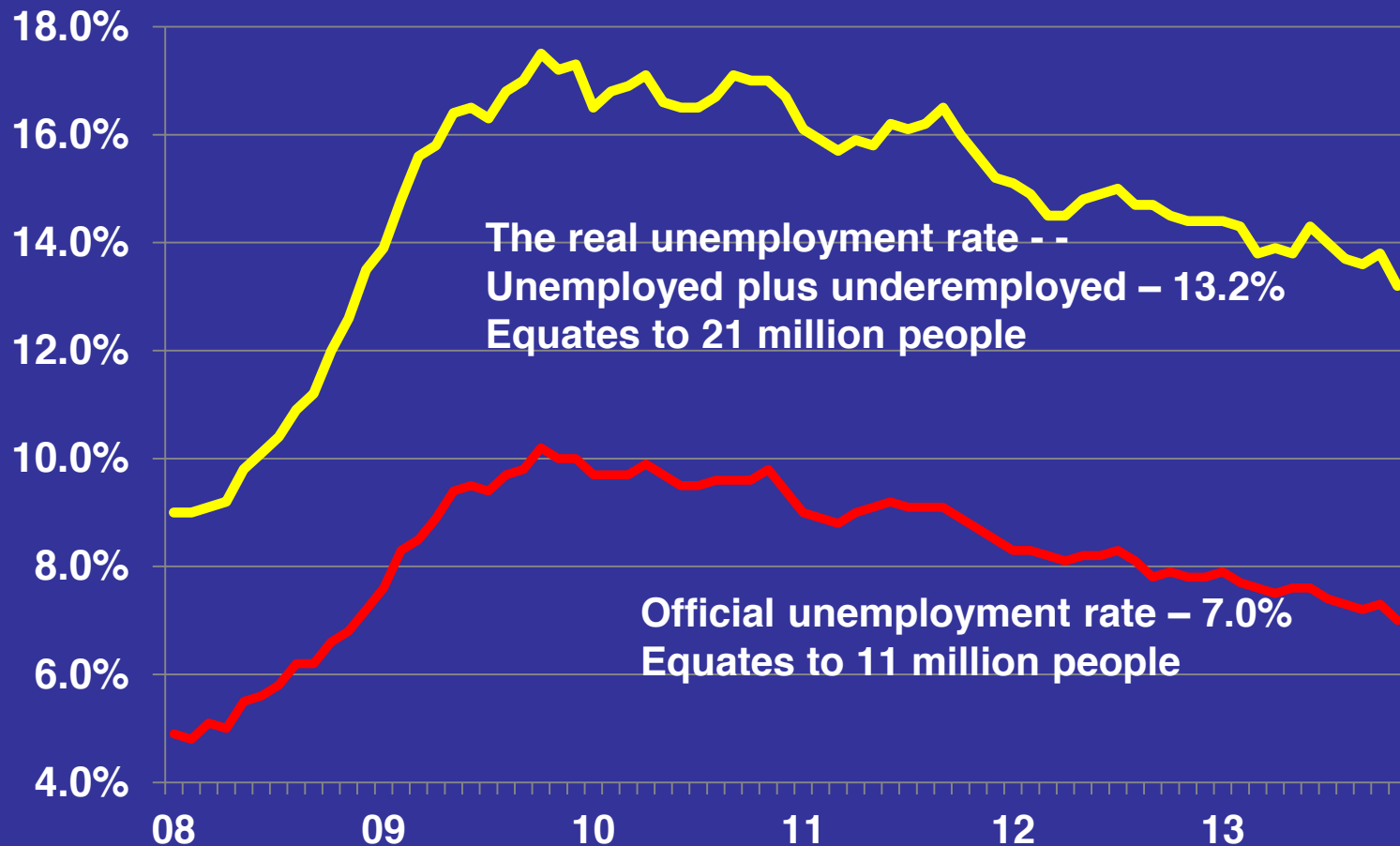
## Net change in non farm payrolls – monthly, thousands



Source: U.S. BLS ( [www.bls.gov](http://www.bls.gov) )

## Unemployment remains high and will remain relatively high for several years – but, it's getting better “slowly”

\*\*There are about 21 million people either unemployed, underemployed, or stopped looking – **they are not buying houses**



Source -- BLS: <http://www.bls.gov/news.release/pdf/empsit.pdf>; <http://data.bls.gov/cgi-bin/surveymost?ln>

## Labor force participation rate is shrinking -

Major problems for social programs with our aging population – fewer people paying taxes, but more people collecting SSI, Medicare, etc. Also, demand for goods and services /GDP will Remain relatively weak.

% of civilian adult population , that are working



# Starts are finally turning the corner??

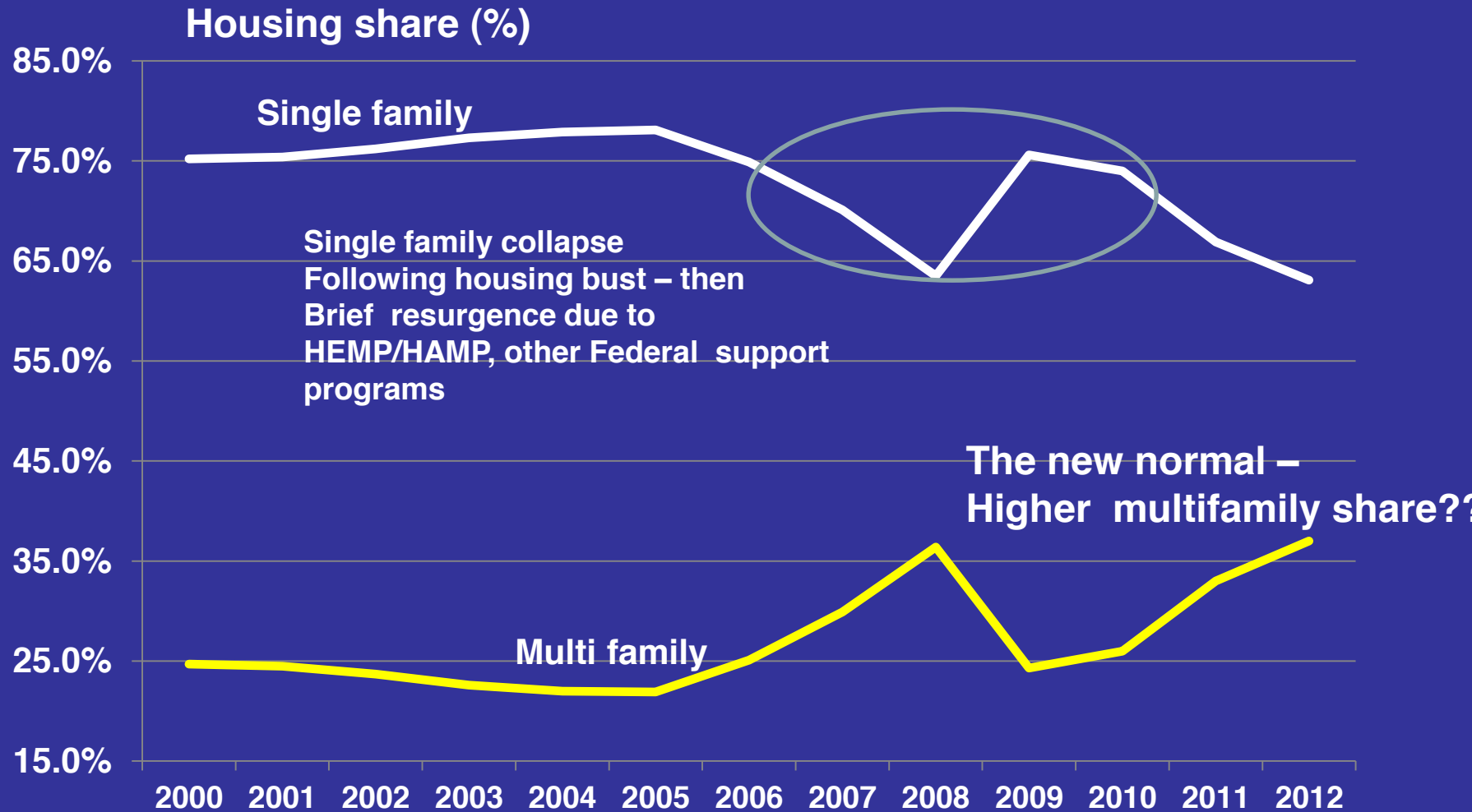
Problems going forward: distressed resales ( i.e., foreclosures) and jobs. Rising prices will moderate the foreclosure problem while good paying jobs will create demand – this will take more time!!

## Single family starts, Thousand units, SAAR



Source: Census (<http://www.census.gov/const/www/newresconstindex.html> )

## Multi family share is increasing – will it continue?



Source: Census (<http://www.census.gov/construction/nrc/>)

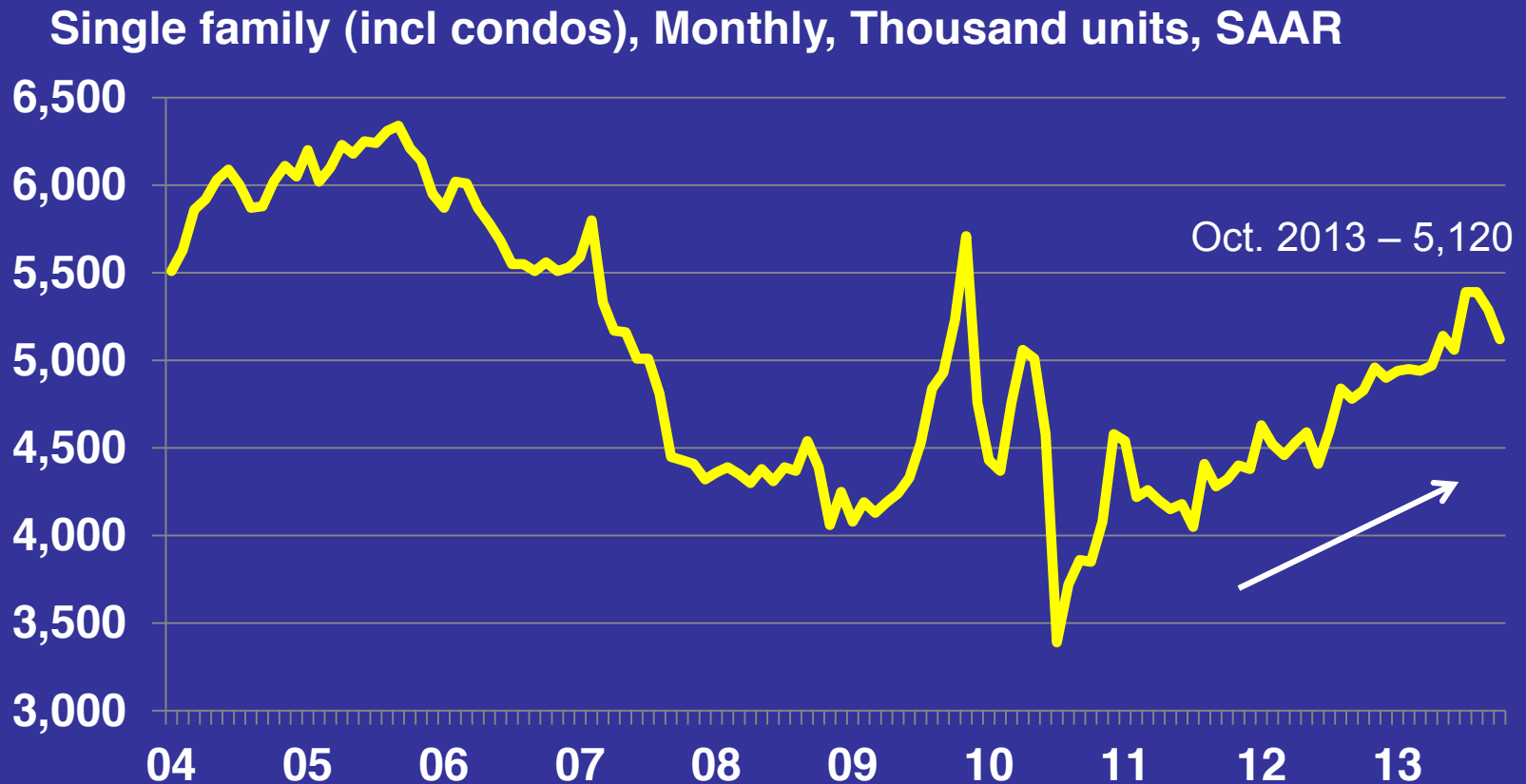
**New Single Family Home sales is the key statistic to watch – Sales drive housing starts – this drives demand for wood products!**

**Thousands, SAAR**



Source: Census (<http://www.census.gov/const/www/newressalesindex.html> )

# Resale market getting better



Source: NAR (<http://www.realtor.org/research> )

