

# Timber industry economic outlook – Springtime ... for Lumber ... and Wood Products

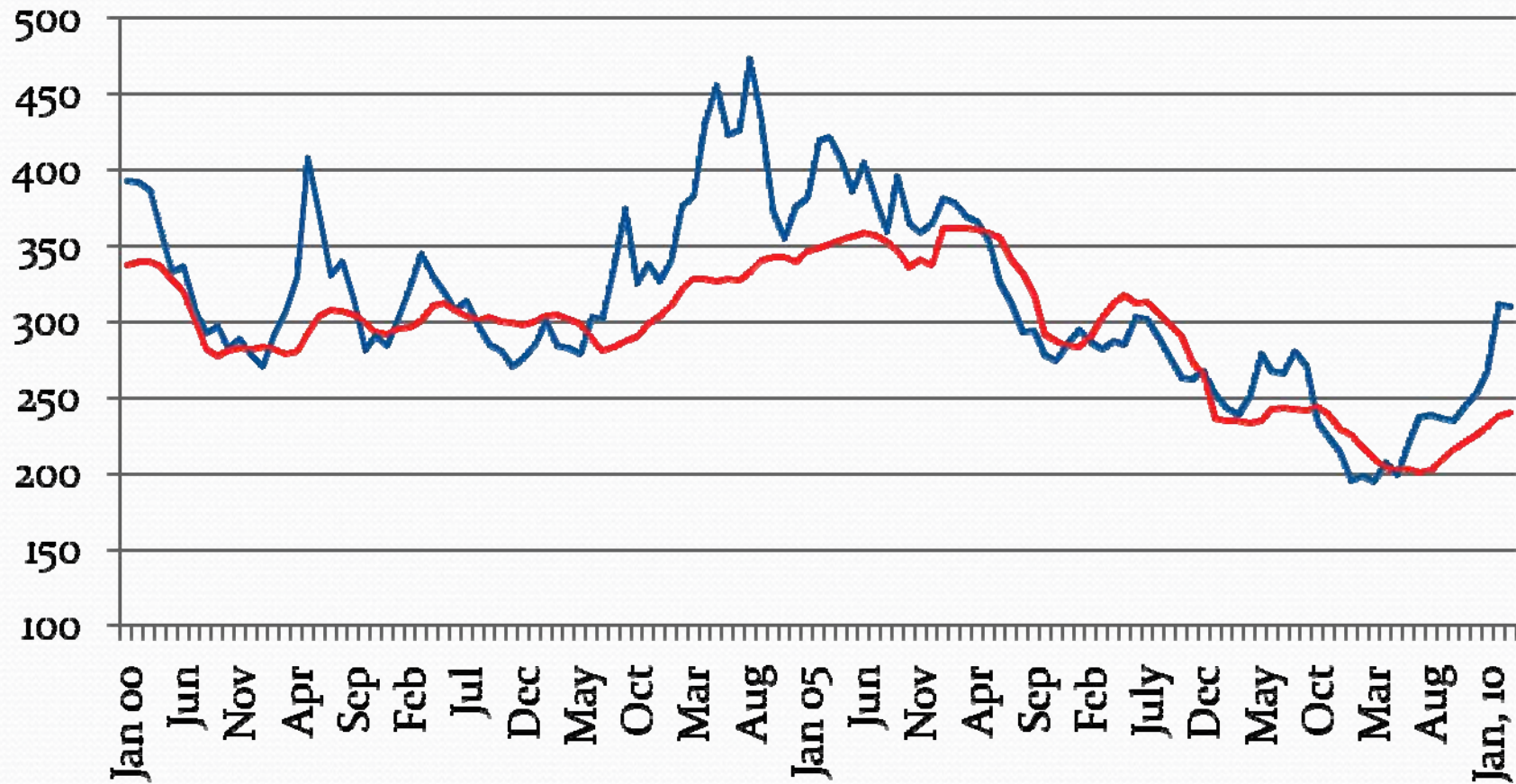
Henry Spelter  
US Forest Products Laboratory



Timber Measurement Society, Portland OR. April 8, 2010

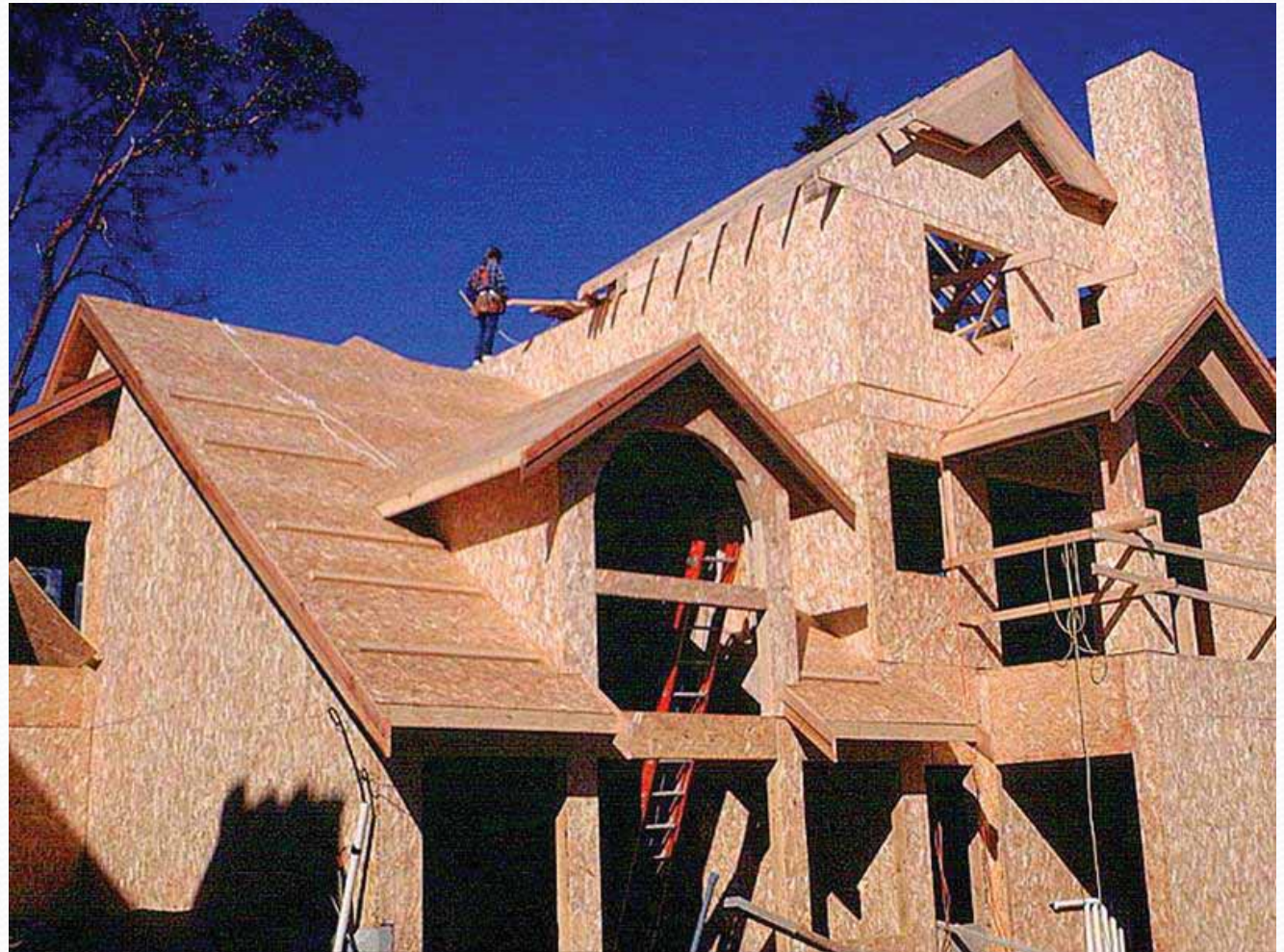
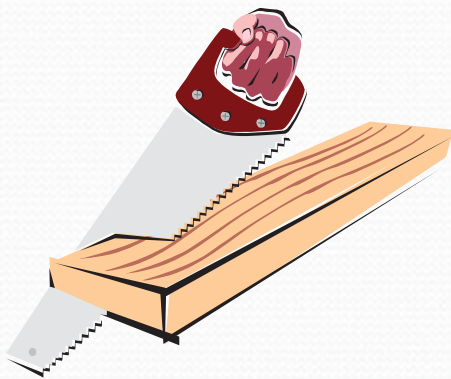
# Random Length Composite Price and Manufacturing Costs - PNW

\$/mbf

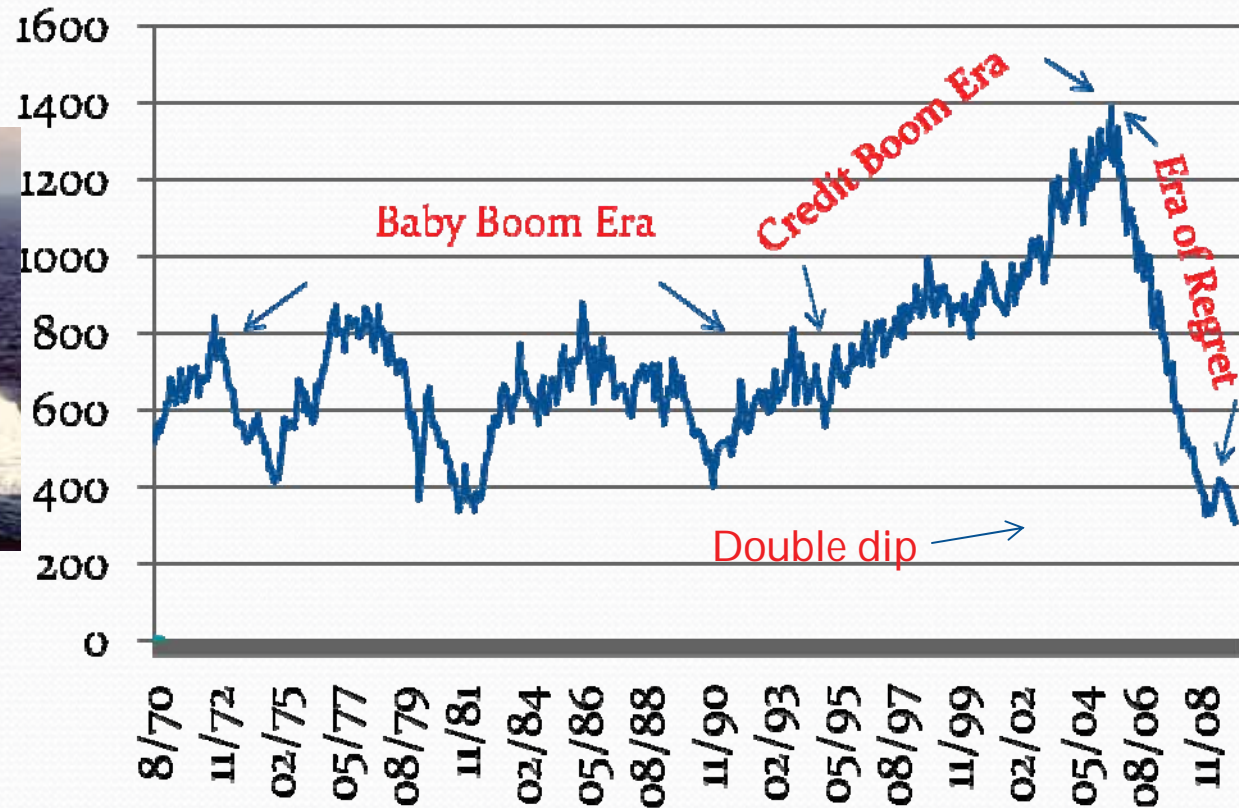


➤ After four years of meager or negative margins, lumber production has resumed profitability!

