

# 2012 Economic State of the B.C. Forest Sector

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Competitiveness and Innovation Branch

# Outline

- ❖ **Overview**
- ❖ **Products**
- ❖ **Markets**
- ❖ **Competitiveness**
- ❖ **Outlook and Conclusions**

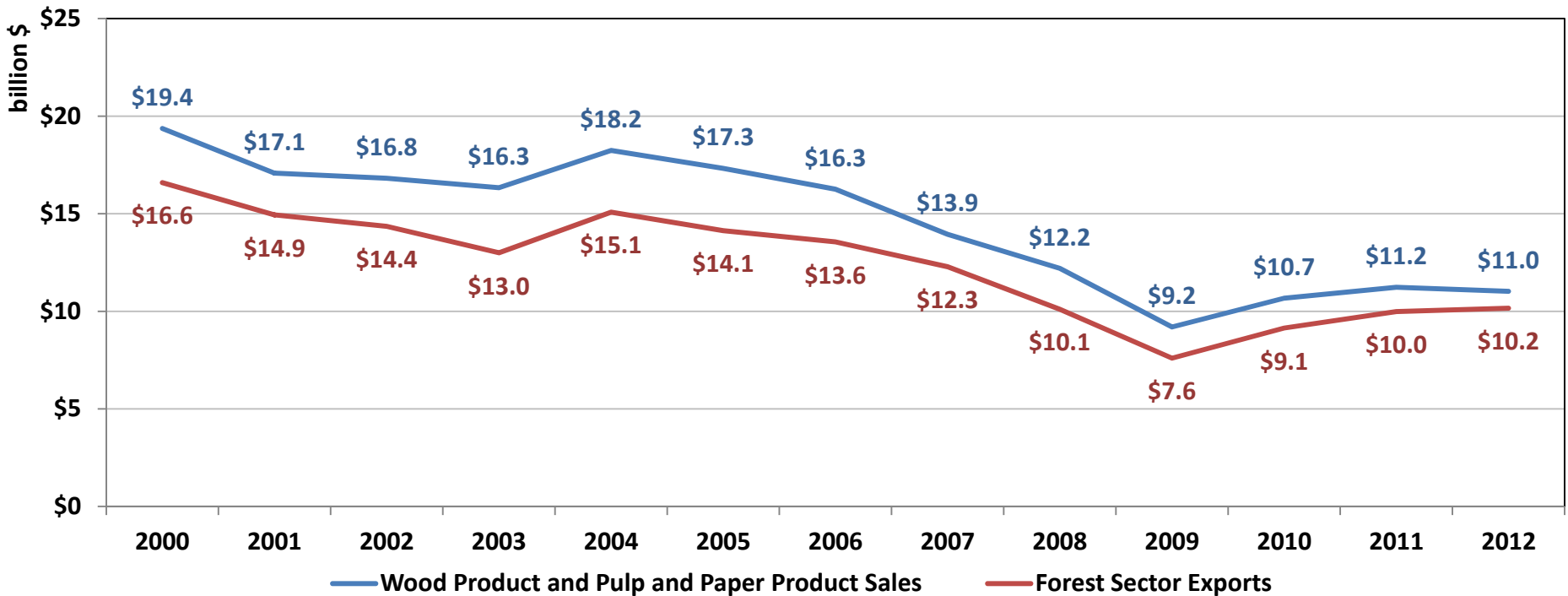
## Overview of B.C. Forest Sector

- ❖ **Includes** forest management, harvesting, reforestation, wood product manufacturing, and paper product manufacturing.
- ❖ **Plays a key role in the provincial economy**, especially in many communities outside the lower mainland.
- ❖ **Is export-oriented**, depending heavily on global markets and exchange rates.
- ❖ **Is cyclical**, affected by the global forest commodity markets.

## Overview of 2012

- ❖ **B.C.'s forest sector sales remained steady** in 2012, even though wood product prices increased notably.
- ❖ **The U.S. economy** continued slow improvement, as seen in the employment status and housing market, and this was reflected in higher forest sector exports to the U.S.
- ❖ **The recent emergence of China** as the 2<sup>nd</sup>-largest export market for B.C. continued to play a key role in B.C.'s forest sector and helped to make up for low US demand.
- ❖ **Employment remained relatively steady** in the B.C. forest sector. Employment was still well below pre-recession levels.
- ❖ **The B.C. forest sector has not recovered** to previously normal levels, but has improved greatly from 2009, the worst year of the worst downturn in its history.

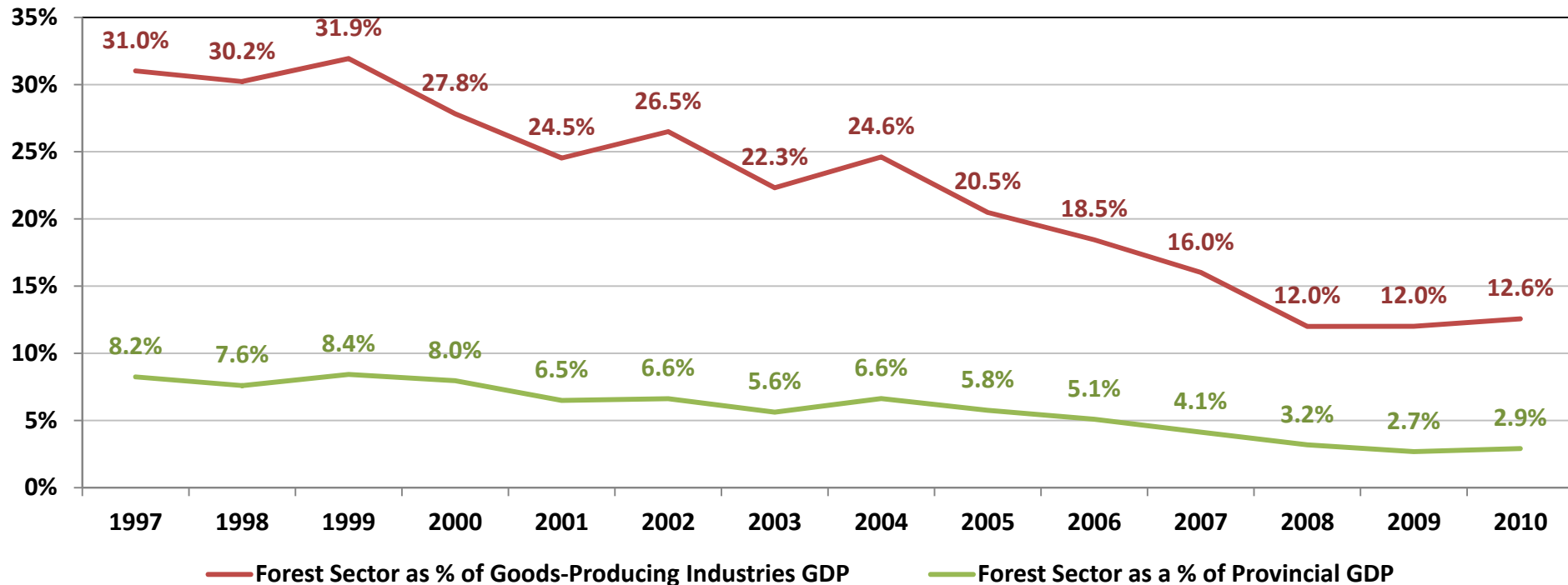
## B.C. Forest Sector Manufacturing Sales and Exports



Data source: Statistics Canada. Logs are not included in sales, but are included in exports.

**Overview Indicator 1 – B.C. forest sector manufacturing sales in 2012 were up 20% from 2009 and accounted for 28% of B.C. total manufacturing sales. Exports were up 34% from 2009, and accounted for 32% of B.C. total merchandise exports. Sales and exports were down about 40% from 2000.**

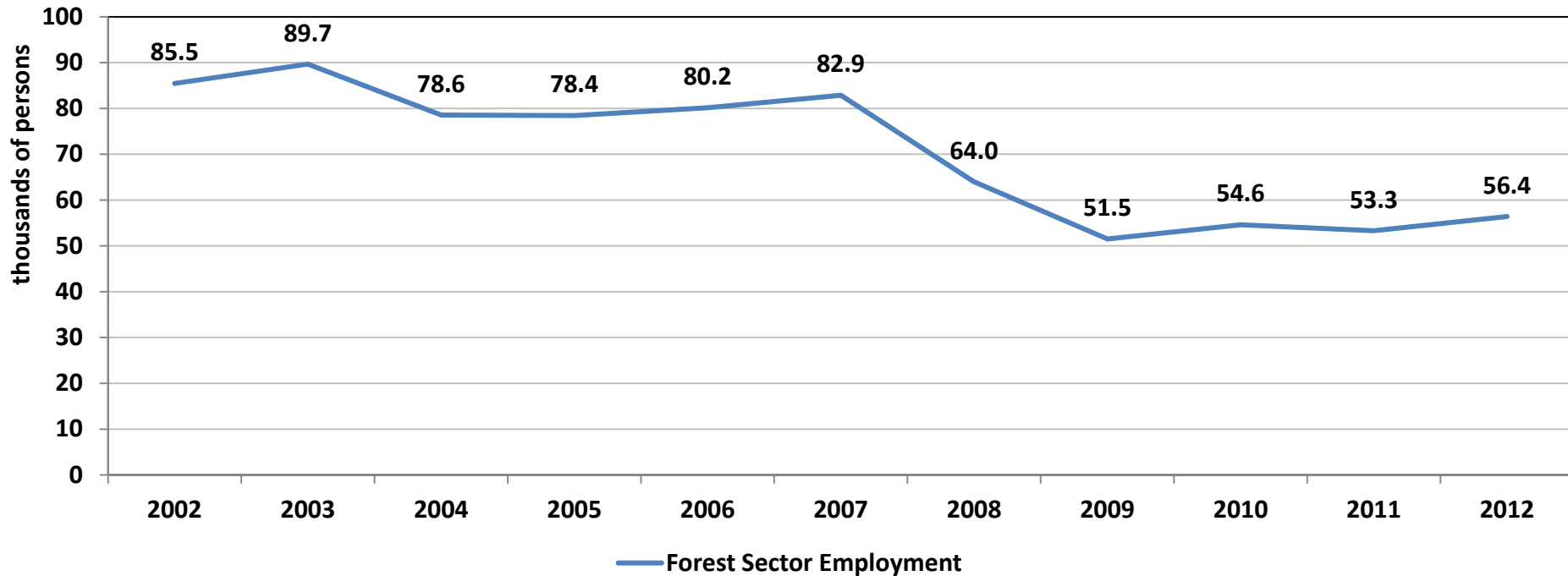
## Forest Sector's Share of the B.C. Economy



Data source: Statistics Canada. Based on current dollar data. 2010 is the latest available year.

**Overview Indicator 2 – In 2010, the forest sector accounted for 2.9% of the province’s gross domestic product (GDP) and 12.6% of goods-producing industries. 2009 was the height of the recession for the B.C. forest sector.**

## B.C. Forest Sector Direct Employment



Data source: Statistics Canada, Labour Force Survey. Includes Wood Product Manufacturing and Paper Manufacturing, and Forestry and Logging with support activities.