# **Growing Wood Exports**

## **Background and Opportunities**

Urs Buehlmann

Virginia Tech, Blacksburg, VA

Delton Alderman

USDA Forest Service, Princeton, WV

Omar Espinoza

University of Minnesota, St. Paul, MN

Al Schuler

USDA Forest Service, Princeton, WV

**NC Exports Wood Conference**

**New Bern, NC**

**November 14, 2013**

### **30 second summary:**

**Bottom line – with housing slowly recovering, U.S. lumber producers benefit immensely**

- increased demand from housing
- decreased competition from Canada (softwood)
- export possibilities to China
- export opportunities to Philippines, Japan
- opportunities in Europe (bioenergy, green materials)
- the Lacey Act

### **Canadian Mountain Pine Beetle**

**Means less lumber from Canada in future – about 15% lower lumber recoveries in 2015 versus 2007!! That means less lumber production and it will be more expensive to produce**

**Plantations – U.S. South is prime spot for high yield plantations!**

**Trees are the answer!**

# Presentation Content

- ① U.S. housing
- ② U.S. economy
- ③ U.S. wood products markets
- ④ U.S. wood products export opportunities
- ⑤ U.S. wood products opportunities
- ⑥ Summary

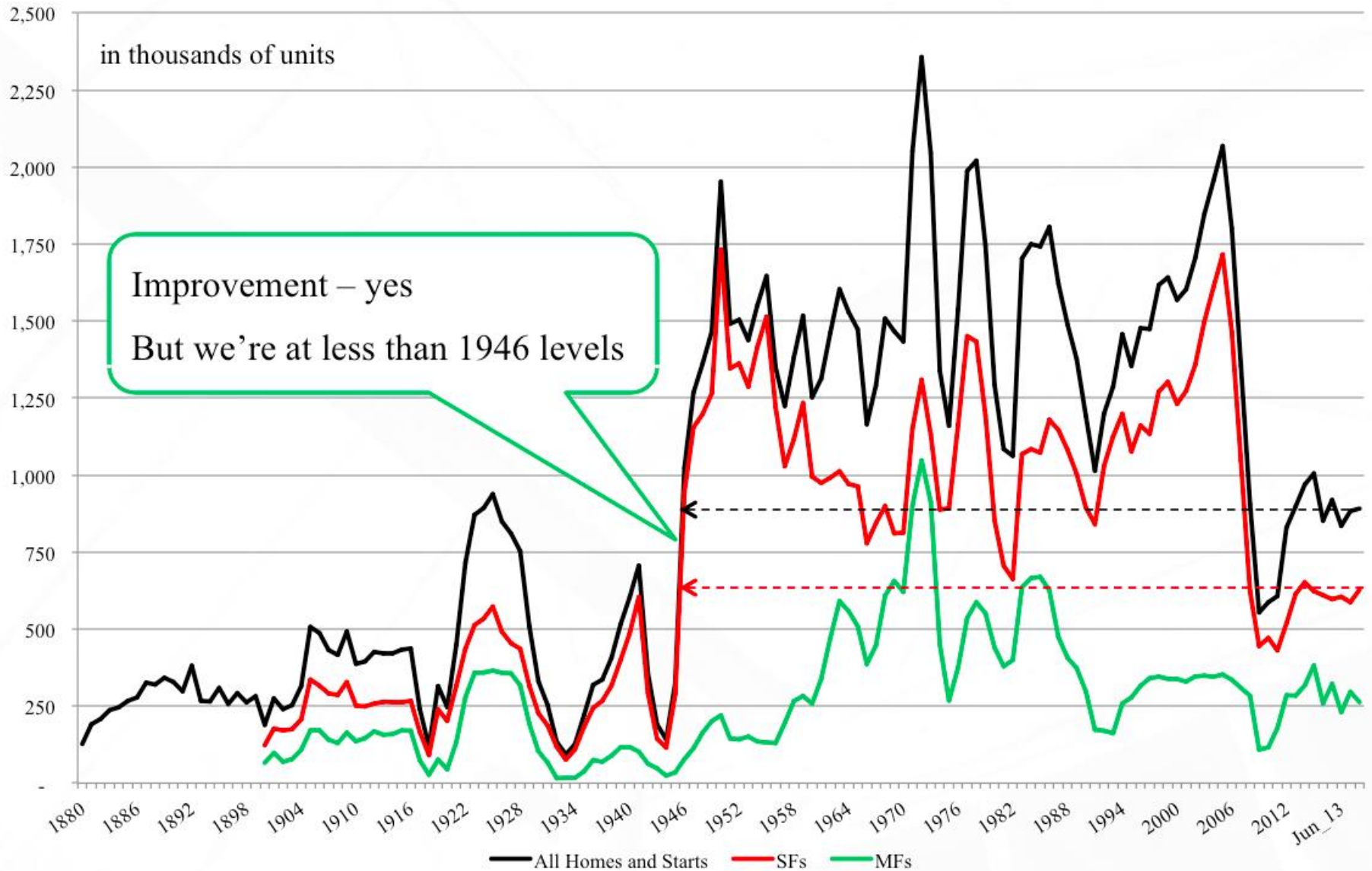
# ① **U.S. HOUSING**

- **70% of structural wood products**
- **50% or more of hardwood products**

**Bottom line...** domestic **wood product markets depend on housing**

**But, exports have picked up some of the slack...**

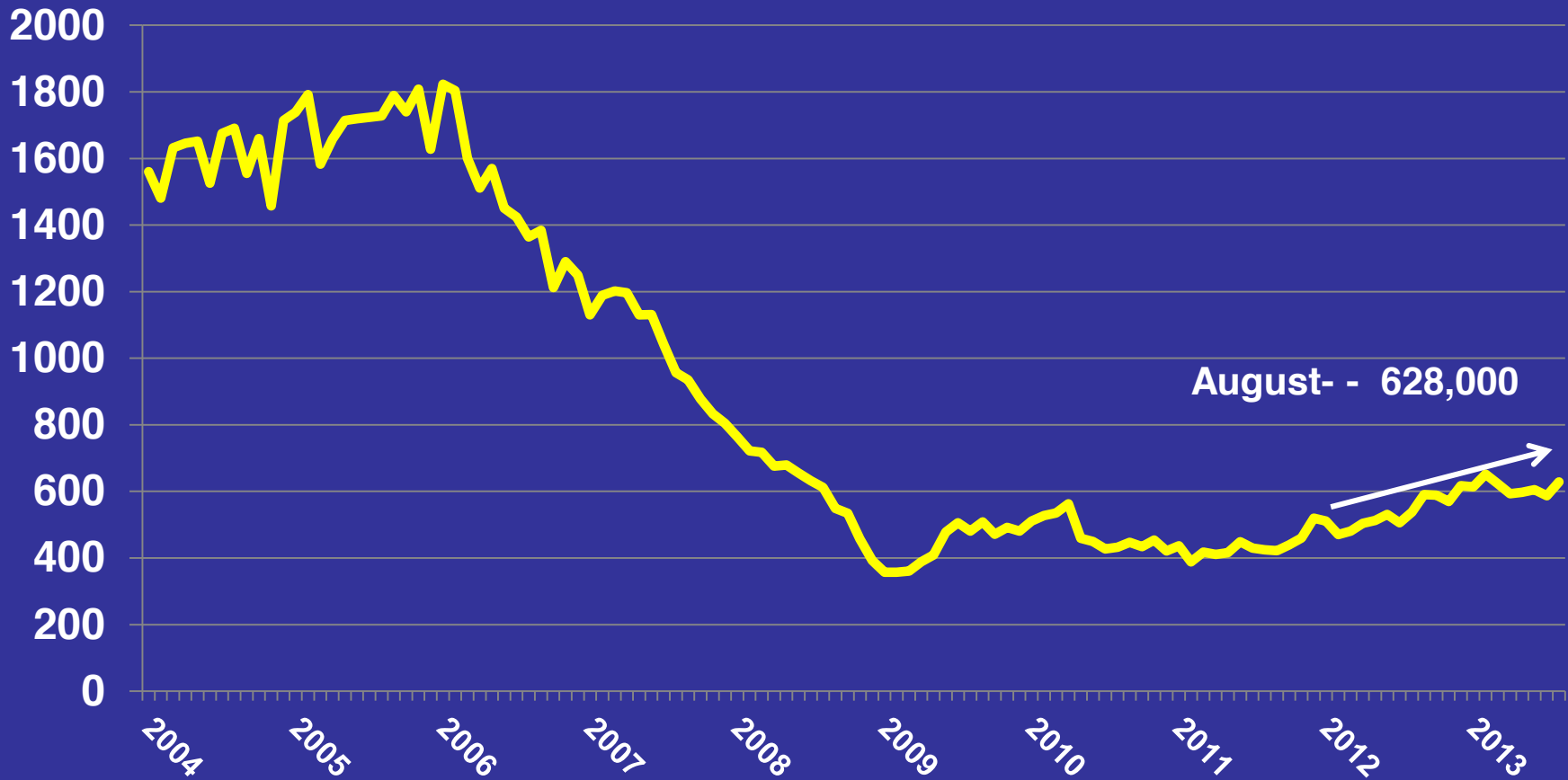
# Housing Units and Starts: 1880 to 2013



# Starts are finally turning the corner?

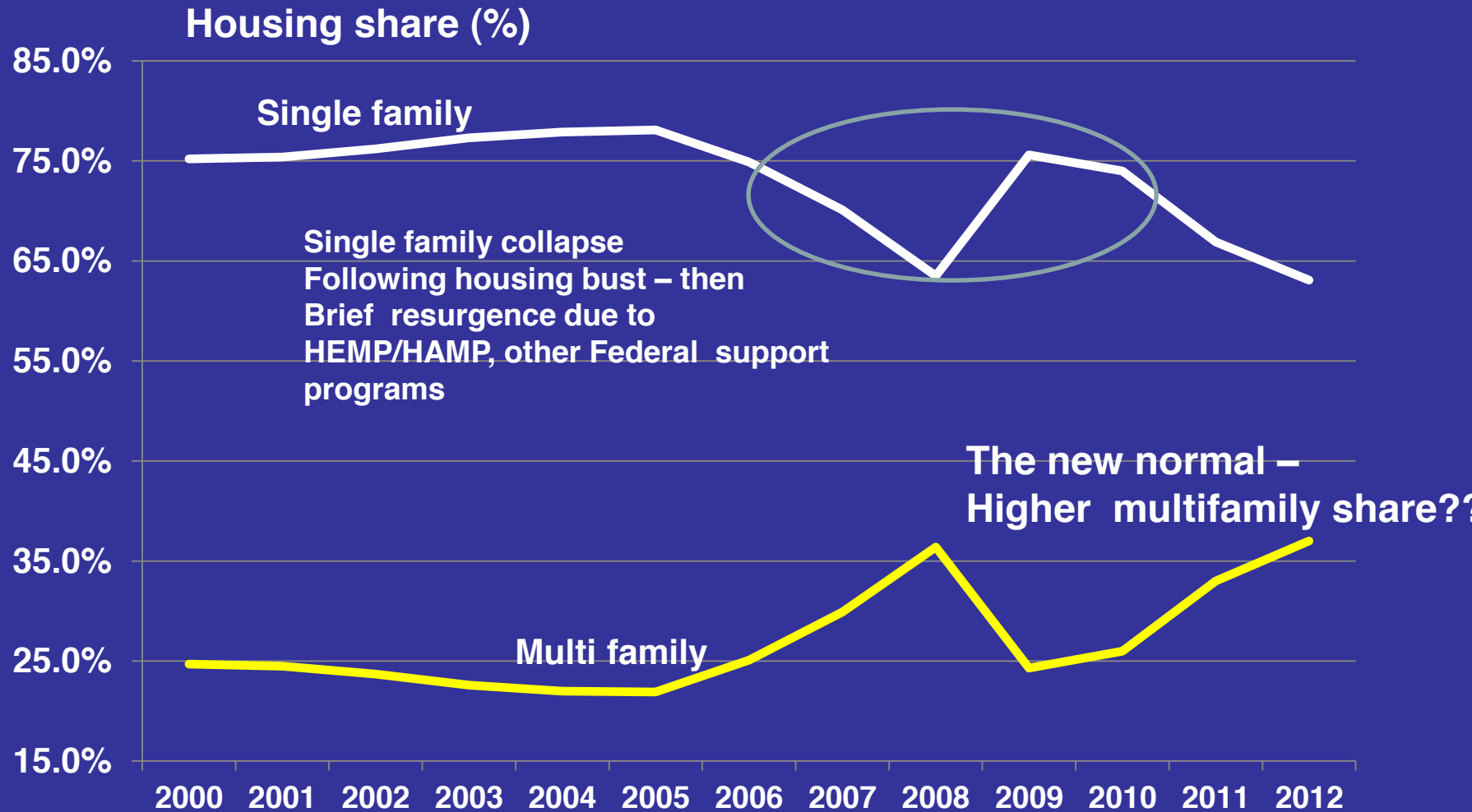
Problems going forward: distressed resales ( i.e., foreclosures) and jobs. Rising prices will moderate the foreclosure problem while good paying jobs will create demand – this will take more time!!