Historically, more than half of U.S. wood panel & lumber usage is in housing construction, so lumber & panel markets follow trends in housing demand . . .

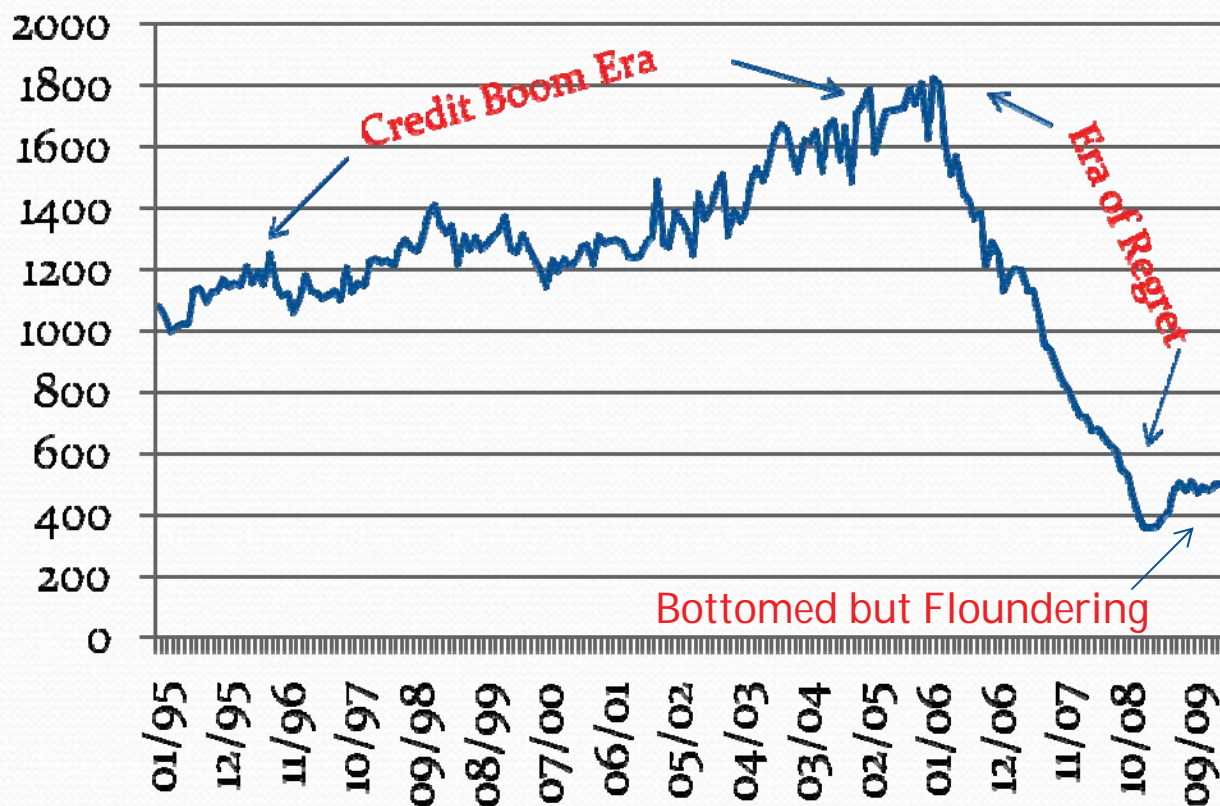


# U.S. New Home Sales -- Long History



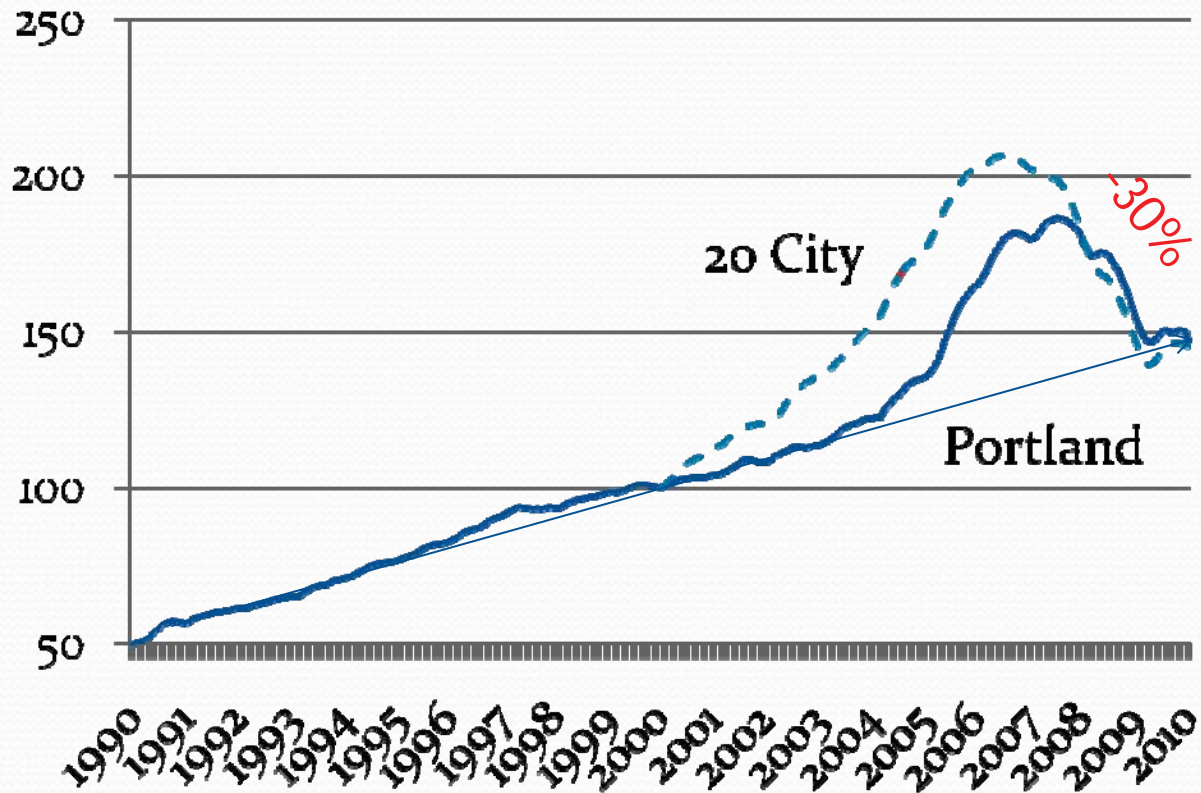
- The current cycle incorporated the biggest boom ever.
- It was distinct from cycles of the “baby boom” era when Fed control of economy was more like speed boat than aircraft carrier.
- Facilitated by world wide credit boom that kept pushing home prices up (until 2006).

## U.S. Single Family Housing Starts, SAAR



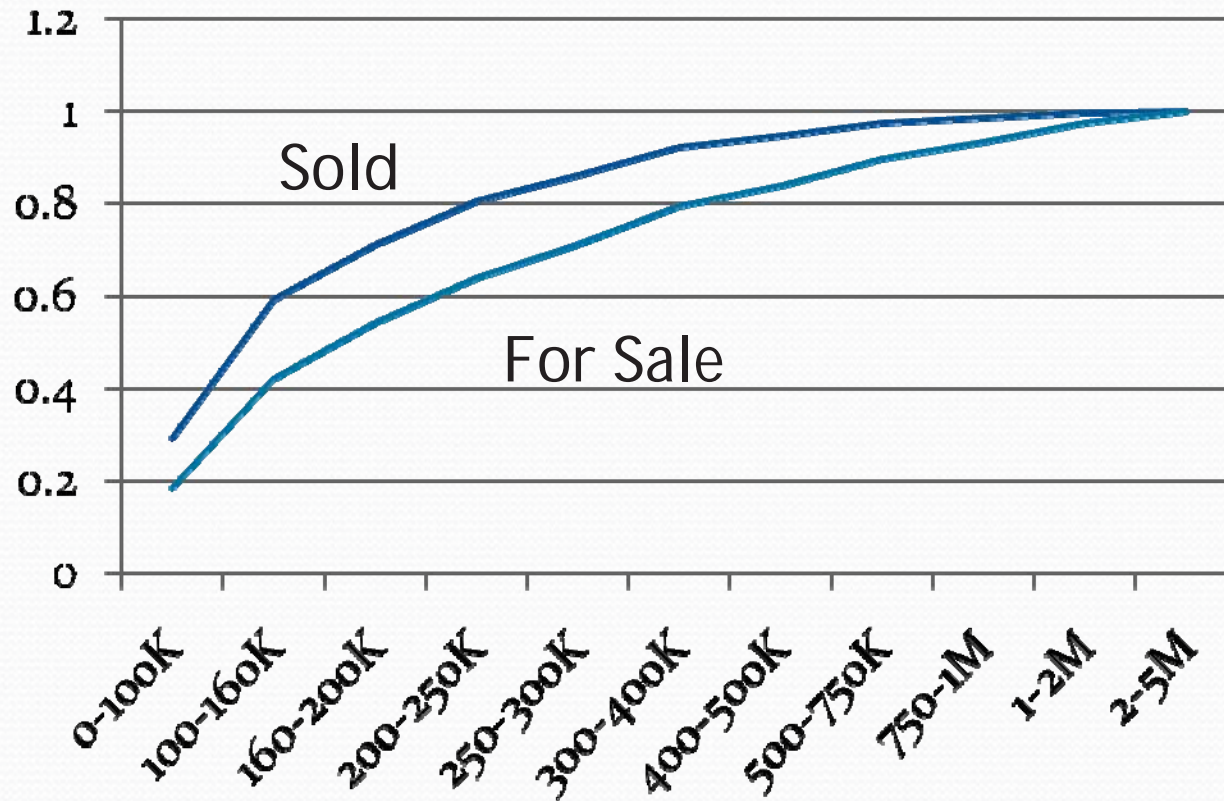
- By March 2009 1-family starts were 80% below their January 2006 peak.
- Starts bottomed in the first quarter of 2009.
- Recovery is still tentative, hampered by foreclosures, humongous vacant inventory overhang.