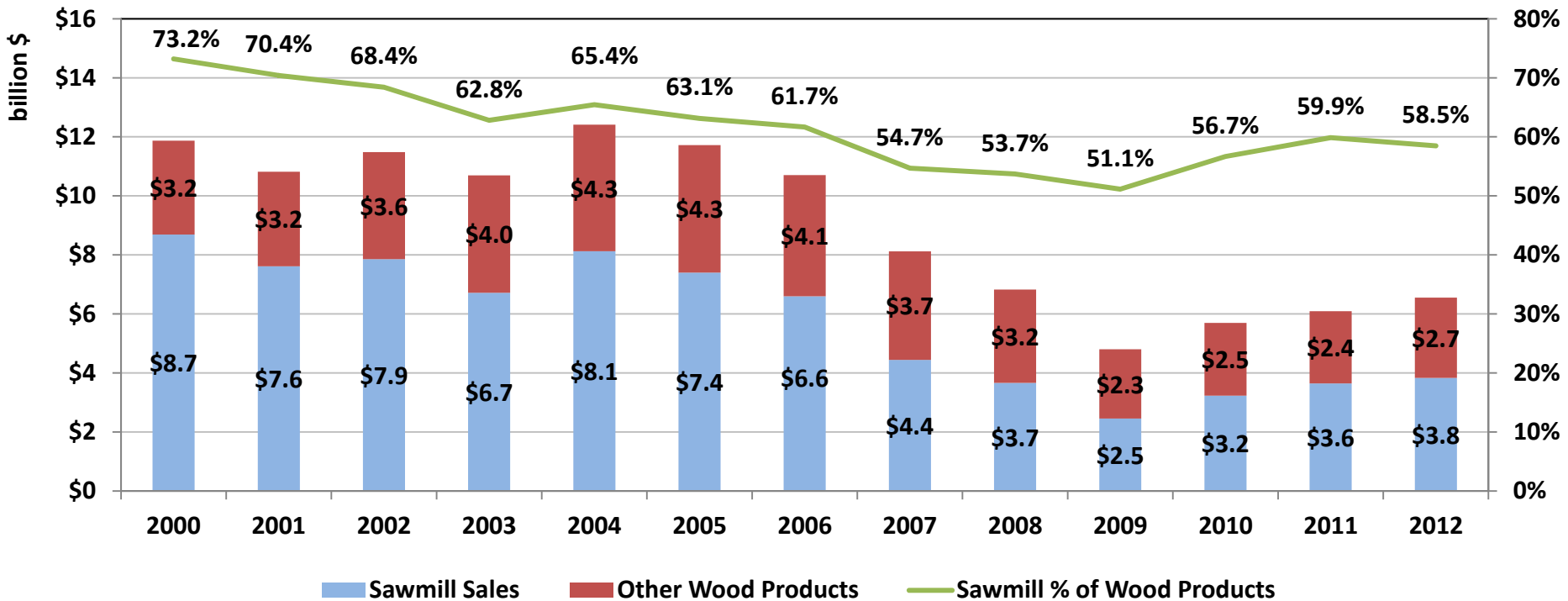
**Overview Indicator 3 – B.C. forest sector direct employment was 56,400 in 2012, up 6% from 2011 and 10% from 2009, and accounted for 2.4% of B.C. all-industry employment. Since 2002, forest sector employment has decreased by roughly 34%.**

## Products

- ❖ **Wood Products, especially Lumber:** In 2012, B.C. produced 29.0 million cubic metres of lumber, or 53% of Canada's total softwood lumber production. B.C. sawmill sales (primarily lumber) were \$3.8 billion\* in 2012, or 58% of Wood Product Manufacturing sales.
- ❖ **Pulp and Paper Products, especially Market Pulp:** B.C. pulp mills sold 4.5 million tonnes of market pulp for \$2.5 billion in 2012, or 61% of Paper Manufacturing sales.
- ❖ **Logs:** In 2012, 67.5 million cubic metres of logs were harvested. Exports of 5.7 million cubic metres (8%), mostly from coastal areas, were sold for \$0.6 billion.
- ❖ **Energy Products:** In 2012, about 25% of the total biomass harvested was used to generate energy. B.C. exported 1.2 million tonnes of wood pellets, more than any other province.



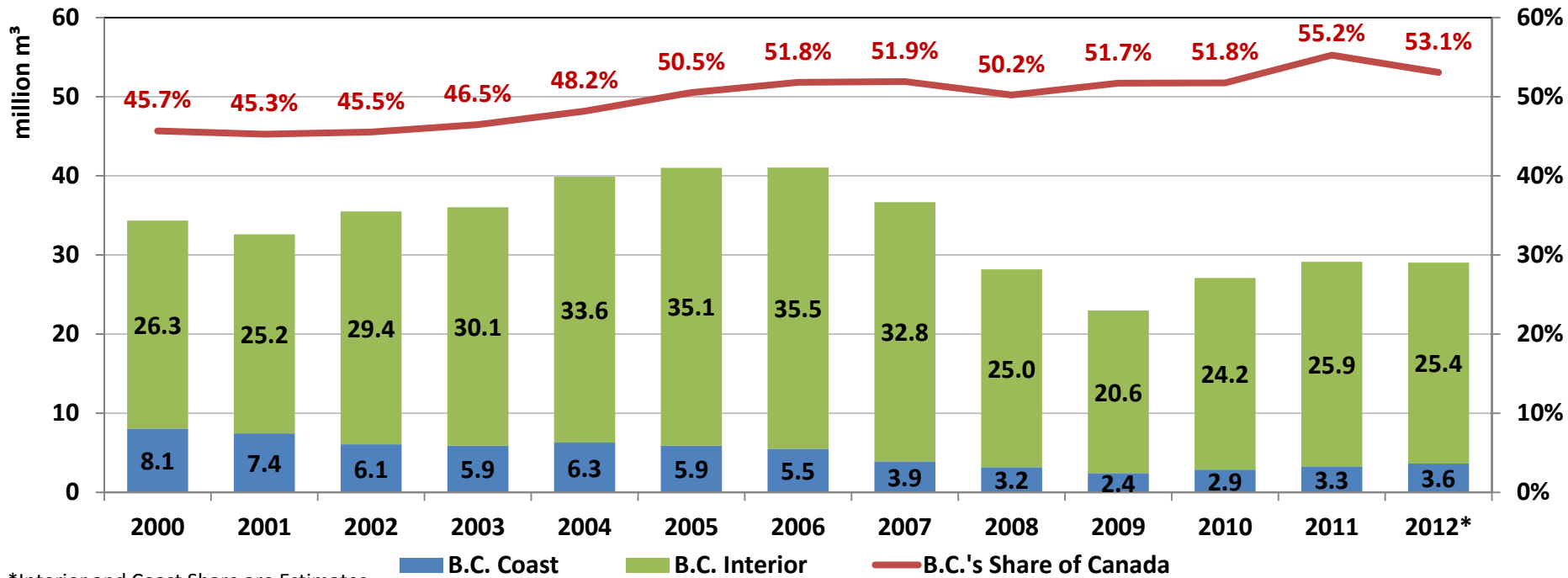
## B.C. Wood Product Manufacturing Sales



Data source: Statistics Canada. Sawmill sales are primarily lumber, and include chip and sawdust sales. Other wood products include veneer, plywood, oriented strand board, shake and shingles, and wood pellets.

**Products – Wood Products – Wood Product Manufacturing sales totaled about \$6.6 billion in 2012. Sawmill sales accounted for 58% of Wood Product Manufacturing sales. From 2011 to 2012, sawmill sales increased 5% and other wood products increased 11%.**

## B.C. Softwood Lumber Production

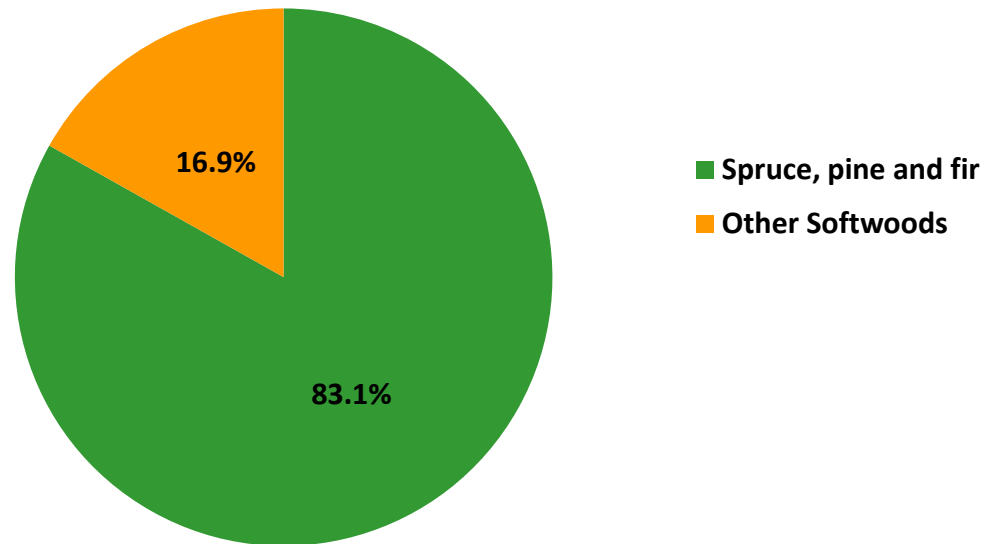


\*Interior and Coast Share are Estimates

Data source: Statistics Canada.

**Products – Softwood Lumber** – Softwood lumber production volume held steady in 2012. B.C.'s share of Canada's lumber output increased to more than half over the past decade. The Coast accounted for 12% of B.C. production, down from 24% in 2000.

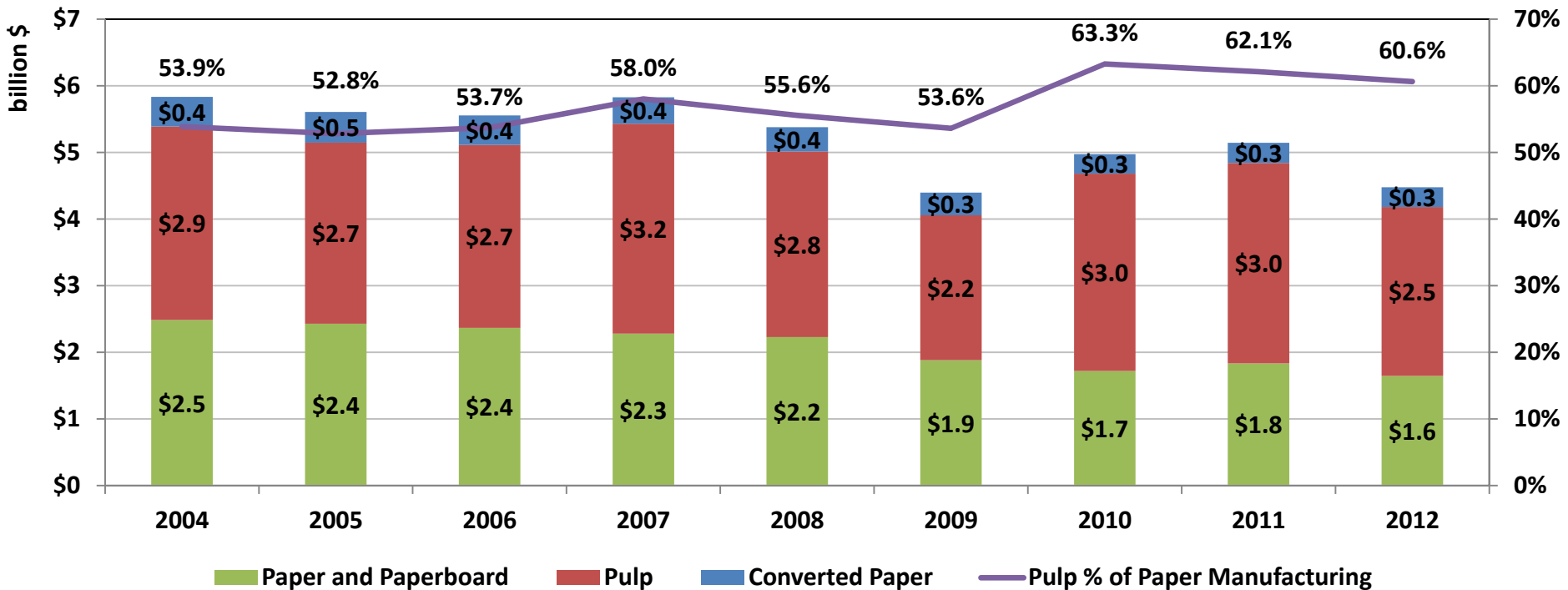
## B.C. Softwood Lumber Production (29.0 million m<sup>3</sup>) Share by Species, 2012



Data source: Statistics Canada, based on volume in cubic metres. Total lumber production was 29,043,000 m<sup>3</sup>.