## Single family starts, Thousand units, SAAR



Source: Census (<http://www.census.gov/const/www/newresconstindex.html> )

## Multi family share is increasing – will it continue?



Source: Census (<http://www.census.gov/construction/nrc/>)

# Housing outlook – longer term thoughts

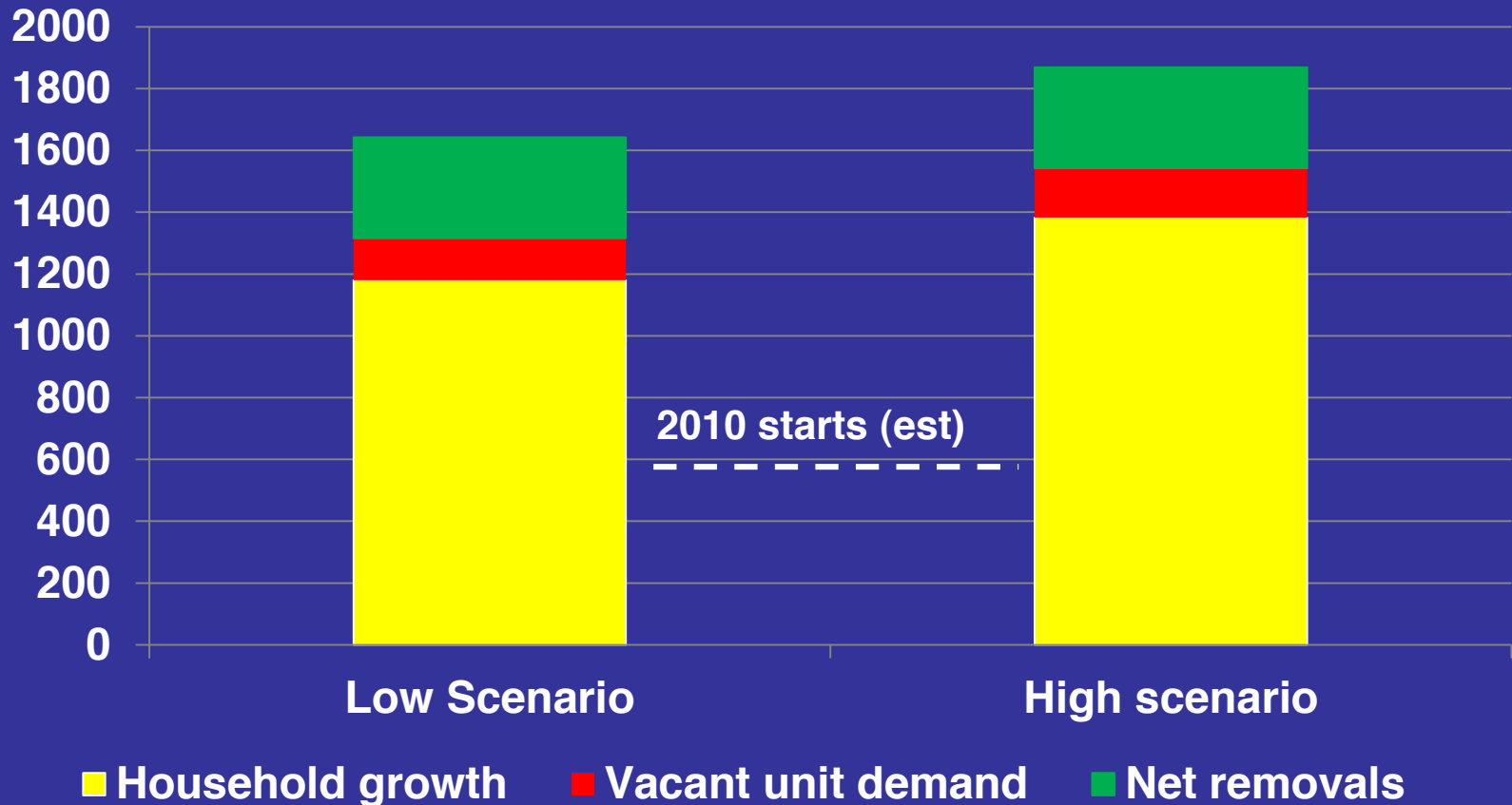
Think about focusing more energy on remodeling/improvements as this sector is expected to approach the size of the new construction market within 10 – 15 years

drivers include - -

- (1) aging housing stock
- (2) lower homeownership rates
- (3) increasing population
- (4) pent up demand (rate of household formation)

# Latest Harvard\* Housing Demand Forecasts 2010 – 2020 ( September 2010)

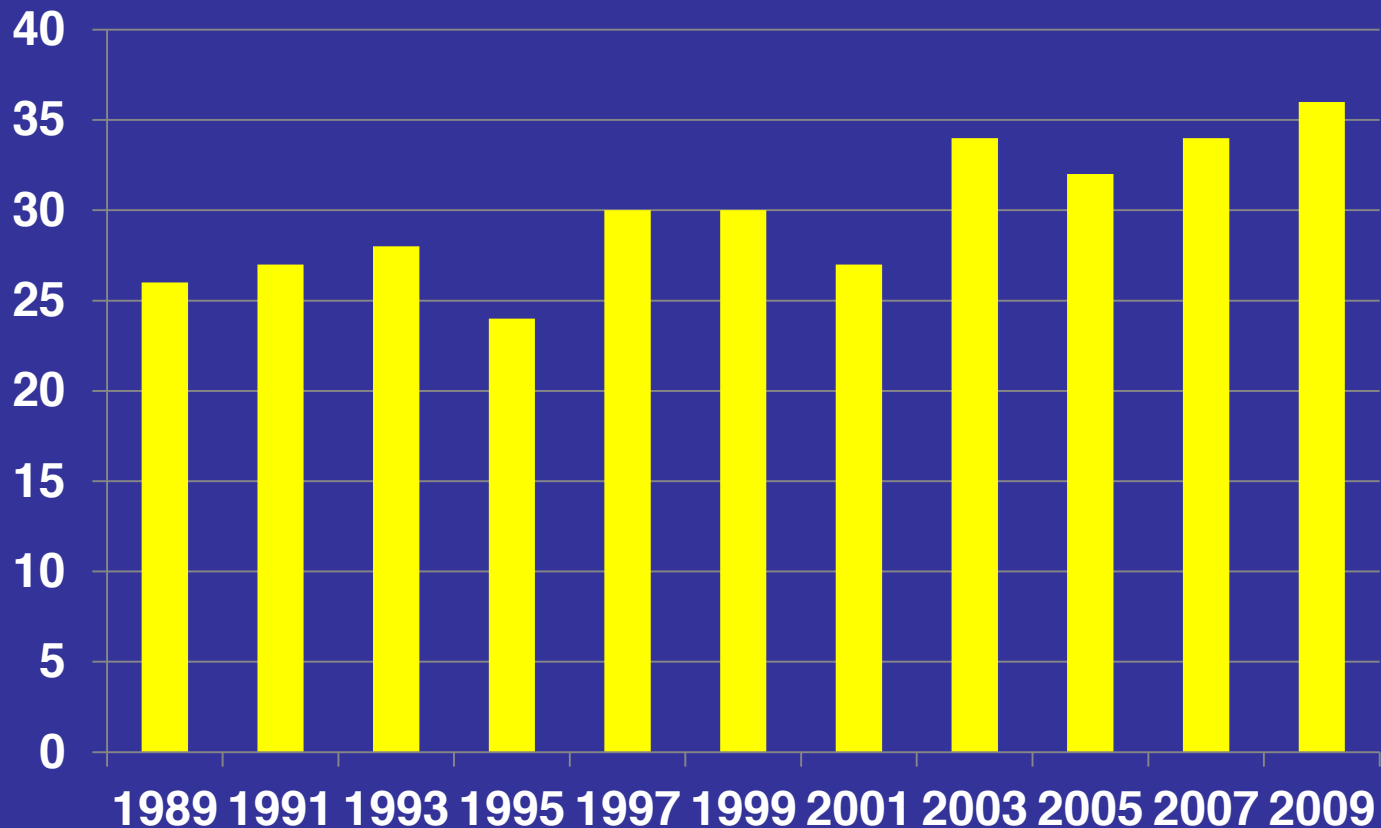
Annual rate (000)



Source: HJCHS, W010-9 , September 2010

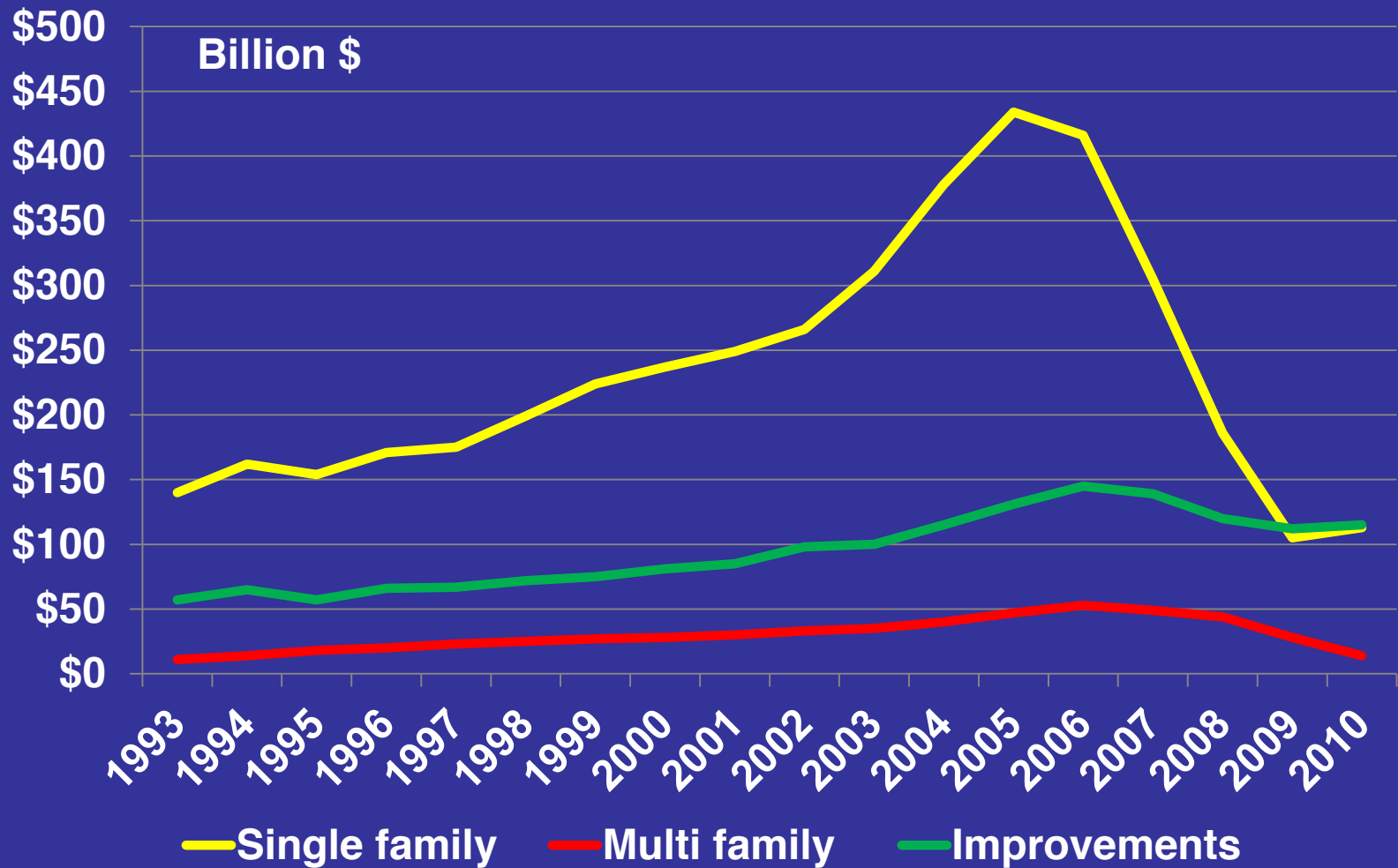
## Median Age of U.S. Housing Stock

In 2009, half of U.S. homes were 36 years old or older. Good news for remodeling business – in fact, over time, we will emulate Europe where remodeling expenditures routinely exceed expenditures on new construction



Source: AHS (<http://www.census.gov/hhes/www/housing/ahs/nationaldata.html>)

**Remodeling/Improvement spending exceeds spending on new single family construction for 1<sup>st</sup> time in history in 2009**  
- - as housing stock ages, remodeling expenditure will increase



U.S. Census; <http://www.census.gov/const/www/sitemap.html>

## ② **U.S. ECONOMY**

- **Economy is turning around**
- **Housing is recovering, albeit slowly**
- **Federal Reserve is still infusing money**
- **Jobs – well-paying jobs with benefits is what is needed!**