## Case Schiller Index- 20 City and Portland Averages - Have Prices Found a Bottom?



- **Countrywide prices have fallen by about 30%!**
- **Home prices now appear to have found support, but....**
- **Is the sample representative?**

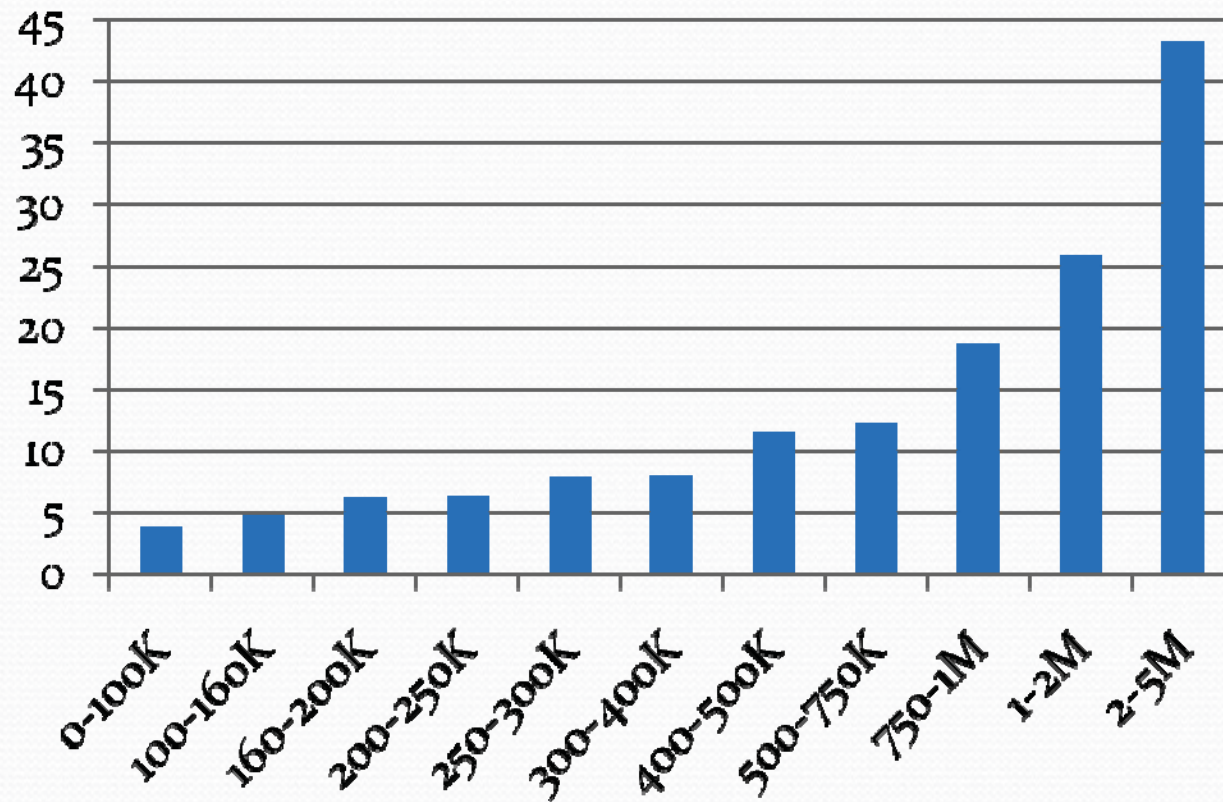
## Cumulative distribution of homes sold and for sale, February 2010, Arizona



Source: Arizona multiple listing service

- Homes being sold are disproportionately in the lower price ranges.
- Lower priced homes are finding a bottom, higher priced homes are still seeking one because...

## Month's Supply of Homes at Current Sales Pace, February 2010, Arizona



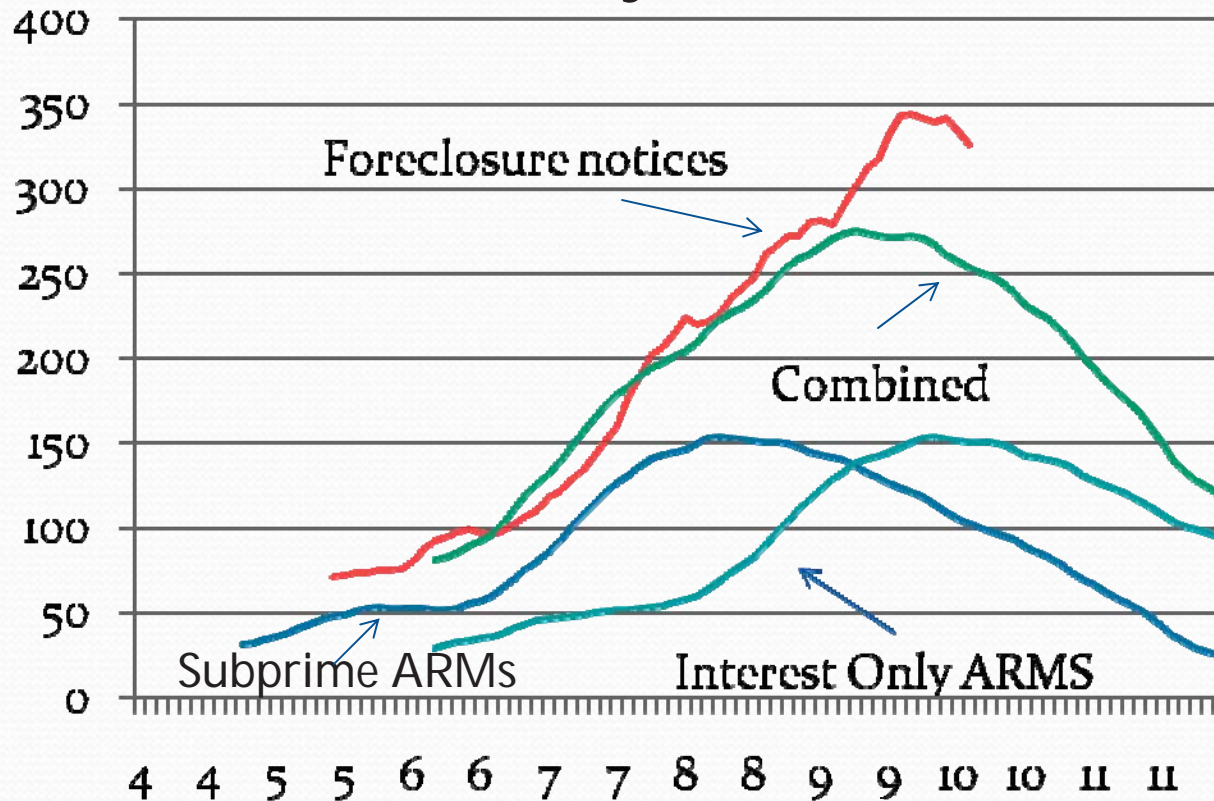
Source: Arizona  
Multiple Listing  
Service

- ...There is still an oversupply in the higher price ranges.
- Add in Shadow Inventory and we could still see further drops on the



# Outlook for U.S. Home Foreclosure Notices (Realty Trac)

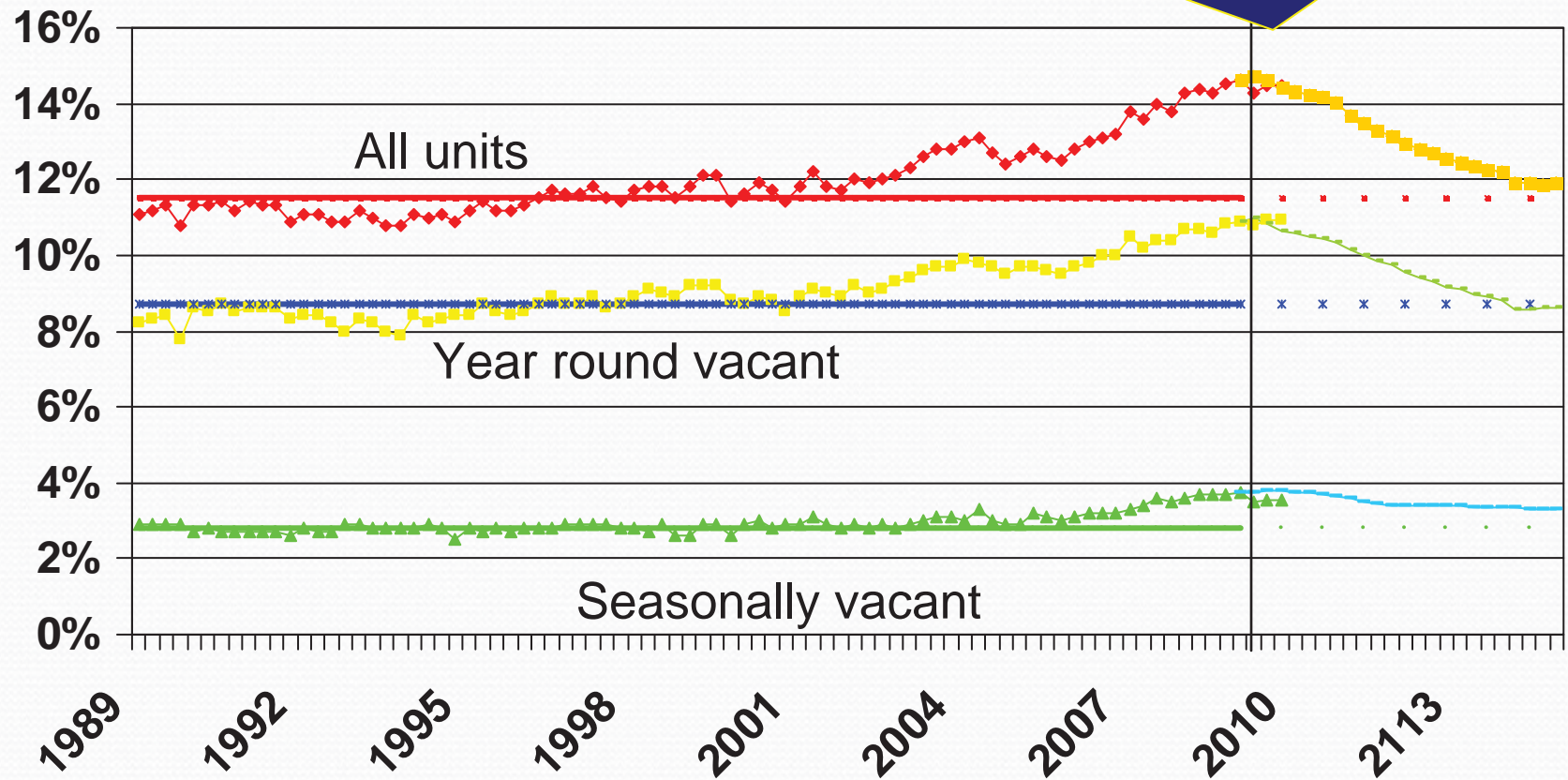
Thousands



- Subprime ARMs reset within 2-3 years. Their impact has peaked!
- Interest only option ARMS recast in 5 years. Their peak effect is occurring about now!
- Their combined impacts peaked about six months ago, but still high.

