



Forest Economic Advisors

Global Forest Product Market Outlook

Southern Forest Products Export Conference
Memphis
October 22nd, 2018



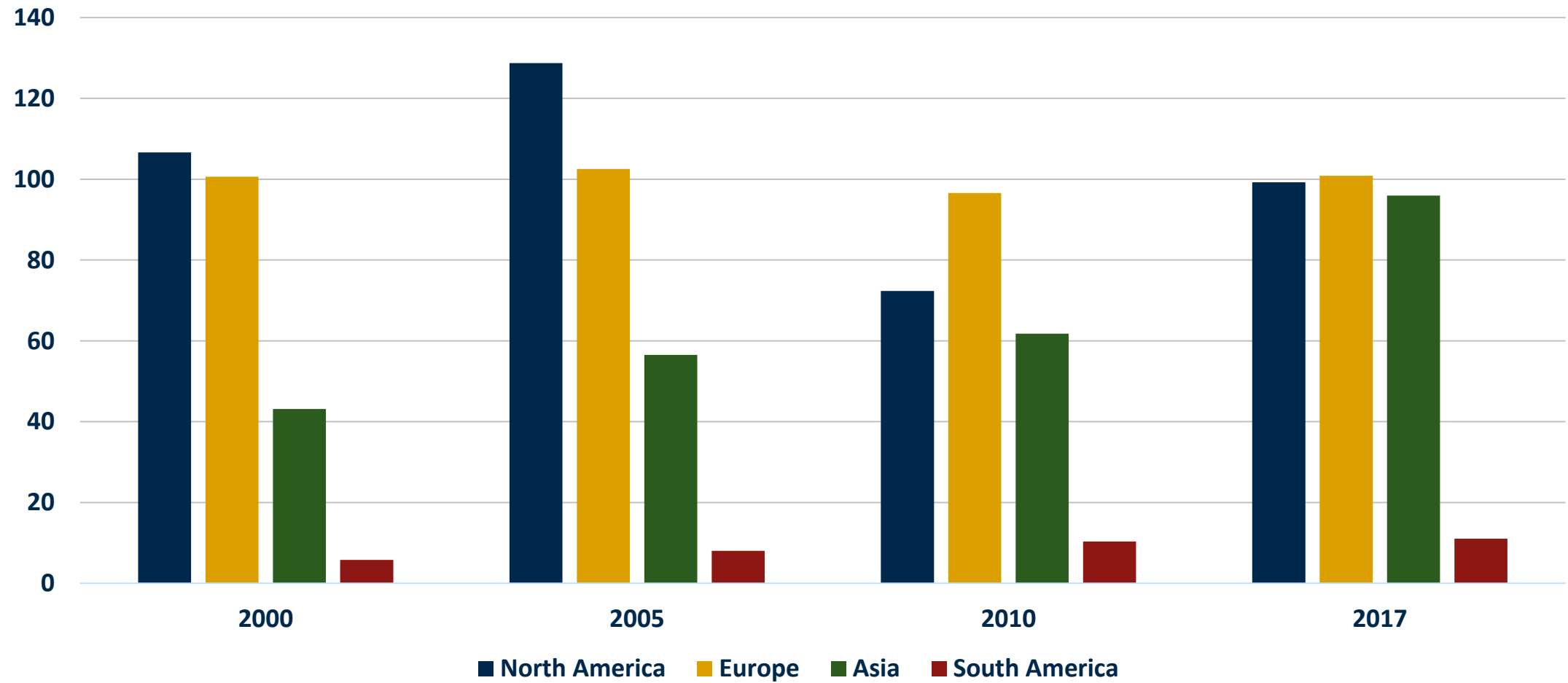
Agenda

- Review of Recent Trends in Global Forest Product Markets
- Update on the Current Events Affecting Trade
- Detail Competitive Headwinds Facing Exports from US South
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Major Regional Shift in Global Forest Product Consumption

