



Seminar presented at
the ITTO Council Meeting
in Yokohama, Japan, November 2009

Web: www.aktrin.com

DISCLAIMER

- All data presented in this seminar are AKTRIN's estimates, based on sources believed to be accurate.
- Most charts and data are meant to give an indication of general trends, and not current facts.
- Due to the extraordinary current economic situation, most data is biased. In order to avoid a biased impression, we are providing in some instances hypothetical data that would apply to “healthy economic circumstances”. If we do that, we will specifically indicate it.

SEMINAR OUTLINE

- 1. THE STATE OF THE AMERICAN ECONOMY**
- 2. CHARACTERISTICS OF THE AMERICAN WOOD AND WOOD-PRODUCTS MARKETS**
- 3. AMERICAN STANDARDS & CERTIFICATION FOR WOOD & WOOD-PRODUCTS**

PART I

THE STATE OF THE AMERICAN ECONOMY

KEY DRIVERS FOR WOOD CONSUMPTION

(raw or processed)

1. GDP growth

2. Housing starts.

The residential construction market – including remodeling and cabinetry – accounts for about 40% of US lumber consumption.

| | <u>2007</u> | <u>2008</u> | <u>2009</u> | <u>2010</u> |
|-------------------------------------|---|-------------|-------------|-------------|
| USA GDP Growth (%) | 2.1 | 1.1 | -1.6 | 1.9 |
| US Housing Starts (millions) | 1.34 | 0.90 | 0.57 | 0.75 |
| | <i>under healthy economic conditions, housing starts should be around the 1.75 million mark</i> | | | |

Comparative GDP Growth (%)

| | | | | |
|----------------|------------|------------|-------------|------------|
| World | 5.2 | 3.4 | 0.5 | 3.0 |
| China | 13.0 | 9.0 | 6.7 | 8.0 |
| USA | 2.1 | 1.1 | -1.6 | 1.9 |
| European Union | 2.9 | 1.0 | -1.8 | 0.5 |

THINGS DO NOT LOOK GOOD

- **Due to the large number of foreclosures, there is a huge inventory of unsold houses on the market. This will hamper new construction.**
- **The slow economy, high consumer debt and high unemployment do not bode well for the housing industry.**

IMPLICATIONS FOR THE LUMBER MARKET

- **Today, overall lumber demand is down 25% or 47 million m³ from its peak in 2005.**
- **During the same time period, prices for softwood lumber fell by 40%. (*Hardwood lumber prices were less affected by the housing market*).**

A GLIMMER OF HOPE

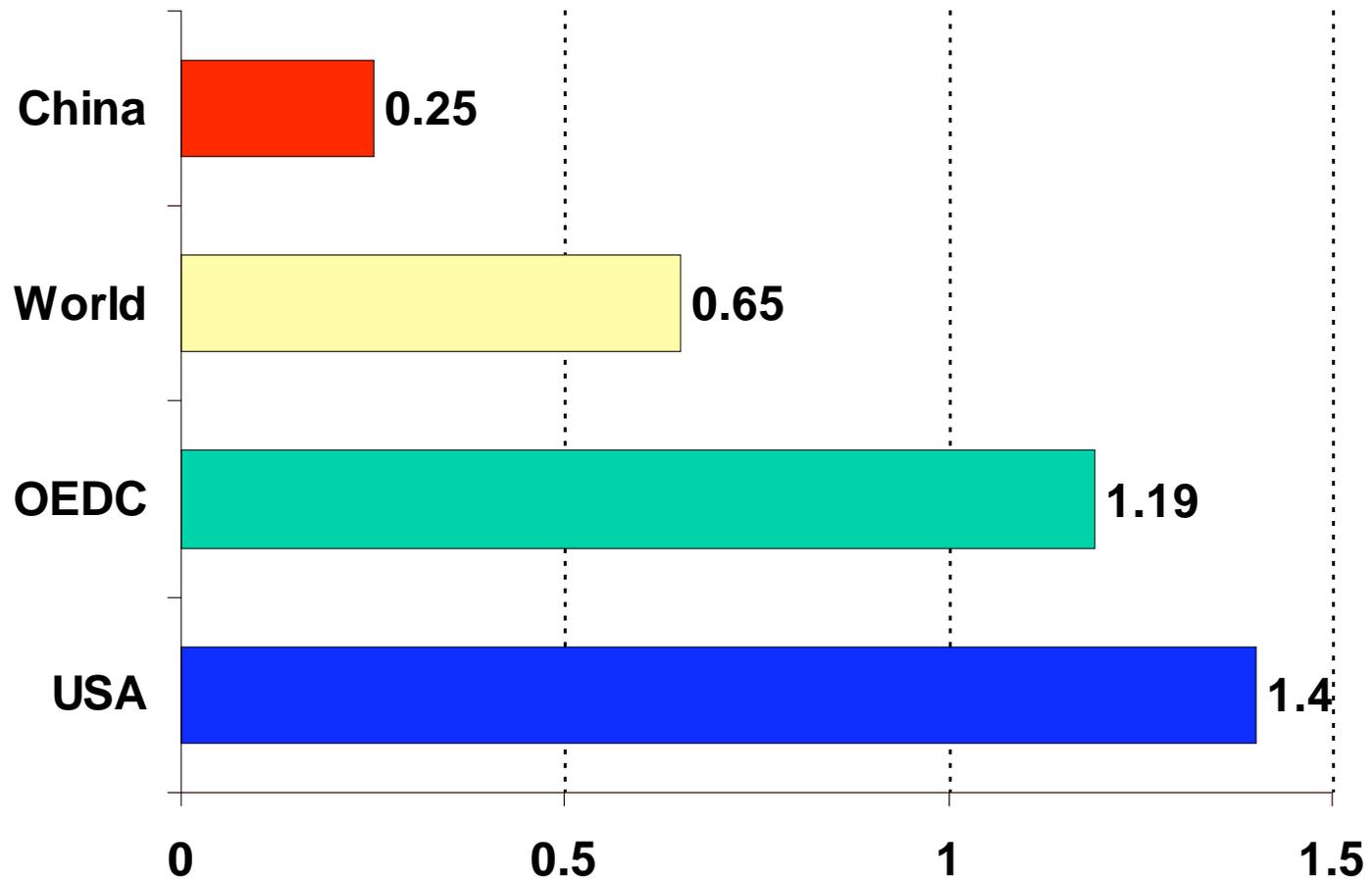
- **The US economy has now entered a recovery phase, but it will be slow.**
- **The multi-family housing market is still declining but single family housing is now showing some modest growth.**