# **Why a slow recovery ?**

## **Housing**

**Slowly recovering, but**

## **Weak Economy**

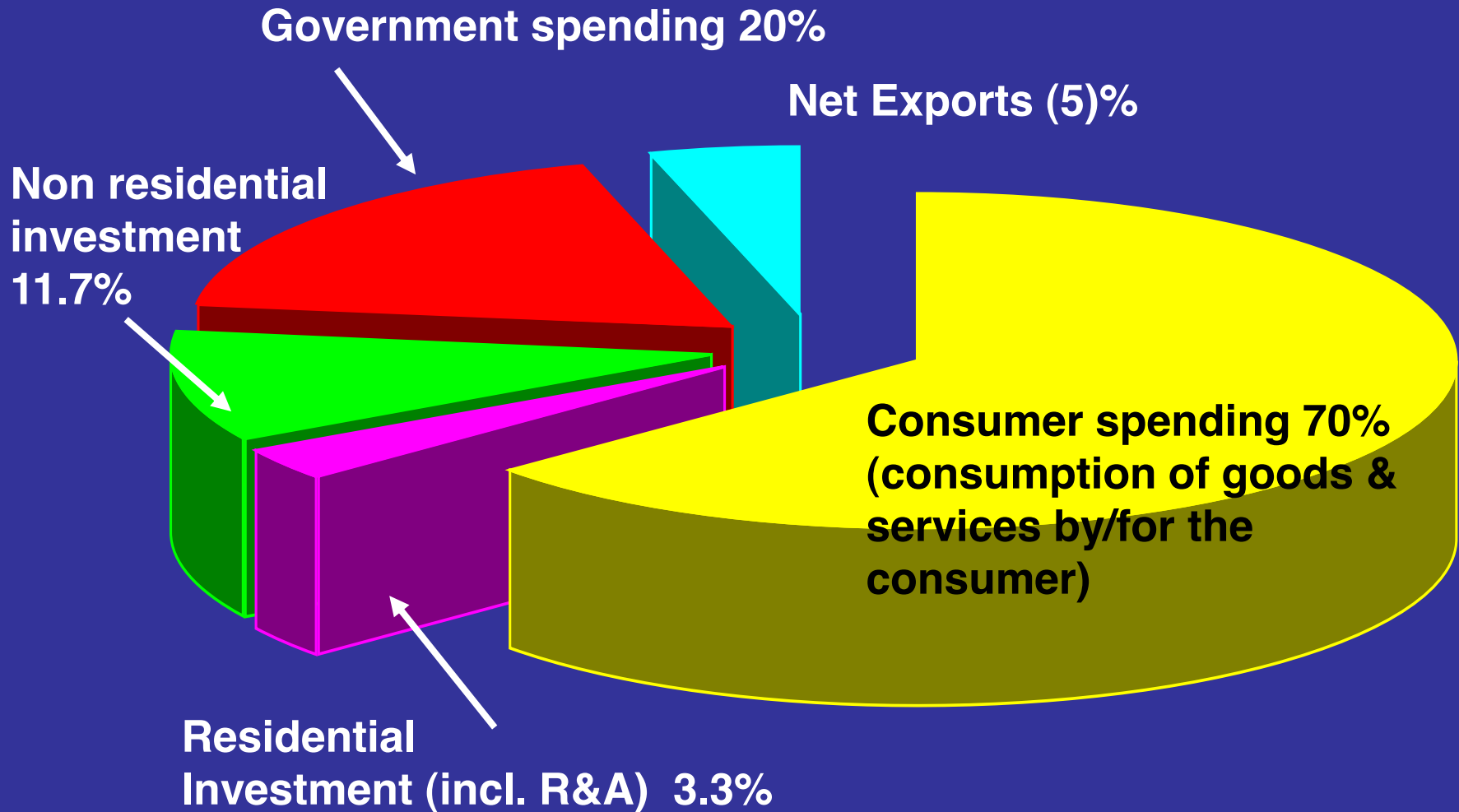
**high unemployment**

**+ weak income growth -  
(same as 1989)**

**+ consumer debt**

**= weak consumer spending**

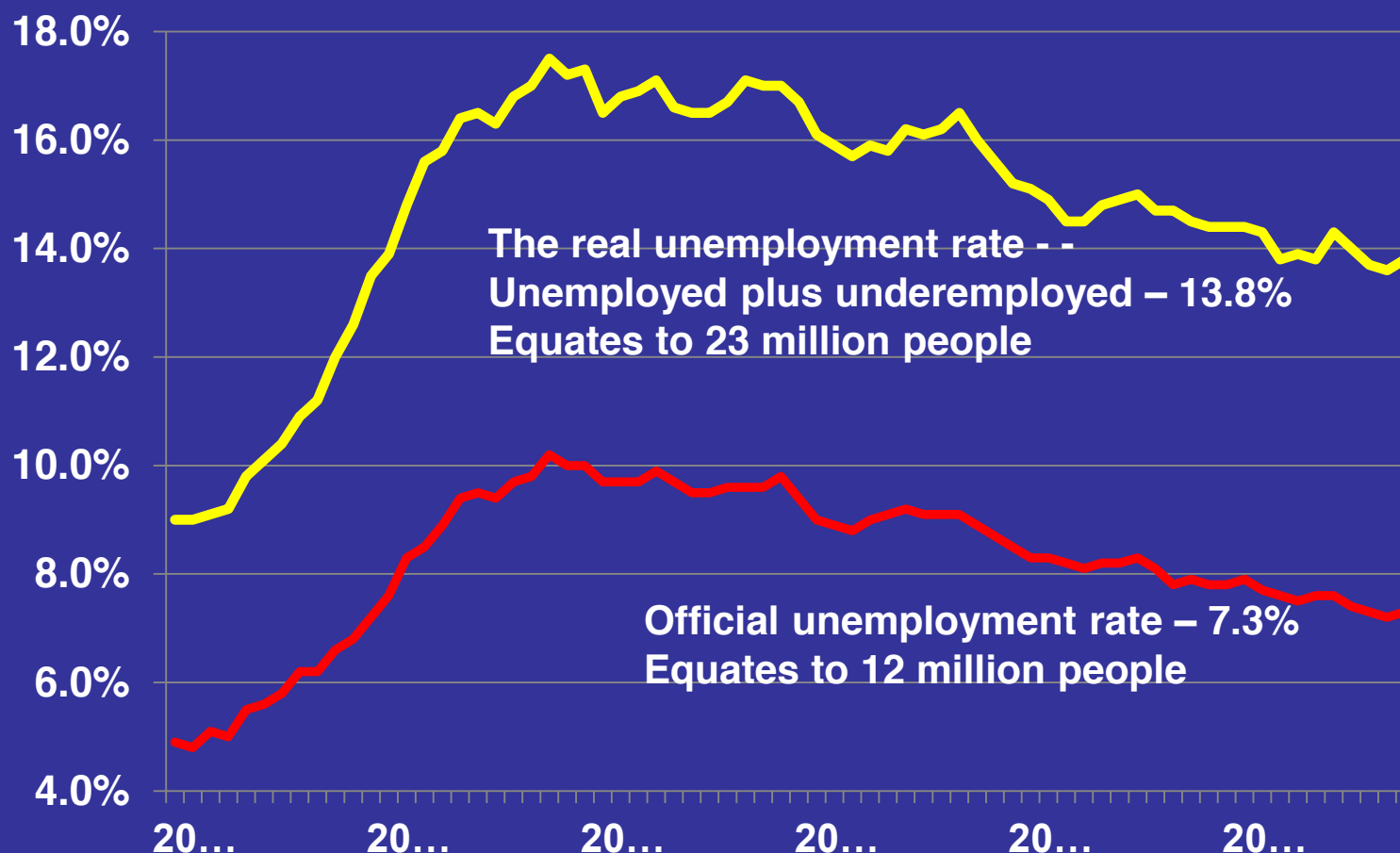
# U.S. Economy in 2008



Source: BEA (<http://bea.gov/national/nipaweb>)

## Unemployment remains high and will remain relatively high for several years – but, it's getting better “slowly”

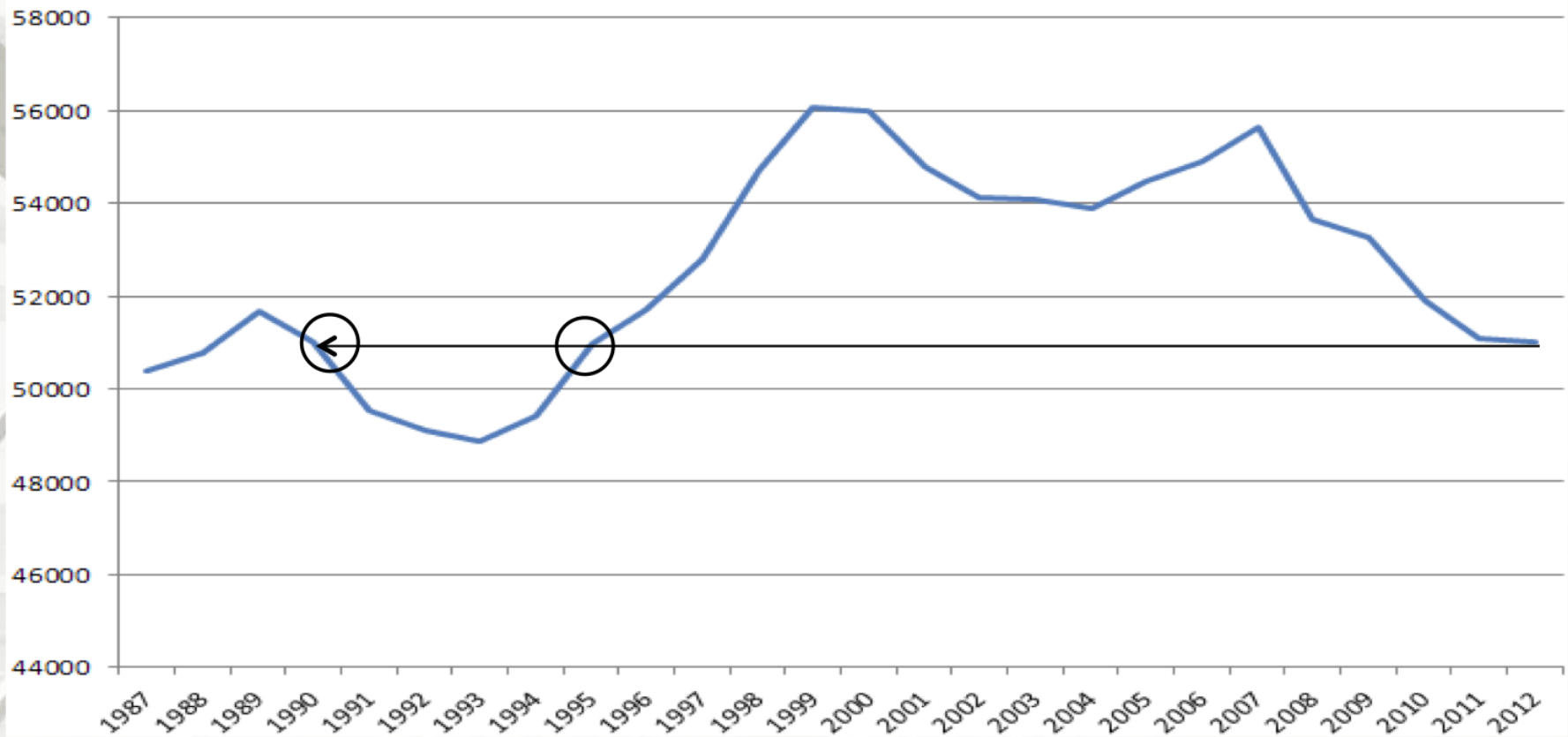
\*\*There are about 19 million people either unemployed, underemployed, or stopped Looking – **they are not buying houses**



Source -- BLS: <http://www.bls.gov/news.release/pdf/empsit.pdf>; <http://data.bls.gov/cgi-bin/surveymost?ln>