Apparent Consumption of Softwood Lumber

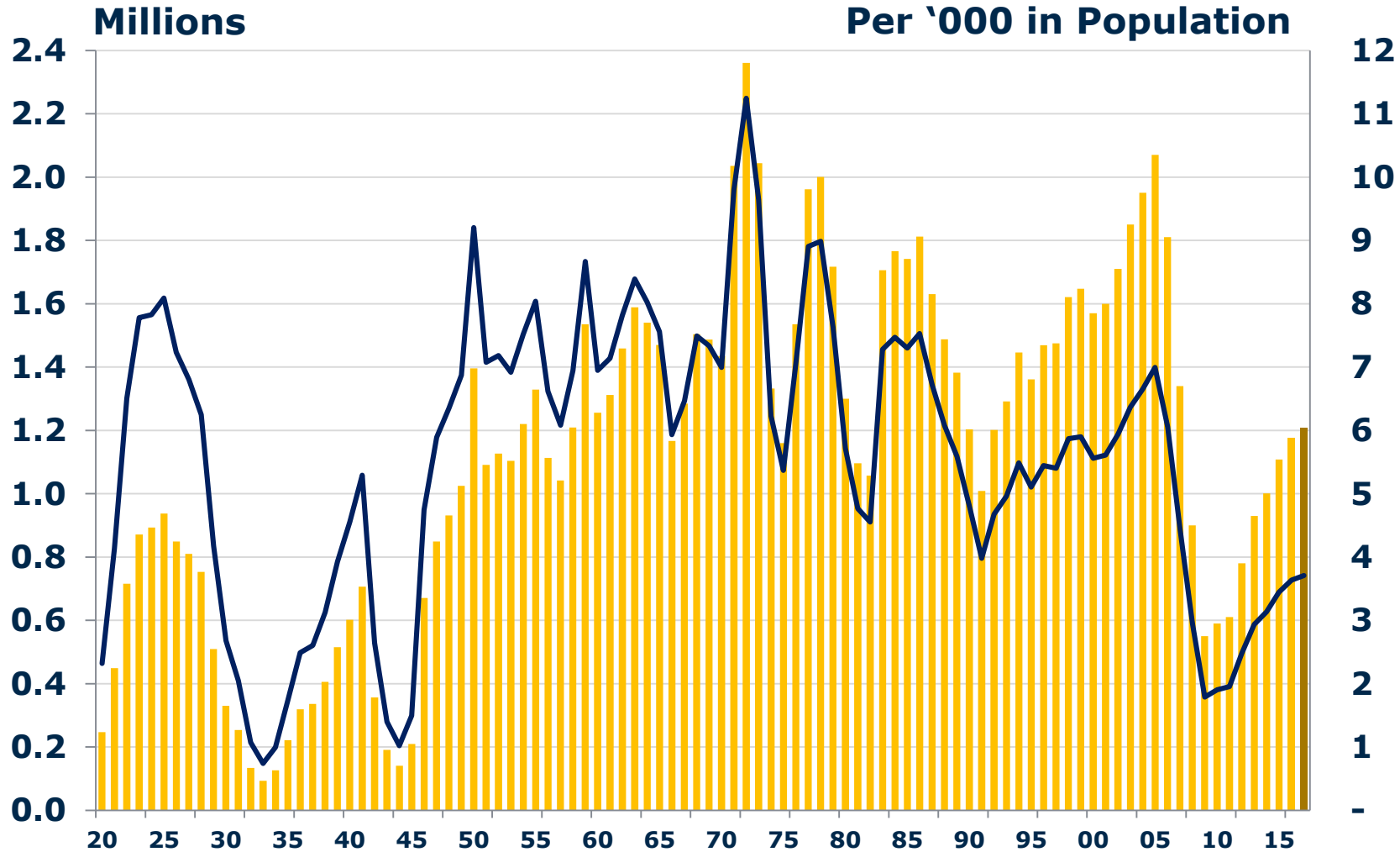
Million Cubic Meters



Source: FAOSTAT
www.getfea.com



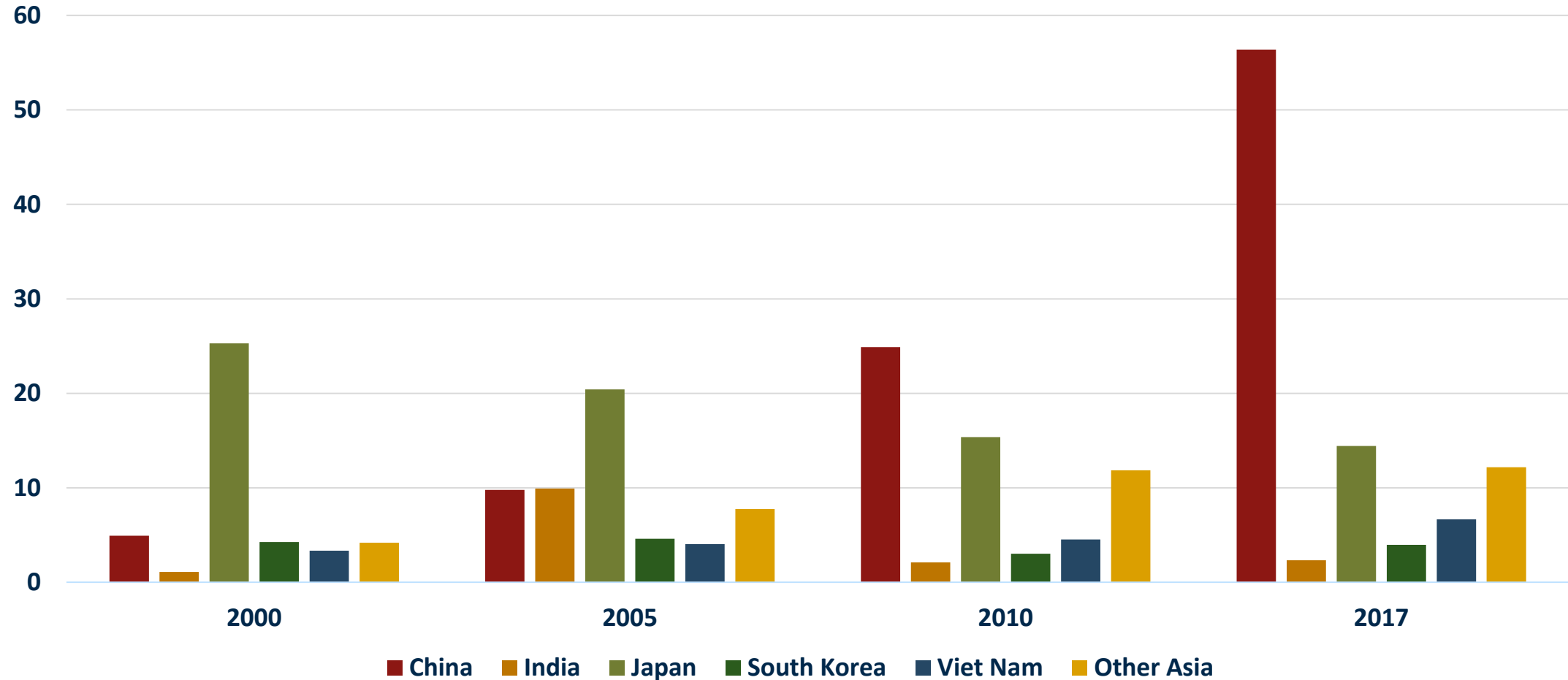
U.S. Housing Starts Remain Near Recession Levels



