

International Wood Building Forum, 2005

Globalization, Consolidation and Innovation:
Evolving Markets and Changing Competitive Landscapes

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Three trends are driving the competitive landscape in the North American wood products industry:

- **Globalization**
- **Consolidation**
- **Innovation**

**The environment will be more competitive.
Companies must adapt, or fall by the wayside.**

Long Term (Trend), U.S. Housing Demand Depends on 3 major factors

	NAHB Estimate ¹ Millions
Net household formations ² Population size and age, divorce, marriage, immigration	1.4 – 1.5
Net removals ³ Demolition and conversion to non-housing use	.3 - .4
Net vacancies – includes second homes⁴	<u>.1 - .2</u>
Total Shelter Demand (include HUD code)	1.8 – 2.1

¹ Middle and high immigration forecasts put the range at 1.82 – 2.10 million.

² Immigration has been the hardest to predict. More than 1990's.

³ Removals should increase by 100,000 per year from the 1990's.

⁴ Second homes should grow as the population ages.

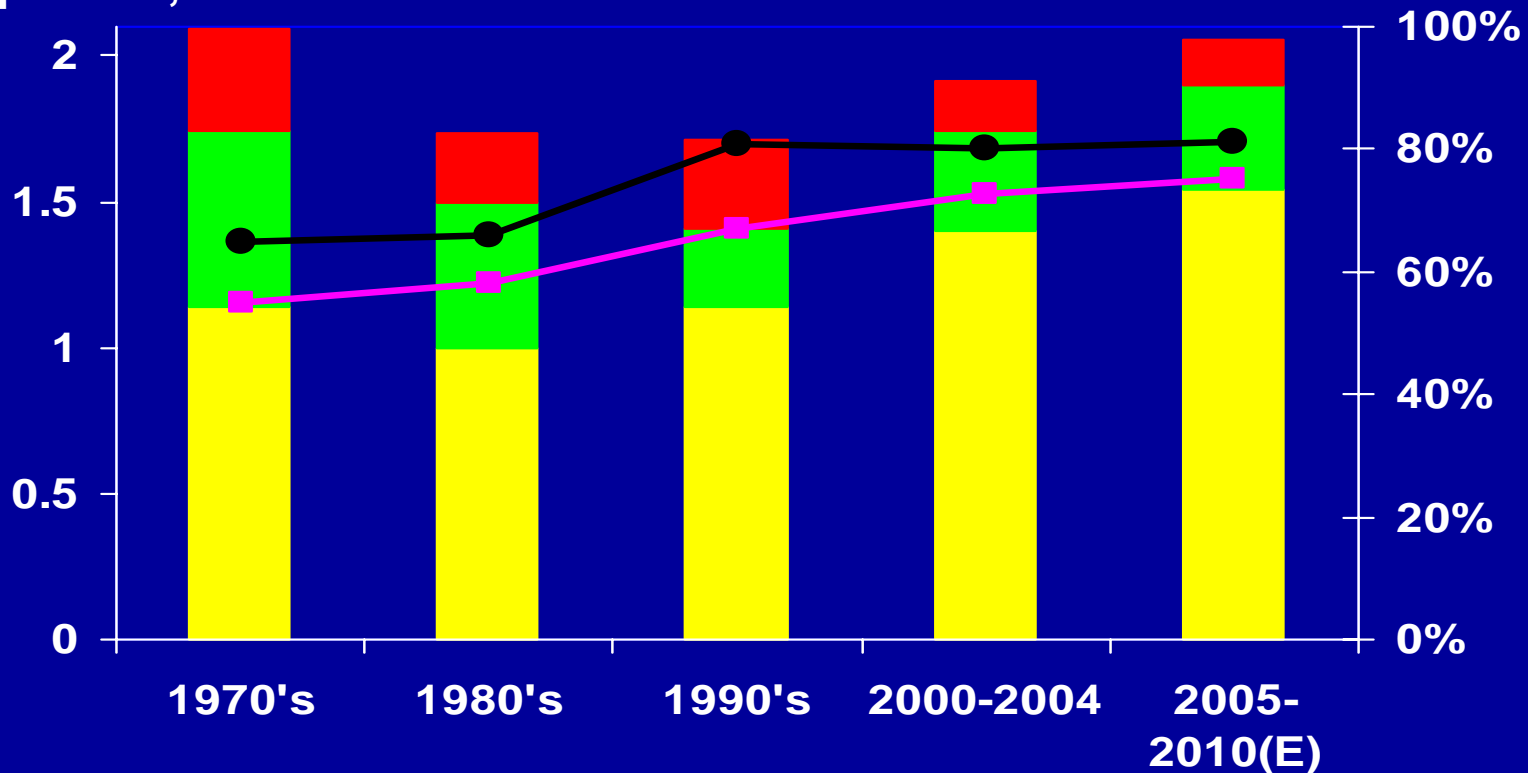
Single Family Drives Housing Demand

Share up from 55% in 70's to 74% this decade

Why – Affordability, Demographics & Immigration!!!

Starts and MH
Shipments, Millions

SF Share



SF MF MH SF Share Total SF share conventional

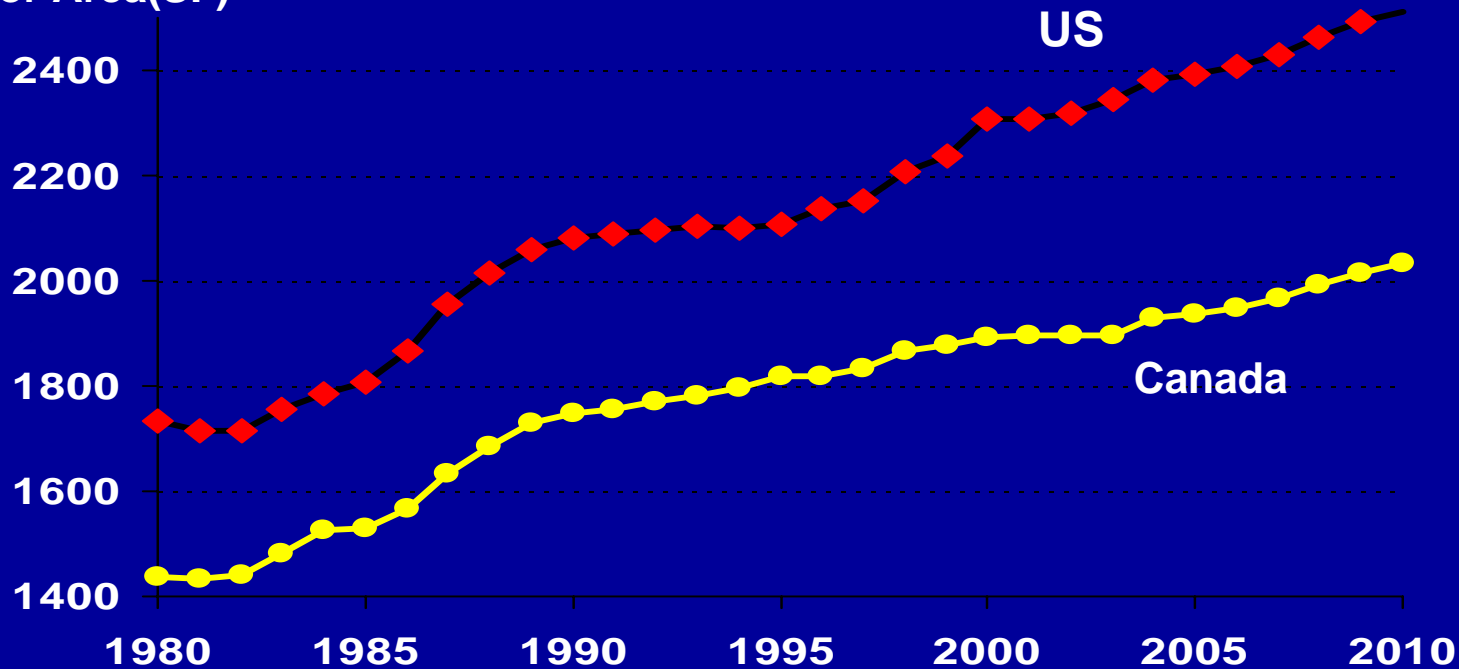
Source: Consensus forecast – NAHB, major banks)