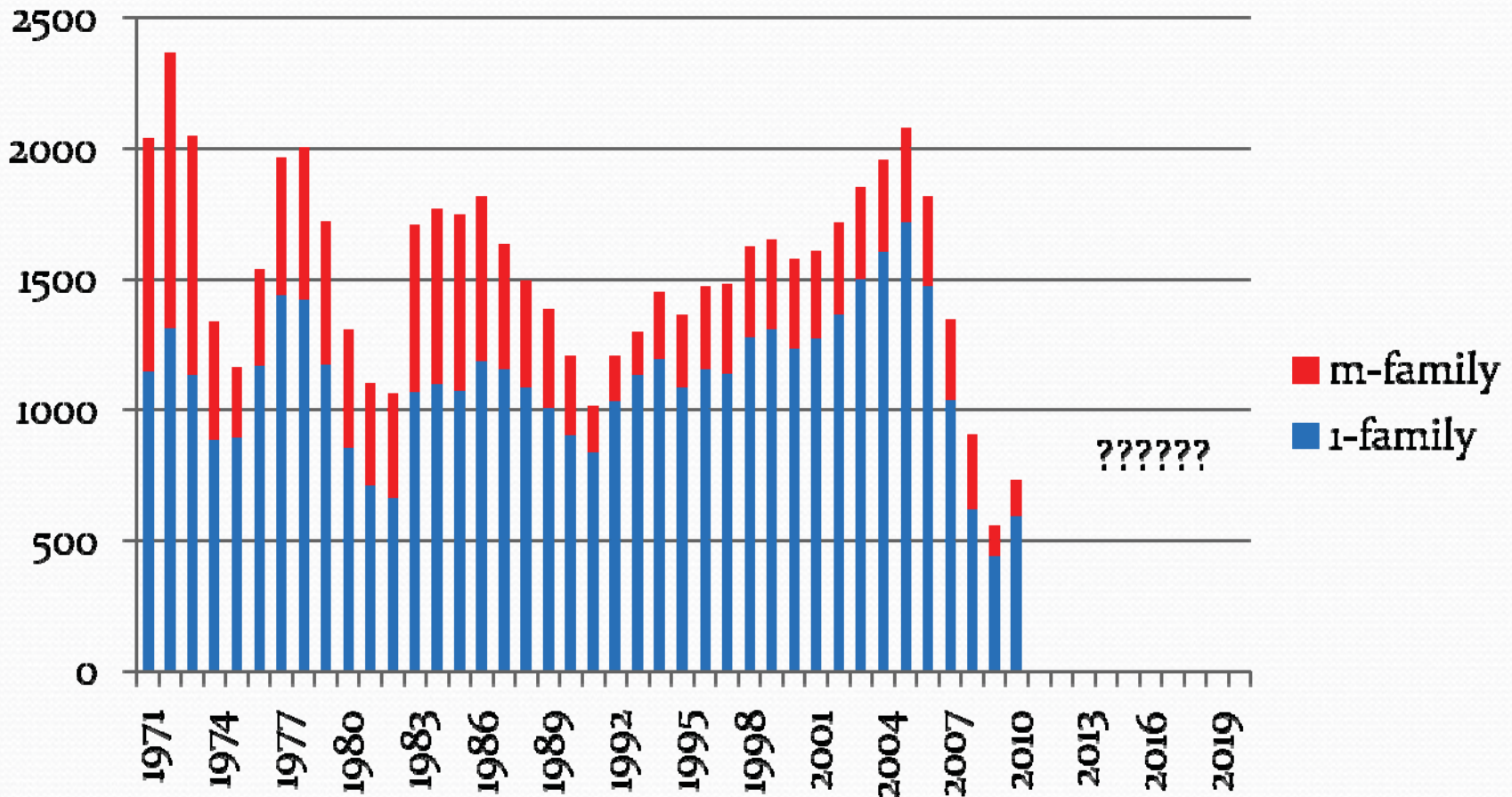
# Shares of U.S. homes that are vacant, 1989-2015