The Major Cause for the Regional Shift is China

Apparent Consumption of Softwood Lumber in Asia

Million Cubic Meters

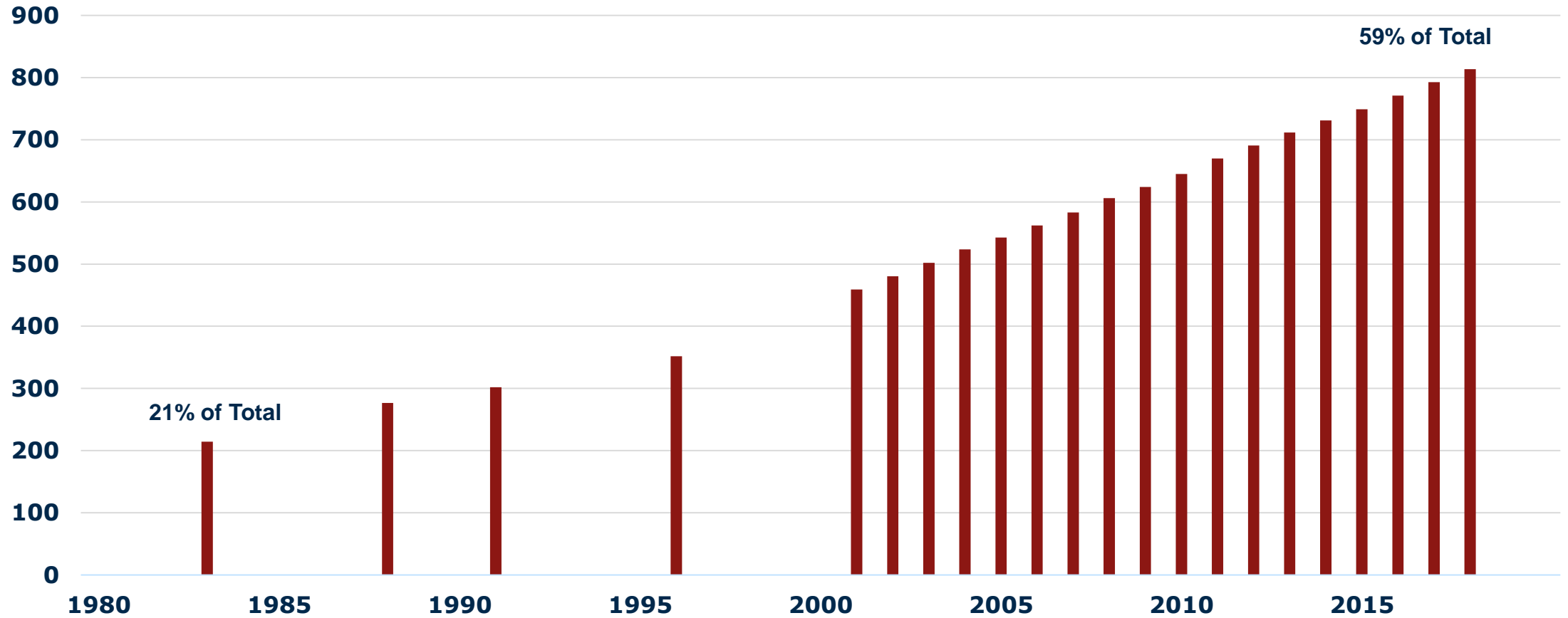


Source: FAOSTAT

www.getfea.com

China's Urban Population Has Exploded

Million, Source China National Bureau of Statistics



Chinese Construction Boom is Unprecedented

Pudong, Shanghai

1990

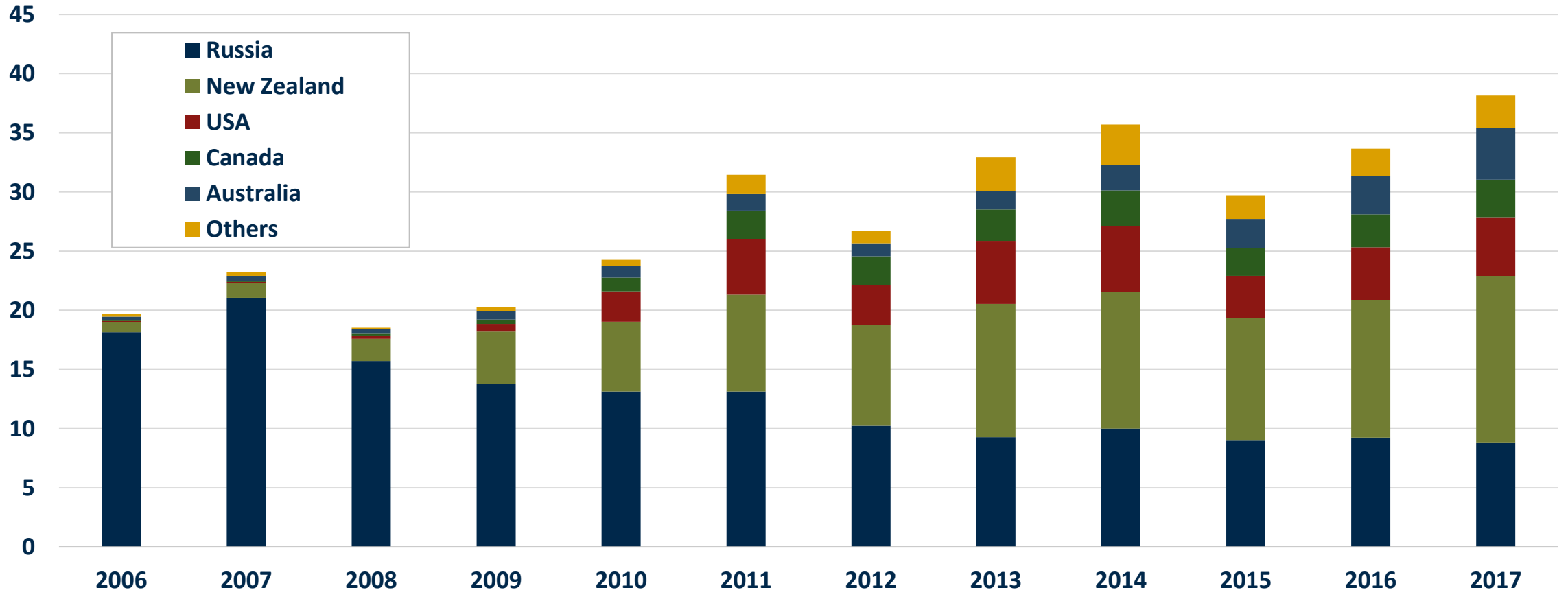


2010



China: Softwood Log Imports by Country

Million Cubic Meters

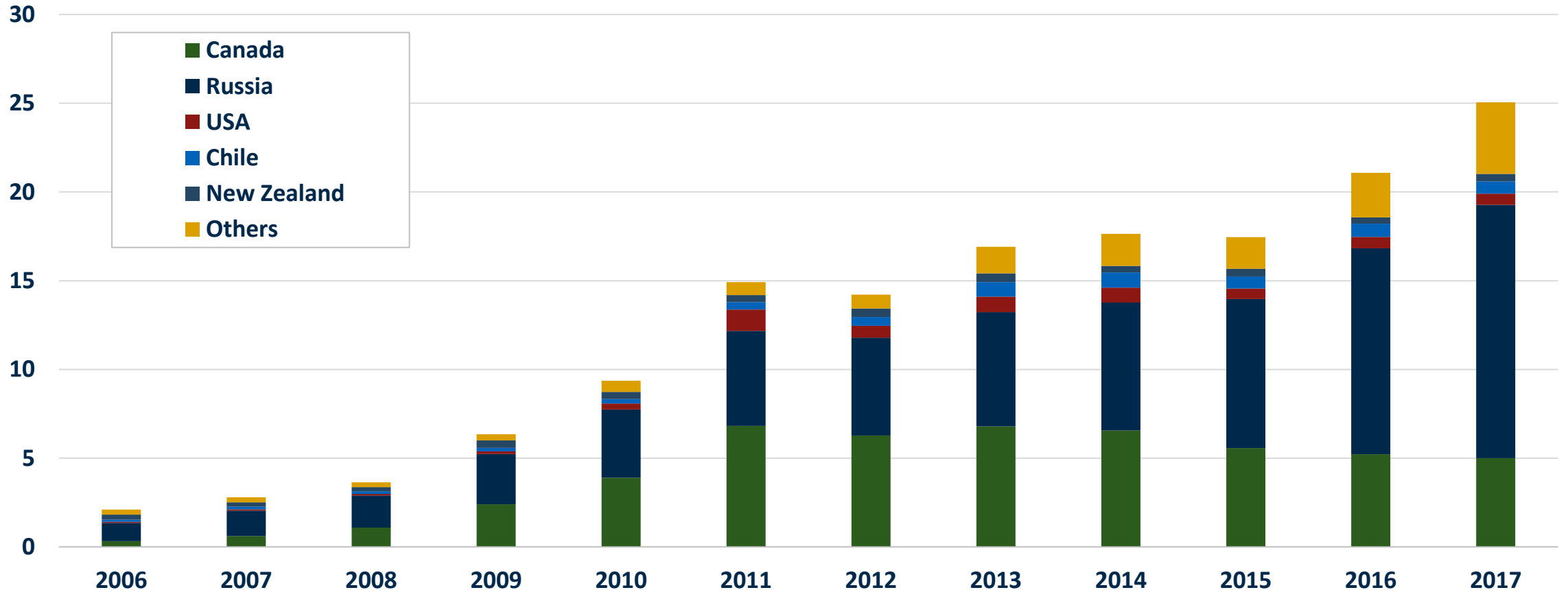


Source: China Customs, China Bulletin

www.getfea.com

China: Softwood Lumber Imports by Country

Million Cubic Meters

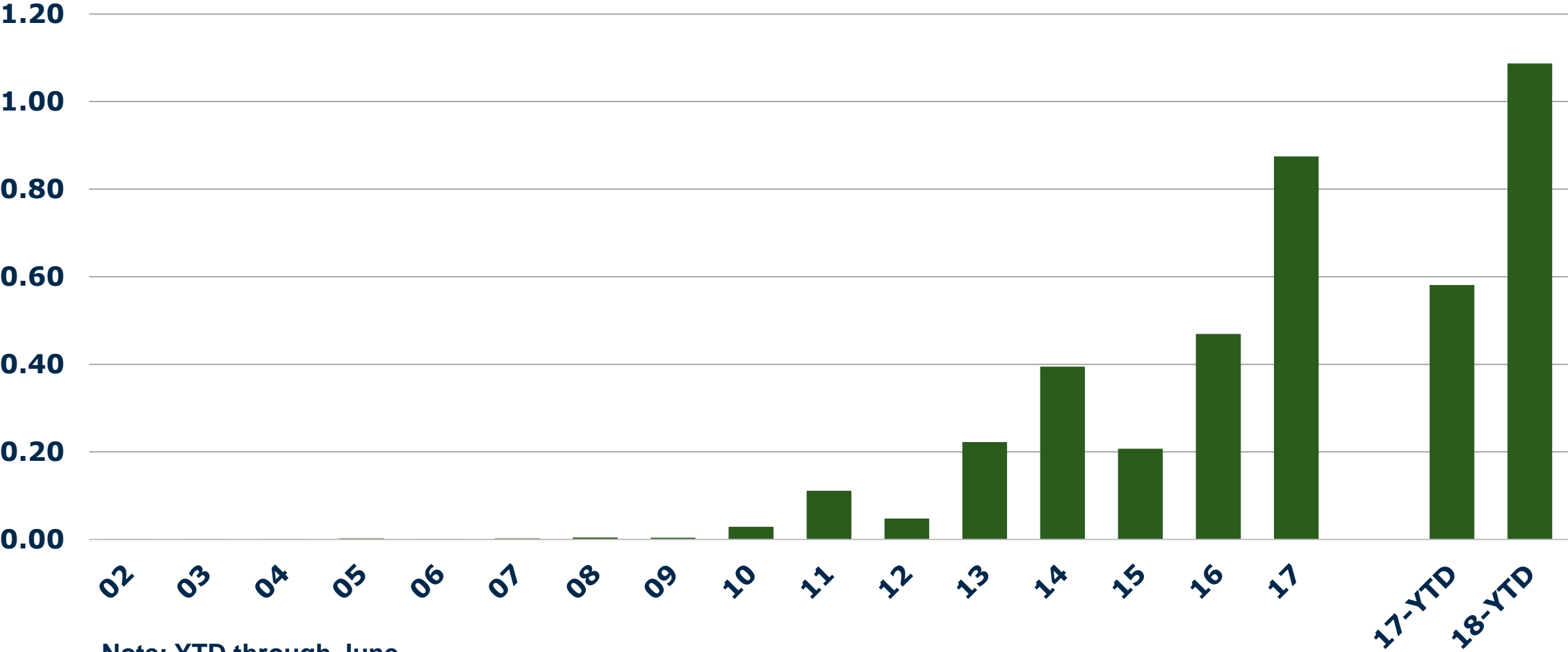


Source: China Customs, China Bulletin

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US South Log Exports to China Rose Sharply through 2018H1

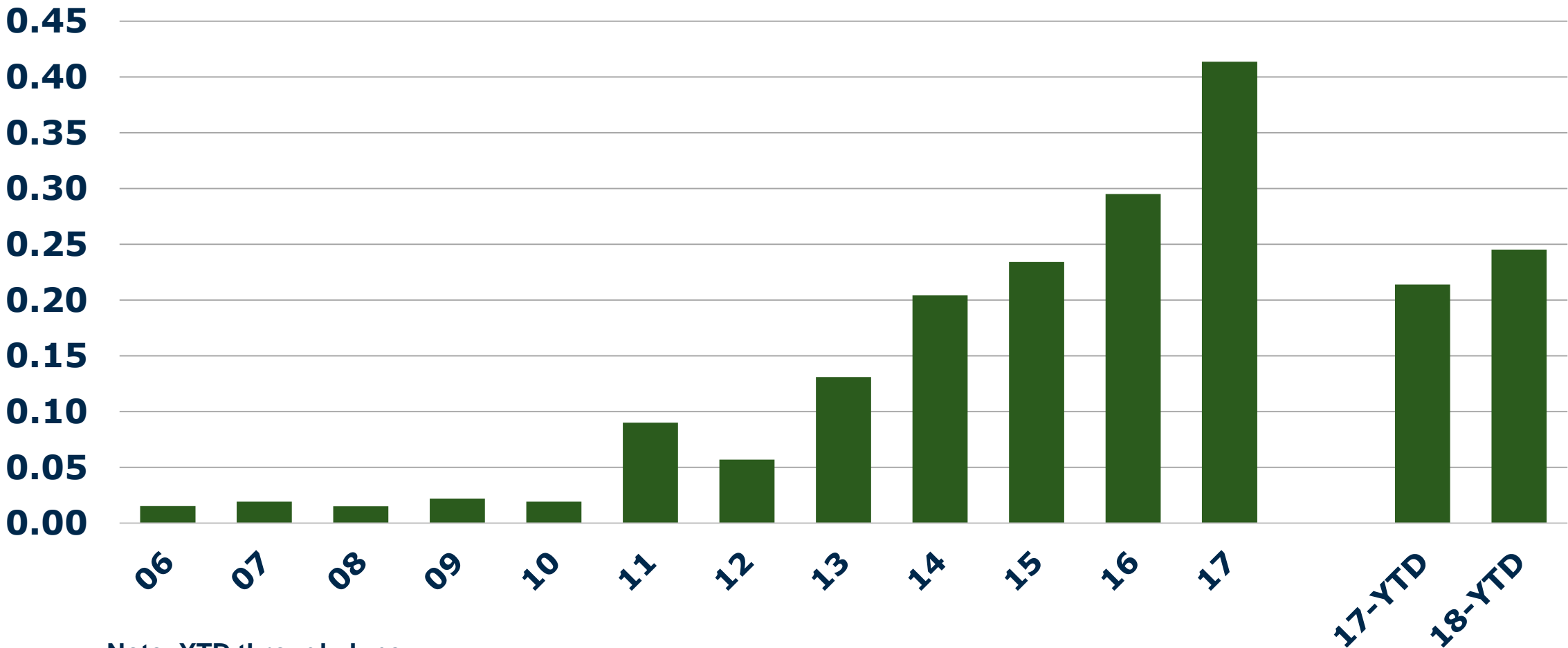
Million m³



Note: YTD through June

US South Lumber Exports to China Rise at a Record Pace Through 2018H1

Million m³



Note: YTD through June

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US-China Trade Dispute Timeline

- **May 2018**
 - Log shipments from US denied entry due to documentation issues
 - China's General Administration of Customs published new regulations for inspection and quarantine of log shipments
- **July 6th 2018**
 - 1st phase of US tariffs on Chinese imports worth \$34B go into effect. China responds by implementing their first phase (25% on \$34B) as well. – **No Forest Products**
- **August 3rd**
 - China releases list of tariffs on \$60B following US's announcement of \$200B tariffs. - **Included a number of forest products**
- **August 23rd**
 - Both US and China impose 2nd Phase-(25% on \$16B). – **SYP Logs, Wood Pellets**
- **September 17th**
 - US impose tariff of 10% on \$200B and announces rate will increase to 25% in 2019.
- **September 24th**
 - China responds with tariffs on \$60B of US goods – **Resulted in tariffs of 5-10% on many forest products. Many expected to increase to 20% or 25% in 2019.**

China's Tariff on the US Softwood Log and Lumber:

Starting from August 23rd:

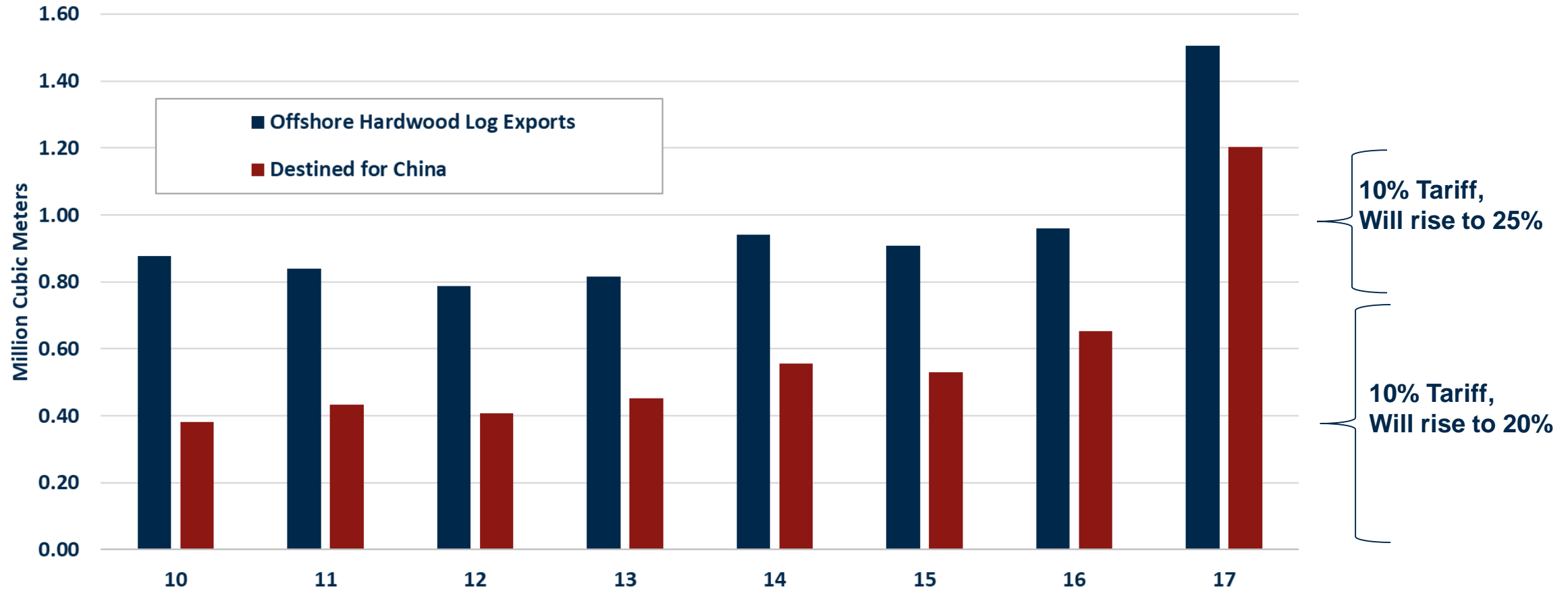
- SYP log: 25% tariff

Starting from September 24th

- Hemlock log, 15cm+: 5% tariff
- Douglas fir log, 15cm+: 5% tariff
- Hemlock log, <15cm: 10% tariff
- Douglas fir log, <15cm: 10% tariff
- Spruce log: 10% tariff
- Douglas fir lumber, SYP lumber, Hemlock lumber: 10% tariff

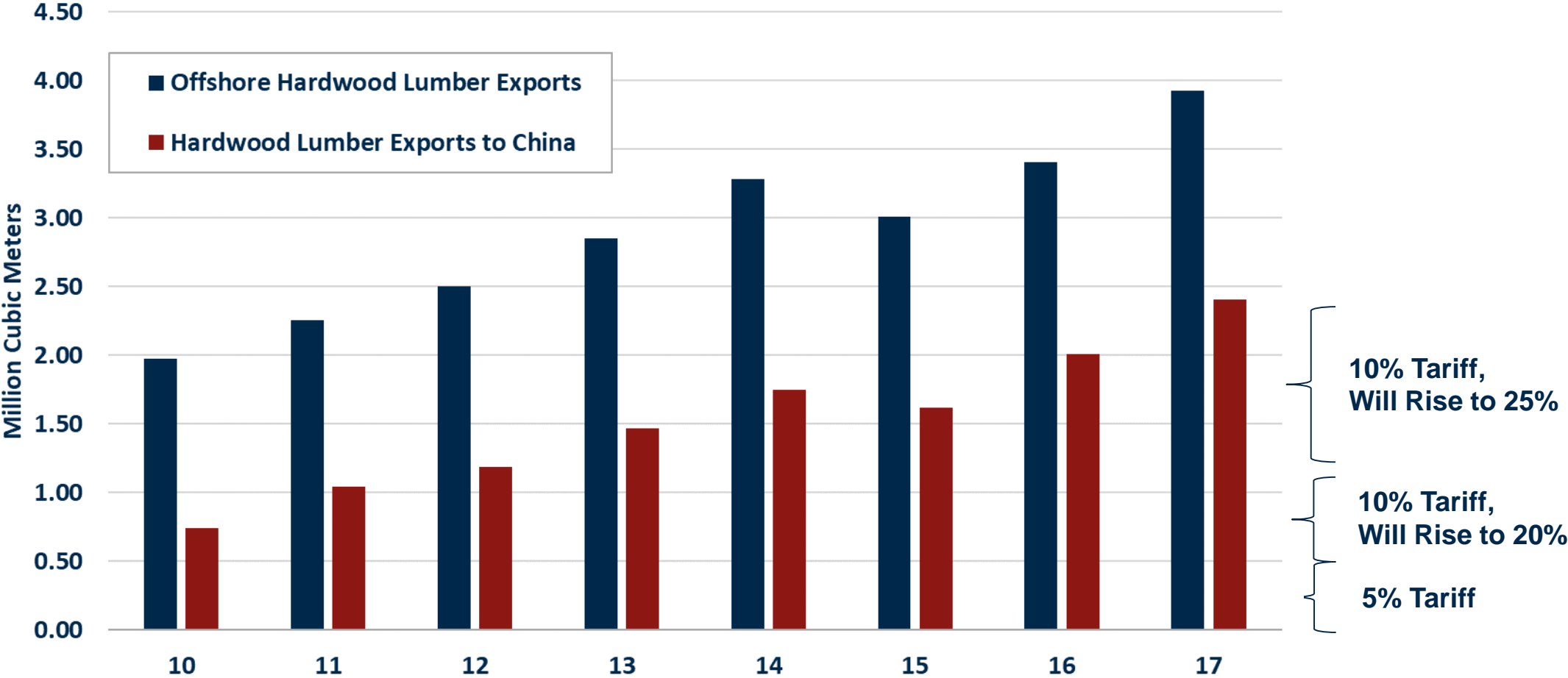
Chinese Tariffs Also Impacting US Hardwood Log Exports...