Source: Al Schuler, USDA Forest Service

Increasing House Size Leads to Higher Lumber and Panel Demand

Average single family home size increased 33% in the past 20 years; to increase another 5% by 2010

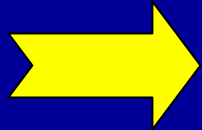
Single family
Floor Area(SF)



Source: RISI

Source: Al Schuler, USDA Forest Service

Three trends:

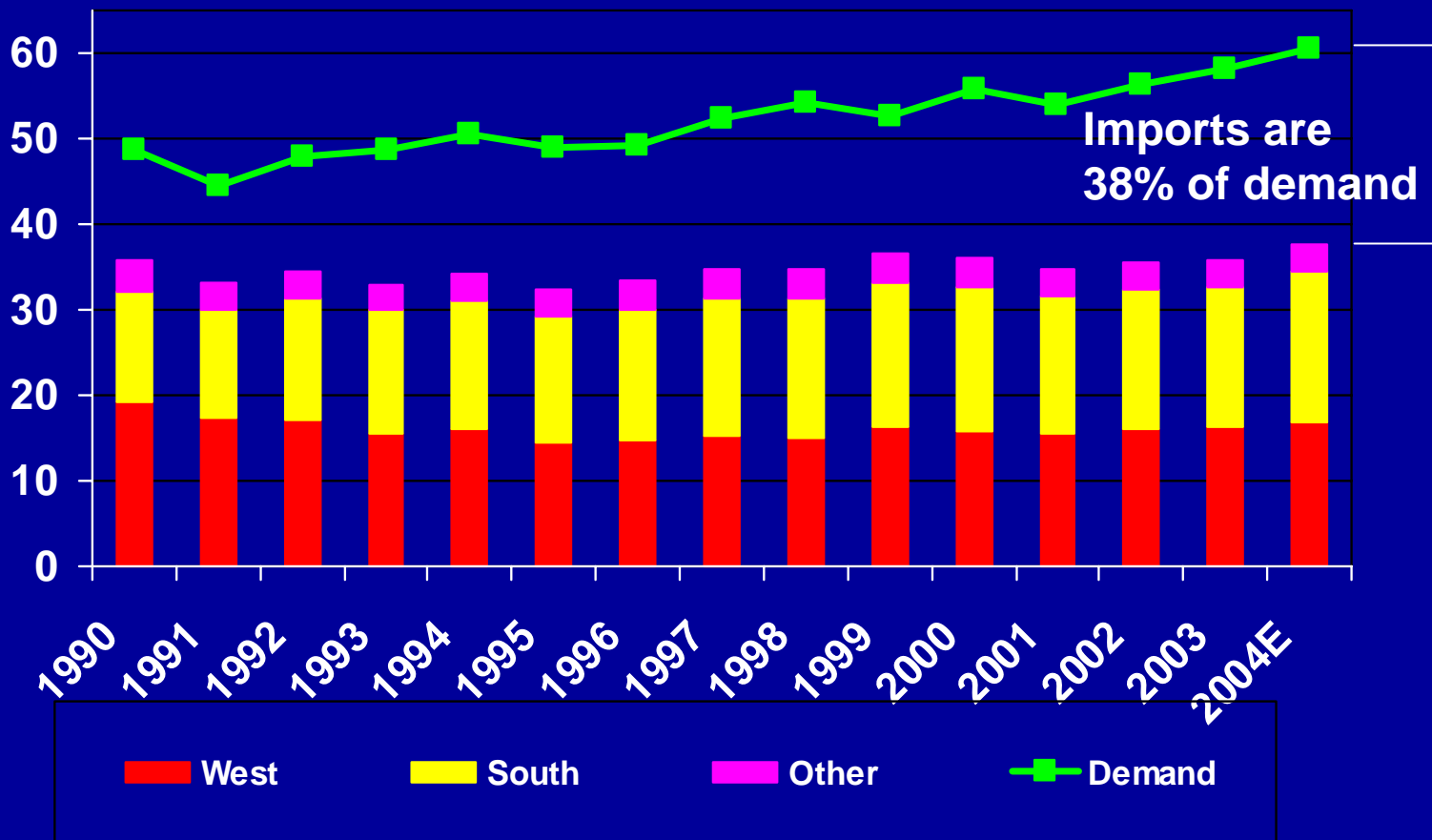


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U.S. Softwood Lumber supply – Imports absorbed almost all the growth in demand