**Indigestion follows a binge**



U.S. Commerce Department

# What about the Longer term?

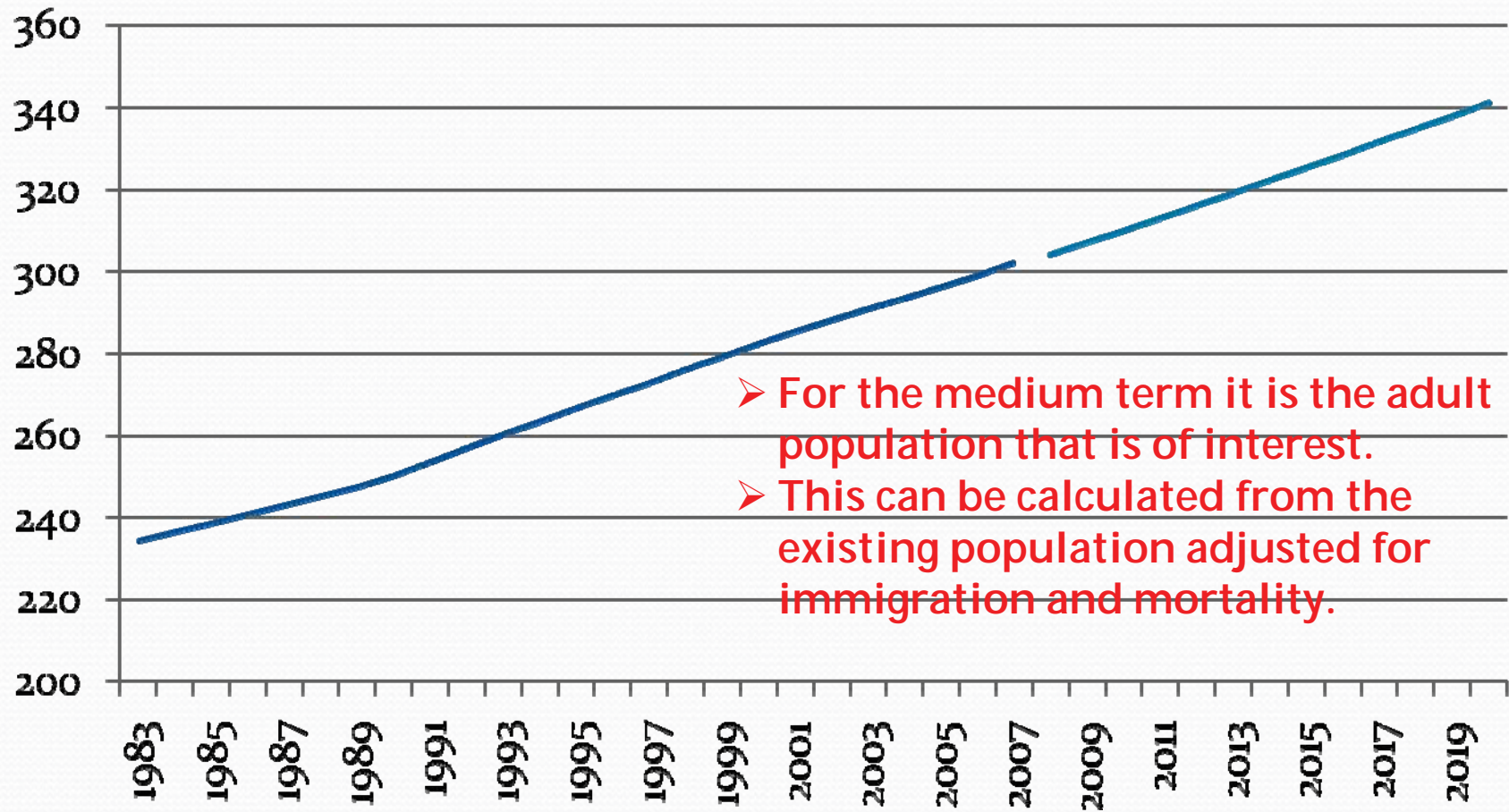


# For Housing, Demography is Destiny

- Population  $\times$
- Headship Rates =
- Household Formation

# U.S. Population & Census Projection to 2020

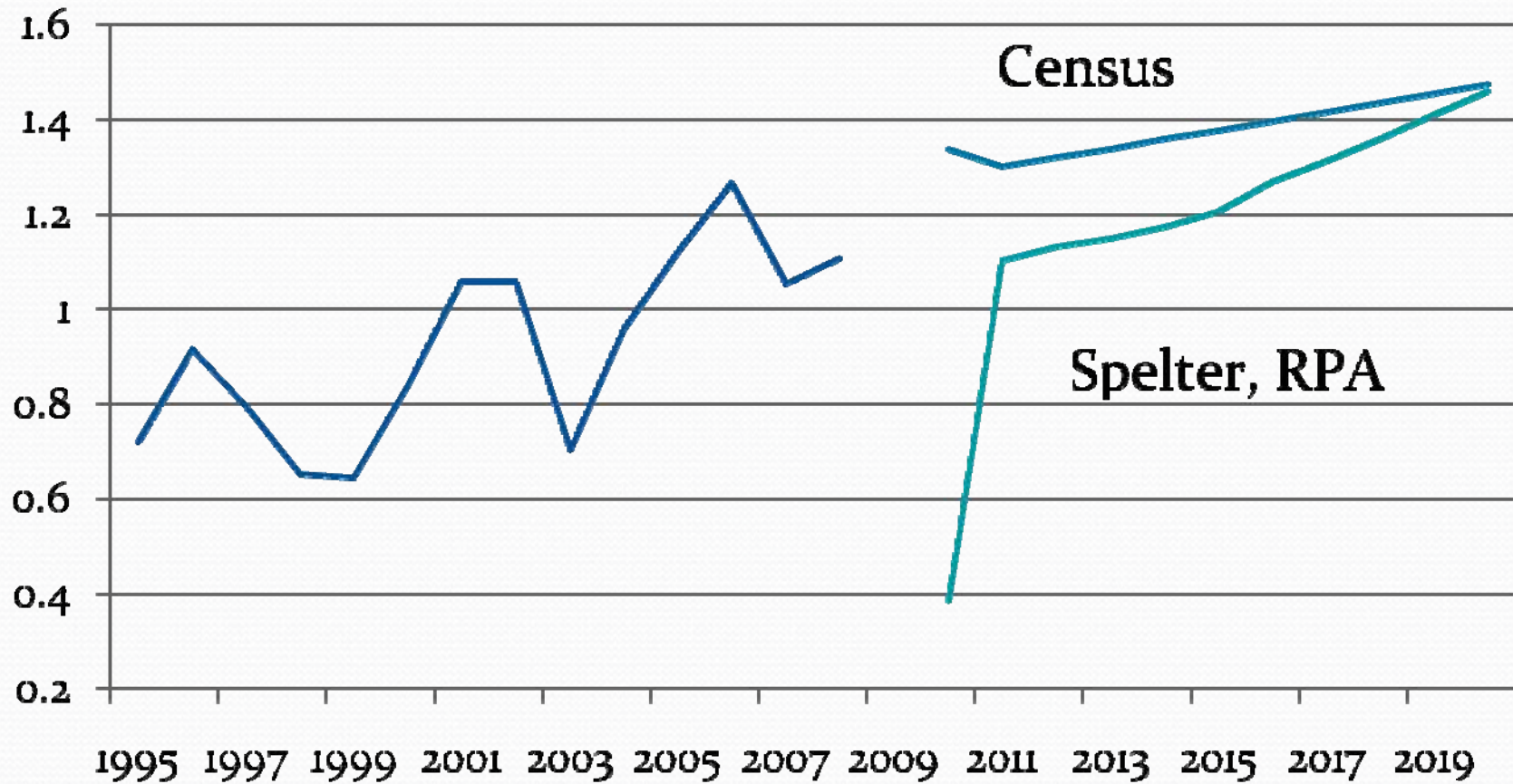
Millions



Source: U.S. Census

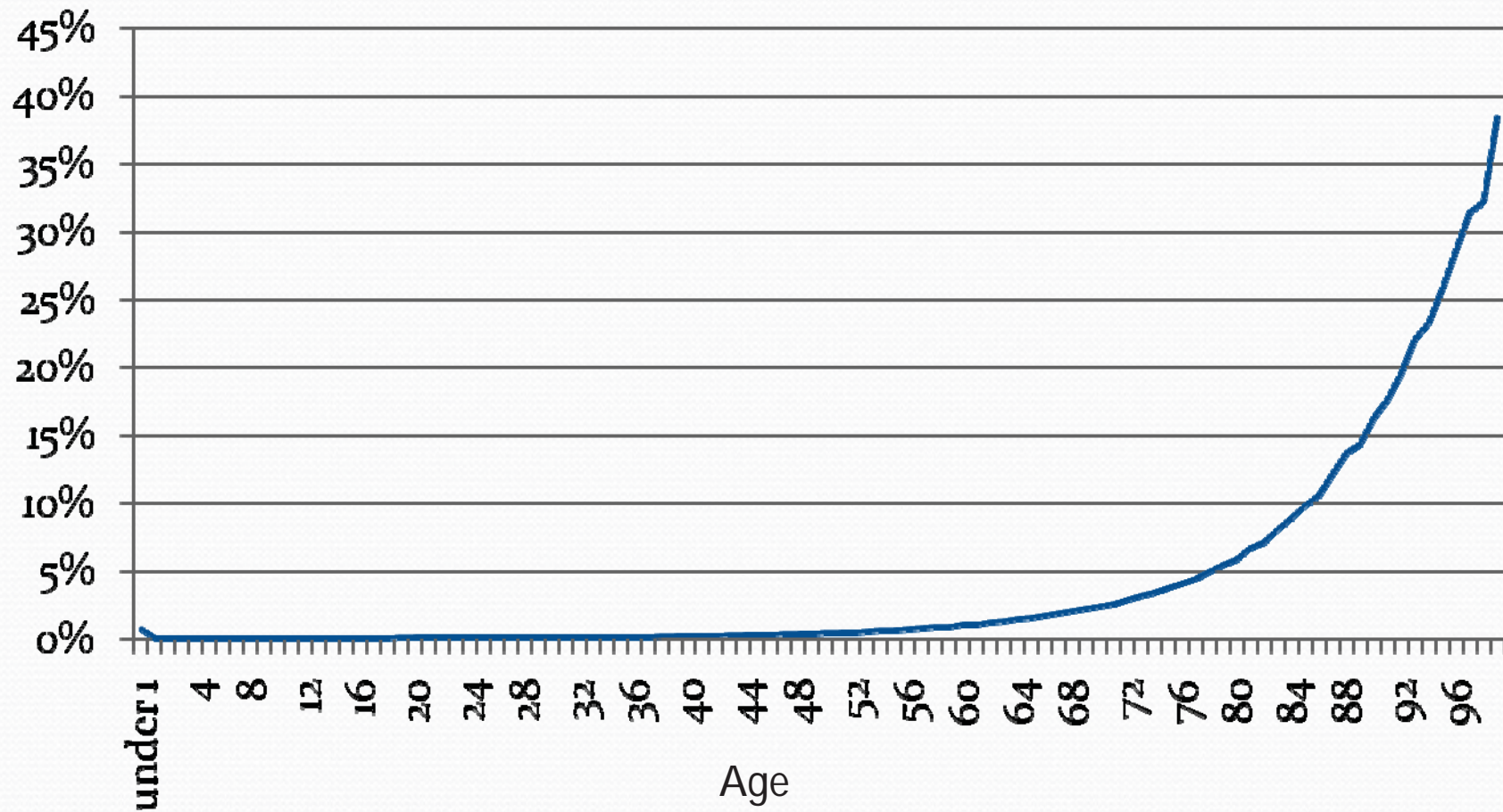
# U.S. Immigration & net Immigration Projected till 2020

Millions



Source: U.S. Census & Spelter

# U.S. mortality rates by age



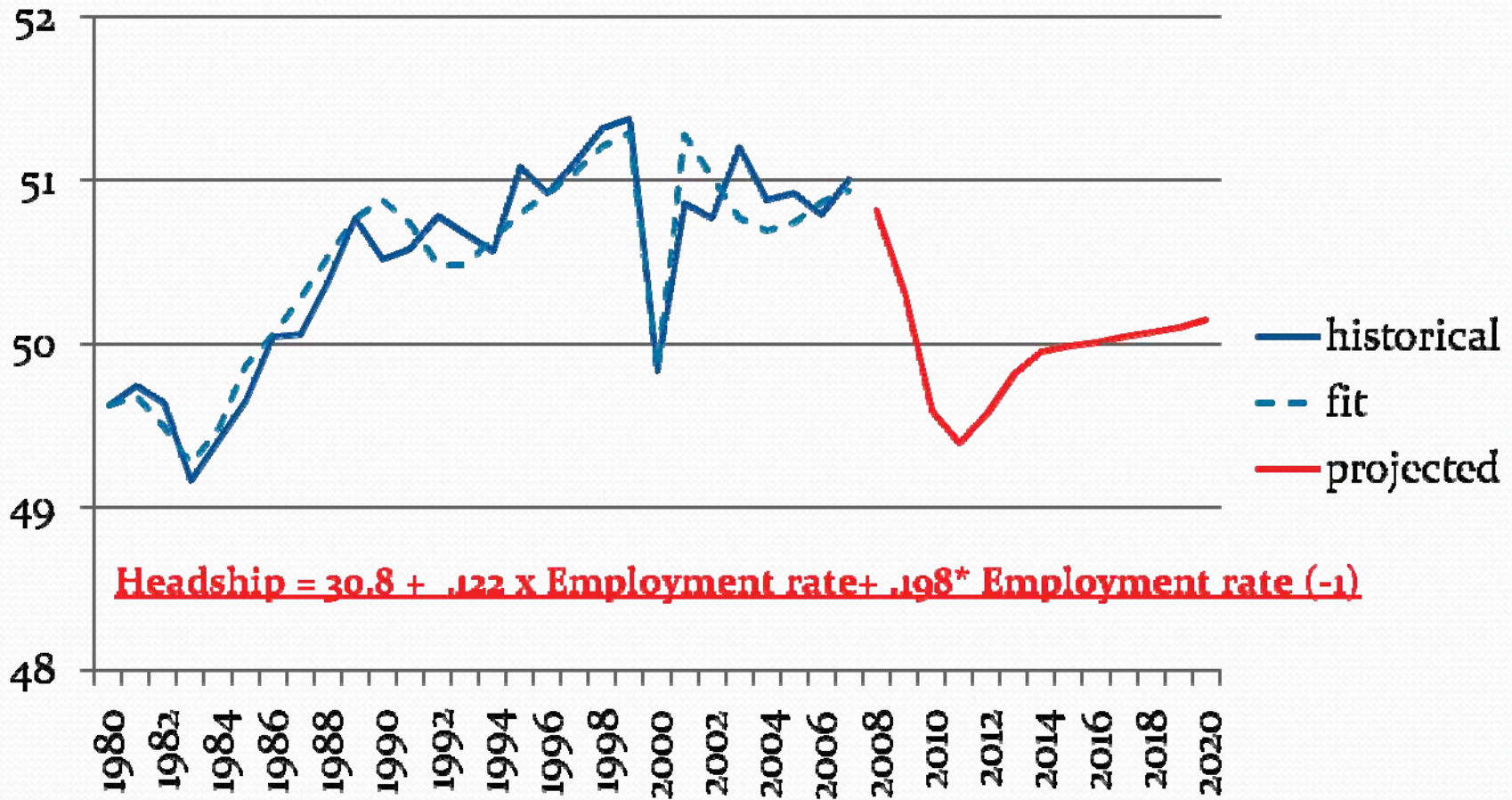
Source: Center for Disease Control

# Headship Rates are Economy Dependant

- Employment = Income = Independent Household
- No Job = No Income = Dependency
- Therefore Employment is Key Indicator of Household Formation