PART II

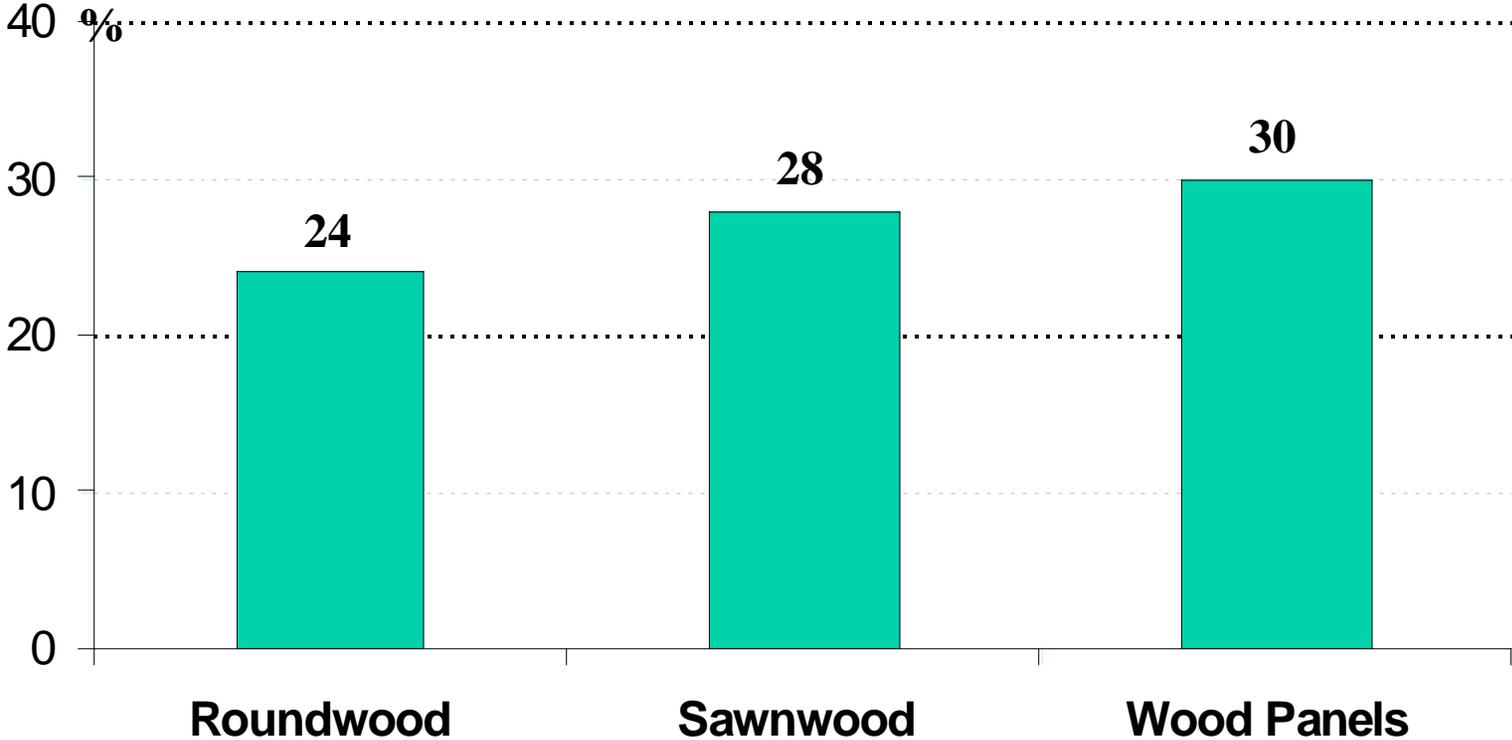
- 1. THE STATE OF THE AMERICAN ECONOMY**

- 2. CHARACTERISTICS OF THE AMERICAN WOOD AND WOOD-PRODUCTS MARKETS**
 - Overview**
 - Wood Usage in Housing Construction**
 - Wood Usage for Furniture**

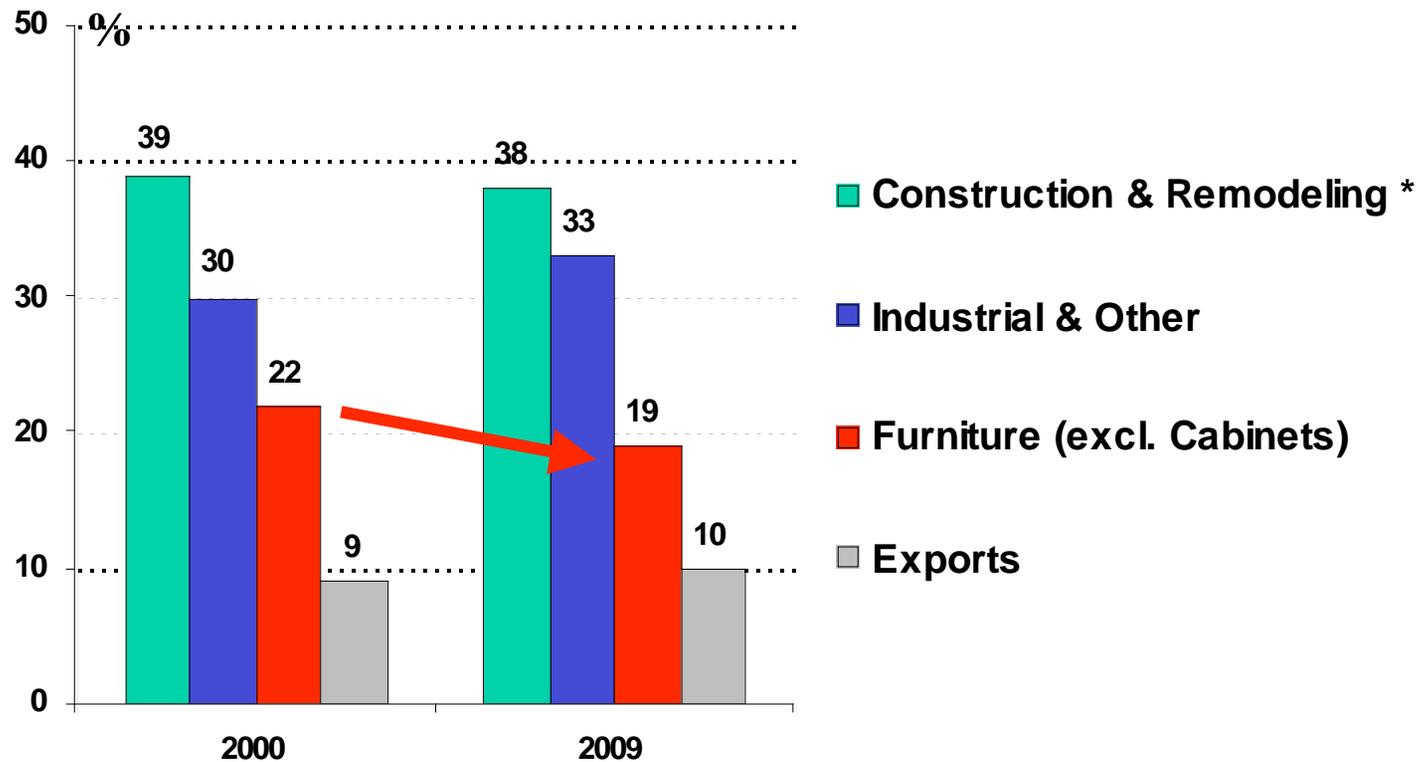
PER-CAPITA WOOD CONSUMPTION
cubic meters per capita



AMERICAN SHARE (%) OF WORLD CONSUMPTION FOR SELECTED WOOD PRODUCTS



CHANGING HARDWOOD-USER COMPOSITION



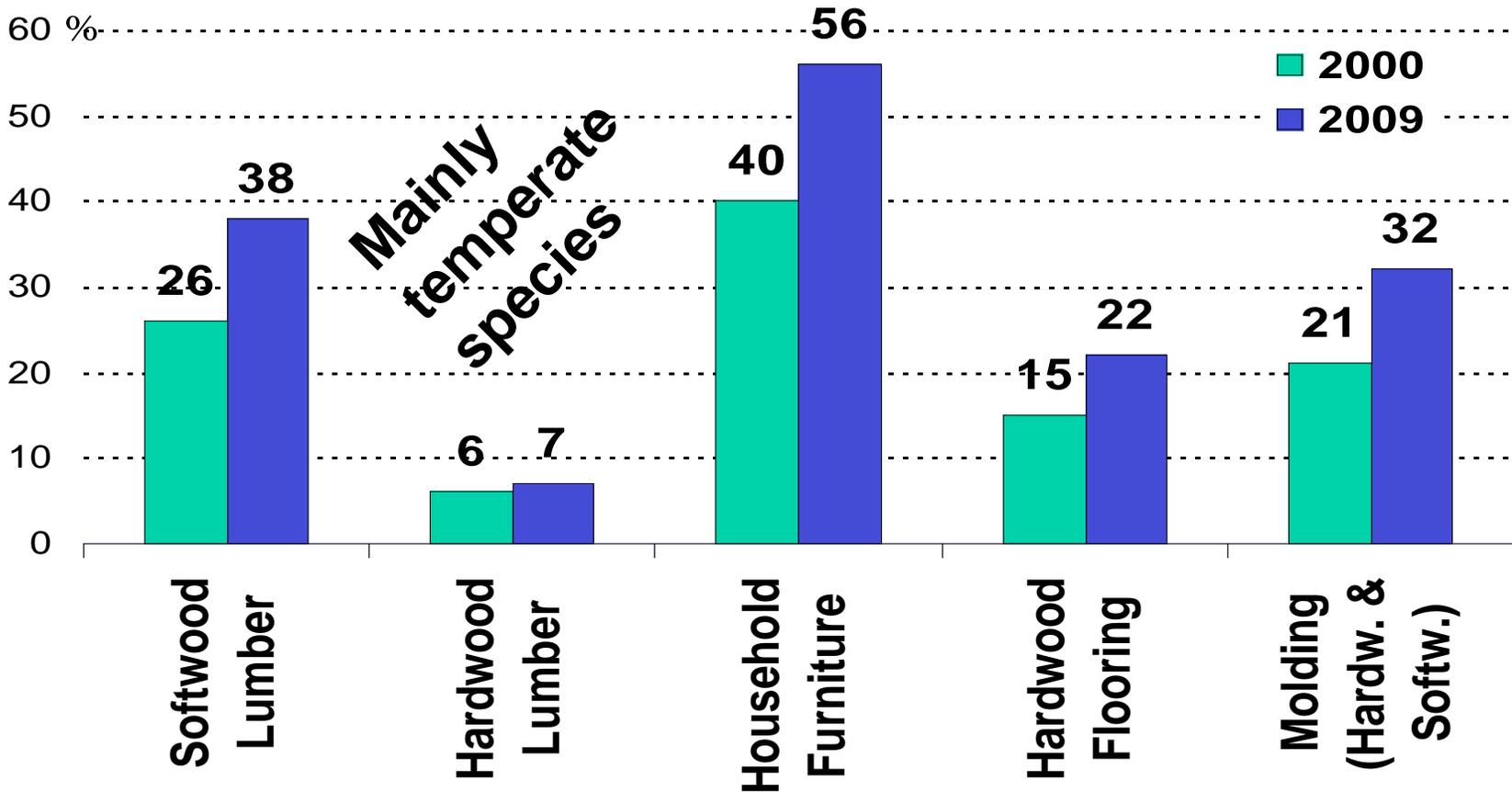
* flooring, millwork, trusses, cabinets, & fabricated wood members