BBF



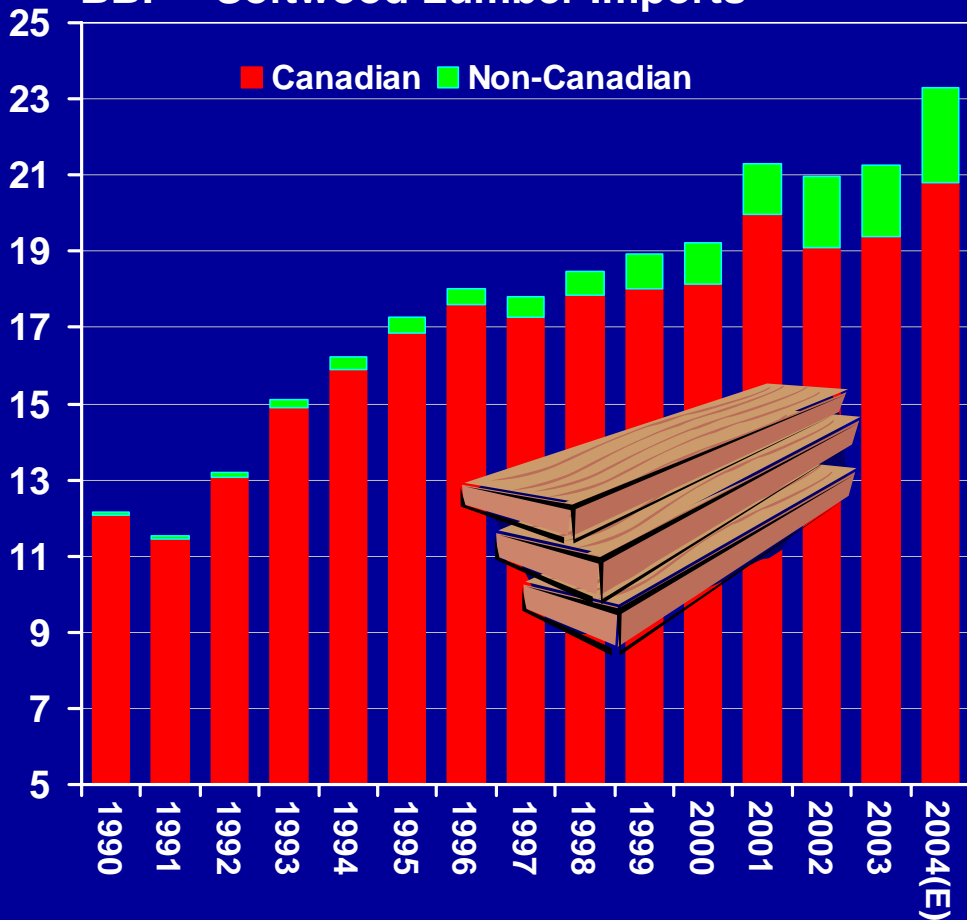
Demand* = domestic consumption plus offshore exports

Source: RISI, SFPA

Source: Al Schuler, USDA Forest Service

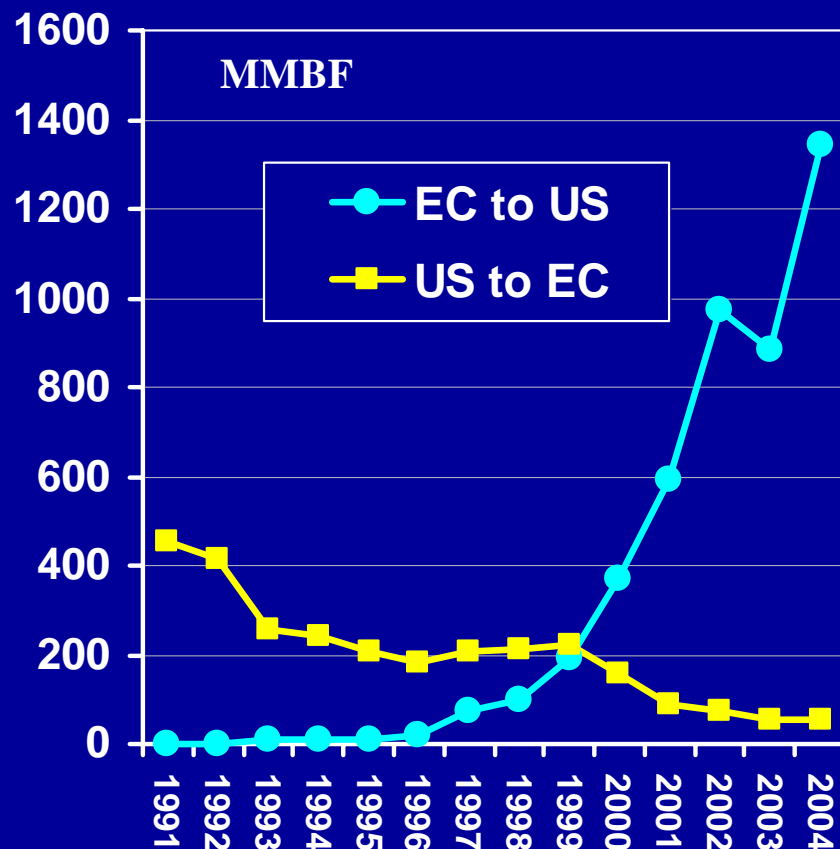
Softwood lumber imports from Canada are huge, and non-Canadian imports are also growing . . .