**Products – Softwood Lumber – In 2012, 83% of softwood lumber production volume was spruce, pine or fir, and 17% was from other species such as cedar and Douglas fir.**

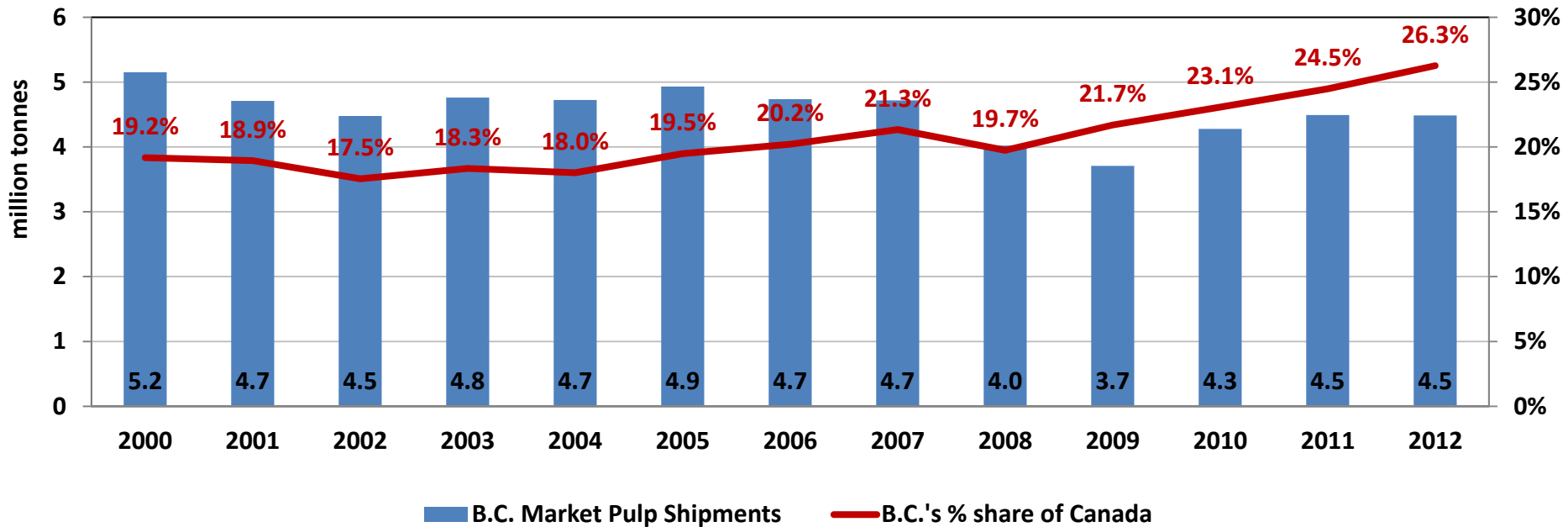
## B.C. Paper Manufacturing Sales



Data source: Statistics Canada.

**Products – Pulp and Paper** – Paper Manufacturing sales totaled about \$4.5 billion in 2012. Pulp decreased 16% from 2011 to 2012, but still accounted for 61% Paper Manufacturing sales. Paper and Paperboard sales trended down 34% since 2004.

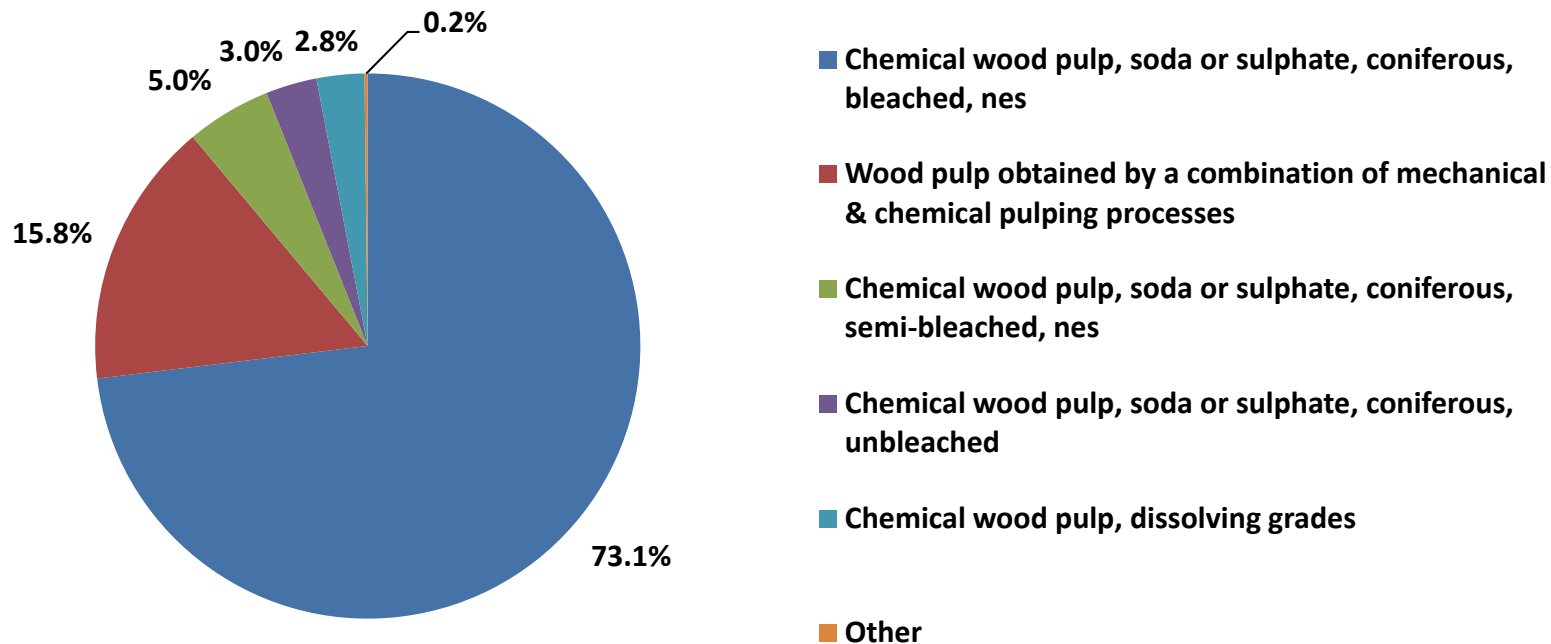
## B.C. Market Pulp Shipments and Share of Canadian Shipments



Data source: B.C. Stats and the Canadian Forest Service.

**Products – Pulp** – B.C.'s market pulp shipments in 2012 were unchanged from 2011. B.C.'s share of Canadian shipments increased over the past decade due to decreases in other provinces. Compared with lumber, market pulp shipments were quite stable over the past decade.

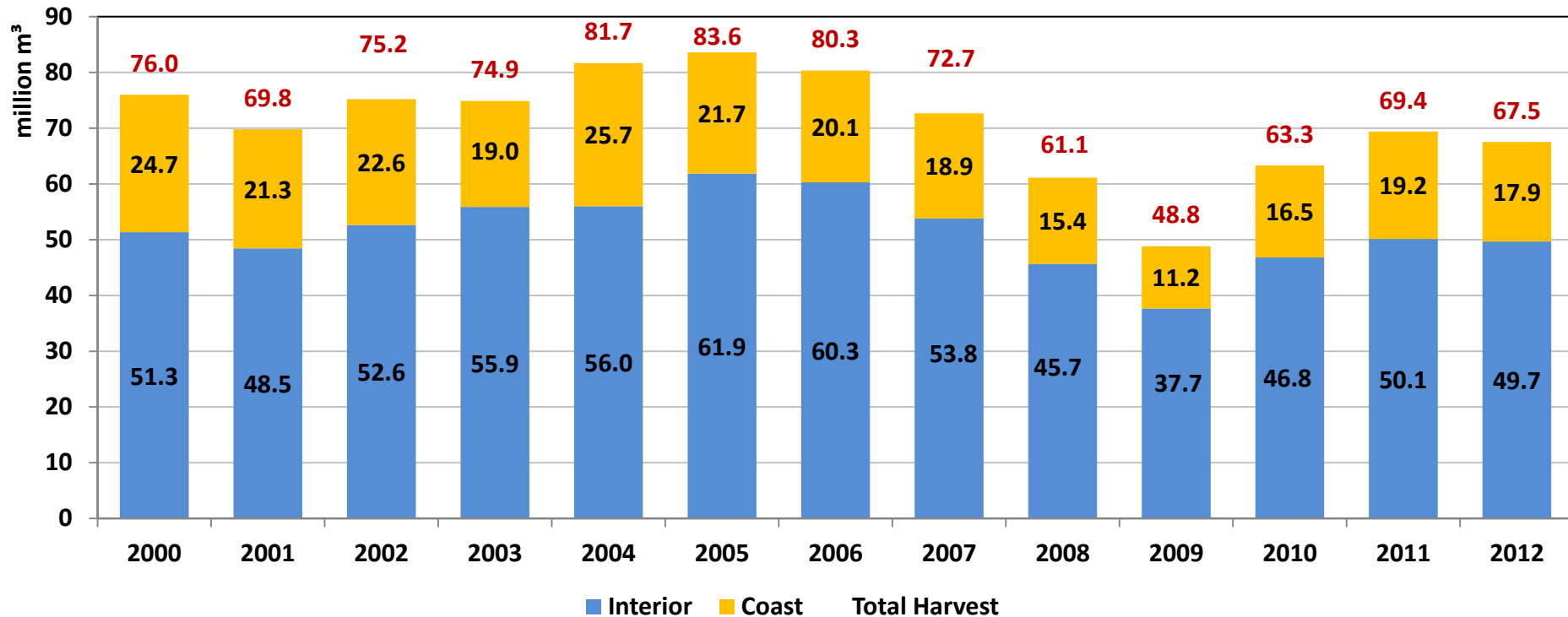
## B.C. Pulp Export (4.5 million t) Share by Product, 2012



Data source: Statistics Canada. Based on air dry tonnes. Exports of 4.45 million tonnes account for 99% of the 4.49 million tonnes of market pulp shipments.

**Products – Pulp – Bleached sulphate (kraft) pulp dominates B.C.'s pulp exports. High-value dissolving pulp accounts for 2.8% of the export volume and 5.3% of export value.**

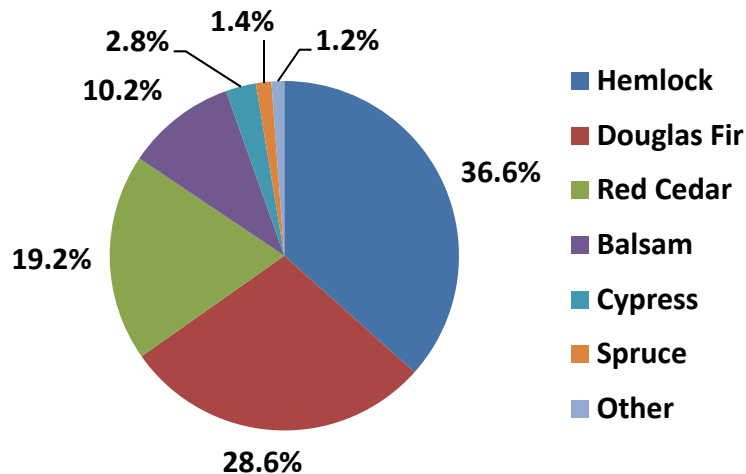
## B.C. Timber Harvest Volume



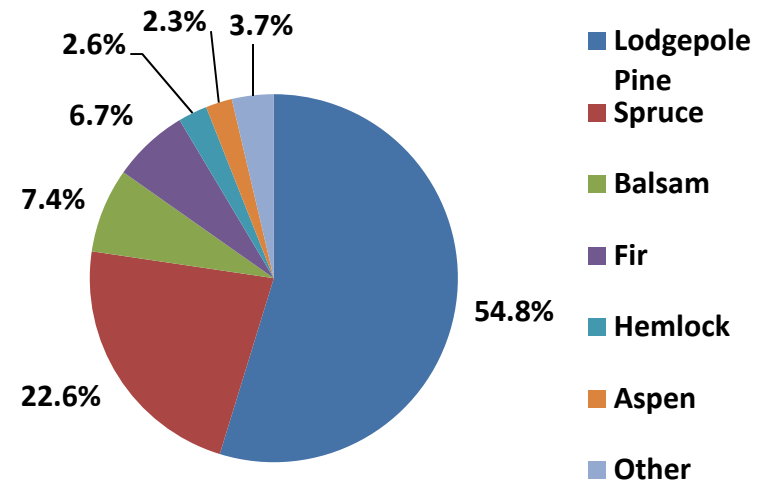
Data source: FLNRO. All logs, special forest products, species and grades billed excluding waste, reject and Christmas trees, data run on March 1, 2013. Includes both Crown and Private lands.