THE AMERICAN IMPORT POTENTIAL IS VERY LARGE

- **American imports of forest products* are in the vicinity of \$ 30 billion annually.**
- **This is about 17% of world trade in forest products***
- **Commercial forest land in the USA is declining. Land conservation – above all in green-leaning California – is gaining momentum. Increasing acerages are used for recreational and/or residential housing purposes.**
- **As the American production of forest products* is stagnant, the entire consumption growth goes on account of imported foreign products.**

(Forest products include roundwood, fuelwood, sawnwood, wood based panels, pulp, paper and paperboard)*

GROWING IMPORT PENETRATION



Between 2000 to 2009, the US Trade Balance in Forest Products deteriorated from \$ 9 billion to \$ 15 billion

(Forest products include roundwood, fuelwood, sawnwood, wood based panels, pulp, paper and paperboard)

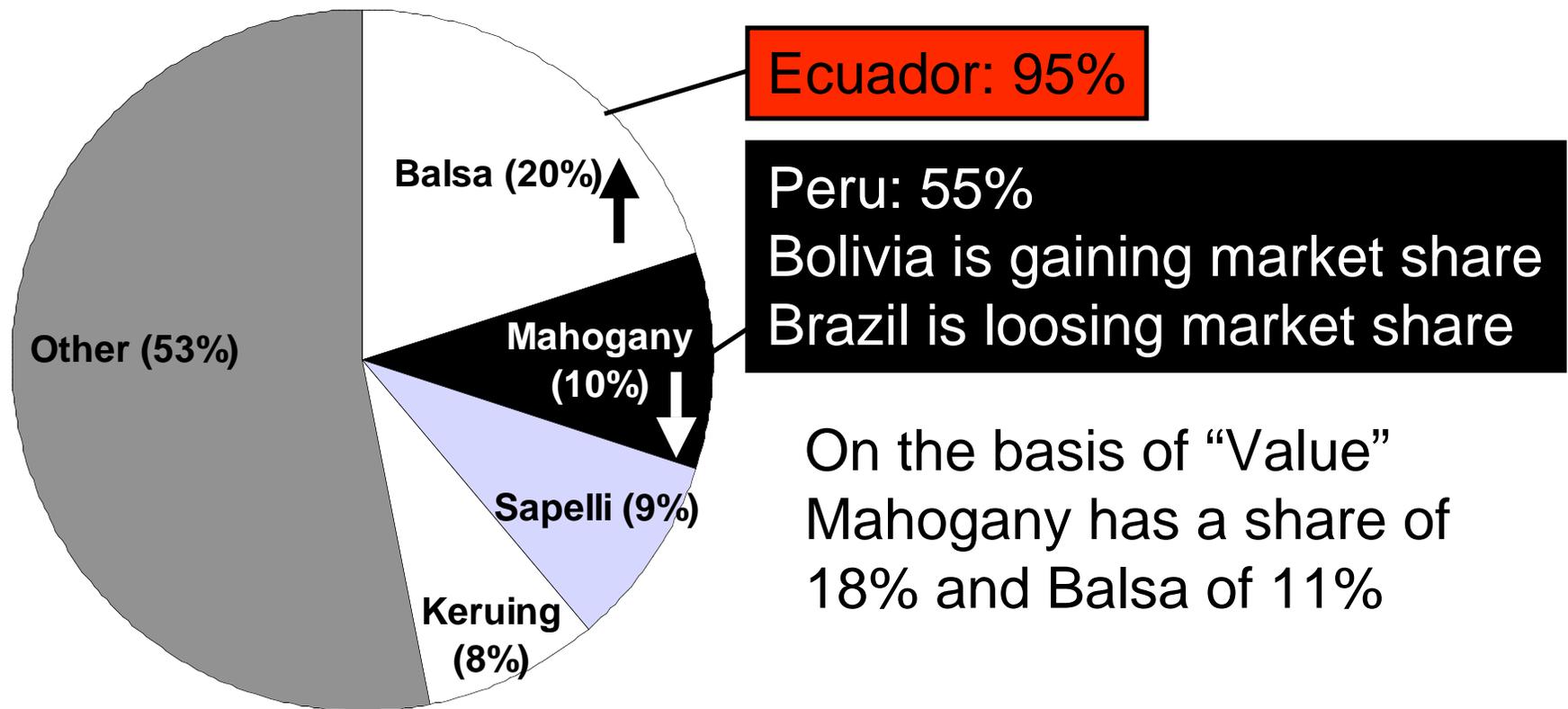
AMERICAN IMPORTS OF TEMPERATE HARDWOOD LUMBER

- Under normal economic conditions, US **hardwood lumber** production is very large, that is about 27 mio m³ annually (*25% is Red Oak; 16% is White Oak; 10% is Maple*).
- As the USA is self sufficient in hardwood lumber, only about 1.9 mio m³ of hardwood lumber is imported annually.
 - **Over 80% of hardwood imports are temperate species.**
 - **One-third of which refers to *Poplar* and *Aspen*, some of it is used for pulping.**
 - **About 20% is *Maple* wood**
 - **Some 75% of temperate hardwood imports are from *Canada*.**