# United States Economy

Median household income, in 2012 dollars

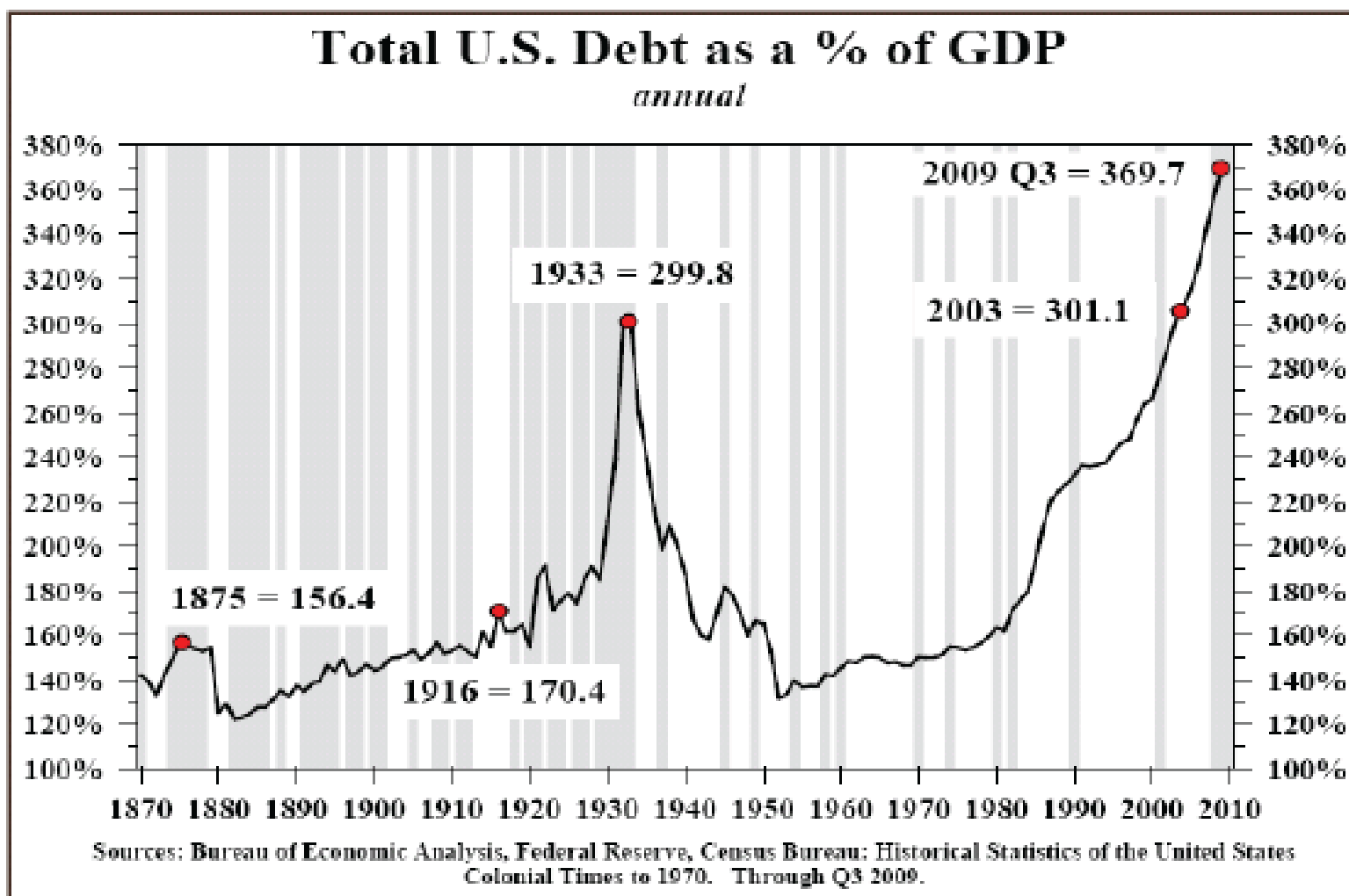


**The typical American family makes less than it did in 1995 and 1989**

“In 1989, the median American household made \$51,681 in 2012 dollars —  
\$51,017 in 2012”

“This isn't a lost decade for economic gains for Americans. It is a lost generation.”  
-- Neil Irwin, Columnist and Economics Editor, The Washington Post

## As real incomes shrink, Americans borrow to maintain standard of living



Source: graph by John Mauldin, Frontline Thoughts ( 4/2011)

# **③ U.S. WOOD PRODUCTS MARKETS**

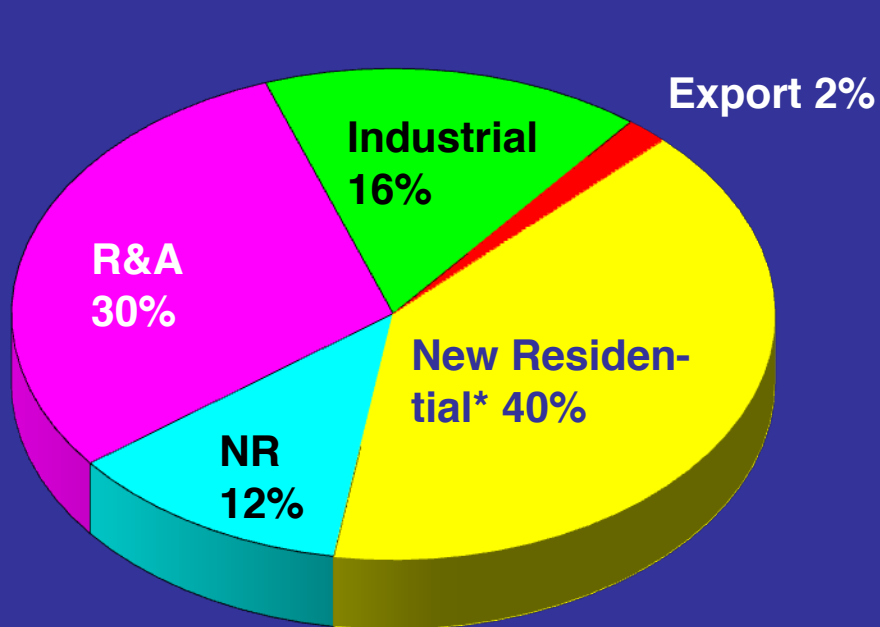
**Heavily geared to housing activities**

**70% of softwood lumber and structural panels consumed in new construction plus remodeling activity**

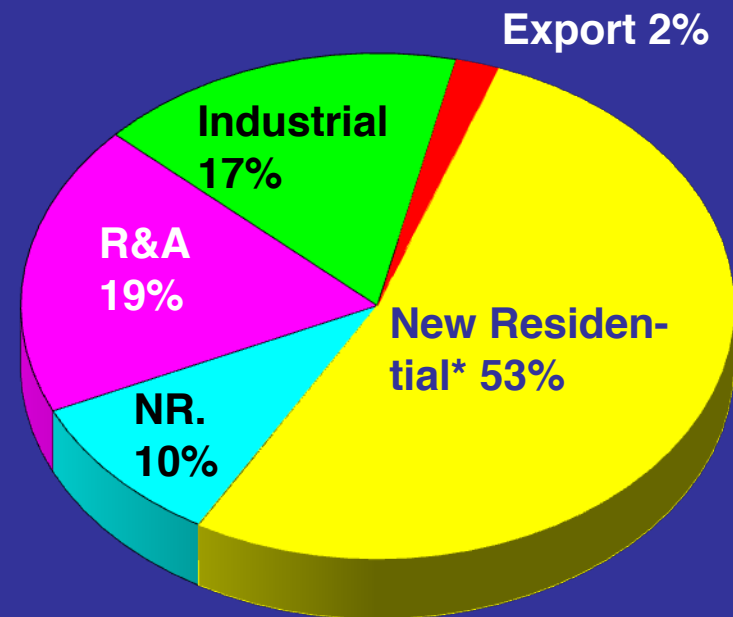
**The majority of hardwood products are tied to housing activity, either directly ( e.g., kitchen cabinets, molding, flooring), or indirectly ( e.g. furniture).**

# Softwood Market Shares: Average during 1998 – 2007

## U.S. Softwood Lumber



## U.S. Structural Panels

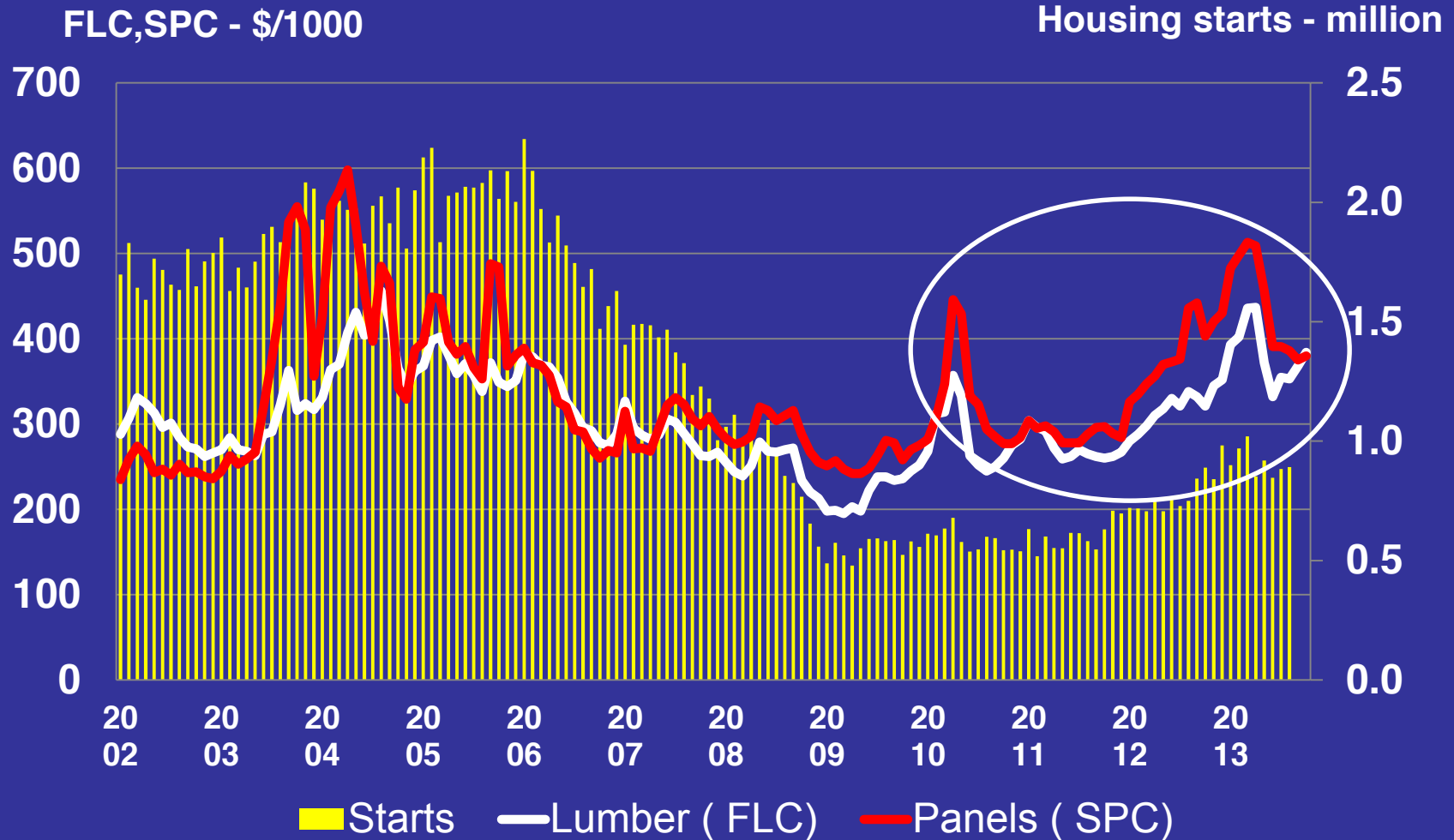


\*New Residential incl. SF, MF, and Mobile Homes

Source : Lumber – WWP; Panels - APA

## Housing starts and wood product prices – Economics 101

Following housing bust in 2008, wood prices fell and production capacity was reduced. So, when housing starts increased, there was an imbalance between demand and supply of wood products. The price mechanism brings demand and supply into balance. Initially, prices fell almost 50% - this instigated production cutbacks of 50% or more – then, as housing begins to turn around, prices increase - this encourages Production increases for wood products – and the cycle starts over.