**Products – Logs – Total harvest volume (67.5 million m<sup>3</sup>) was down 3% from 2011 and up 38% from 2009. The Interior accounted for 74% of the harvest, and the Coast for 26%.**

## Coast Harvest Volume Share by Species, 2012



## Interior Harvest Volume Share by Species, 2012

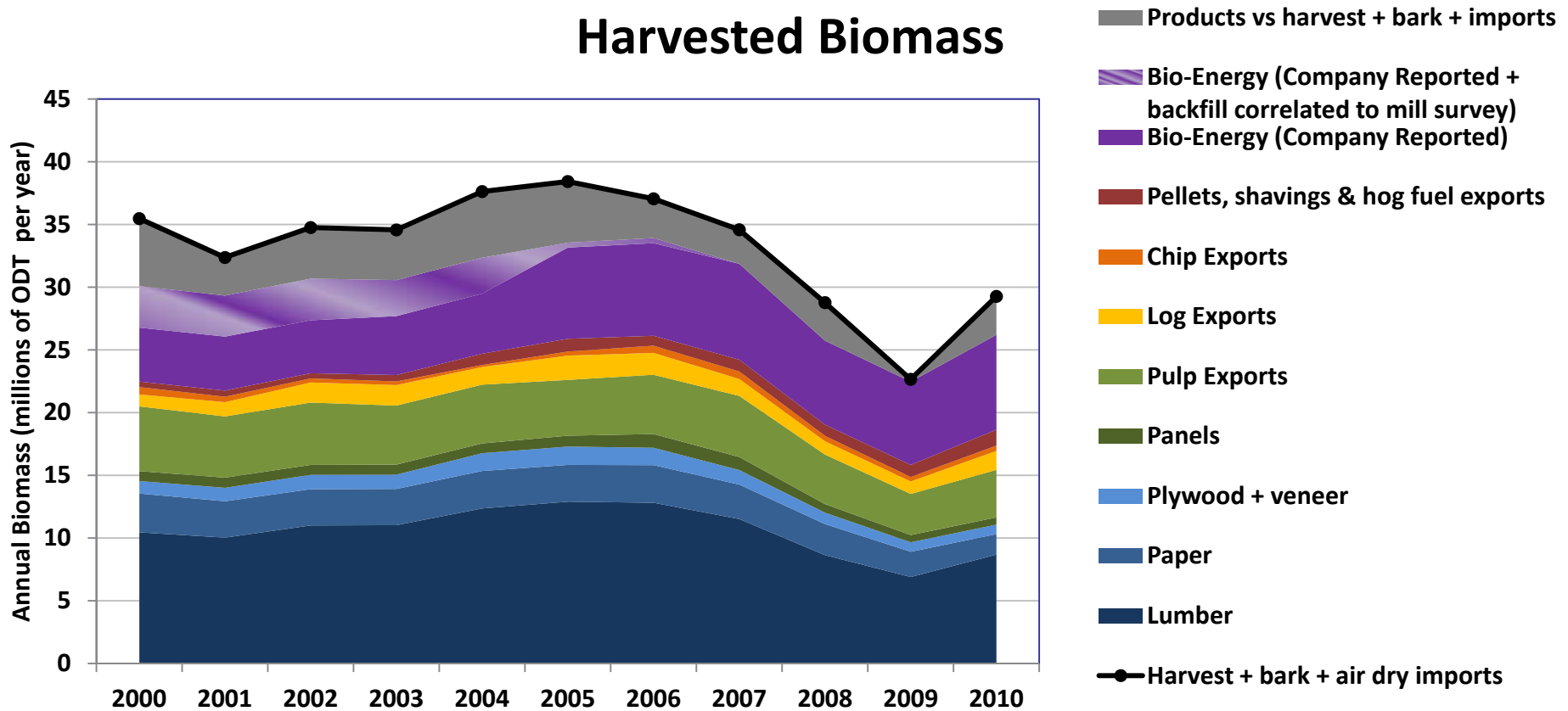


Data source: FLNRO.

**Products – Logs – Hemlock and Douglas fir make up more than half the harvest on the Coast. In the Interior the main species is lodgepole pine, followed by spruce.**



## Harvested Biomass



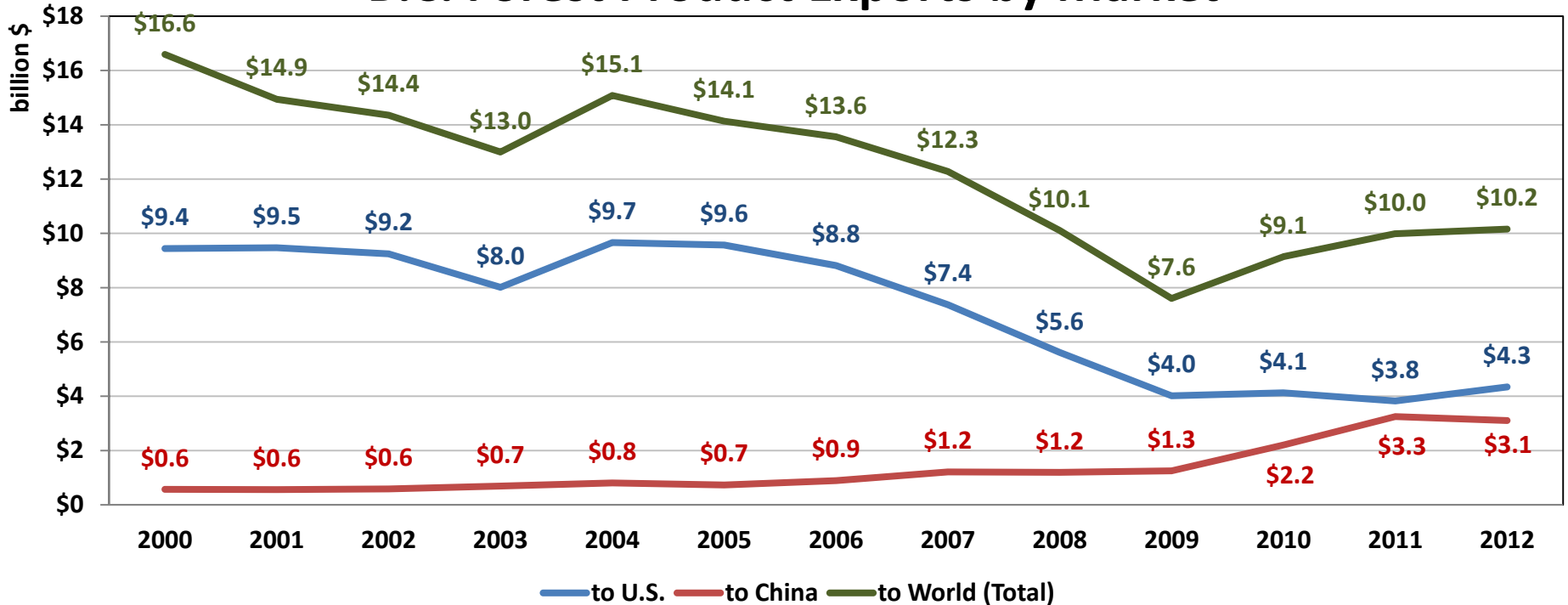
Data source: FLNRO. ODT stands for Oven Dried Tonne.

**Products – Energy Products – In 2010, harvested biomass was used mostly for lumber (8.7 million tonnes of wood), bio-energy (7.5 million tonnes, including bark), and pulp and paper (5.4 million tonnes). Almost all thermal energy produced from biomass was consumed on site for manufacturing. Enough electrical energy for almost 150,000 homes was produced, of which half was sold off-site.**

## Markets

- ❖ **The U.S., China and Japan** are the top three export markets for the B.C. forest sector.
- ❖ **The U.S. is the largest**, but has decreased considerably since 2005.
- ❖ **China has increased** substantially since 2006 and is now in a strong second place.
- ❖ **Japan has decreased** since the late 1990s and remains in 3<sup>rd</sup> place since 2009.
- ❖ Other export markets and domestic sales each equalled about half the value of exports to China in 2012.

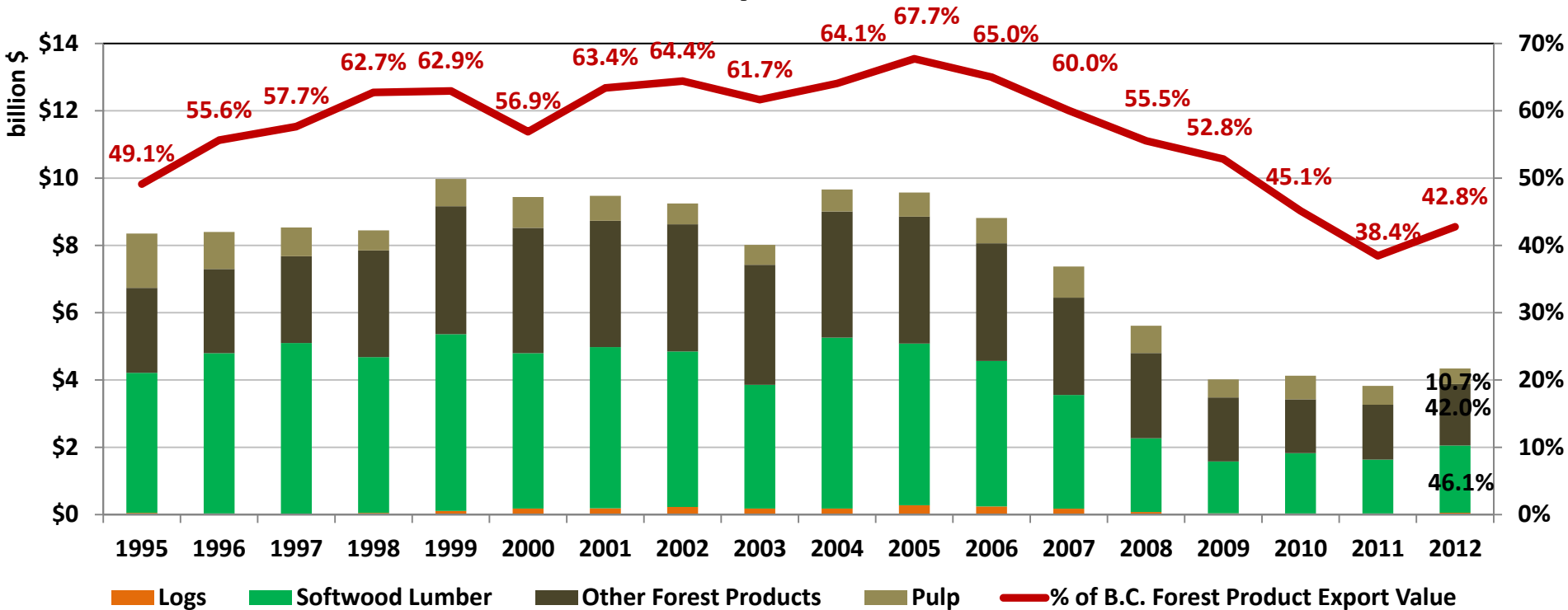
## B.C. Forest Product Exports by Market



Data source: B.C. Stats.

**Markets** – The U.S. was the #1 export market by value, even after the U.S. housing market crashed. China became the #2 market in 2009 and was the key driver of the forest sector’s improvement in 2010 and 2011. Japan was #2 for many years before 2009 and is now #3.