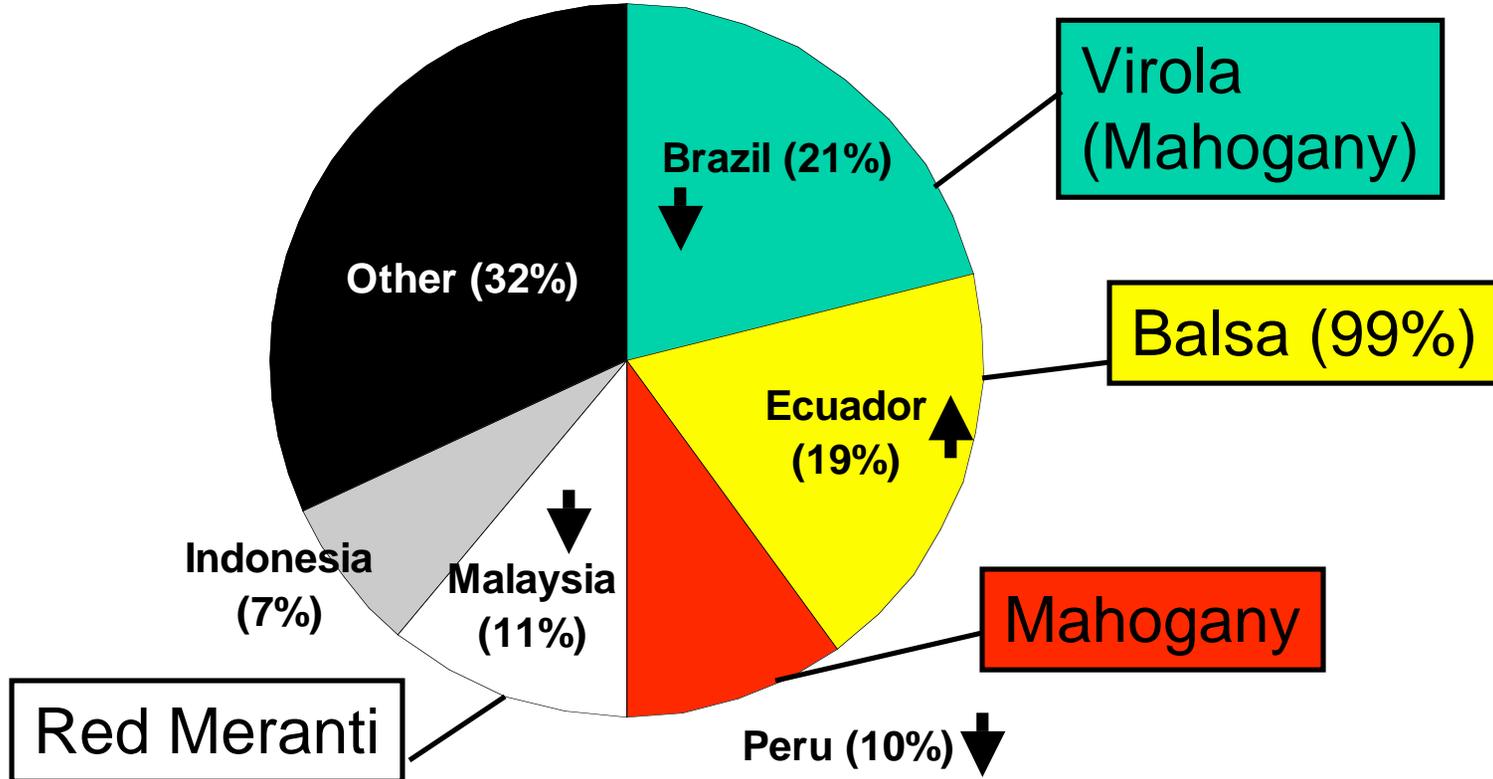
U.S. IMPORTS OF TROPICAL HARDWOOD LUMBER

The USA imports – *during healthy economic conditions* – about 350,000 m³ of tropical hardwood lumber.

By volume, this is 18% of overall hardwood lumber imports. (23% by value)



U.S. IMPORTS OF TROPICAL HARDWOOD LUMBER – *by Country*

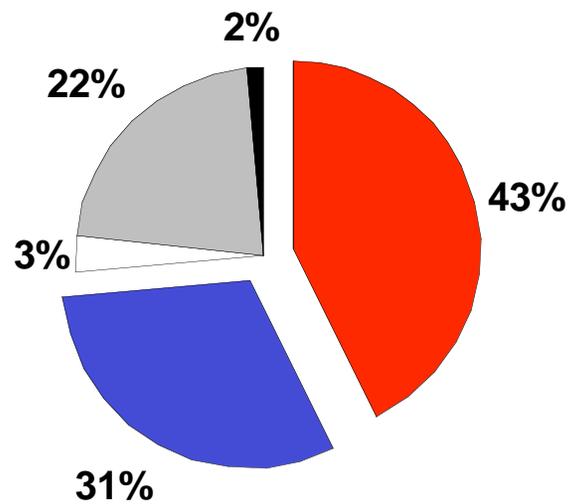


The Residential Housing Market and Wood Usage

RESIDENTIAL HOUSING IS THE LARGEST AMERICAN USER OF SOFTWOOD LUMBER & WOODEN PANELS

Softwood Lumber

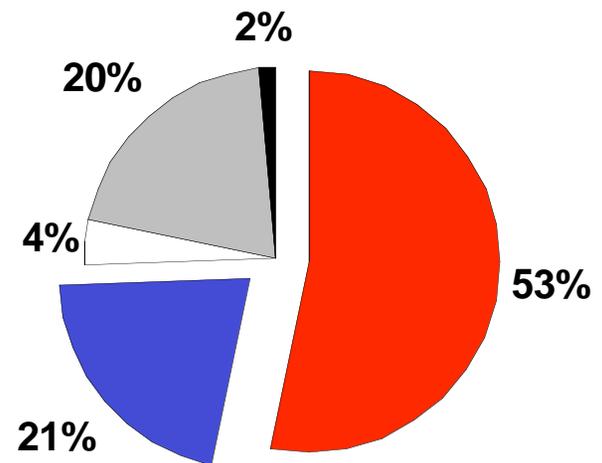
(144 mio m³)*



- New Resid. Constr.
- Remodeling & Alterations
- Non-Resid. Constr.
- Industrial Usage
- Exports

Structural Panels

(36 mio m³)*



* Under healthy economic conditions

SOME COMMENTS TO THE U.S. HOUSING MARKET

- **The best growth potential is in the remodeling segment**
- **The remodeling market is now of almost equal size to the new construction market.**
- **Remodeling uses more hardwood than new construction.**
- **The use of prefabricated components and systems is increasing**

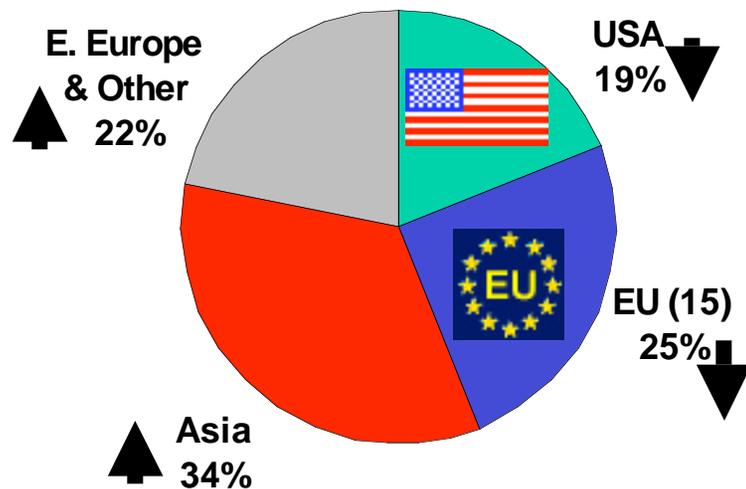
The Furniture Market and Wood Usage

- **The Furniture Industry is strongly influenced by the housing market.**
- **The Furniture Industry is a very important user of hardwoods.**
- **In particular, the Furniture Industry is a prime market for tropical hardwoods**

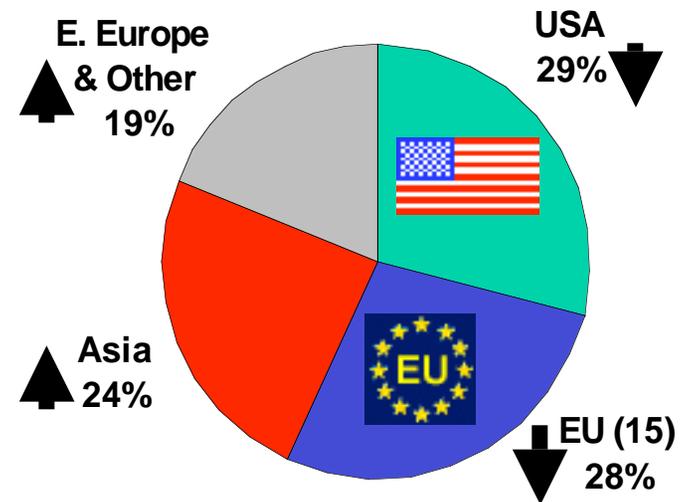
THE AMERICAN POSITION IN WORLD FURNITURE PRODUCTION & CONSUMPTION

(approx. Global market size in 2008 ~ US\$ 280 bn. at MSP)