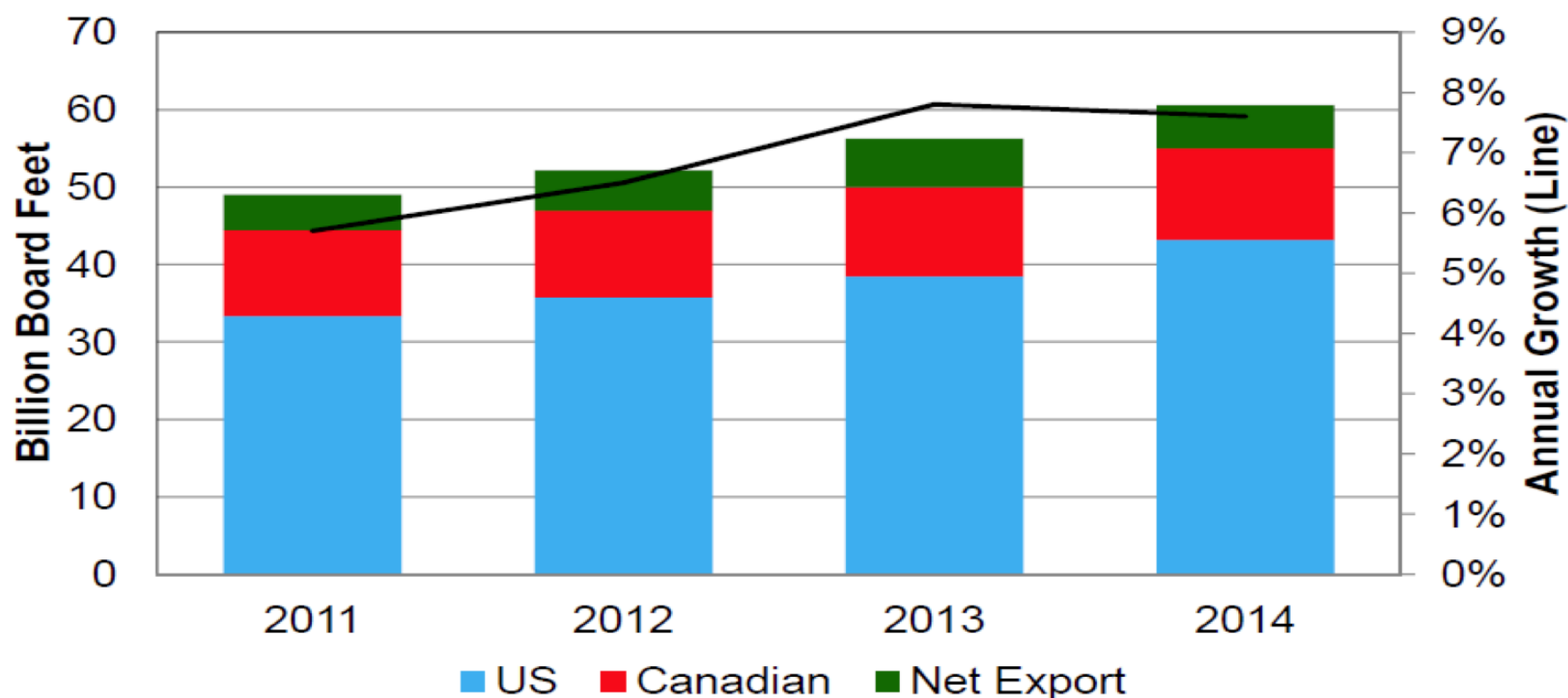


Sources: Prices – Random Lengths (<http://www.randomlengths.com/>); starts (Bureau of Census (<http://www.census.gov/construction/nrc/>))

# United States Softwood Lumber and Panel Markets

## Modest Growth Will Push Demand for North American Softwood Lumber up by 8.4 BBF from 2012 to 2014.

### Demand for North American Softwood Lumber

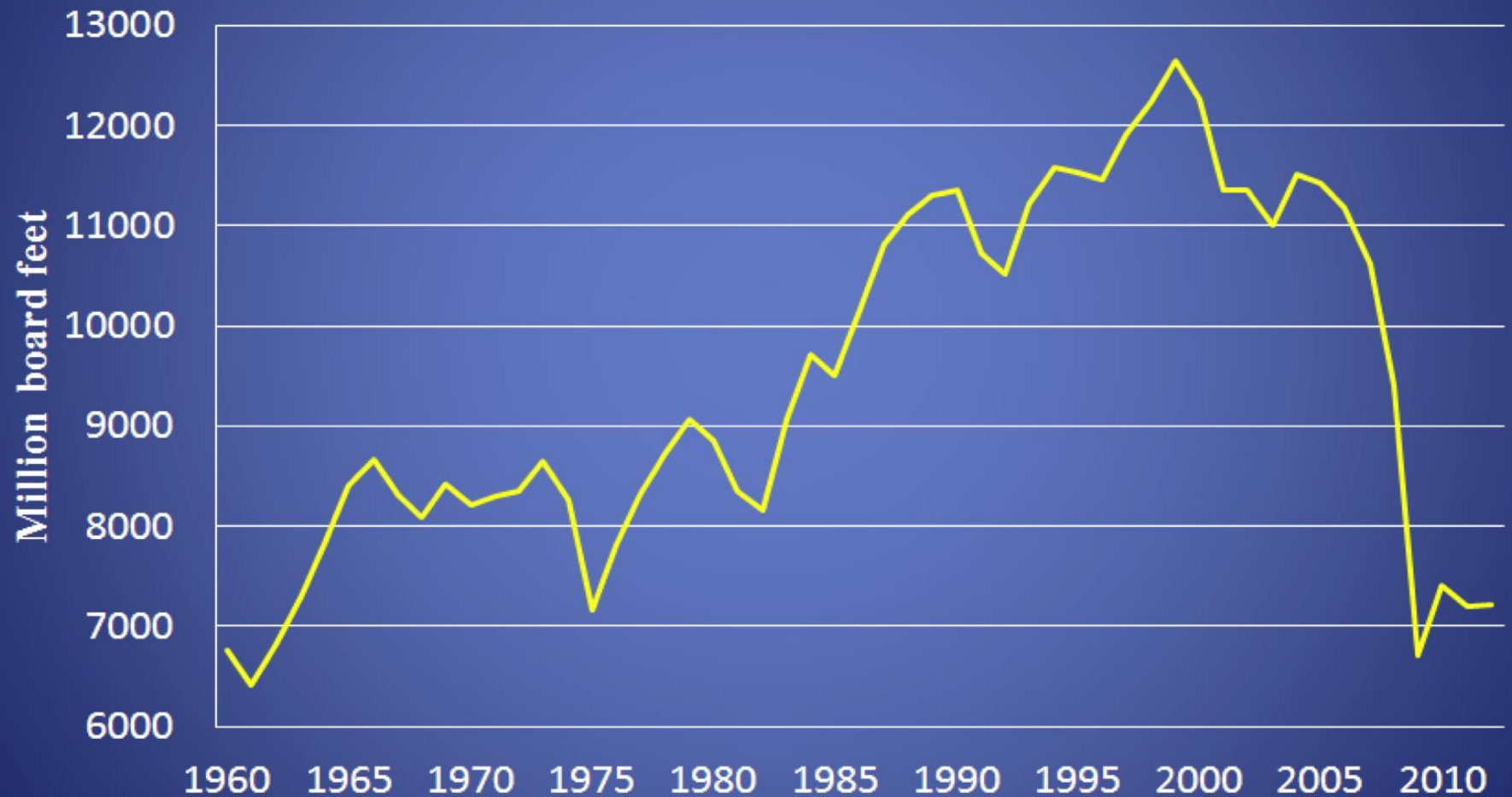


# Hardwoods

- Hardwood lumber production has declined by 40% between 1999 and 2010, and has only increased modestly since
- We have permanently lost as much as a third of our hardwood lumber production capacity in the past 5 years – Liquidated or abandoned

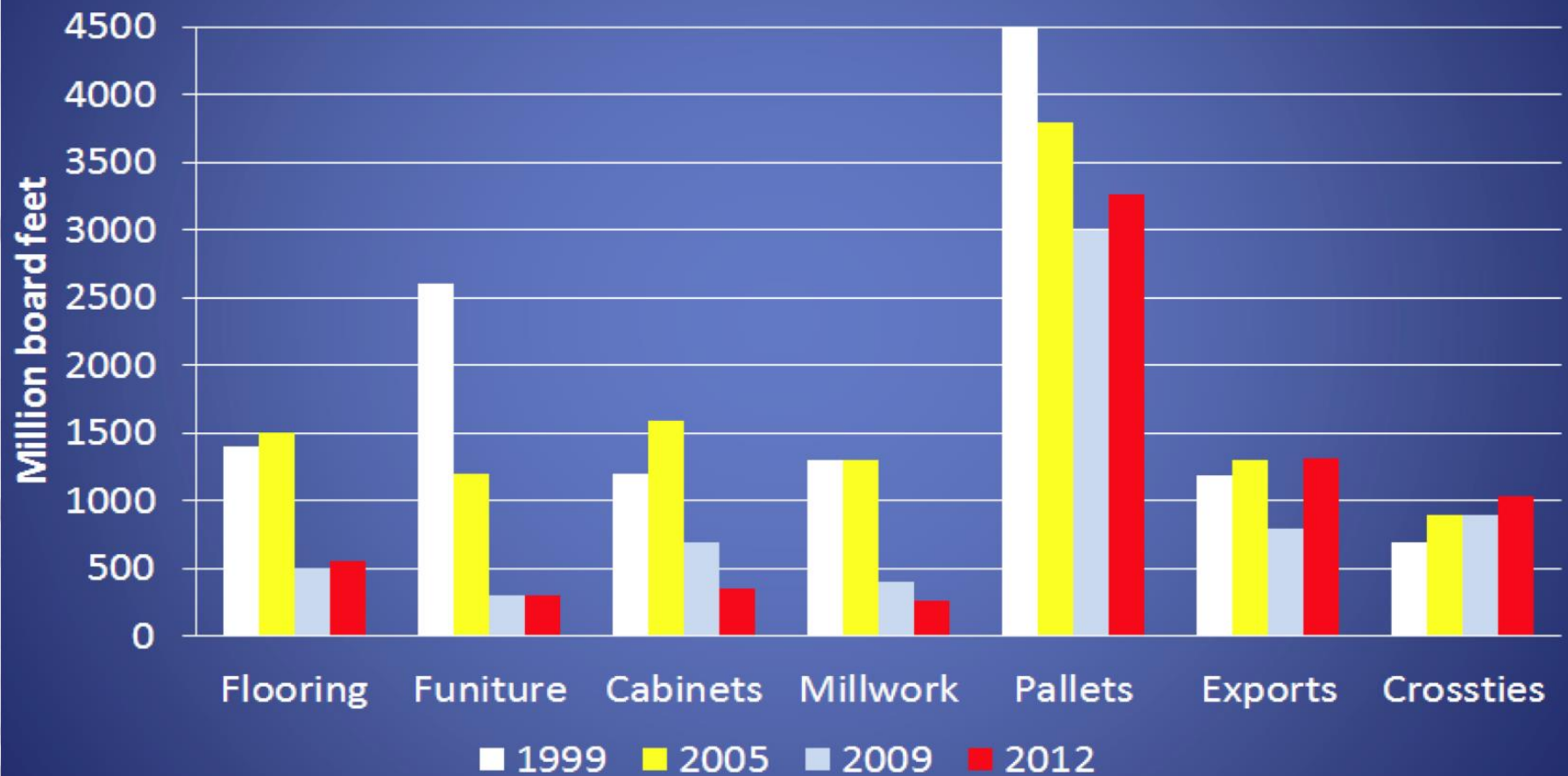
# United States Log and Lumber Markets: Hardwoods

## Eastern Hardwood Lumber Production



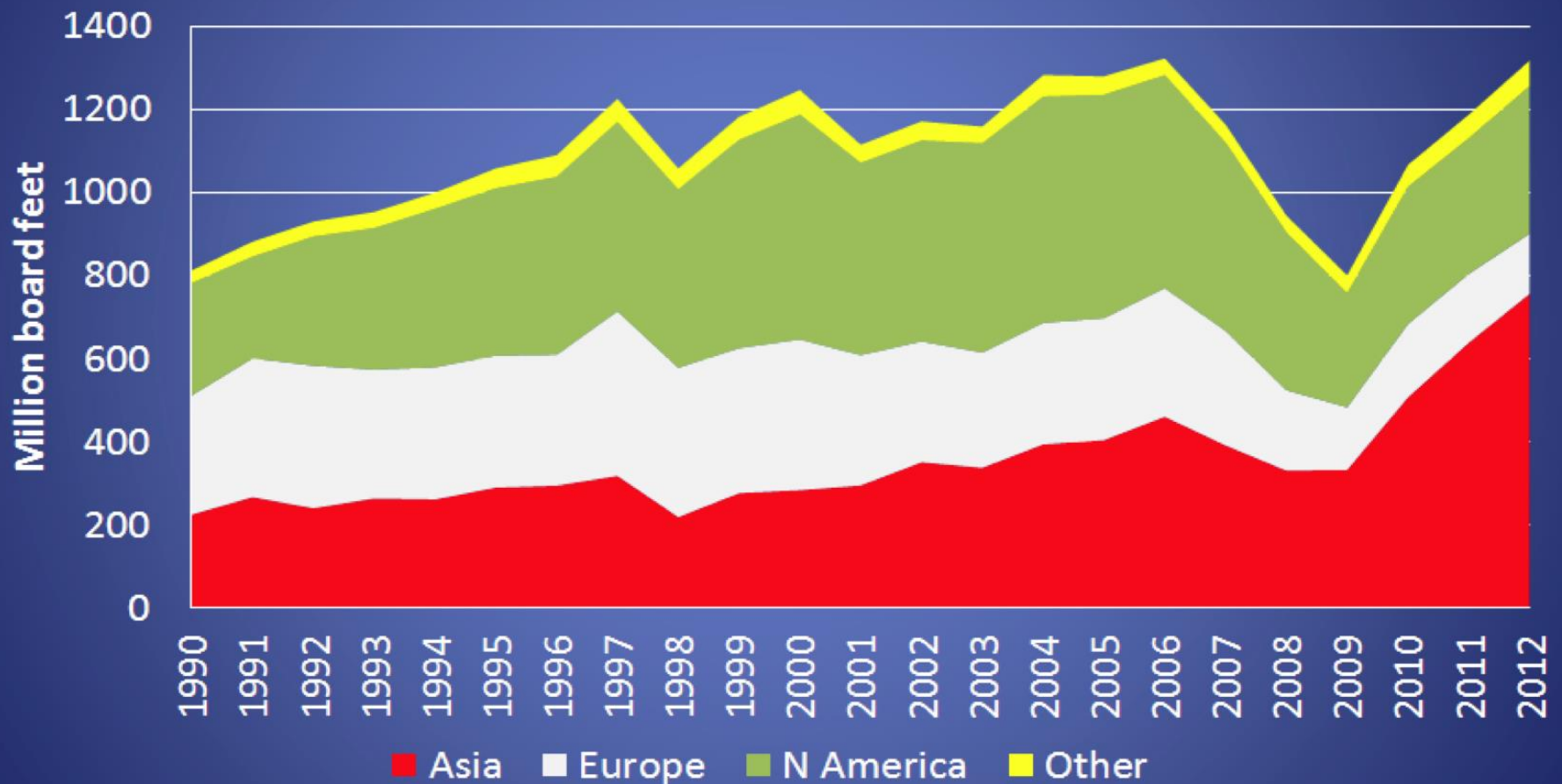
# United States Log and Lumber Markets: Hardwoods