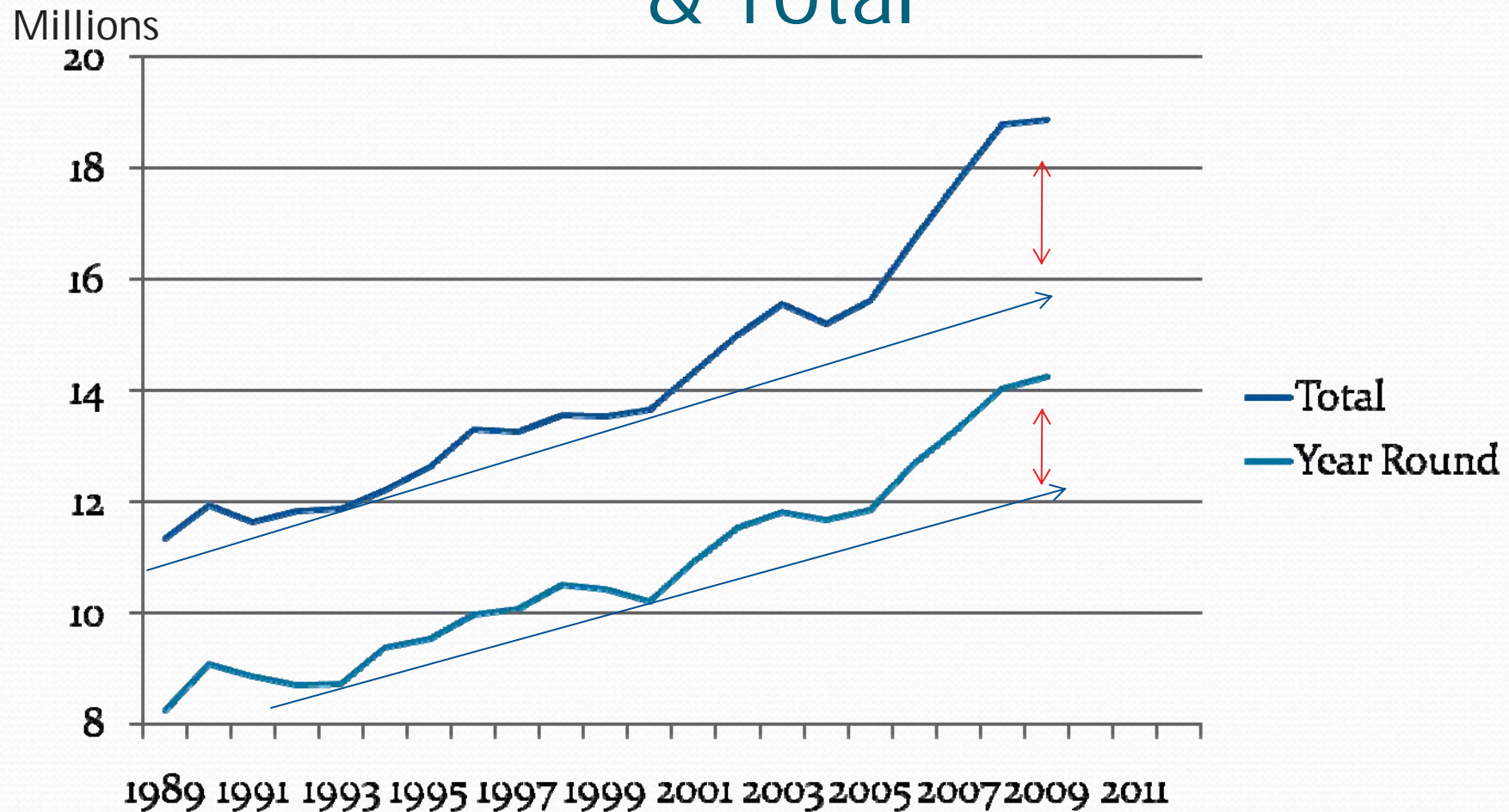
# Relating Headship Rate to Employment



## Illustration of Headship Impact:

- Suppose population increases from (1) 100 to (2) 110 to (3) 120.
- Suppose headship rate is unity (1).
- Then households increase from 100 to 110 to 120 and net increases are 10 per period.
- Alternatively, suppose headship rates are 1, then drop to .95 and remain at .95
- Then households are (1) 100 (2) 104.5 (3) 114.
- The first period increase drops from 10 to 4.5, the 2<sup>nd</sup> increase however is 9.5 or almost 10.

# Vacant U.S. Housing Units, Year Round & Total

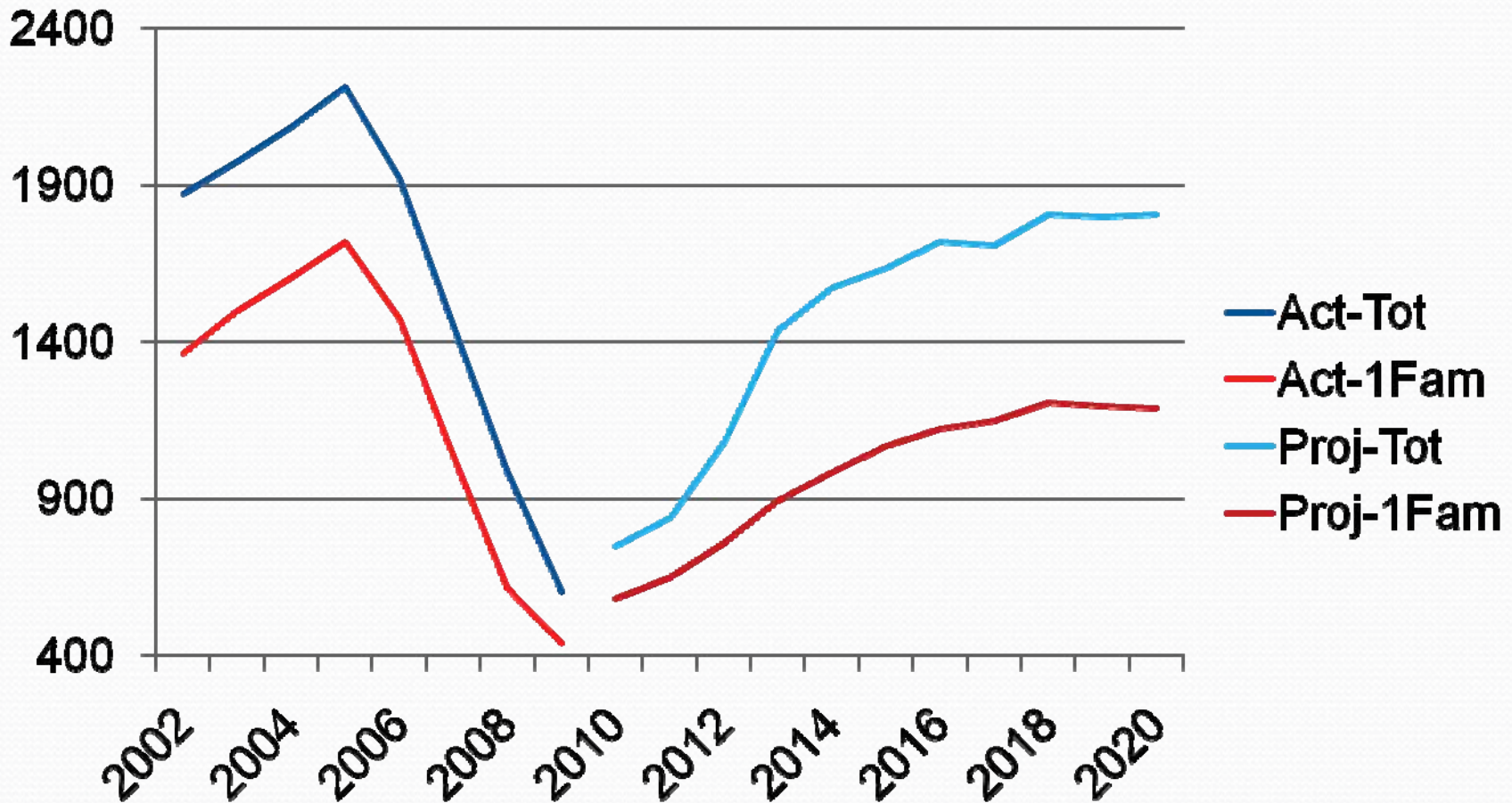


Source: U.S. Census

➤ One more impediment to full recovery is the overhang of vacant units. They need to be brought back to normal for population growth to retake control.

# Demand for dwellings projected to 2020

Thousands



## Conclusions:

- Housing improving but gradually.
- With the population and immigration rates projected, it will retrace much of its losses by mid-decade.
- **EVEN IF** employment rate fails to recover, once it stabilizes, population growth dominates and demand recovers!

## But Wait, There is More!

- **Rising Offshore Demand**
- **Mounting Log Supply Constraints**
- **Reduced Sawmill Capacity**

## *Global Drivers . . .*



**Trade liberalization (GATT → WTO)**

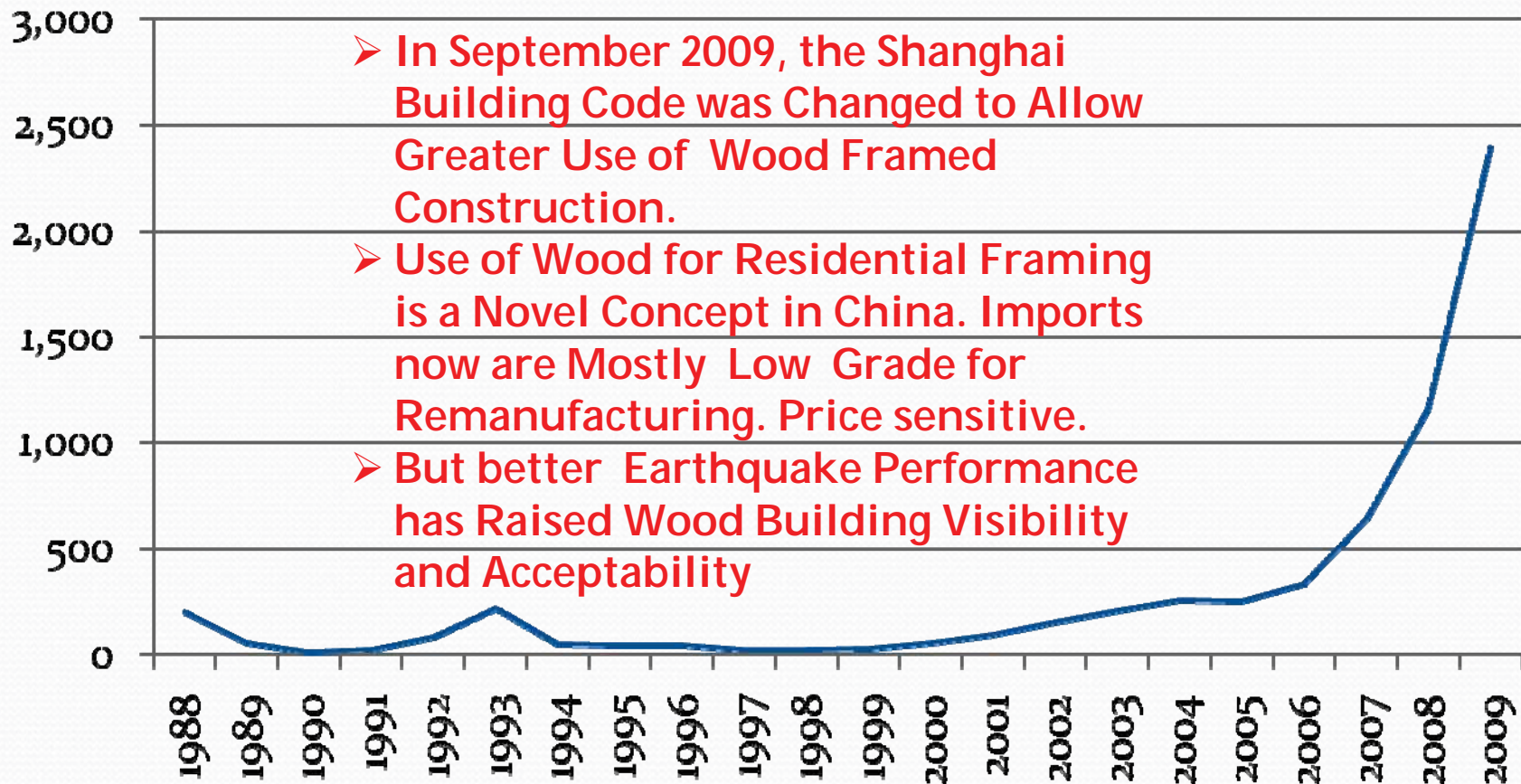
**Expanded global commerce (but US lumber producers not taking full advantage of opportunities)**

**Natural disasters are showcasing advantages of wood construction**

**Rise of China as a major new potential consumer of North American wood products**

# B.C. Lumber Exports to Mainland China

'000 cubic meters



- In September 2009, the Shanghai Building Code was Changed to Allow Greater Use of Wood Framed Construction.
- Use of Wood for Residential Framing is a Novel Concept in China. Imports now are Mostly Low Grade for Remanufacturing. Price sensitive.
- But better Earthquake Performance has Raised Wood Building Visibility and Acceptability



## *Mountain Pine Beetle . . .*



Has ravaged BC Lodgepole pine since mid 1990's

80% of mature pine is dead

Pine constitutes about 40% of the BC Interior timber

Falloff in the interior Annual Allowable Cut is projected at between 20%-40% over the next 5-to-25 year, 6-9% of N. American capacity, more if beetle increases its range.