World Furniture Production

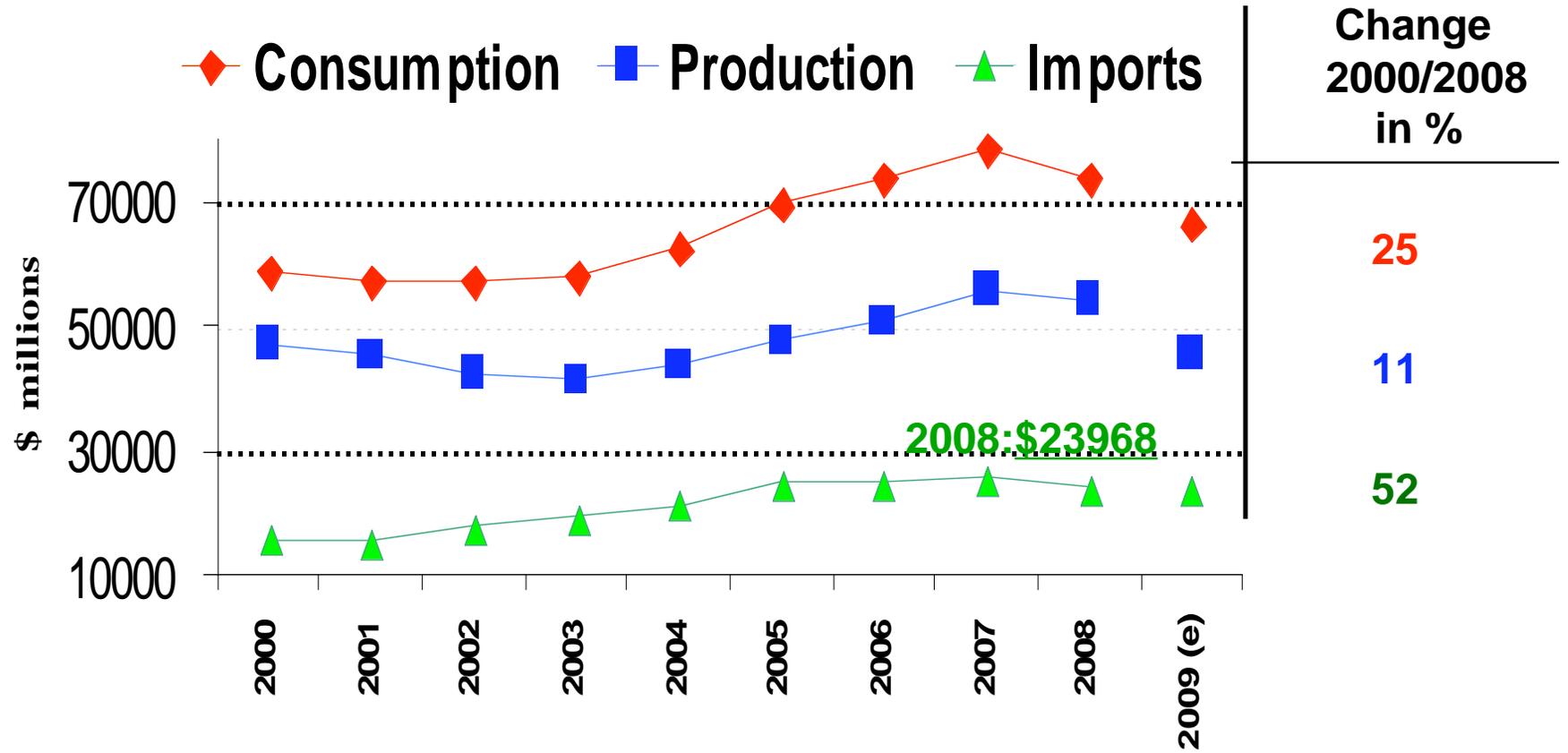


World Furniture Consumption



On a country by country basis, the USA is still the world's largest furniture producers, followed by China and Italy.

The Gap between Furniture Consumption & Furniture Production is growing in the USA



Change
2000/2008
in %

25

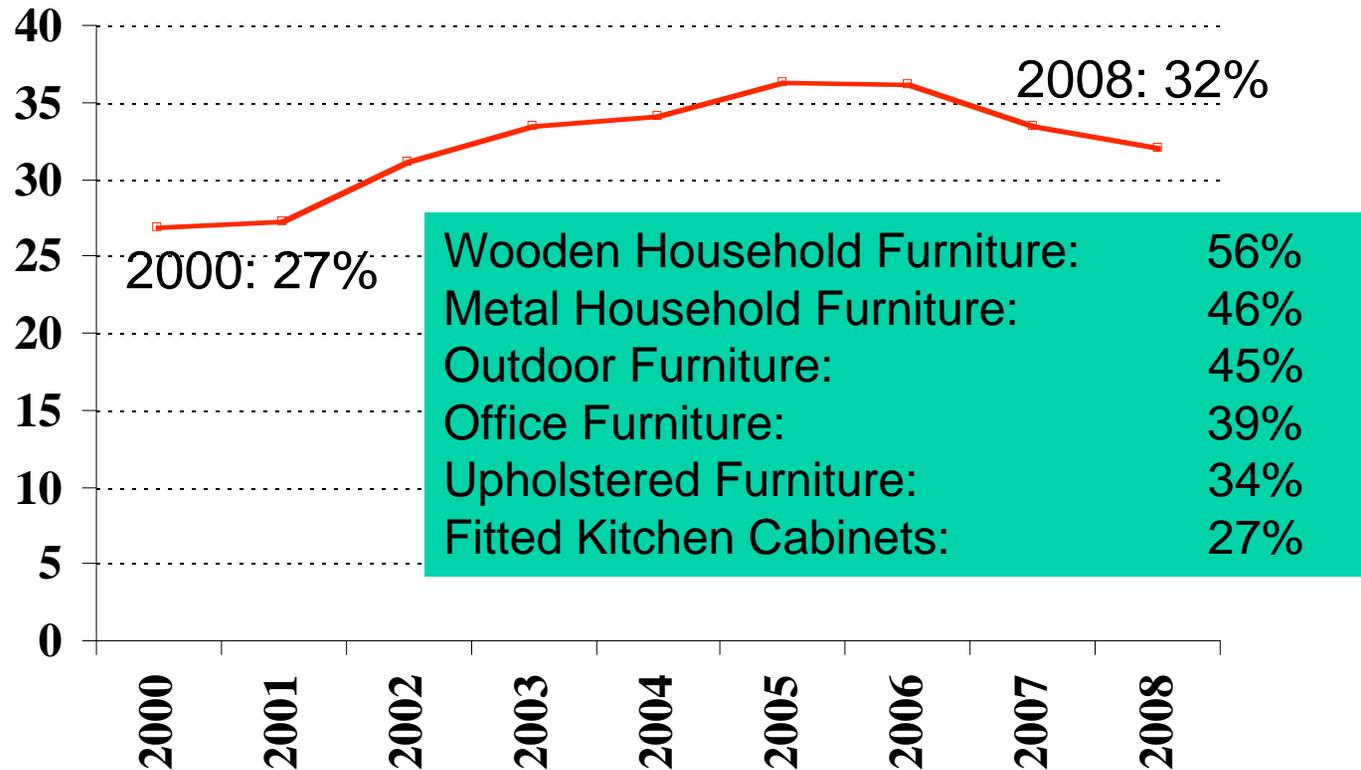
11

52

Imp. Pen.: 27 27 31 33 34 37 37 33 32 33 (%)