BBF – Softwood Lumber Imports



Source: RISI, USDA FAS

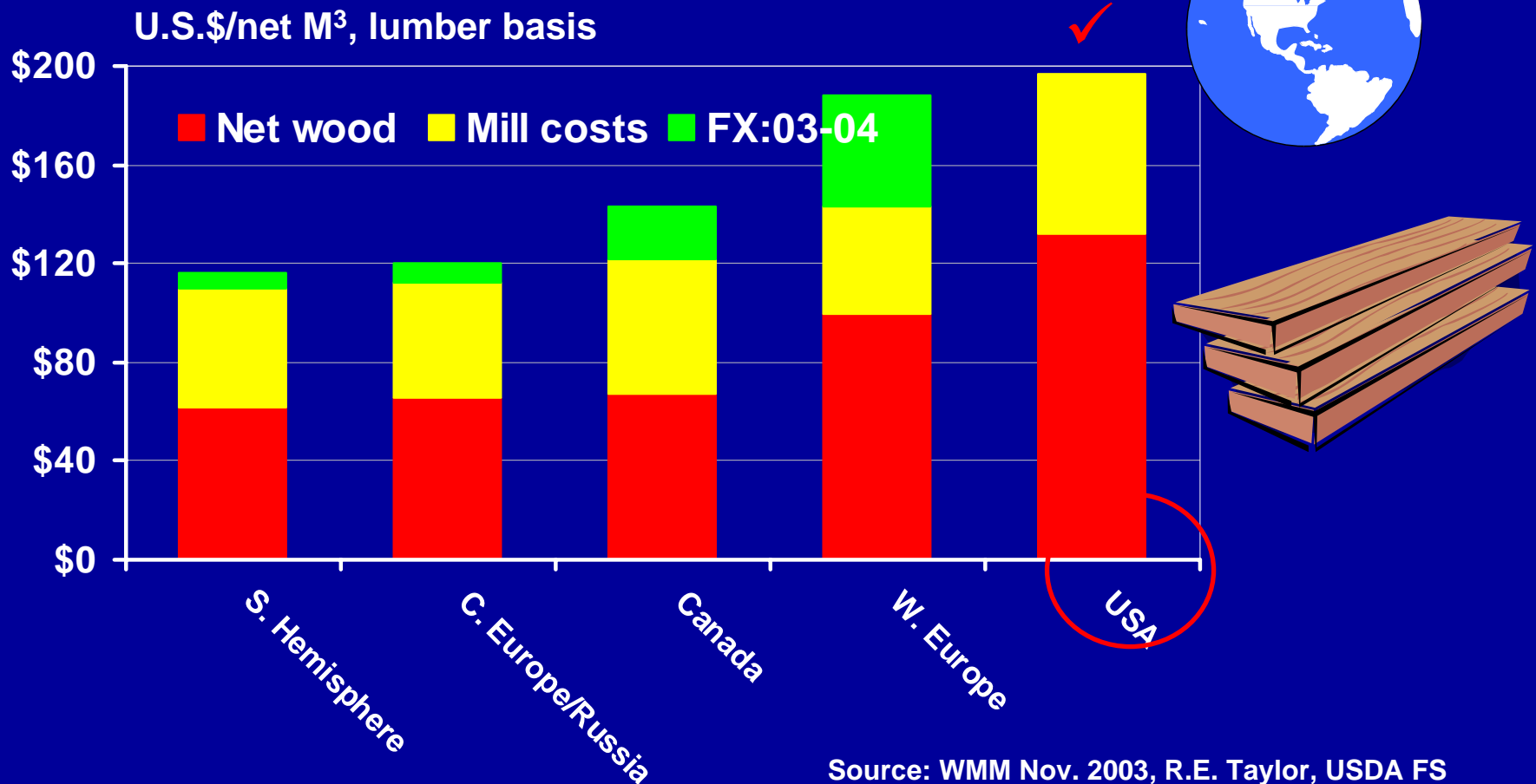
Big shifts in framing lumber trade with Europe (in wides and narrows) began in the late 1990s . . . (a quality issue)



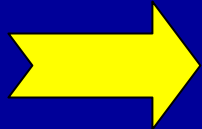
Source: Al Schuler, USDA Forest Service

Also, the United States is not the lowest cost producer . . . , but the recent weakening of the USD is helping

Global Sawmilling Costs – 2002



Three trends:

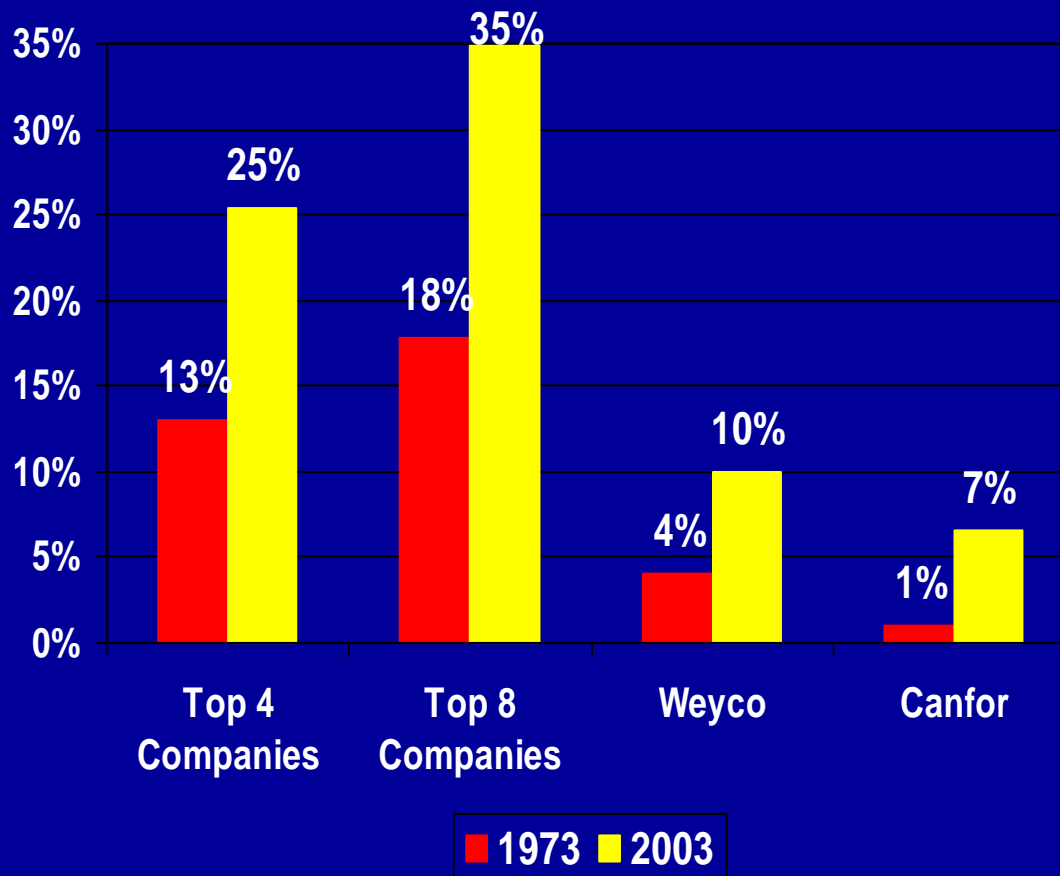


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Consolidation in Lumber ... Production is about scale economies and, larger companies are more global in sourcing products