Offshore Hardwood Log Exports

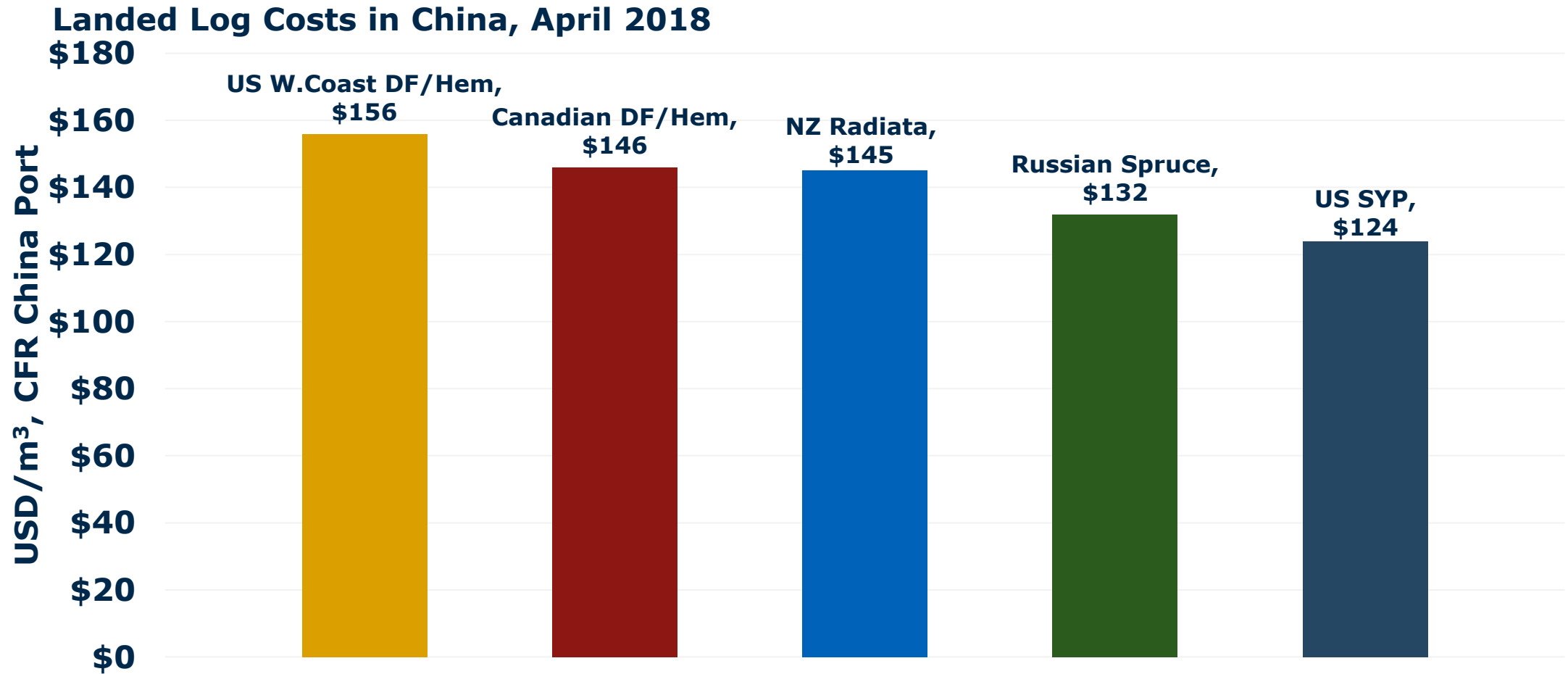


...and US Hardwood Lumber Exports

Offshore Hardwood Lumber Exports



Southern Yellow Pine Logs Landed in China Compared With Other Supply Regions

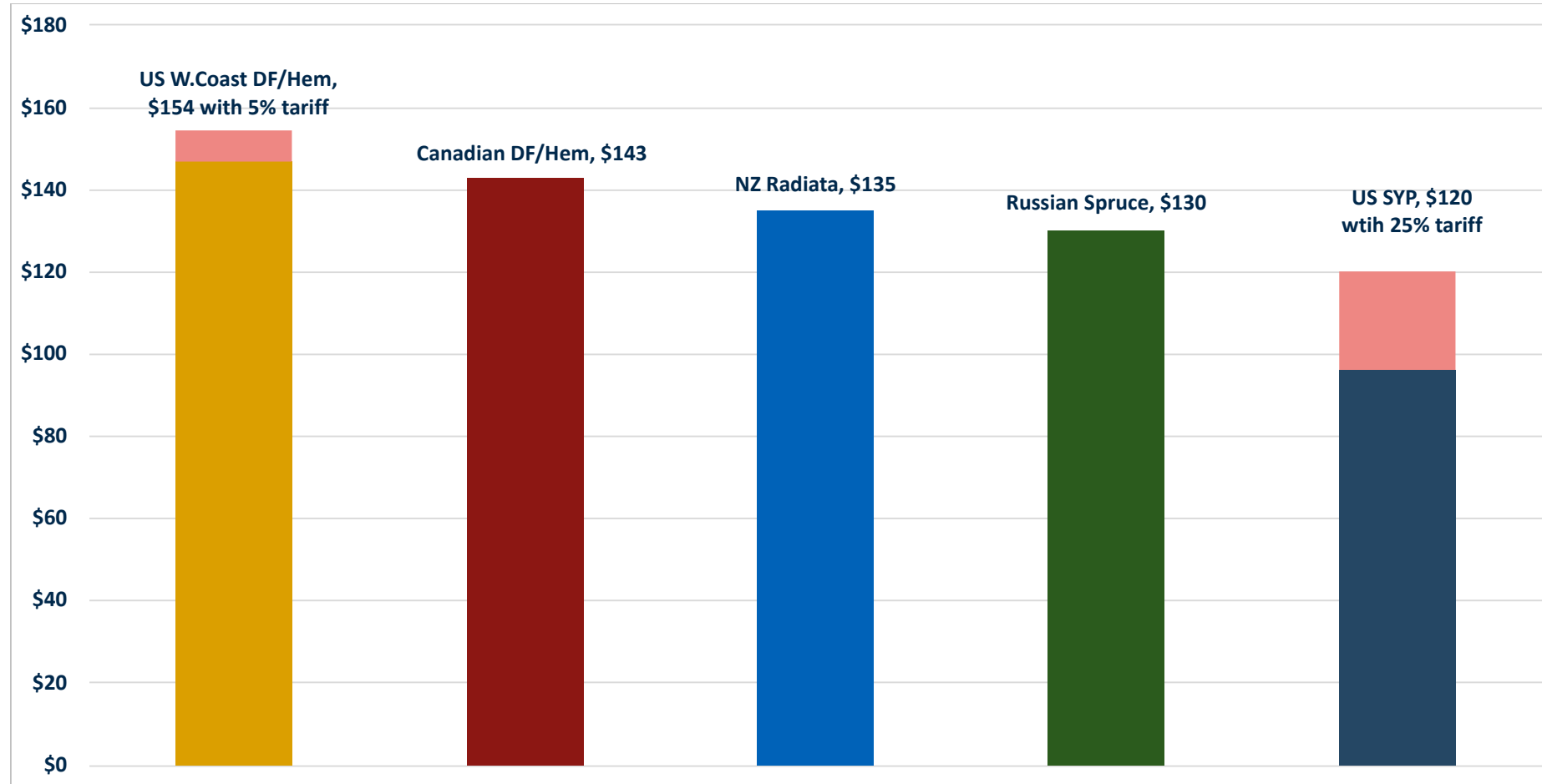


Source: China Bulletin

www.getfea.com

Southern Yellow Pine Logs Landed in China Compared With Other Supply Regions