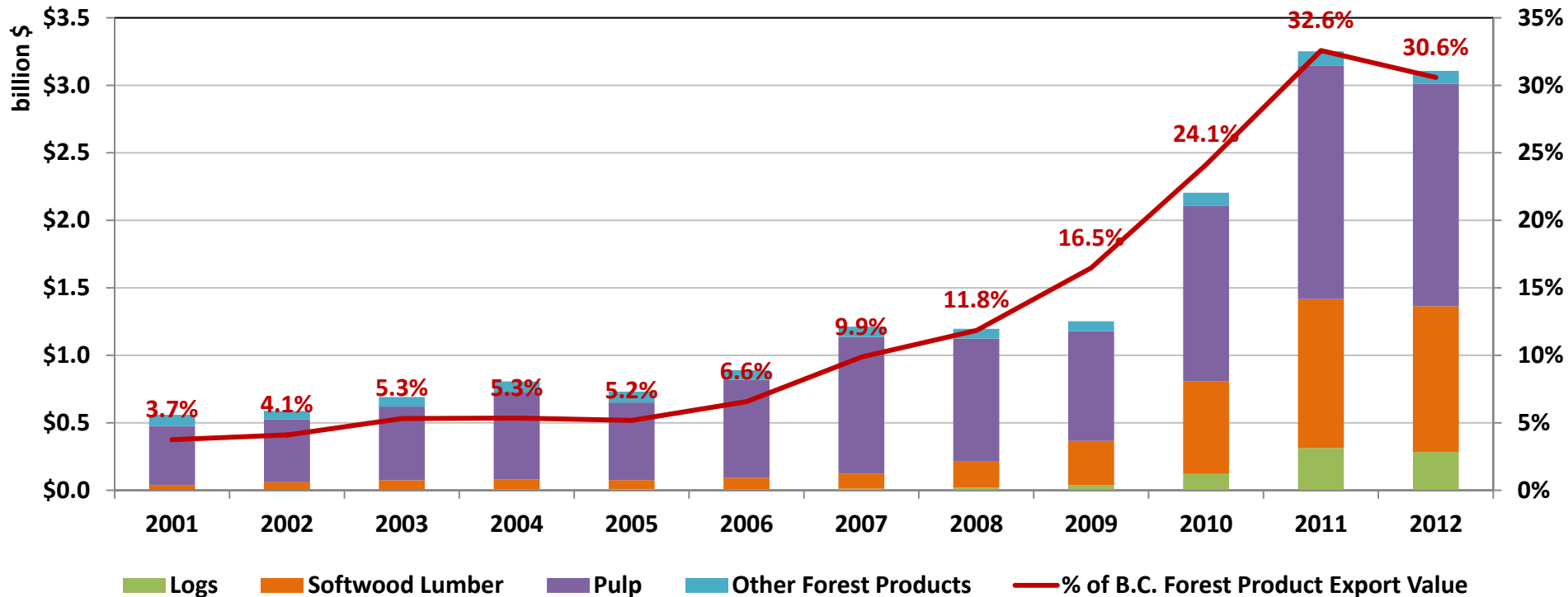
## B.C. Forest Product Exports to the United States



Data source: B.C. Stats.

**Markets – U.S.** – The U.S. is B.C.’s largest market. Exports to the U.S. increased 14% in 2012. The U.S.’s share of B.C.’s forest product exports decreased from a high of 68% in 2005 to 43% in 2012.

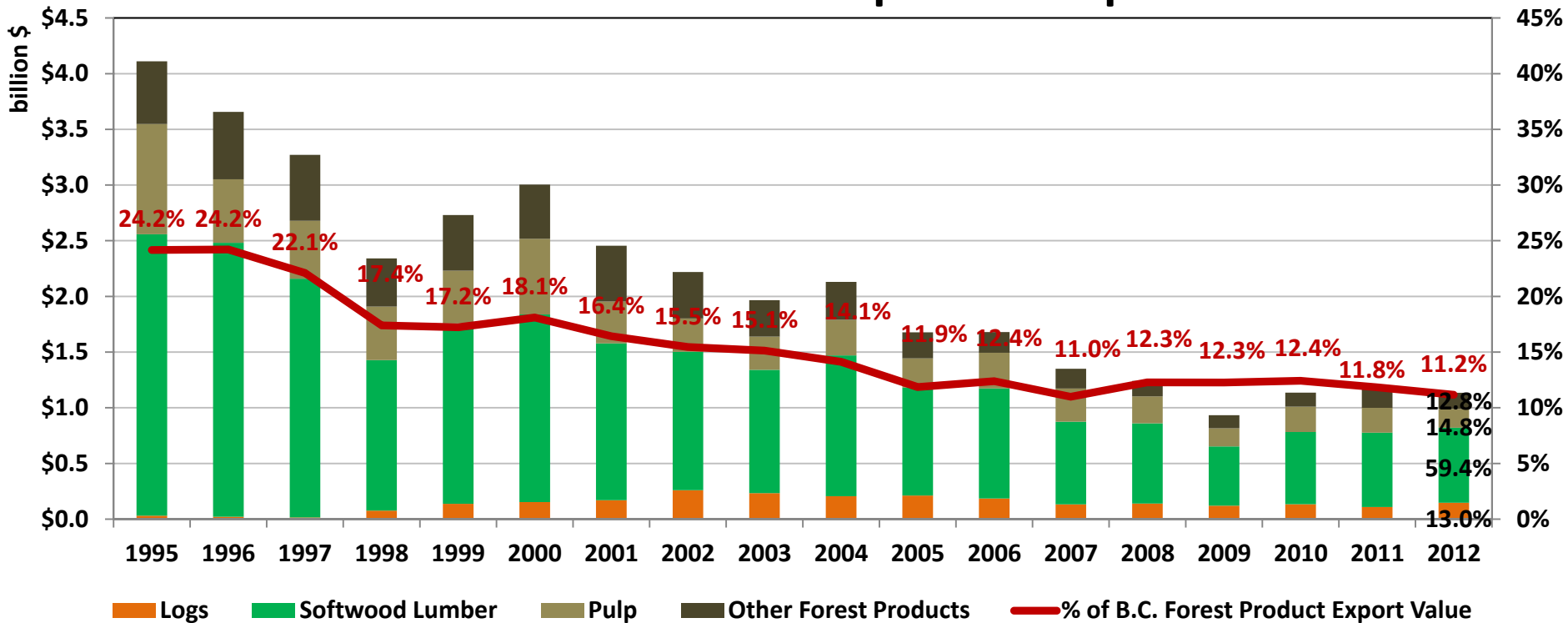
## B.C. Forest Product Exports to China



Data source: B.C. Stats.

**Markets – China** – B.C. forest product exports to China stabilized in 2012. Lumber and log exports grew the fastest in recent years, in response to Russia restricting log exports, but pulp still dominated with 53% of the value of B.C. exports to China.

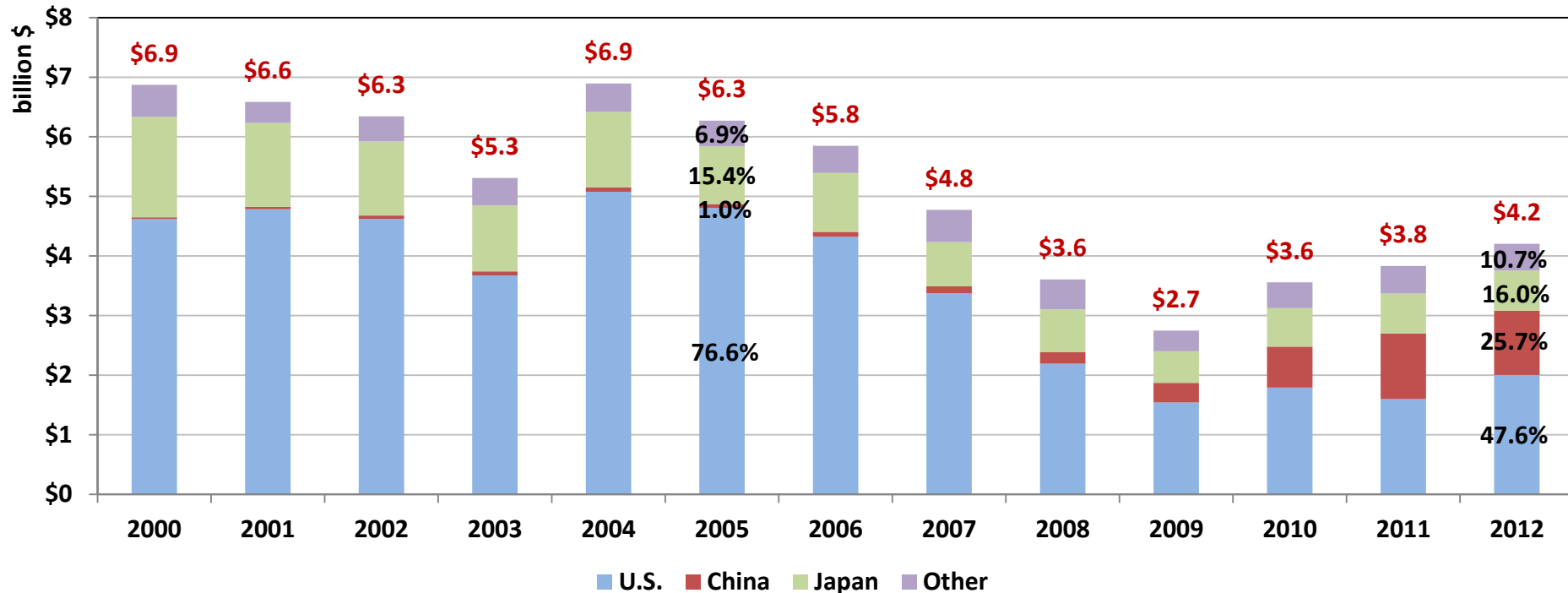
## B.C. Forest Product Exports to Japan



Data source: B.C. Stats.

**Markets – Japan** – B.C.’s exports to Japan decreased about 75% from the peak years in the mid-1990s, but have been relatively steady in recent years. Lumber has the highest share of value with 59% in 2012.

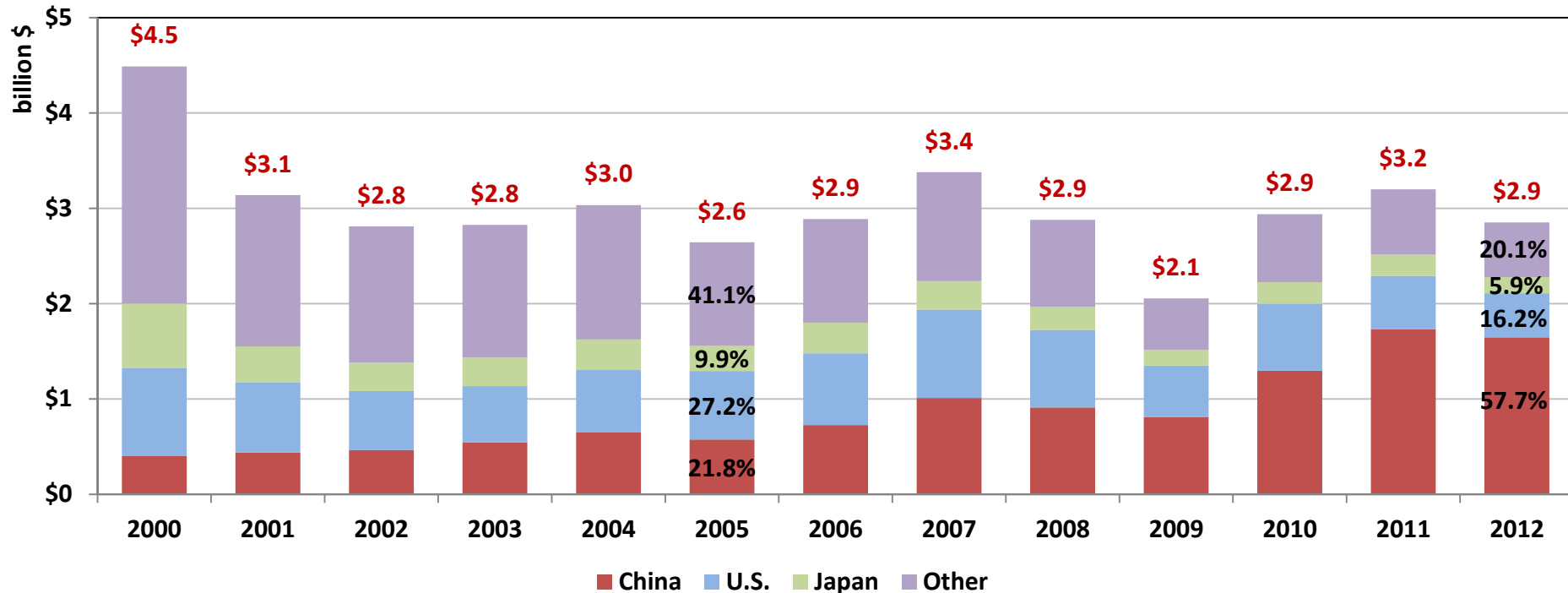
## B.C. Softwood Lumber Exports by Market



Data source: B.C. Stats.