## Hardwood Lumber Consumption 1999, 2005, 2009, 2012



# United States Log and Lumber Markets: Hardwoods

## Hardwood Lumber Exports 1990 to 2012 by Region



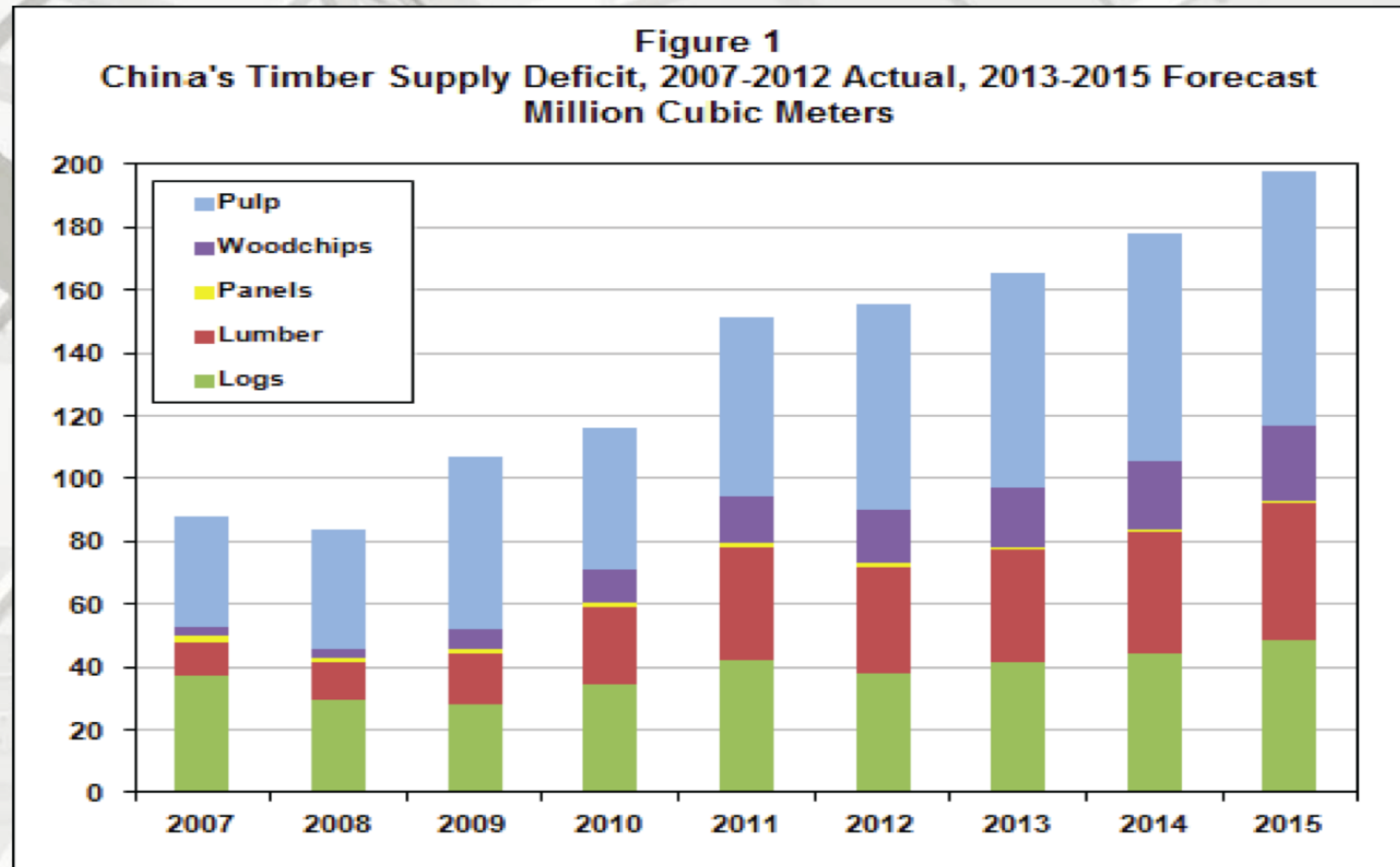
# **④ U.S. WOOD PRODUCTS EXPORT OPPORTUNITIES**

# **Wood deficit in China creates opportunities for exporters – logs and lumber**

**China's potential fiber supply gap (difference between total demand and domestic supply) is projected to be 150 million m<sup>3</sup> (roundwood equivalent, 63 billion bdft) by 2015**

**(this is larger than the entire Canadian timber harvest in 2009)**

# Chinese Wood Products Demand Increasing



“As of mid-2013, we are now projecting that the 2015 timber supply deficit in China will be even higher than we had previously forecast, at nearly 198 million m<sup>3</sup>, or 8.8% higher than we had projected in April 2011. ...in 2012 the wood products sector in China (lumber, plywood, blockboard, MDF, particleboard and OSB) consumed approximately 230 million m<sup>3</sup> of wood, net of sawmill residues.”

# Perspective on China's wood products industry

- world's 4<sup>th</sup> largest producer of logs
- 3<sup>rd</sup> largest consumer of logs
- Largest importer of logs
- 3<sup>rd</sup> largest importer of lumber
- 2<sup>nd</sup> largest consumer lumber
- Largest producer and consumer of furniture, plywood, MDF, flooring, doors and various finished products
- China's forest product output in 2009 was US\$230 billion
- China has largest level of housing starts in the world

# China: Trends and Issues

- Economic growth has rebounded to 8-9% and is expected to continue at this pace
- China's domestic wood products demand is growing at 10-15% per year
- China consumes 75-85% of its domestic production, thus GDP growth and wood products growth are tied closely
- Due to domestic wood fiber deficit, China needs logs for processing and lumber for products
- Russia's log exports
- Canada's pine beetle infestation

# **⑤ U.S. WOOD PRODUCTS OPPORTUNITIES**

Lacey Act, as amended\*, will encourage more acreage of certified forests plus more COC certificates?

\*The Lacey Act of 1900, originally designed to combat illegal trafficking of wildlife and fish, was amended in 2008 to include illegal logging and products made from illegally harvested timber

## Illegal Logging

- Illegal material depresses world prices for wood by up to 16%
- Severely undermines markets for legal operators
- Undermines reputation of the wood industry



Source: Mike Snow, AHEC

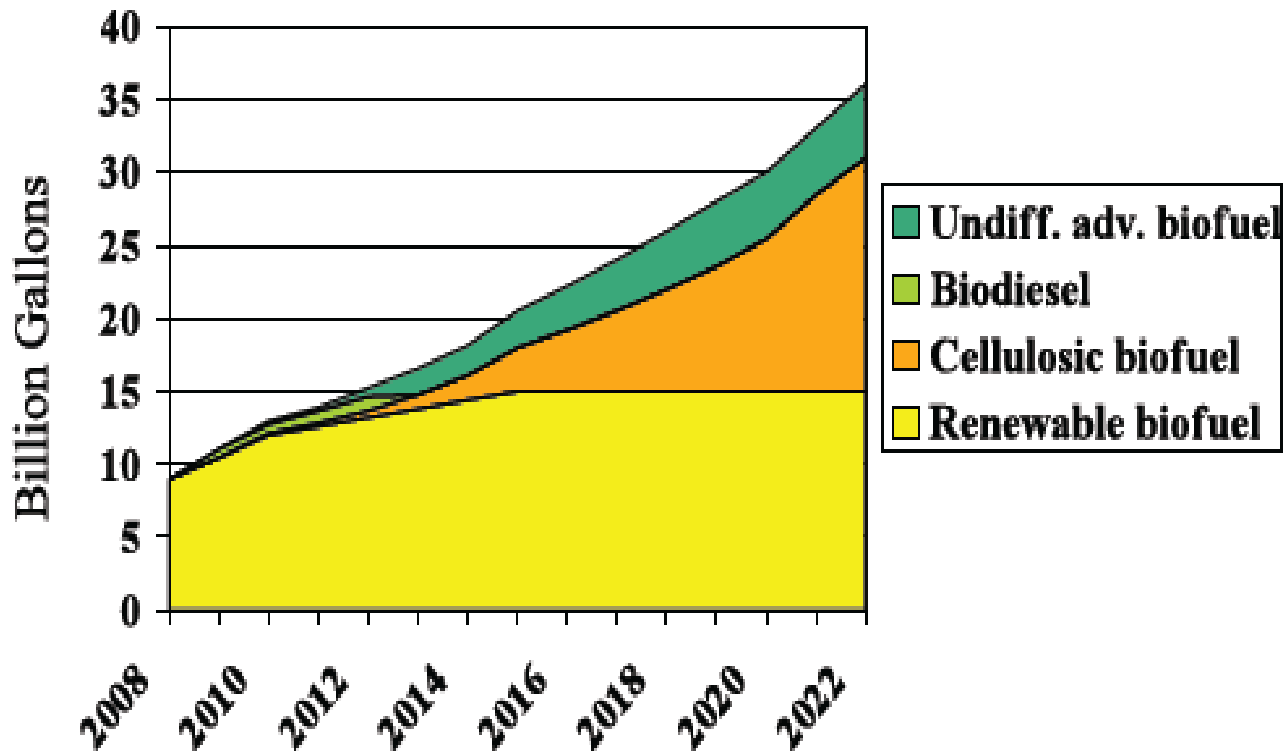
# **New Opportunities – new climate – Good or Bad – Depends on us!**

Resource constraints + climate change policies + shifting consumer values

“Use to be a simple business of converting trees into lumber, panels, and paper  
Now, uniquely positioned ,or exposed, to political and economic forces that  
Are reshaping the regulatory and market landscapes” - - A.,Sauer, World Resources  
Institute

- **Energy Independence and Security Act of 2008** - sets targets for  
cellulosic biofuels production through 2022 – 36 billion gallons  
renewable fuels by 2022 – 21 of the 36 must be “advanced biofuels  
such as cellulosic ethanol
- **American Clean Energy and Security Act of 2009**  
(Waxman/Markley climate change bill - establish targets  
to obtain a certain percent of electricity (17%) from  
“renewable sources” fuels including biomass by 2018 – objective is to  
reduce GHG emissions

## Biofuel Targets Under the U.S. Renewable Fuels Standard



Source: U.S. Energy Independence and Security Act of 2007 (H.R. 6)

## Impacts on forest products industry

- New revenue streams and markets for forest products and services
  - (1) carbon storage and sequestration – “being paid to grow trees”
  - (2) biomass and biofuels for transport fuels and electricity
- Competitive advantages in a low carbon economy
  - carbon neutral/carbon negative products
  - there will be incentives to reduce green house gas emissions via carbon tax or cap and trade system
- Green preferences will increase with increasing awareness of climate change benefits of sustainable forest products.