% of North American Lumber Production

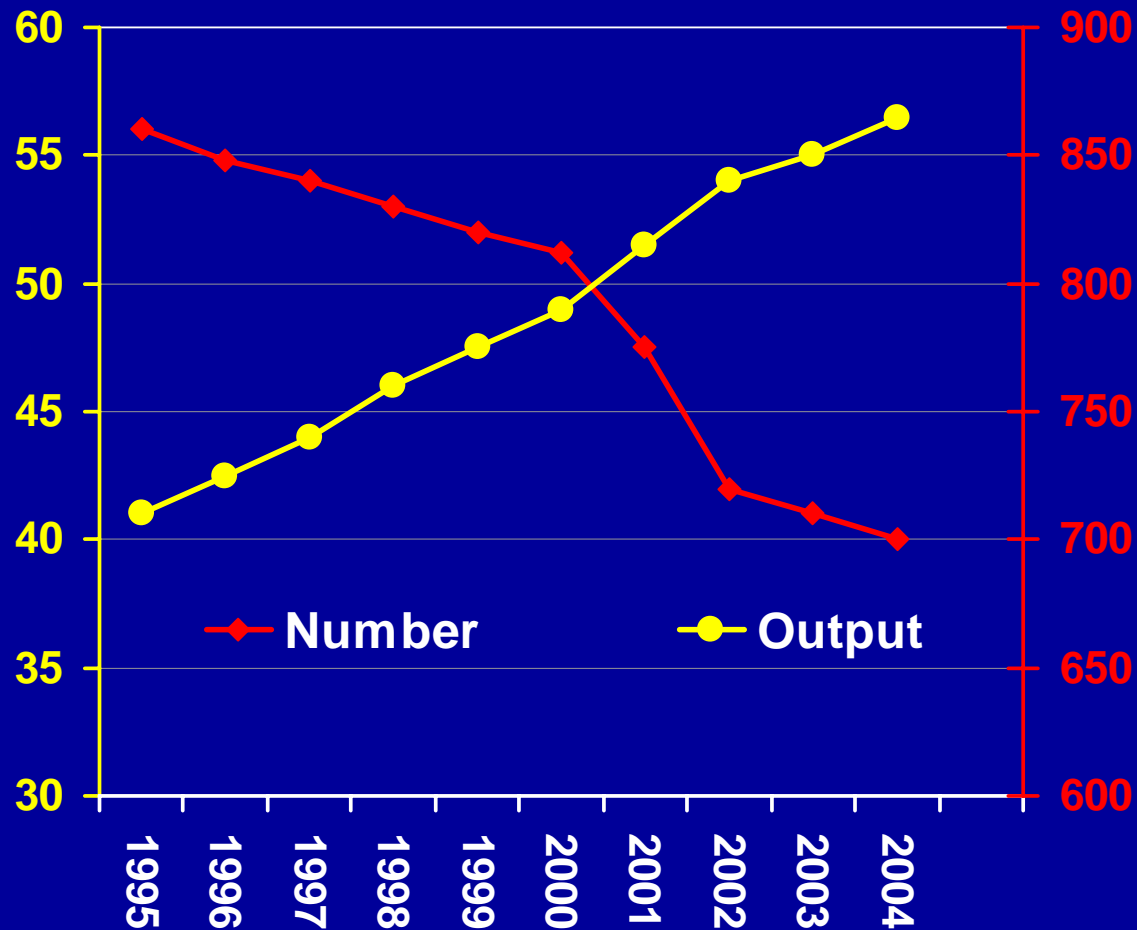


Increasing Scale Economies for Lumber

Average U.S. sawmill size has increased by 1/3rd...but is still small

Output - MMBF/year

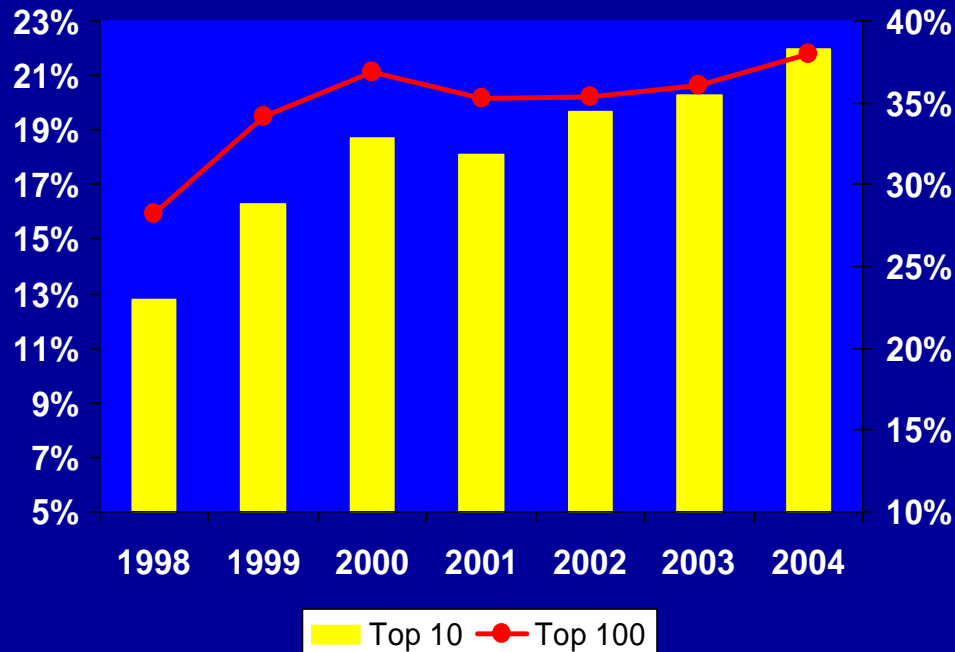
Number of Mills



Consolidation in U.S. Homebuilding will accelerate industrialization trends

Top 10 Market Share*

Top 100 Market Share*



Consolidation rationale

- Lower capital costs
- Operating efficiencies
- Land control
- Brand recognition
- Deeper pockets
- Simplify construction process
- National vs regional focus

* SF Homes closed by largest for-sale builders

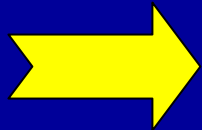
Source: NAHB, M. Carliner

Source: Al Schuler, USDA Forest Service

Three trends:

➤ **Globalization**

➤ **Consolidation**

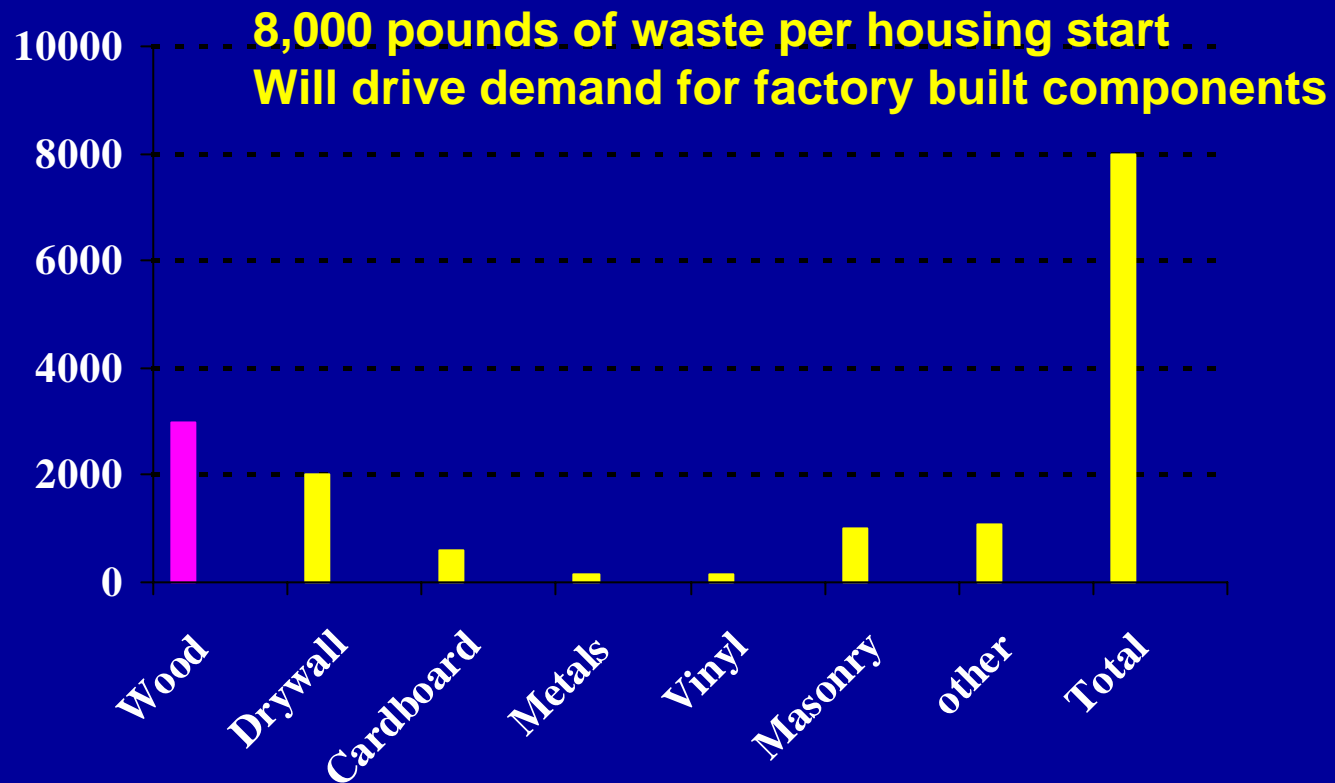


➤ **Innovation**

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Construction Site Waste – Builders operate on low margins (< 10%) so Cost Savings are important

Pounds of waste for a
2000 Sq. Ft. Home in U.S.

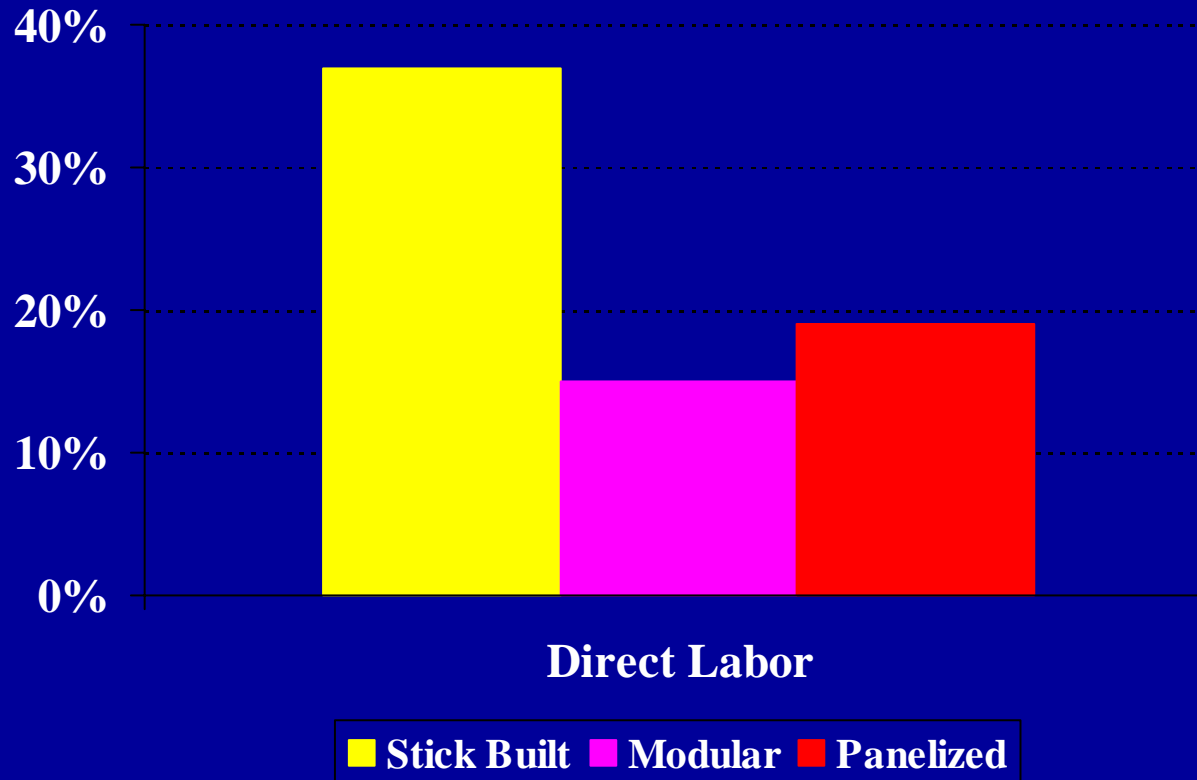


Source: NAHB

Source: Al Schuler, USDA Forest Service

Labour is a major cost in house construction... so, builders are automating

Direct Labor share of costs (excl. finished lot and gross margins)



Source: U.S. Bureau of Labor Statistics, Occupational Projects and Training Data

Source: Al Schuler, USDA Forest Service

And,...they are responding with new construction methods ...

(1,000 units)

	<u>1997</u>		<u>2004</u>	
	<u># Units</u>	<u>%</u>	<u># Units</u>	<u>%</u>
Stick Built ¹	1,175	80%	1,326	68%
Panelized²	105	7%	260	13%
Concrete³	125	9%	275	14%
Modular ⁴	45	3.1%	58	3%
Steel Frame ⁵	8	0.5%	8	.4%
SIPs ⁶	8	0.5%	16	.8%
Other ⁷	8	0.5%	10	.5%
TOTAL	1,474	100%	1,953	100%
Manufactured*	354	19%	131	6%
Grand Total	1,828	100%	1,979	100%