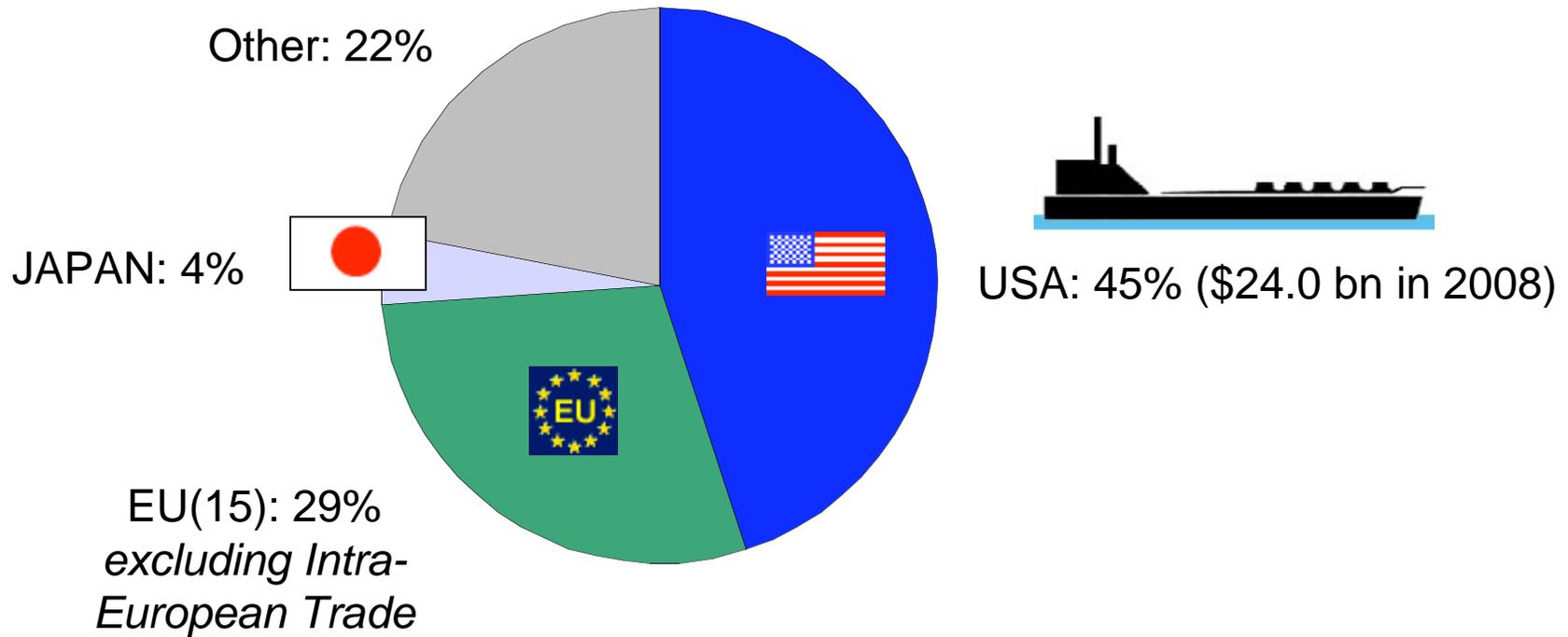


US IMPORT PENETRATION FOR FURNITURE (in %)



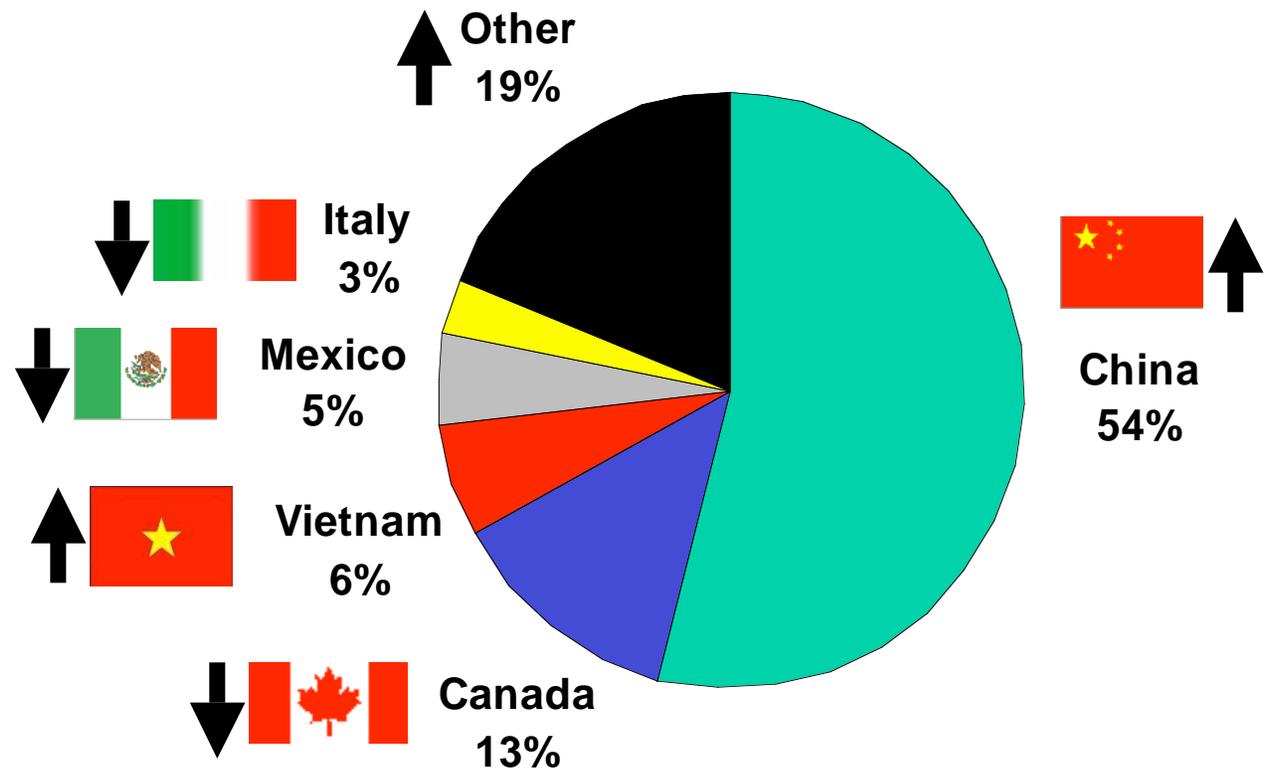
The US has a huge trade deficit in furniture and protectionism is becoming more prevalent. Chinese Bedroom furniture is now subject to punitive duties.