Landed Log Costs in China, September 2018 with Tariffs added

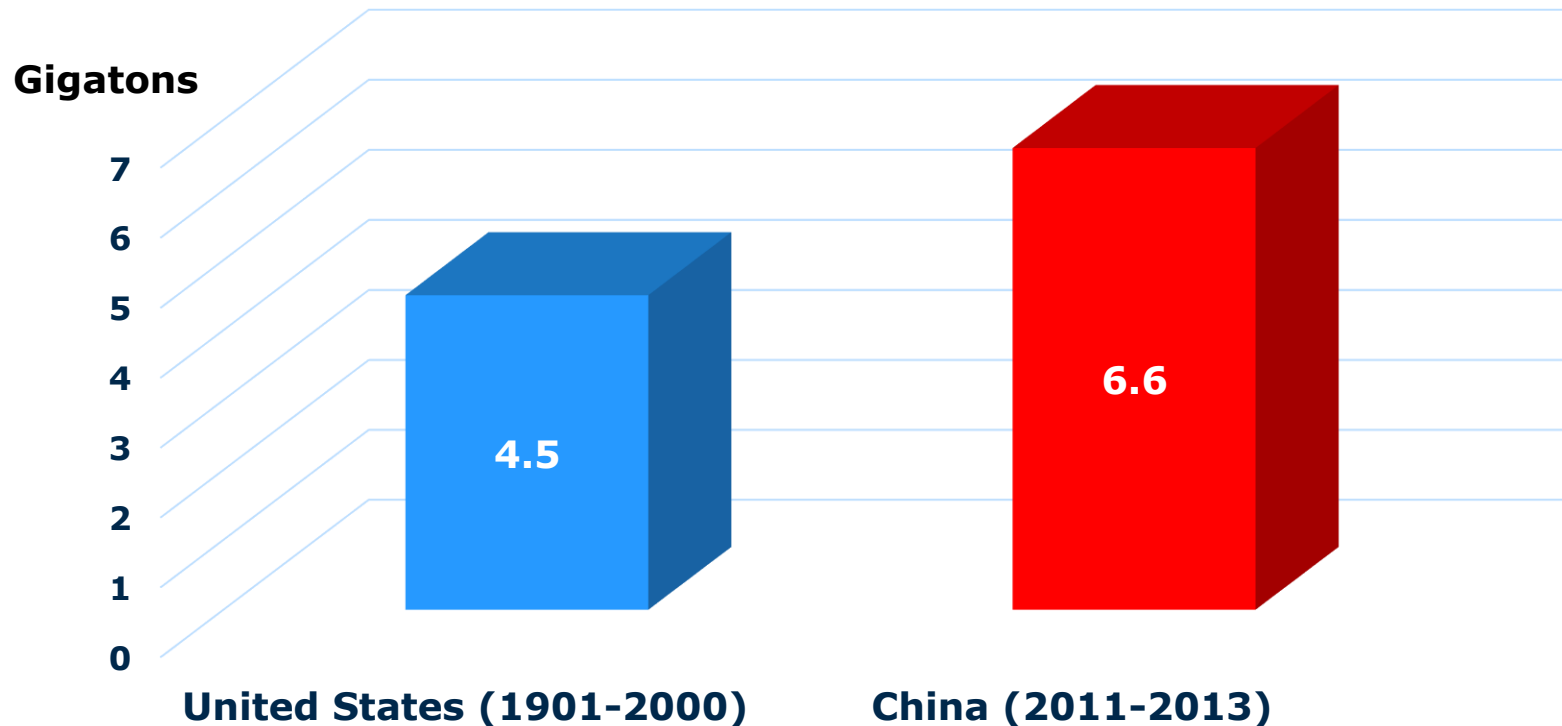


Source: China Bulletin

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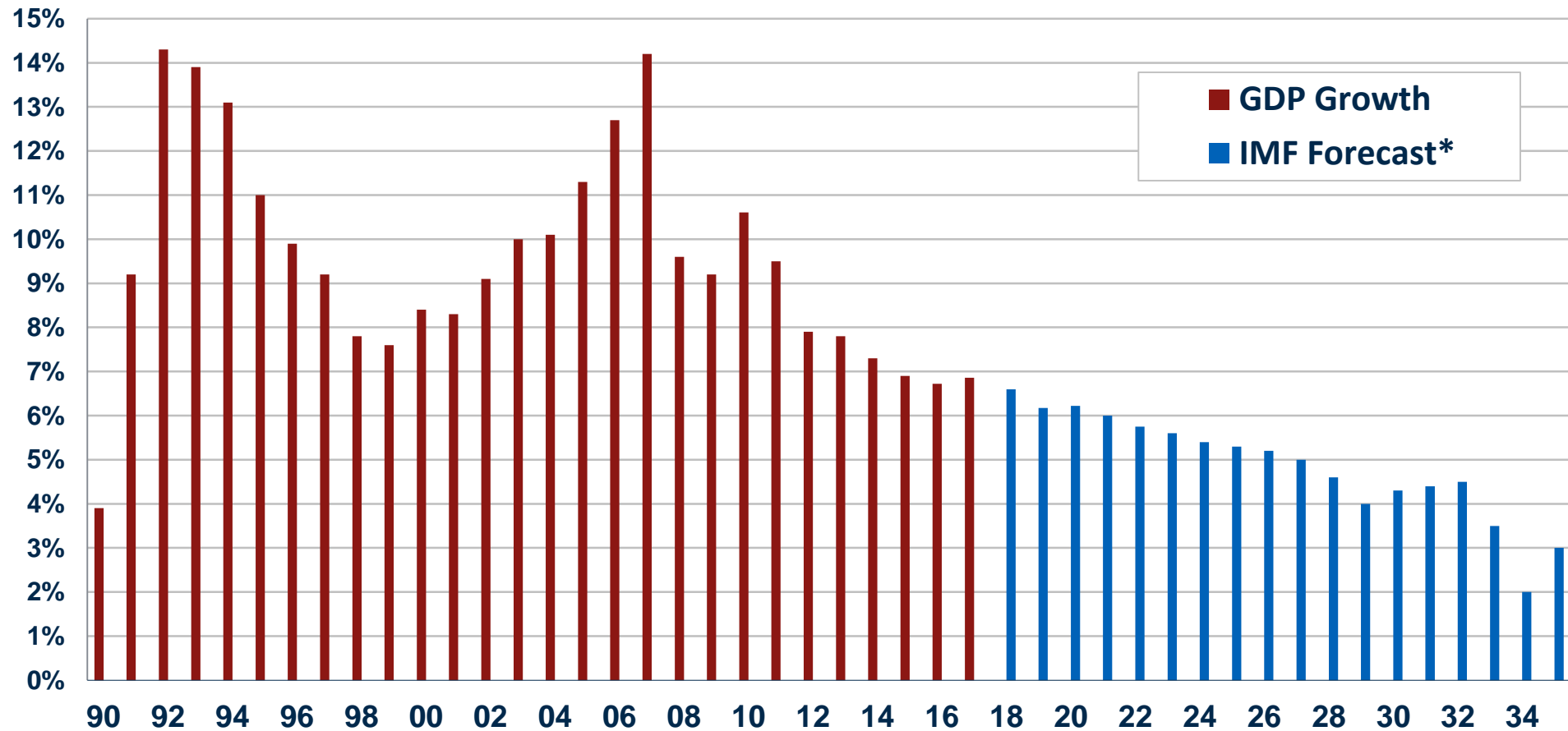
China Used More Cement in Three Years Than US Did in 20th Century



Source: Vaclav Smil, USGS, Cement Statistics 1900-2012, Mineral Industry of China, 1990-2013