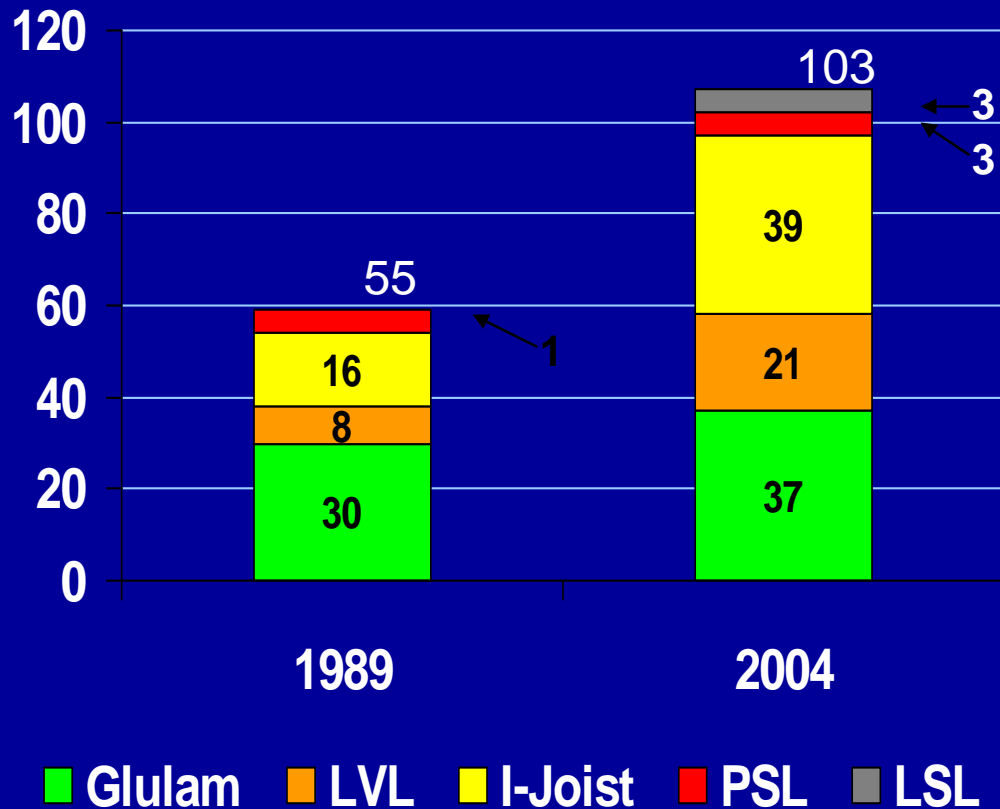
¹ stick built walls and floor with prefab roof trusses, ² panelized wood walls built in factory, ³ block or poured concrete walls, ⁴ factory built modules (not HUD), ⁵ steel framing used for at least exterior walls, ⁶ foam core with structural panels, ⁷ log homes, post & beam, etc. *HUD code

Source: APA, Craig Adair, march 2005

Source: Al Schuler, USDA Forest Service

... Engineered wood plants doubled in past 15 years
... Technology (innovation) has replaced nature

Plants



Growth:

- Higher design values
- Consistent quality
- Fewer callbacks
- More consistent price
- Less jobsite waste

EWP's

Labor & efficiency advantages

*40% fewer parts – less labor
Plus 50% less wood fiber*

<u>Floor system</u>	<u>Piece Count</u>
<u>Traditional 2x4</u>	85 2x10's 133 pieces total
<u>LP's "Solid Start"</u>	26 I Joists 80 pieces total