## *Mountain Pine Beetle . . .*

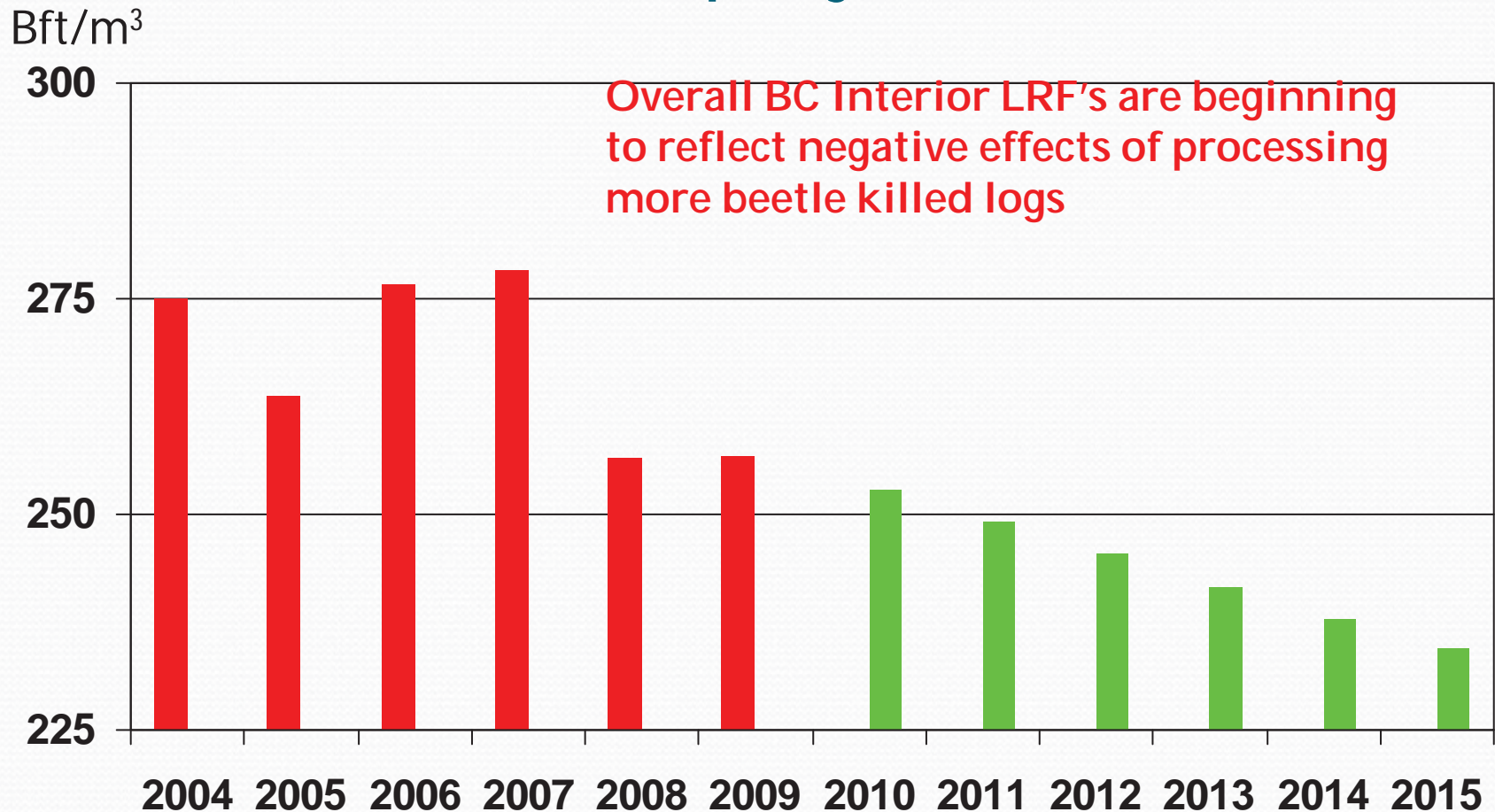


The greatest uncertainty revolves around shelf life of beetle killed pine

After a year or two, logs develop checks, become more brittle and wood develops stain

Impacts include (1) falloff in recovery, (2) reduced throughput and (3) lower grade out-turn. Shelf life therefore is partly physical, partly economic.

# Interior BC lumber recovery factors 2004-2009 with projections to 2015



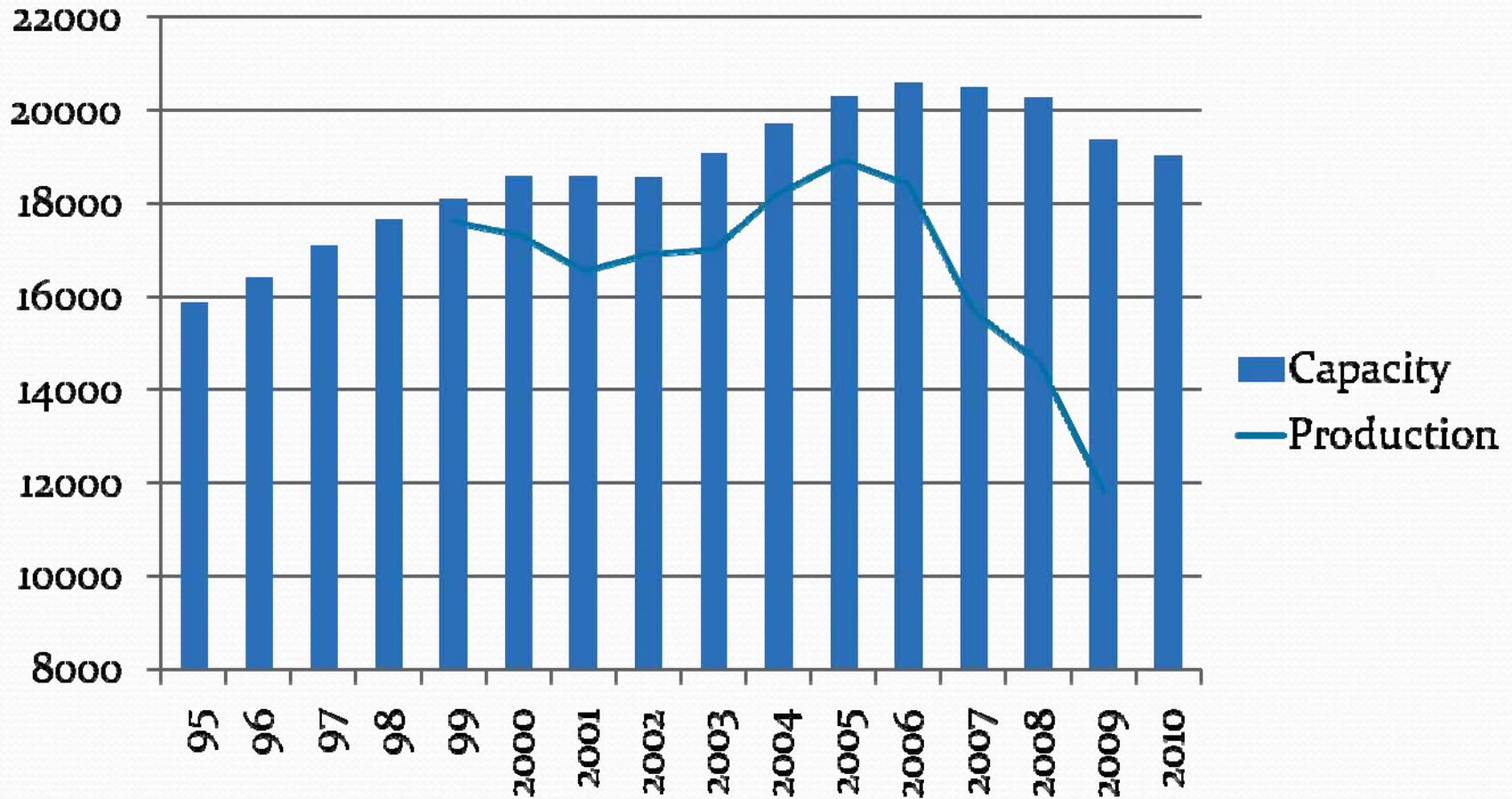
Source: 2004: Spelter (Profile 2005); 2005-09  
derived from BC MoF & Statistics Canada data

# Capacity---

Attrition has been ongoing for four years and is changing the short run supply capability