THE USA IS THE WORLD'S LARGEST FURNITURE IMPORTER

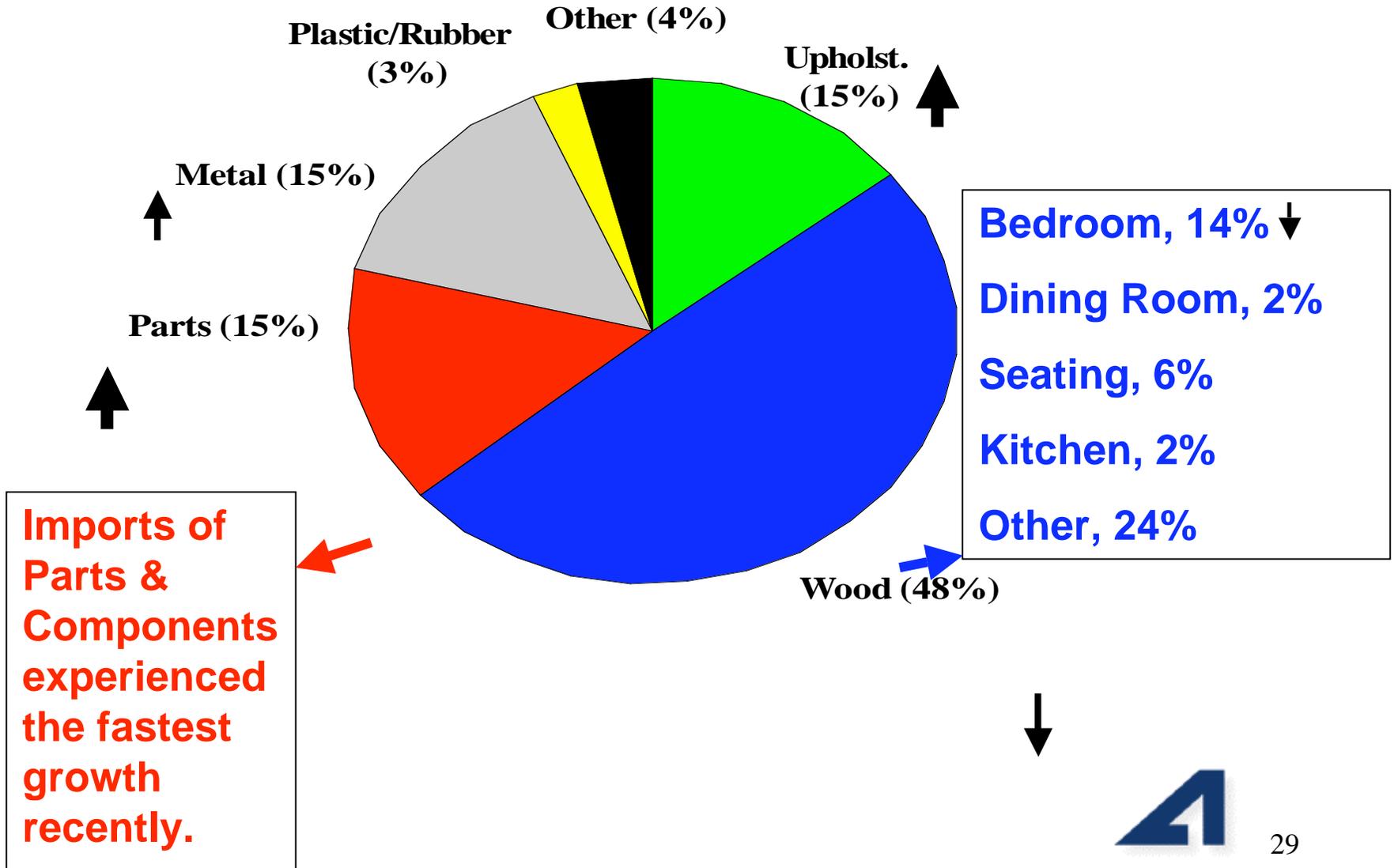


US Imports of Furniture by Source Country (2008)

The share of Vietnam is only 6% but growth between 2000 and 2008 was over 1000%



US FURNITURE IMPORTS BY FURNITURE CATEGORY



THE AMERICAN FURNITURE INDUSTRY IS (STILL) AN IMPORTANT USER OF WOOD RAW-MATERIALS

WOOD USAGE (during healthy economic conditions)

| | |
|-------------------------|------------------------------|
| • Hardwood Lumber | 5.0 million m ³ |
| • Softwood Lumber | 1.5 million m ³ |
| • Particleboard | 3.0 million m ³ |
| • Plywood (hard & soft) | 72.3 million m ² |
| • Veneer | 136.5 million m ² |

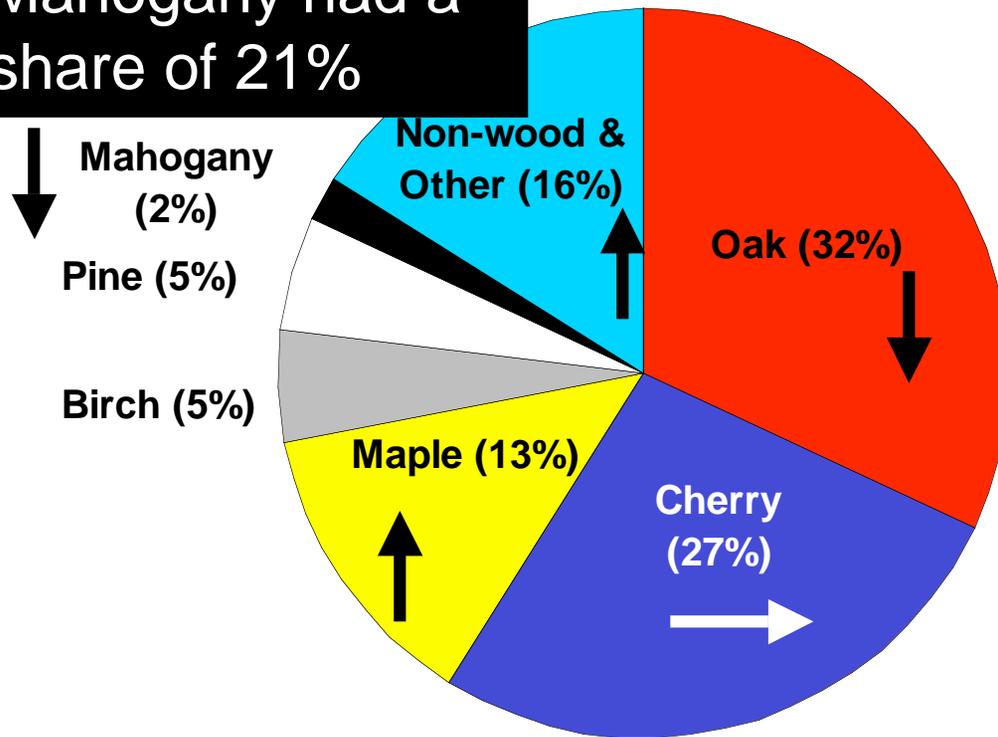


WOOD CONSUMPTION OF THE U.S. FURNITURE INDUSTRY IS DECLINING

- **American furniture manufacturing is shrinking. As of 2009 the industry consumed only 1.7 mio m³ of hardwood lumber. This is down from 5.3 mio m³ in 1962 (*previous peak year*)**
- **The industry's share of the overall hardwood consumption fell from 22% in 2000 to 19% in 2009.**
 - **The USA is self-sufficient regarding temperate hardwood lumber. In fact, the USA is a net exporter.**
 - **Therefore, the furniture industry does not need to rely on foreign supplies of temperate hardwoods.**
 - **However, the USA is a huge net importer of hardwood in the form of furniture.**

COMPOSITION (%) OF SPECIES USED IN HOUSEHOLD FURNITURE SOLD IN THE USA

In the 1950s
Mahogany had a
share of 21%



- There are great fashion variations over time
- In the 1930s, **Walnut** had a share of 40%, now it is less than 2%.
- **Non-wood** (multi-media) is gaining popularity.
- **Rubber-wood** has a share of about 2%

PART III

- 1. THE STATE OF THE AMERICAN ECONOMY**
- 2. CHARACTERISTICS OF THE AMERICAN WOOD AND WOOD-PRODUCTS MARKETS**
- 3. AMERICAN STANDARDS & CERTIFICATION FOR WOOD & WOOD-PRODUCTS**

- **Adhere to American legislated and voluntary Standards and Certification Programs.**
There are literally hundreds of Standard in the USA, and the System is confusing.
- **The most stringent Standards are in California.**
- **Generally, Standards are developed by trade associations.**
- **Most Standards and Certifications are voluntary. Nevertheless, they are of relevance in litigation cases.**
- **America is a litigate society, and liable suits are very expensive.**



In the following I will confine myself to a brief description of the 3 most important standards/programs in the USA

- 1. Forest Stewardship Council / Rainforest Alliance.**
- 2. Lacey Act**
- 3. CITES / Endangered Species Act**

FOREST STEWARDSHIP COUNCIL (FSC)

- **Established in 1993, the FSC is an independent, non-governmental, not-for-profit organization with head office in Germany. FSC is represented in over 50 countries.**
- **Its purpose is to promote responsible and sustainable management of the world's forests, mainly through standard setting.**
- **The Standards are very broad and go beyond mere forest management. They also include social, economic, ecological, cultural and spiritual aspects.**

FOREST STEWARDSHIP COUNCIL (Continued)

There are two kinds of Standards:

- **Forest Management Standards** are confined to the management of forests or plantation areas
- **Chain of Custody Standards** track the material through the production processes all the way to the store.

FOREST STEWARDSHIP COUNCIL (Continued) and RAINFOREST ALLIANCE

FSC does not issue certificates itself. Certification is carried out by several independent certification bodies, such as the **Rainforest Alliance**.

Founded in 1987, the Rainforest Alliance is an international, non-profit, non-governmental conservation organization promoting sustainable agricultural and forest management.

It is doing this under its *SmartWood Program*

The FSC is based in New York and has offices throughout the world.

RAINFOREST ALLIANCE (Continued)

The Rainforest Alliance is accredited to certify forestry operations that meet FSC standards and it is now one of the largest certifier of sustainable wood resources.