**Markets – Softwood Lumber** – Over the past decade, B.C.’s export markets changed from U.S.-dominated to a more even distribution among the U.S., China and Japan.

## B.C. Pulp Exports by Market

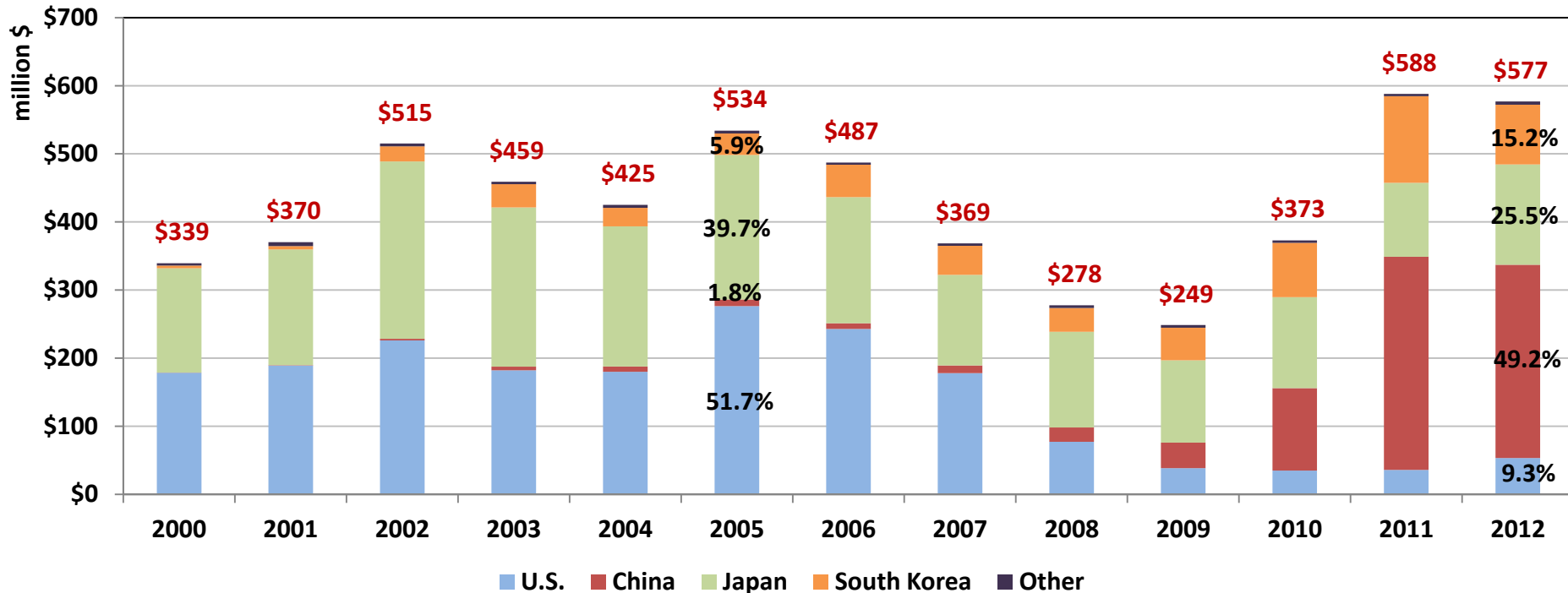


Data source: Statistics Canada.

**Markets – Pulp** – China had a dominant 58% share of B.C. pulp exports in 2012, followed by the U.S. (16%), Japan (6%) and other destinations (20%). Over the past decade, exports to China have tripled while exports to Europe and other nations have shrunk.



## B.C. Log Exports by Market



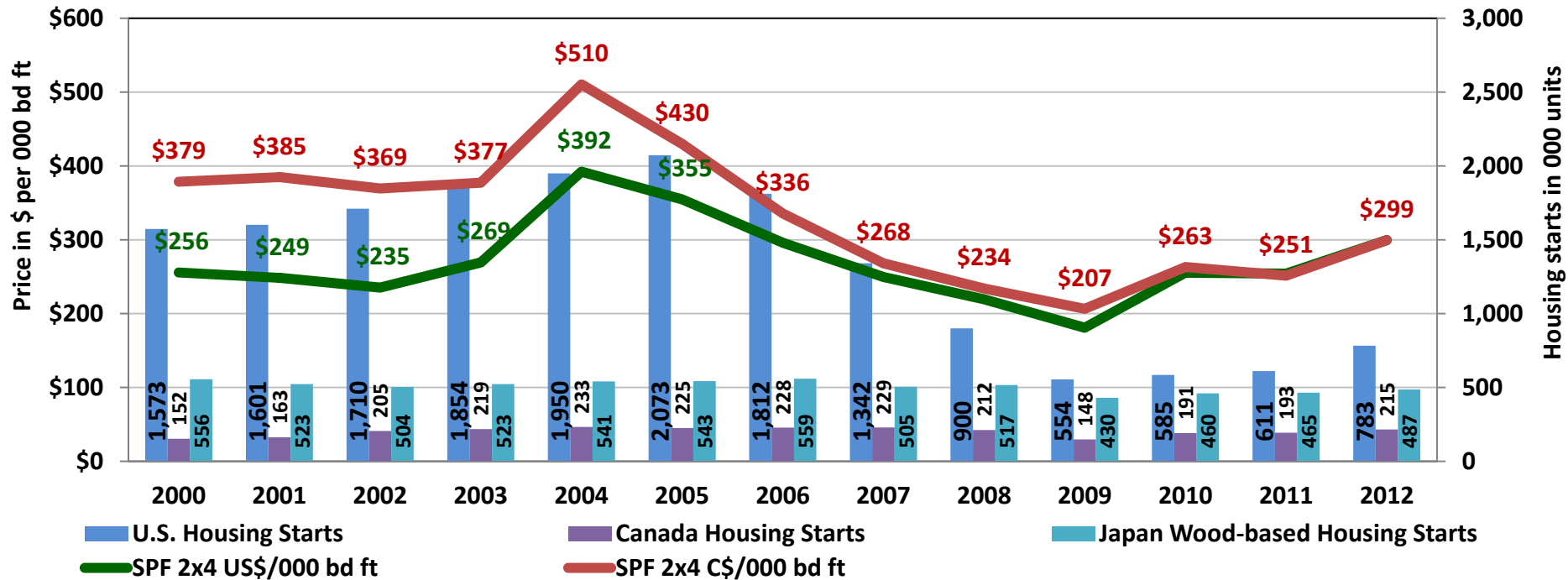
Data source: B.C. Stats.

**Markets – Logs** – The value of log exports stabilized in 2012. China remained the largest destination. South Korea took fewer logs, while the U.S. and Japan took more than in 2011. Over the past decade, China replaced the U.S. as the main log export market.

## Competitiveness

- ❖ **Prices and Costs:** Over the past decade, B.C. forest sector companies faced rapidly changing product prices, currency exchange rates, and interest rates. Combined with comparatively high production costs, these factors created a challenging business environment.
- ❖ **Investment:** Forest sector investment in equipment and mills increased in 2012, reflecting increased confidence in the sector's future.
- ❖ **B.C.'s Share of Canadian Production:** B.C.'s increasing share reflected positively on the competitiveness of the B.C. forest sector within Canada.
- ❖ **Government Revenues:** Government revenues increased in 2012, but were still well below historical levels.

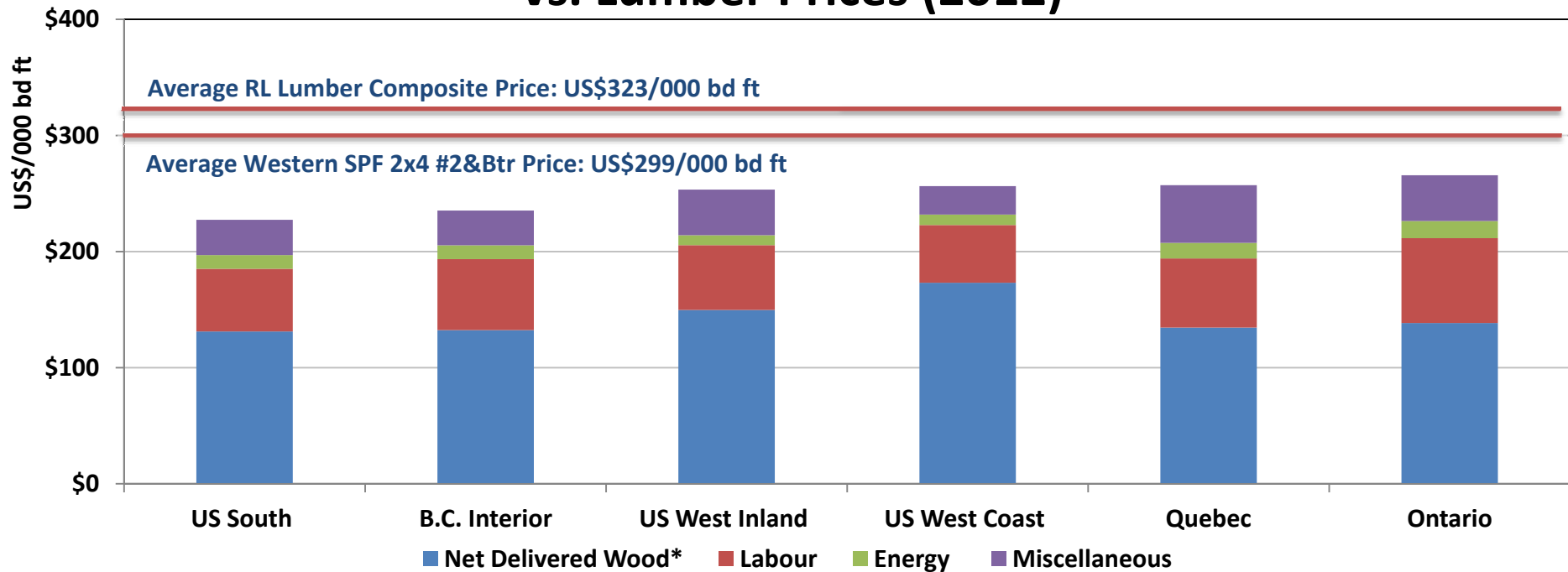
## SPF 2x4 Lumber Prices and Housing Starts



Data sources: Madison's, U.S. Census Bureau, JAWIC and Statistics Canada.