**Wood products industry must get involved to make sure these benefits evolve!**

# Green Building (sustainable) Trends

What is green building? A philosophy that focuses on buildings that:

- (1) Efficiently using water, energy, and other resources
- (2) Protecting occupant health and improving employee productivity
- (3) Reducing waste, pollution and environmental degradation

- Market for “green homes” is expected to increase from \$2 billion to \$20 billion over the next five years in the USA
- **Implications for wood products industry: certified wood products plus LEED and other green building certification programs will benefit wood – any trends that promote sustainable products will favor wood! Life cycle analysis shows that wood is a sustainable material.**

# Wood: The “Green” Material

- Wood outperforms all other building products:
  - Releases less effluents during manufacture
  - Requires less energy
  - Better insulator
  - Stores carbon
  - Recyclable and Renewable



Source: M. Snow, AHEC

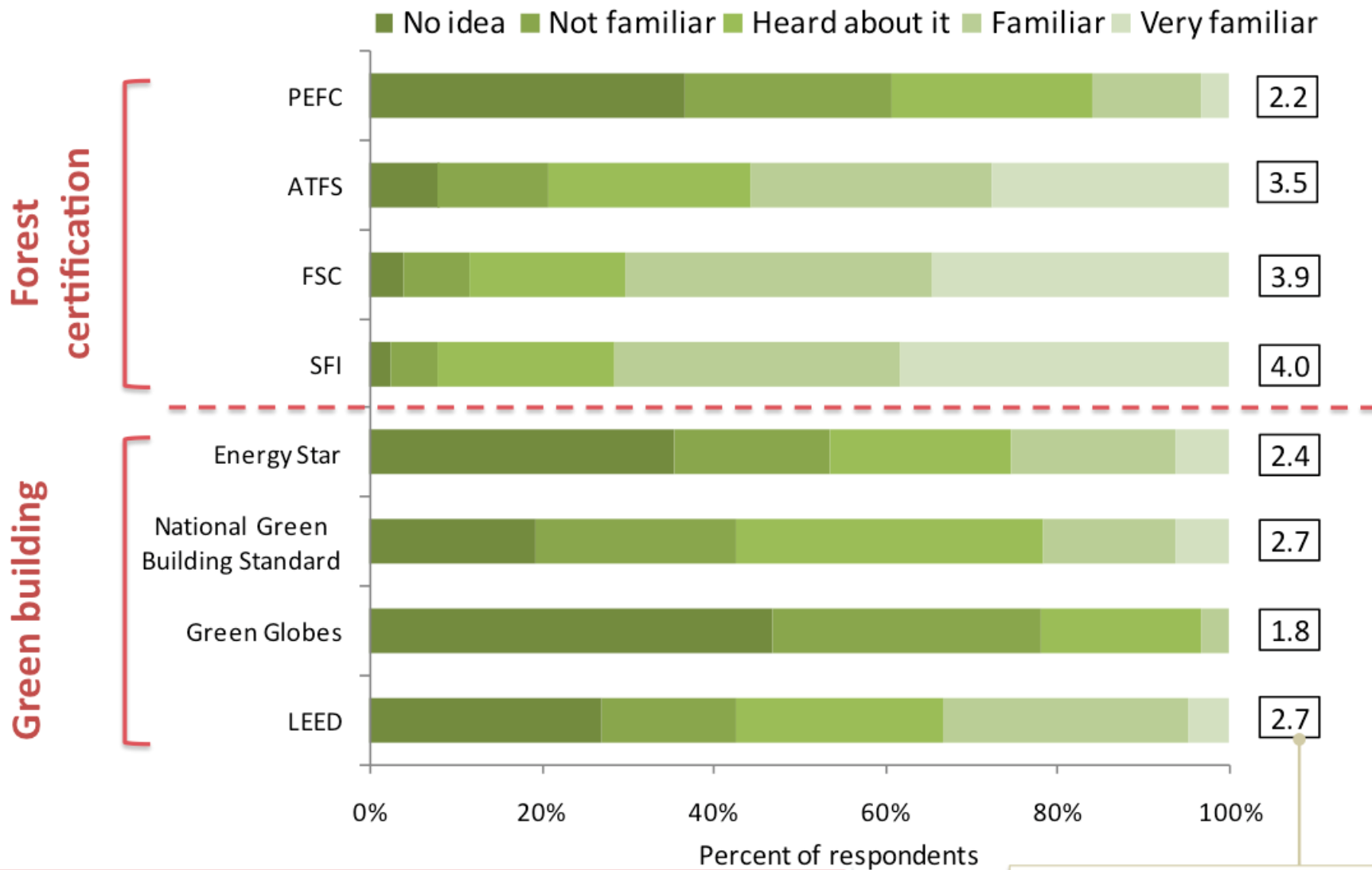
# Wood: energy efficient



Material	Embodied energy, Mj/kg
AD sawn hardwood	0.5
KD sawn hardwood	2.0
Concrete	4.0
Mild steel	34.0
Plastics	90.0
Aluminium	170.0

Source: M. Snow, AHEC

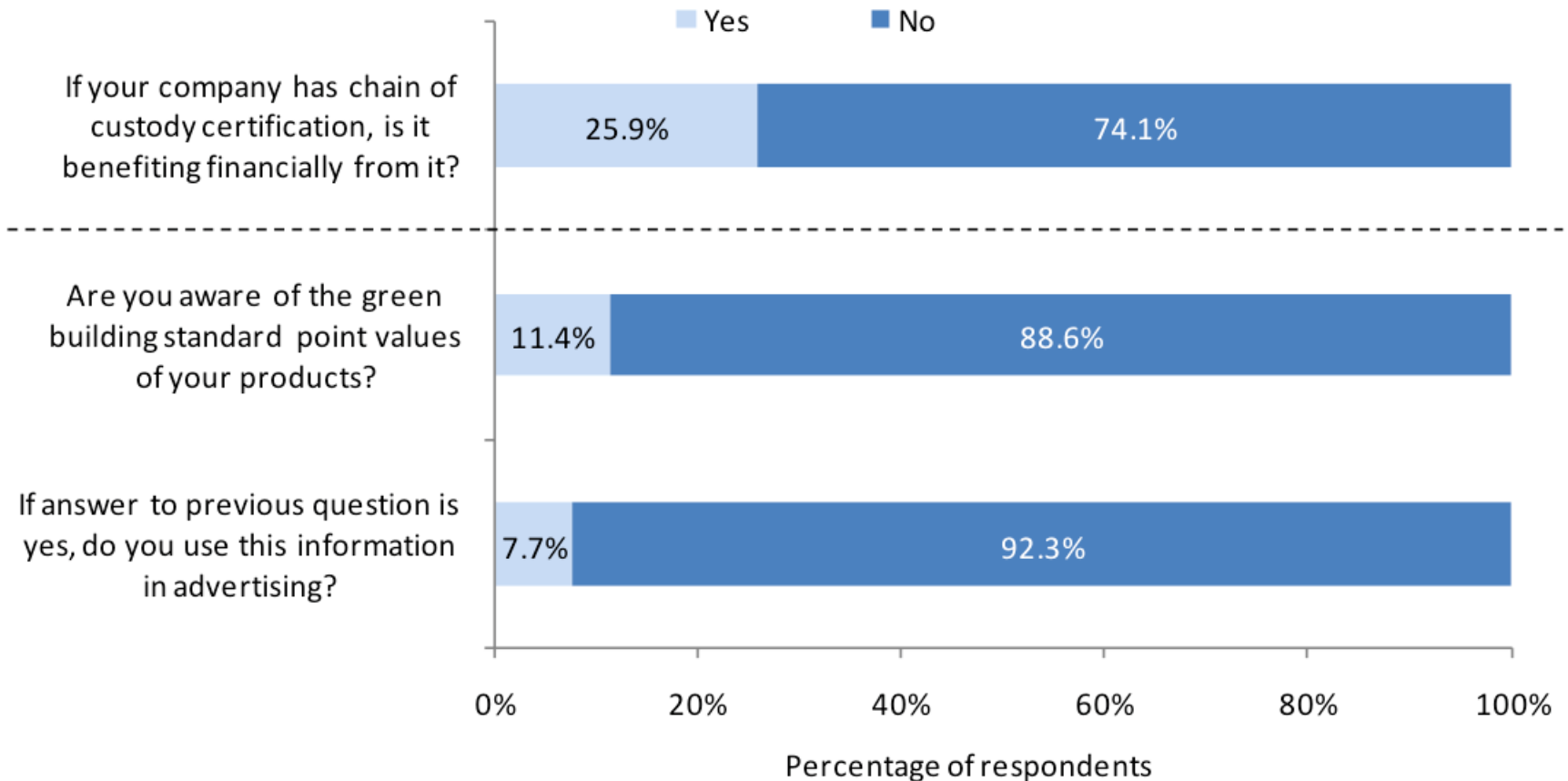
# Familiarity with “Green” Programs



There is a higher degree of familiarity with forest certification schemes than with green building programs. Most companies are familiar or very familiar with ATFS, FSC, and SFI; but not so with PEFC. The LEED program is the most recognized among green building.

Average response  
(1=No idea, 7=Very familiar)

# Benefits of Green Movement



Out of companies with certification, only a quarter said they are benefiting financially from it. Only 11.4% of respondents are aware of the green points of their products, and of these, only 7.7% use that information in advertising.

# Future Wood Markets – New Products

## High-Rise Timber Structures



# US Corn Yields (General Trend)

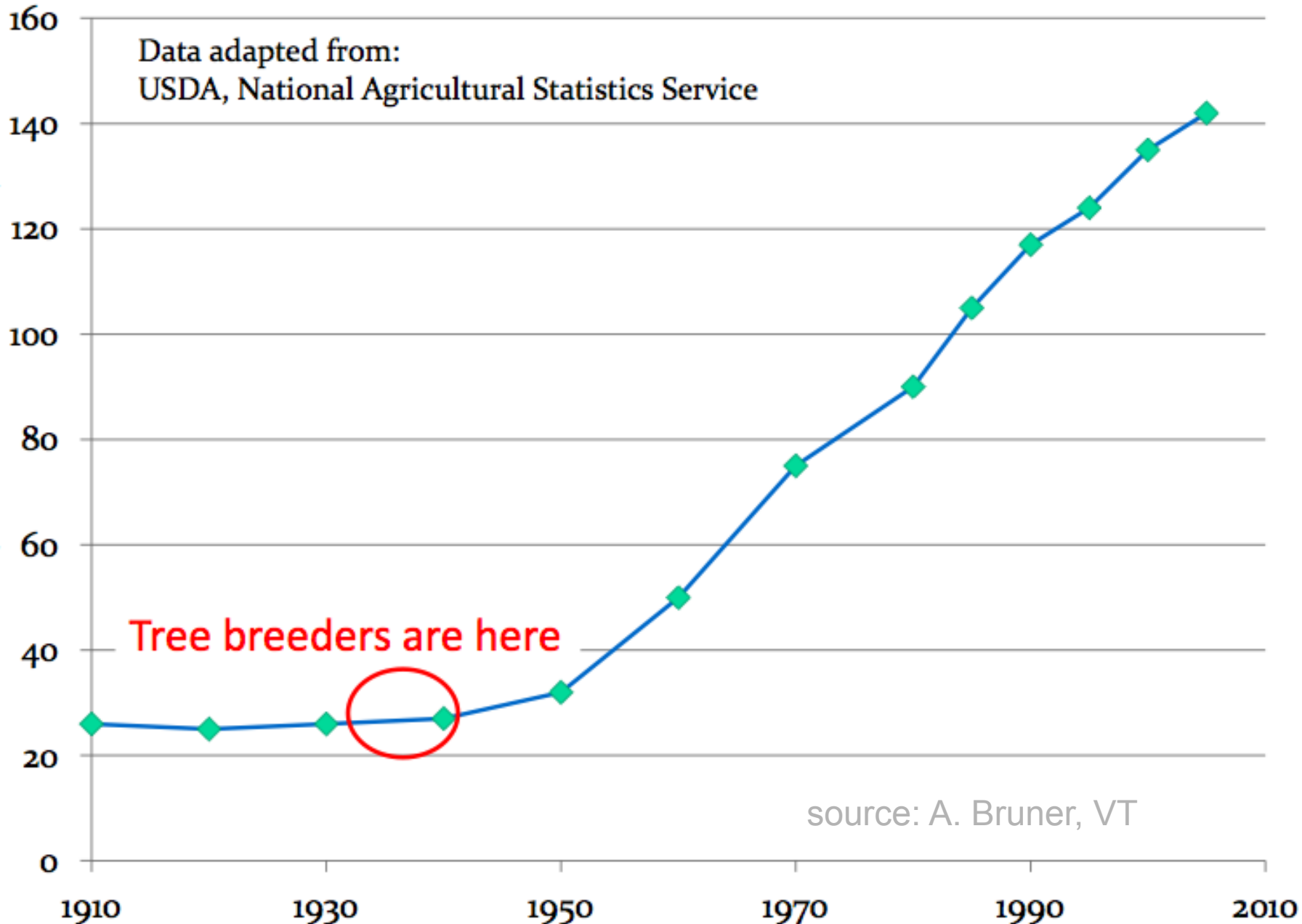
Data adapted from:

USDA, National Agricultural Statistics Service

Yield (bushels / acre)

Tree breeders are here

source: A. Bruner, VT



## ⑥ Summary

- U.S. wood products markets dependent on housing
- Housing improvement hinges on balancing supply and demand
- Housing demand and economic recovery strongly dependent on improvements in U.S. job market
- Exports markets to Asia are doing well
- China, with its huge wood fiber deficit is a major opportunity
- Lacey act helps “legal” producers like the U.S.
- Wood is the material of the future – carbon sequestration, renewable energy, green building material, ...
- Plantations will supply fiber needed

# **7 Acknowledgements**

- **Russ Taylor, Wood Markets Monthly**
- **Lynn Michaelis, RISI**
- **Bill Luppold, USDA-FS**
- **Peter Ince, USDA-FS**
- **A. Brunner, VT**
- **T. Hammett, VT**

# THANK YOU!

## QUESTIONS - DISCUSSION



source: Jim Rider, South Bend Times

## **Disclaimer of Non-endorsement**

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

## **Disclaimer of Liability**

With respect to documents sent out or made available from this server, neither Virginia Tech nor any of its employees, makes any warranty, expressed 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 Virginia Tech of the linked web sites, or the information, products or services contained therein. Unless otherwise specified, Virginia Tech 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 Virginia Tech's 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**

Virginia Tech 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. Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the author. Virginia Tech is an equal opportunity provider and employer.