So far it has certified more than 400,000 km² of forest.

Any stakeholder in the forestry sector can become a member of the Rainforest Alliance (wood-lot owners, manufacturers of primary and secondary wood products, wholesalers and retailers, associations, community-based cooperatives, consumers, etc).

LACEY ACT (16 U.S.C. SS 3371-3378)

- **The original Lacey Act goes back to 1900 and was meant to protect game and wild birds. The Act has been amended several times, most recently in 2008 through the *Food, Conservation, and Energy Act (Farm Bill)* expanding its reach to wild plants or plant parts (including logs and lumber). The new Act entered into full force on October 1, 2009.**
- **In regards to wood and wood-products, the Lacey Act is administered by the *USDA Animal and Plant Health Inspection Service (APHIS)***

LACEY ACT (Continued)

A plant that is harvested, sold, imported or exported in violation of US or foreign laws is illegal and in contradiction to the Lacey Act.

This refers to laws which regulate the following:

1. Theft of plants
2. Taking plants from protected areas, e.g. parks or reserves
3. Taking plants from other “officially designated areas”.
4. Taking plants without authorization
5. Royalties, taxes or fees regarding plants
6. Export or trans-shipment, such as a log-export ban

LACEY ACT (Continued)

- **The Lacey Act doesn't state how importers should show that wood is legally harvested. No third-party certification is required. Instead, importers have the responsibility to ascertain that their products come from legal sources.**
- **For the purpose of monitoring and enforcement of the Act, importers must declare the identity of the wood by genus and species, country of origin, quantity and value.**

LACEY ACT (Continued)

- **Violations of the Act are persecuted by substantial civil and criminal penalties (maximum of 5 years in prison and fines in excess of one millions dollars).**
- **With the amendment of the Lacey Act, the U.S. became the first country in the world to prohibit the trade of illegally harvested wood and wood-products.**
- **The Lacey Act is more stringent than similar European requirements**

CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES (CITES)

- **CITES** is a multinational agreement between members of the *World Conservation Union (IUCN)* with the purpose to prevent animal and plant species from becoming endangered or extinct because of international trade.
- Today, more than 175 countries – known as Parties – have agreed to the Convention. The United States became a Party to CITES in 1975.

CITES (Continued)

- **Roughly 5,000 species of animals and 28,000 species of plants have been identified as “endangered” by CITES. They are listed in three Appendices, grouped according to their risk.**
- **Under the CITES-treaty, countries must ensure that listed species are not illegally exported or imported. CITES-provisions and regulations apply to both, importing and exporting countries. Smugglers may face criminal prosecution.**
- **Although CITES is legally binding on the Parties, it does not take the place of national laws. Each Party has to adopt its own domestic legislation.**

ENDANGERED SPECIES ACT

- In the United States, CITES is implemented through the **Endangered Species Act (ESA)**.
- Enacted in 1973, the ESA's goal is to prevent the extinction of imperiled plants and animals.
- The *U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS)* together with the *U.S. Department of Homeland Security's Customs and Border Protection Unit (CBP)* enforces ESA-provisions that relate to plants. All CITES-listed timber-species must be imported and exported through designated ports.

ENDANGERED SPECIES ACT (Continued)

- Importing CITES-protected plants into the United States requires an import permit and several documents from various government agencies including the CITES-authorities of the exporting country.
- ESA creates and maintains prioritized **lists** of endangered species.
- There are approximately 1895 species on the ESA-lists. Of these, approximately 1,320 are found in the USA. The remainder are foreign species (as per CITES).
- ESA prohibits the unauthorized trade of listed species. Perpetrators face civil or criminal penalties.

OTHER AMERICAN STANDARDS FOR WOOD, LUMBER, PLYWOOD & VENEER

Rules Book and Hardwood Grades

National Hardwood Lumber Association (NHLA)

Voluntary

www.natlhardwood.org

American National Standard for Hardwood and Decorative Plywood

Hardwood Plywood & Veneer Association (HPVA)

Voluntary

<http://www.hpva.org/publications/index.asp>

Procurement Standard for Imported Hardwood Plywood

International Wood Products Association

Voluntary

<http://www.iwpawood.org/>

Standard for Sliced Decorative Wood Face Veneer

Hardwood Plywood & Veneer Association (HPVA)

Voluntary

<http://www.hpva.org/publications/index.asp>

ENGINEERED WOODEN PANELS

Basic Hardboard

Composite Panel Association (CPA)

Voluntary

<https://www.pbmdf.com/publications/index.asp?CatalogFormID=2&CatalogCatID=2141>

Standard for Particleboard

Composite Panel Association (CPA)

Voluntary

<https://www.pbmdf.com/publications/index.asp?CatalogFormID=2&CatalogCatID=2141>

Standard for MDF

Composite Panel Association (CPA)

Voluntary

<https://www.pbmdf.com/publications/index.asp?CatalogFormID=2&CatalogCatID=2141>

Composite Wood Panels – Formaldehyde Emissions

California Air Resources Board (CARB)

Mandatory Standard in California

<http://www.arb.ca.gov/toxics/compwood/compwood.htm>

Test Method for Determining Formaldehyde from Wood Products

Hardwood, Plywood and Veneer Association / Composite Panel Association

Voluntary

<http://www.astm.org>

MOULDING, MILLWORK, WOOD COMPONENTS

Quality Industry Standards for Wood Moulding and Millwork

Wood Moulding & Millwork Producers' Association (WMMPA)

Voluntary

<http://www.wmmpa.com/>

Architectural Woodwork Quality Standards

Architectural Woodworking Institute (AWI)

Voluntary

http://store.awinet.org/store/index.asp?DEPARTMENT_ID=25

Standards relating to Windows, Doors and Millwork

Window & Door Manufacturers Association (WDMA)

Voluntary

<http://www.wdma.com>

Rules and Specifications for Dimension & Woodwork

Wood Component Manufacturers Association (WCMA)

Voluntary

<http://www.woodcomponents.org>

LAMINATES & EDGE-BANDING

Low-pressure Decorative Laminate

Composite Panel Association (CPA)

Voluntary

<https://www.pbmdf.com>

High-pressure Decorative Laminate - ANSI/NEMA LD 3-2005

National Electrical Manufacturers Association (NEMA)

Voluntary

http://www.nema.org/stds/complimentary-docs/upload/LD3_2005A.pdf

FURNITURE

Certification for Sustainable Office Furniture - level™,
Business & Institutional Furniture Manufacturers Association (BIFMA)
Voluntary

<http://levelcertified.org/>

*Wood furniture must not contain species listed in CITES Appendices I or II.
Additionally, a minimum percentage of the wood must be either Forest Stewardship
Council (FSC) or Sustainable Forestry Initiative (SFI) certified.*

Sustainability for Residential Furniture

Sustainable Furnishings Council

Voluntary

<http://www.sustainablefurnishings.org/>

WOOD PACKAGING MATERIALS

Importation of Wood Packaging Material. 7 CFR 319.40

Department of Agriculture - Animal and Plant Health Inspection Service (APHIS)

Mandatory Federal Standard

http://www.aphis.usda.gov/import_export/plants/plant_imports/wood_packaging_materials.shtml and/or

<http://www.aphis.usda.gov/ppq/wpm/docket02-032-03.htm>

PAINTS, LACQUERS, COATINGS, POLISH

Lead-Containing Paint in Consumer Products (Title 16, C.F.R. Part 1303)
U.S. Government, Consumer Product Safety Commission (CPSC)

Mandatory Federal Ban

http://www.access.gpo.gov/nara/cfr/waisidx_04/16cfr1303_04.html

Standard Test Method for Print Resistance of Lacquers

ASTM

Voluntary

<http://www.astm.org>

Block Resistance of Organic Coatings on Wood Panel Substrates.

ASTM

Voluntary

<http://www.astm.org/>

Resistance of Coatings on Wood Products to Stains and Reagents.

ASTM

Voluntary

<http://www.astm.org>

Standard Practice for Evaluation of Furniture Polish

ASTM

Voluntary

<http://www.astm.org>

**Thank you very much
for your attention**





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