**Prices and Costs – North America's housing market improved in 2012, but housing starts were still low. It may take several more years for the U.S. housing market to recover to historical levels. Lumber prices recovered in US\$ but, due to the rising C\$, the value to B.C. mills was still low.**

## Softwood Lumber Mills' Variable Costs (2012) vs. Lumber Prices (2012)

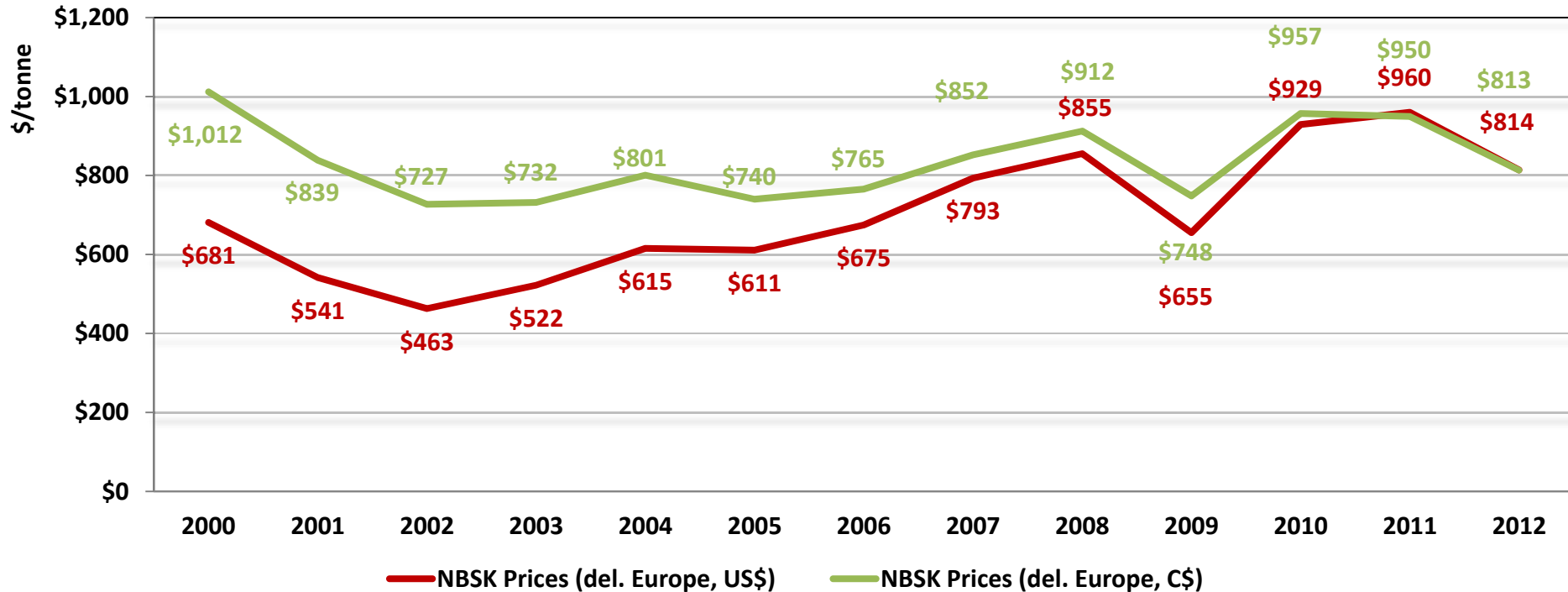


\* = Delivered Wood - Residual Income

Data source: Costs are from Forest Economic Advisors publications, and prices are from Random Lengths publications.

**Prices and Costs – In 2012, B.C. Interior softwood lumber mills had the second lowest variable costs, just 3.5% above the lowest cost U.S. South. In 2011, the B.C. Interior was lowest cost region, but in 2012 it moved to second primarily due to increased delivered wood cost.**

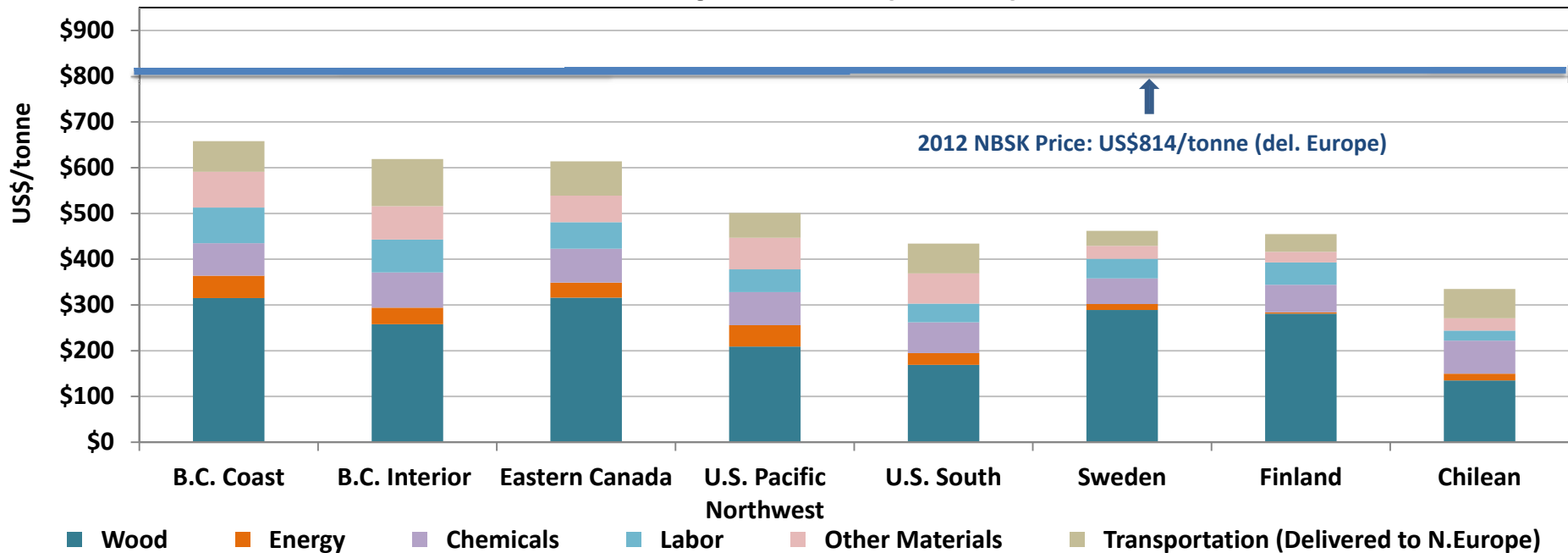
## Market Pulp Prices



Data source: FOEX.

**Prices and Costs – Pricing of pulp in U.S. dollars provided B.C. producers with a foreign exchange profit that has disappeared in recent years. High costs of production are now more difficult to cover.**

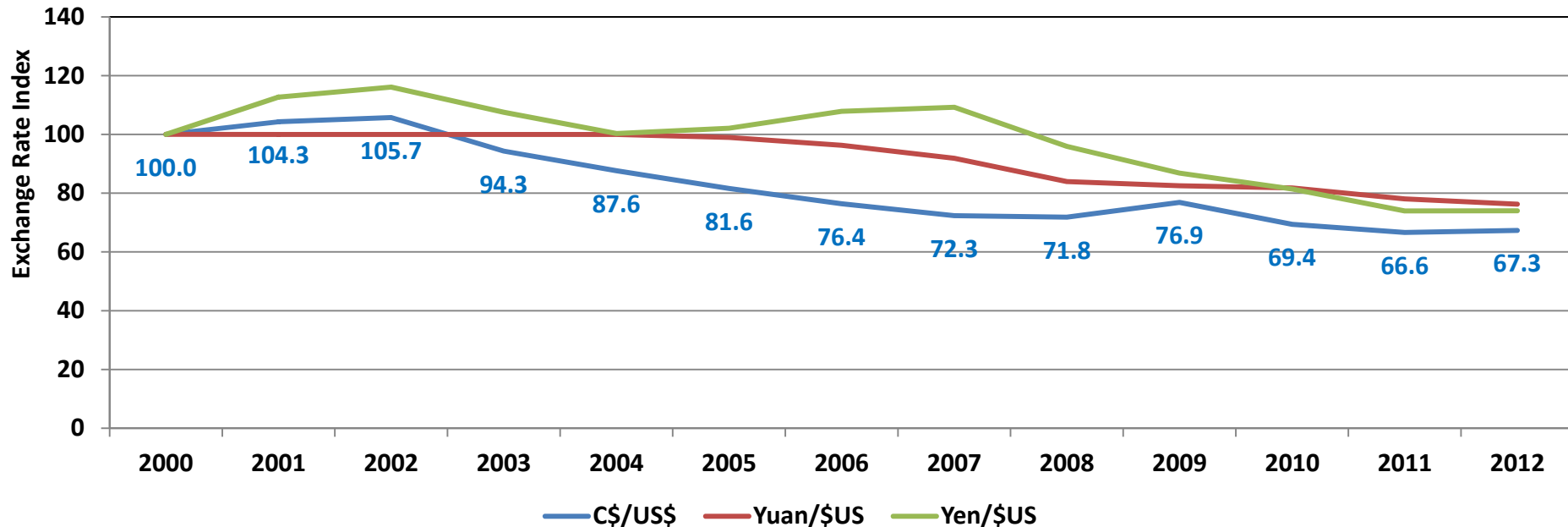
## Market Pulp Mills' Variable Costs (2009) vs. Pulp Prices (2012)



Data source: FLNRO 's past data from RISI (costs), FOEX (prices).

**Prices and Costs – In 2009, B.C.'s Coast pulp mills had the highest average variable costs of production compared with four other North American regions and three international competitors. Interior pulp mills had the second highest costs.**

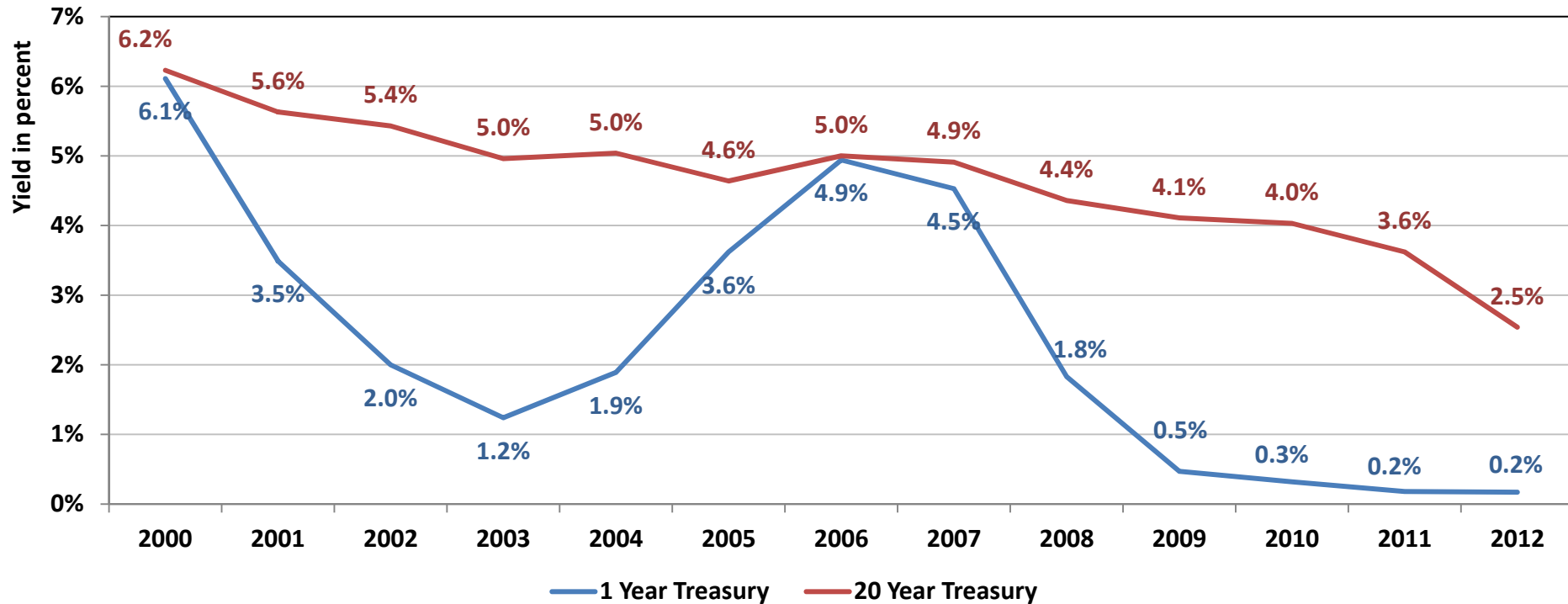
## US\$ Exchange Rates Indexed to 2000



Data source: OANDA.