# Capacity and production – U.S. South

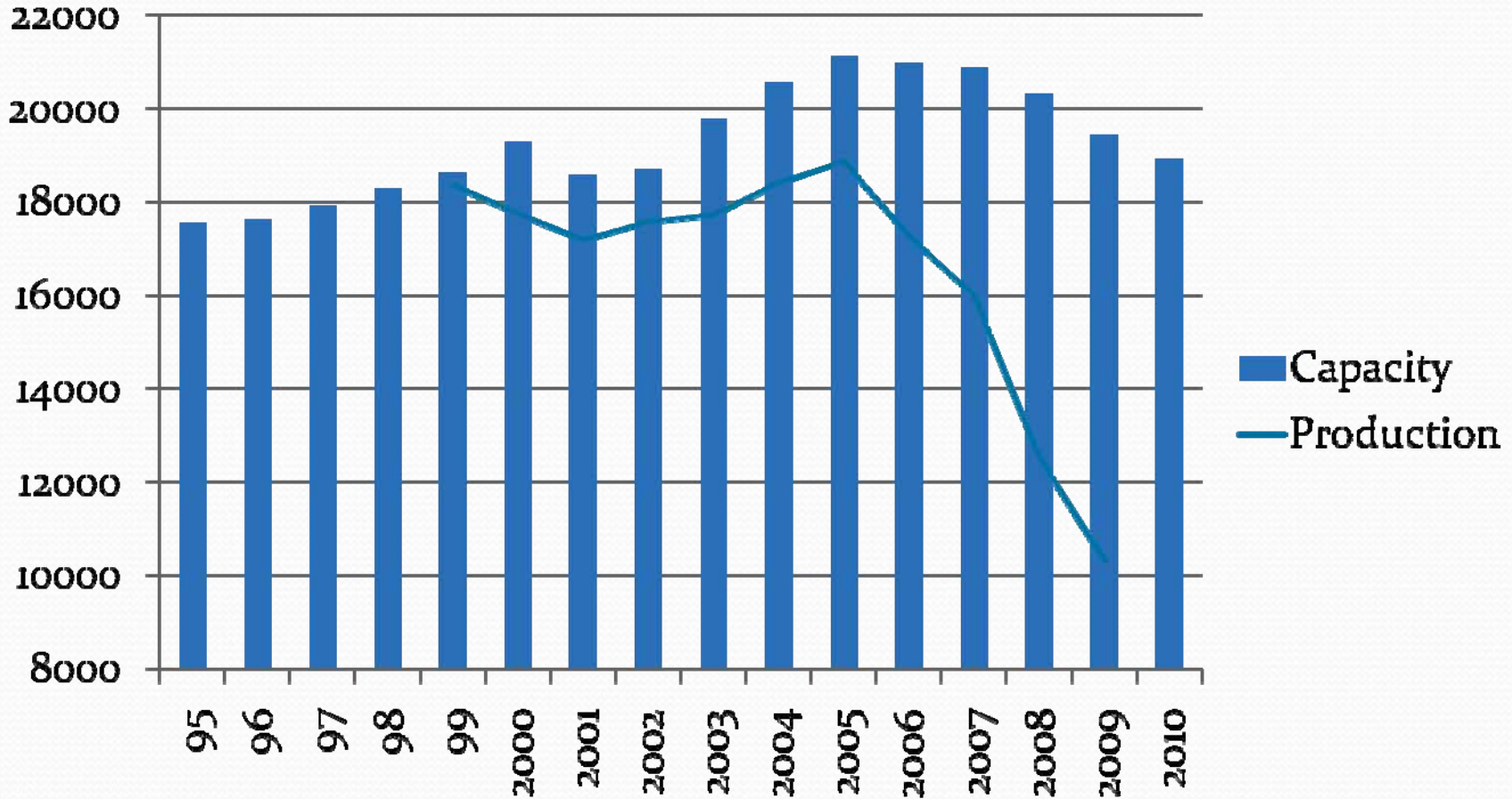
Million bd ft



Source: Spelter Profile reports

# Capacity and production – U.S. West

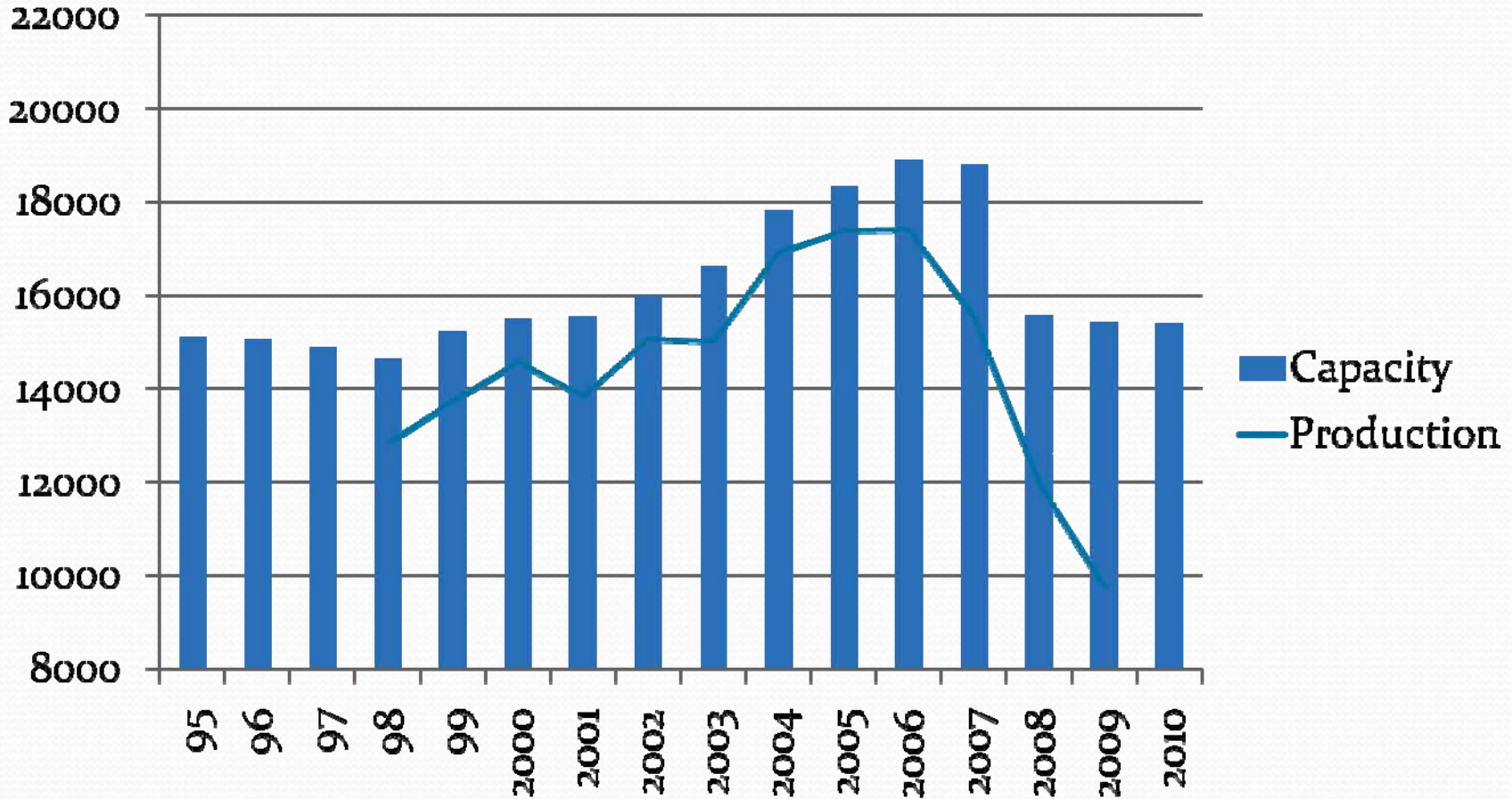
Million bd ft



Source: Spelter Profile reports

# Capacity and production – B.C.

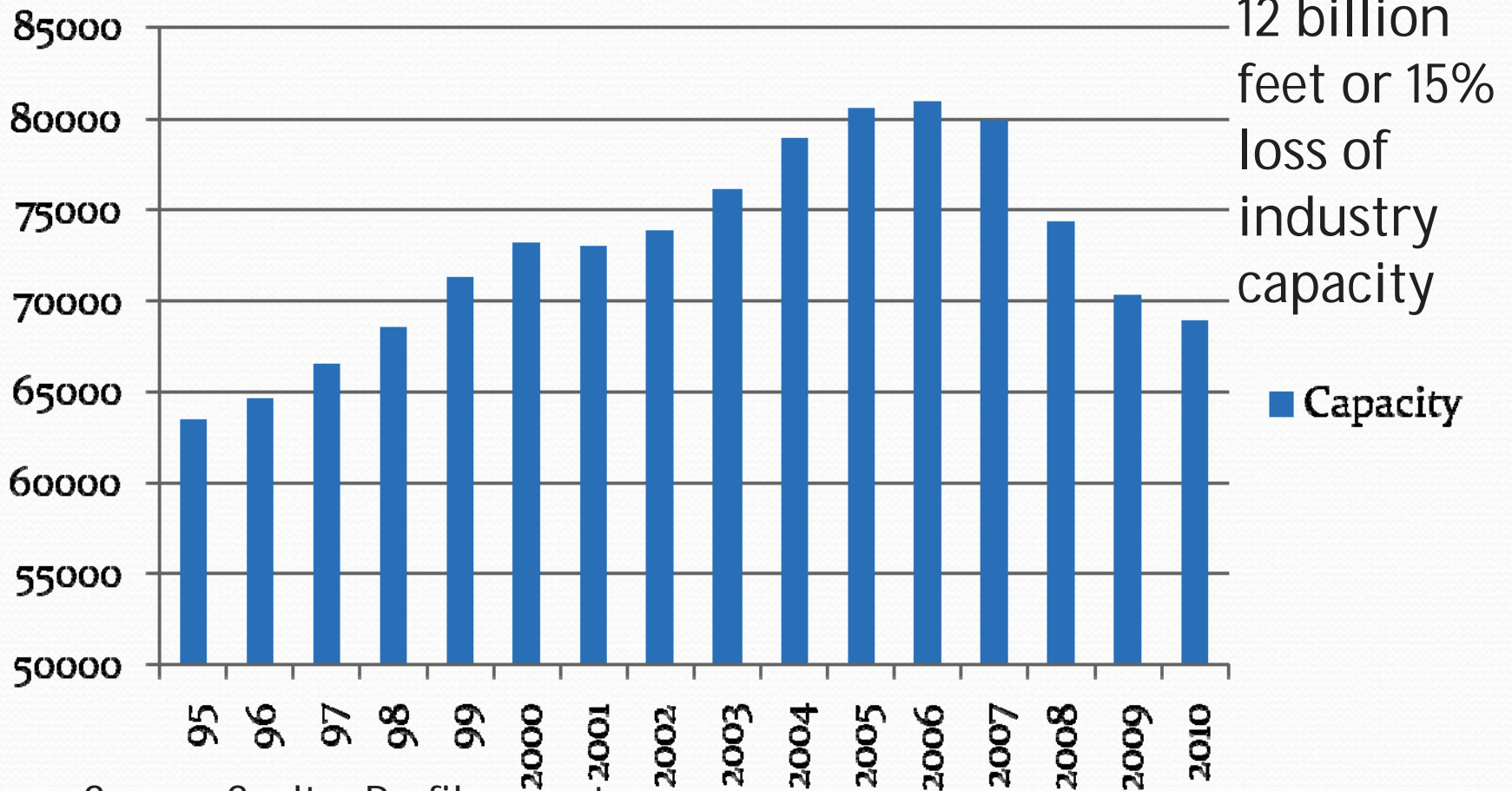
Million bd ft



Source: Spelter Profile reports

# Capacity and production – North American total

Million bd ft



Source: Spelter Profile reports



## Conclusion: Correlation of Forces

### Including:

- Rising Domestic, Offshore Demand +
- Reduced B.C Log Supply +
- Reduced Sawmill Capacity =
- Point to Strong Potential for Major Rebound Over Next 2-3 Years.