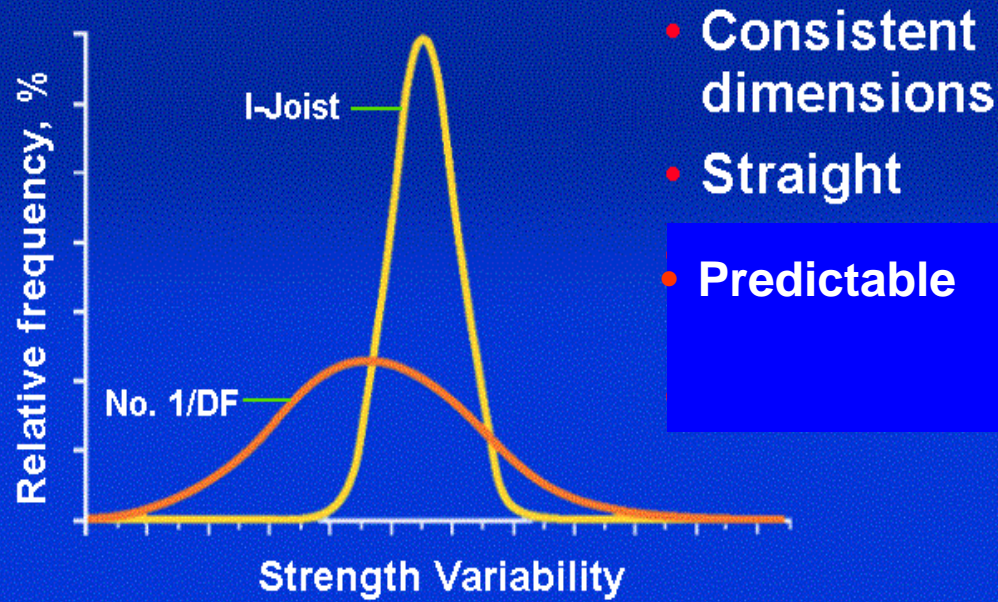
All Engineered Wood floor System



More Advantages of EWP's

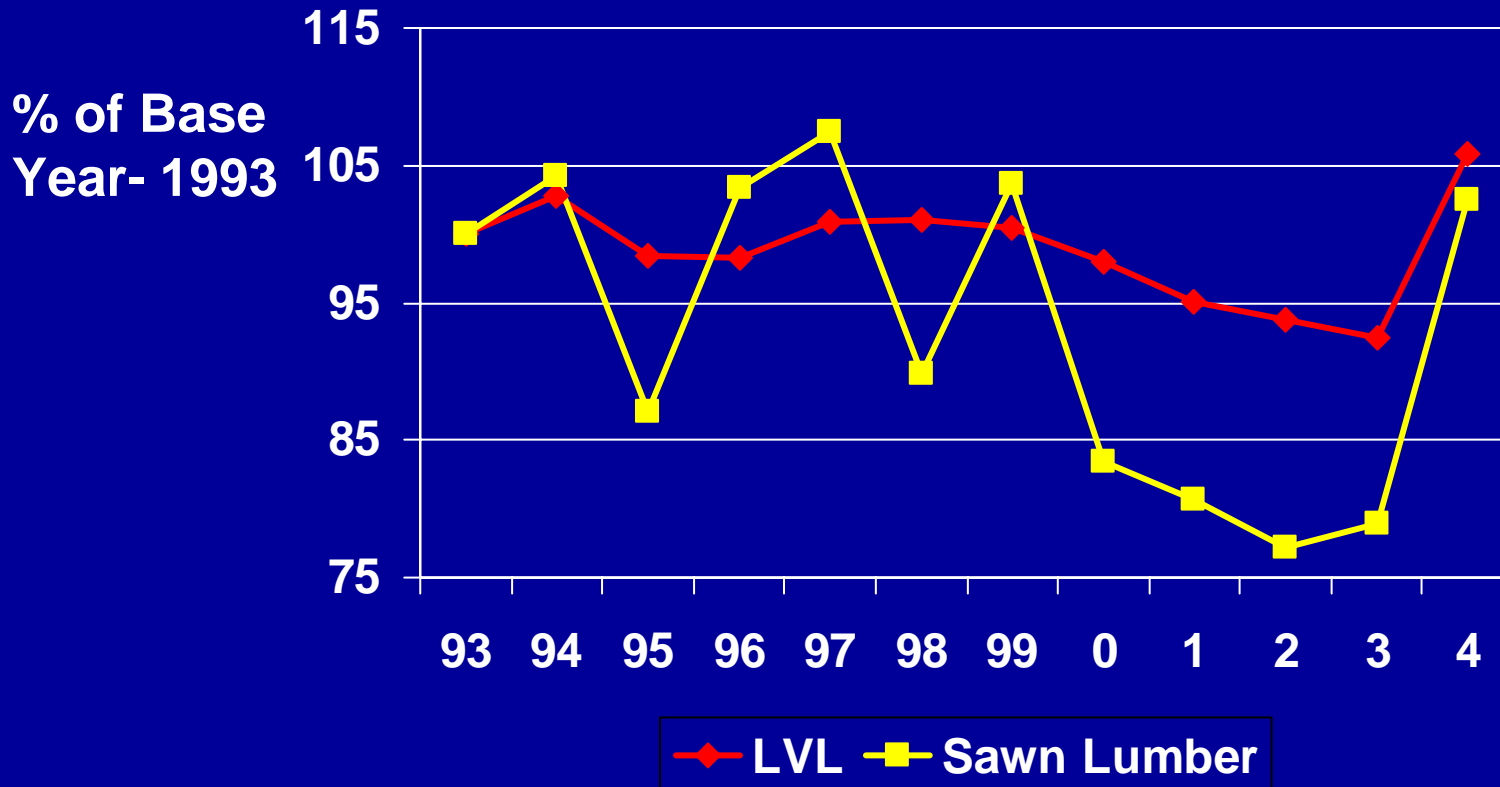
Predictable performance important to architects & builders
for design efficiency

Predictable Performance



More Advantages of EWP's

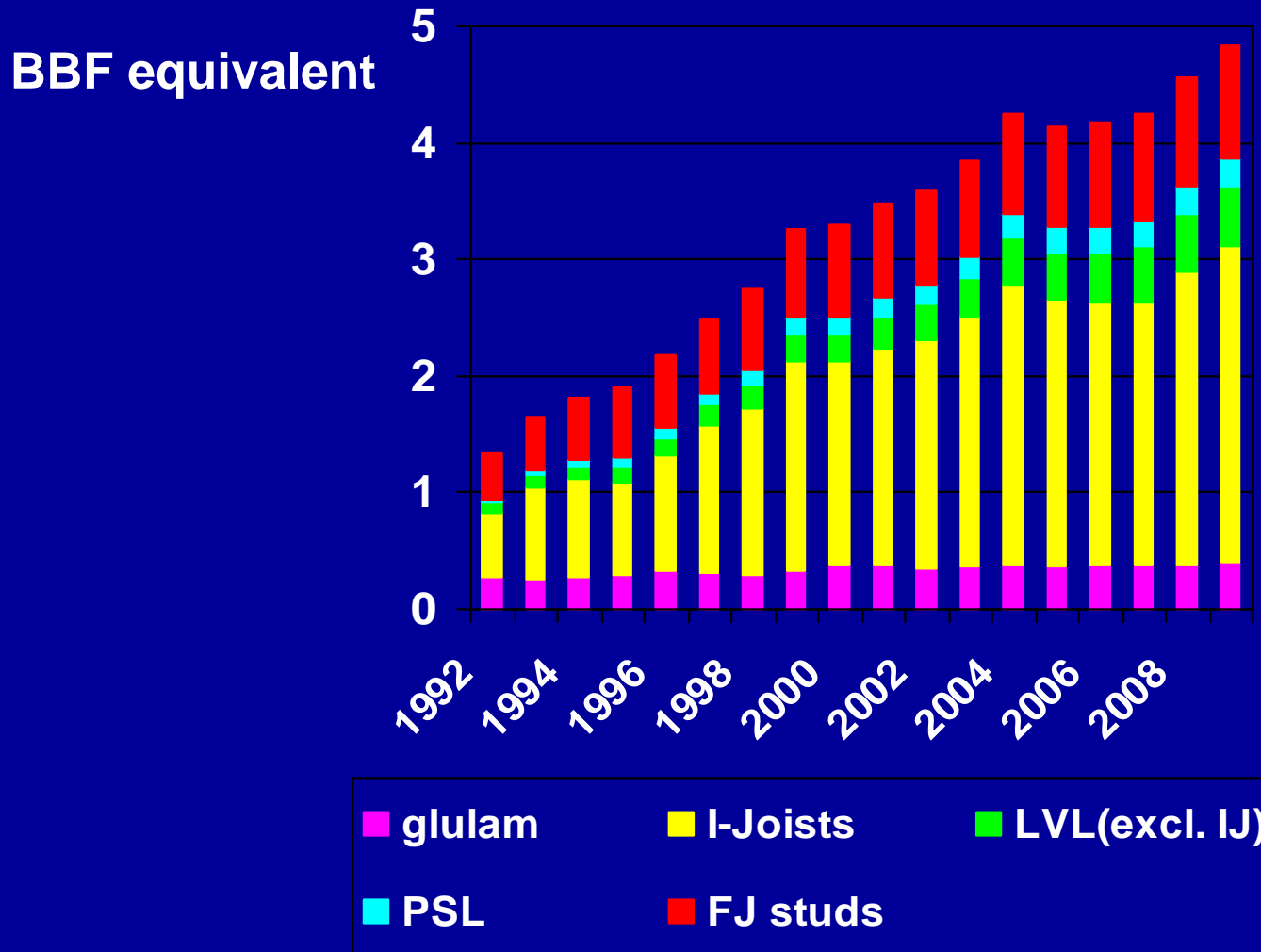
Lower price volatility...
important to builders in costing projects



Source: Random Lengths Framing Lumber Composite; Industry data.

Resulting in major lumber substitution

Growth of EWPs in North America



Source: Russ Taylor's Wood Market Monthly, August 2001, November 2004

Source: Al Schuler, USDA Forest Service

Where to from here?

- **Major trends of globalization, consolidation and innovation will continue....**
 - **creating a highly competitive environment, despite a favourable demand outlook.**
 - **driving new methods of house construction, and the next generation of EWPs.**

Companies must adapt, or fall by the wayside.