**Prices and Costs** – Over the past decade, the US\$ depreciated about 25% relative to the Chinese Yuan and Japanese Yen, and about 33% relative to the C\$. North American forest products are generally priced in US\$, so Chinese and Japanese buyers found it easier to buy them. B.C. forest sector producers, however, earned fewer C\$, making it more difficult to pay their input costs priced in C\$.

## U.S. Treasury Bill Yields

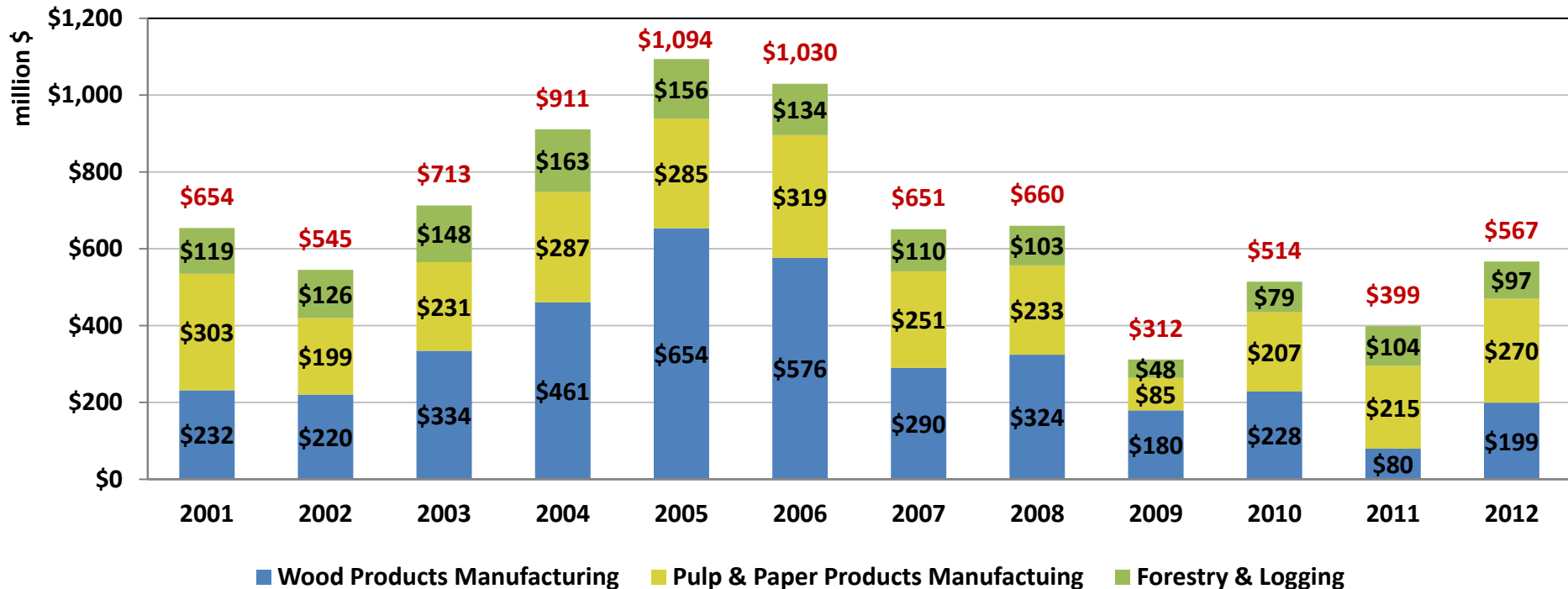


Data source: OANDA.

**Prices and Costs** – The cost of borrowing decreased to record lows over the last decade. Low short-term rates in the early 2000s contributed to the U.S. housing bubble of 2004–2005. After the financial crisis of 2008, short and long-term rates were lowered to stimulate the housing market and investments by industries.



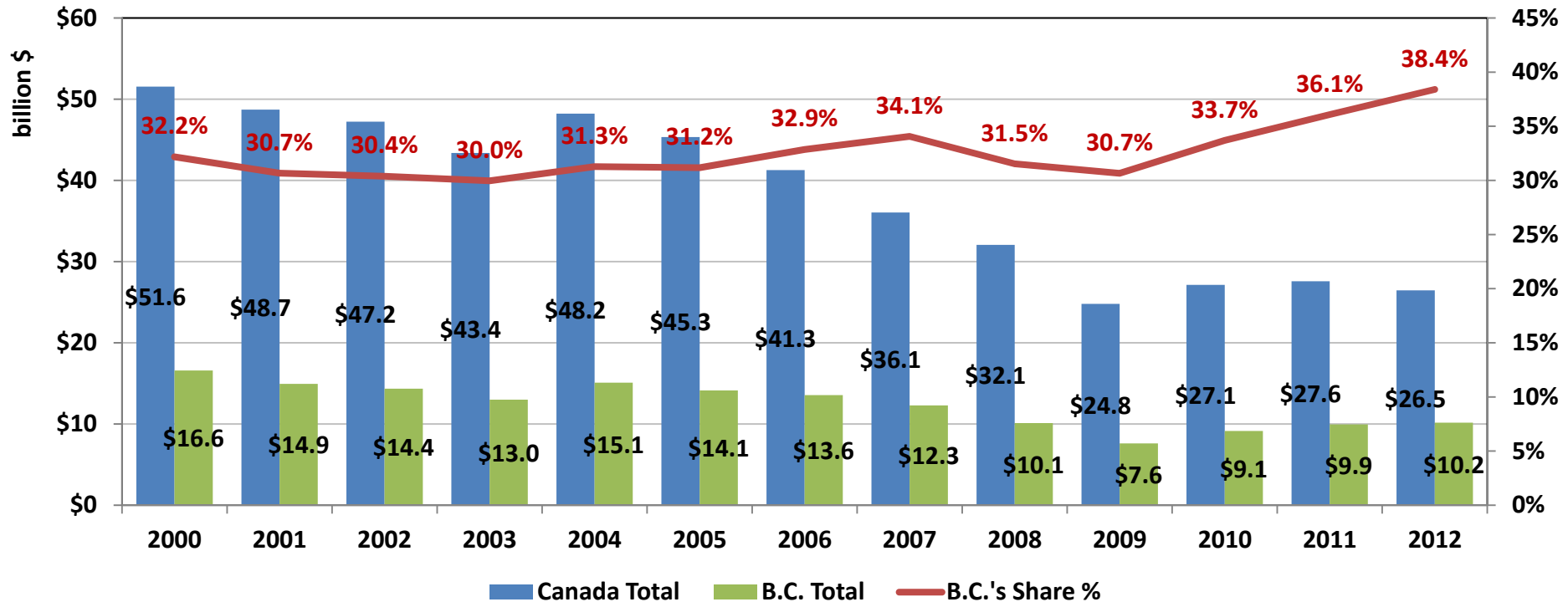
## B.C. Forest Sector Capital Expenditures



Data source: Statistics Canada. Preliminary, actual data for 2012.

**Investment** – B.C. forest sector capital expenditures (\$567 million) increased 42% from 2011, and were up 82% from 2009. Paper Manufacturing accounted for 48% of the total, followed by Wood Product Manufacturing (35%) and Forestry & Logging (17%).

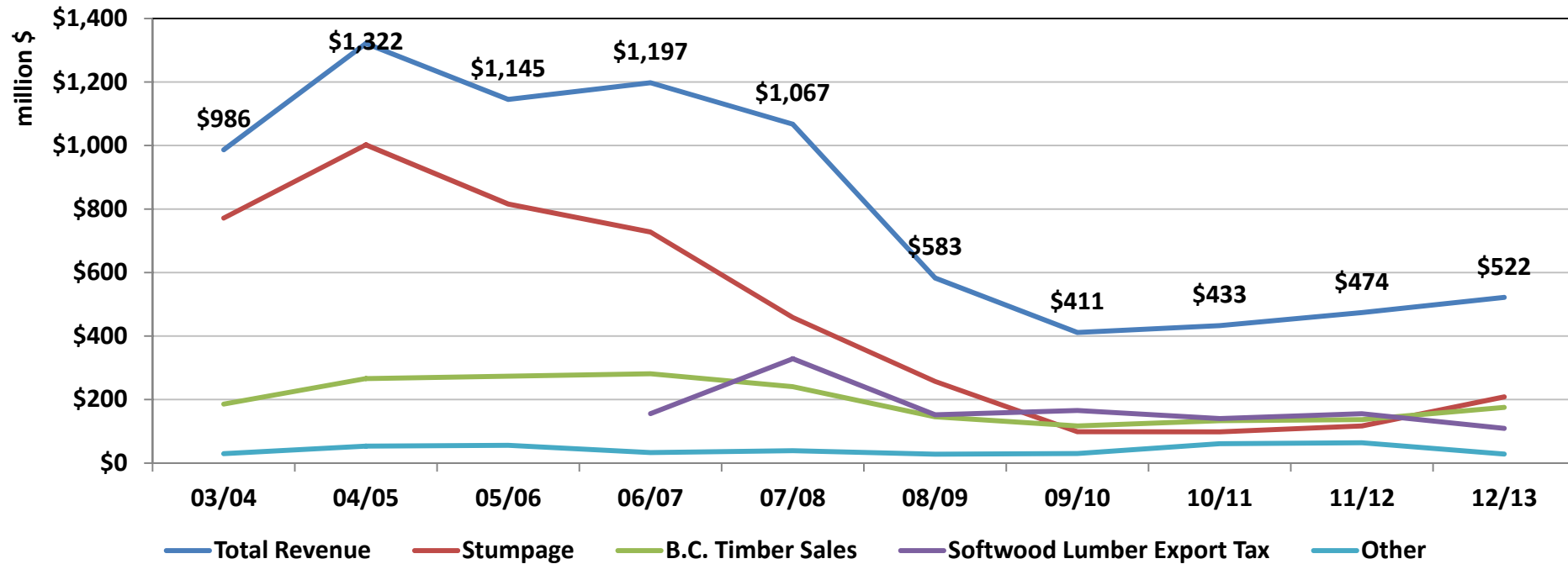
## Forest Product Exports: B.C. and Canada



Data source: Statistics Canada.

**B.C.'s Share** – B.C. forest sector exports improved after the 2009 low faster than the rest of Canada, mainly due to B.C.'s promotion in and access to China, and reduced allowable harvests in Ontario and Quebec.

## B.C. Government Forest Sector Revenue, by Fiscal Year



Data source: FLNRO. Corporate and personal income taxes are not included in these figures.

**Government Revenues** – In 2012, the B.C. government received direct forest revenues estimated at \$522 million. Stumpage paid on harvested timber decreased from \$1 billion in 2004/05 to just under \$100 million in 2009/10 and 2010/11, and has since doubled to \$208 million in 2012/13.

## Outlook

- ❖ Lumber prices are expected to increase over the next several years with stronger demand (mainly from China and a recovering U.S. market) and weaker timber supply (Mountain Pine Beetle impacts).
- ❖ Pulp prices decreased from peak levels of over US\$1000/tonne in June 2011. Slow but steady price increases that began in the last few months of 2012 are expected to continue.
- ❖ Foreign market demand for wood pellets and logs is expected to continue to be strong.
- ❖ The U.S. economy, especially housing starts, showed signs of improvement in 2012. Further increases in the U.S. housing market are expected over the next few years.
- ❖ China continued as the world's largest importer of logs and lumber in 2012, and Chinese demand is projected to grow.

## Conclusions

- ❖ B.C.'s forest sector held relatively steady from 2011 to 2012 after improving from the severe low of 2009.
- ❖ Promotion in and access to China, along with log export restrictions in Russia, played a large role in the B.C. forest sector's improvement after 2009.
- ❖ B.C.'s forest product markets are diversifying with increasing shares for China while shares for the U.S. and Japan remain below earlier levels.
- ❖ More robust and diversified global demand would support further improvement in the B.C. forest sector.
- ❖ Innovations and investments in markets, products & technologies will make the sector more competitive.