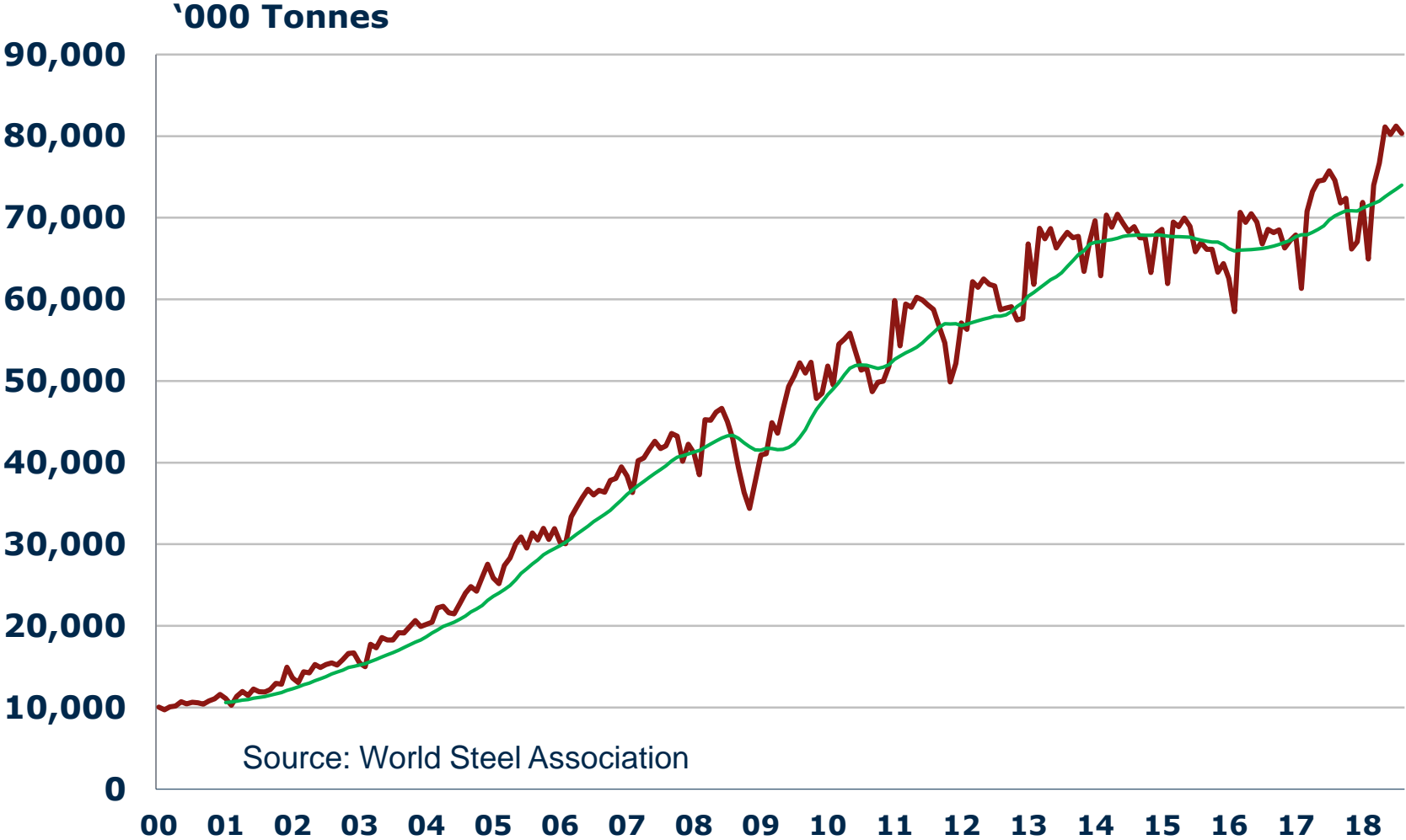
Chinese Growth is Slowing

Chinese Real GDP Growth

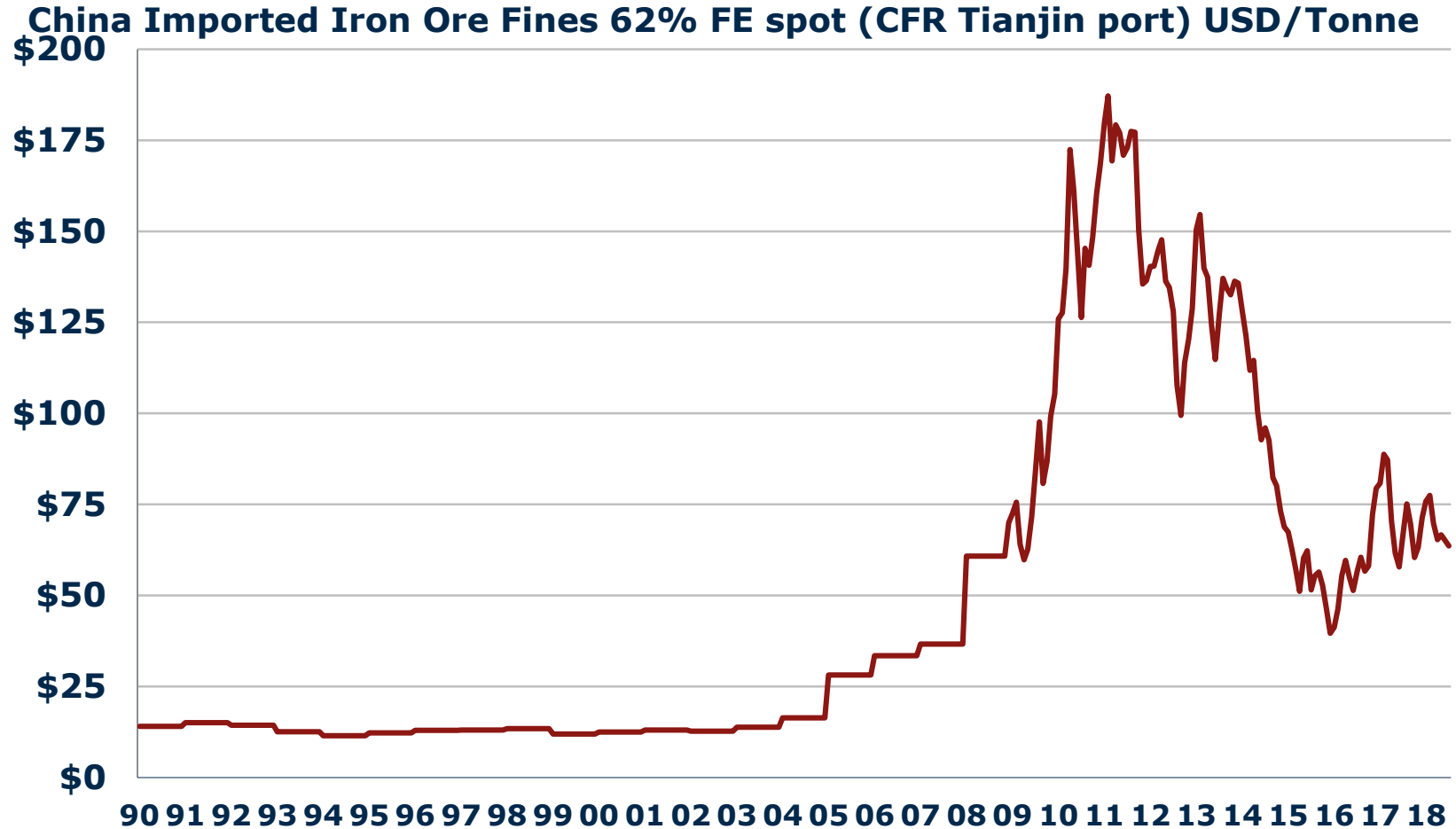


*FEA forecast after 2023

Chinese Steel Production is Rising Again



Chinese Iron-Ore Import Prices Are Down 64% since Early 2011

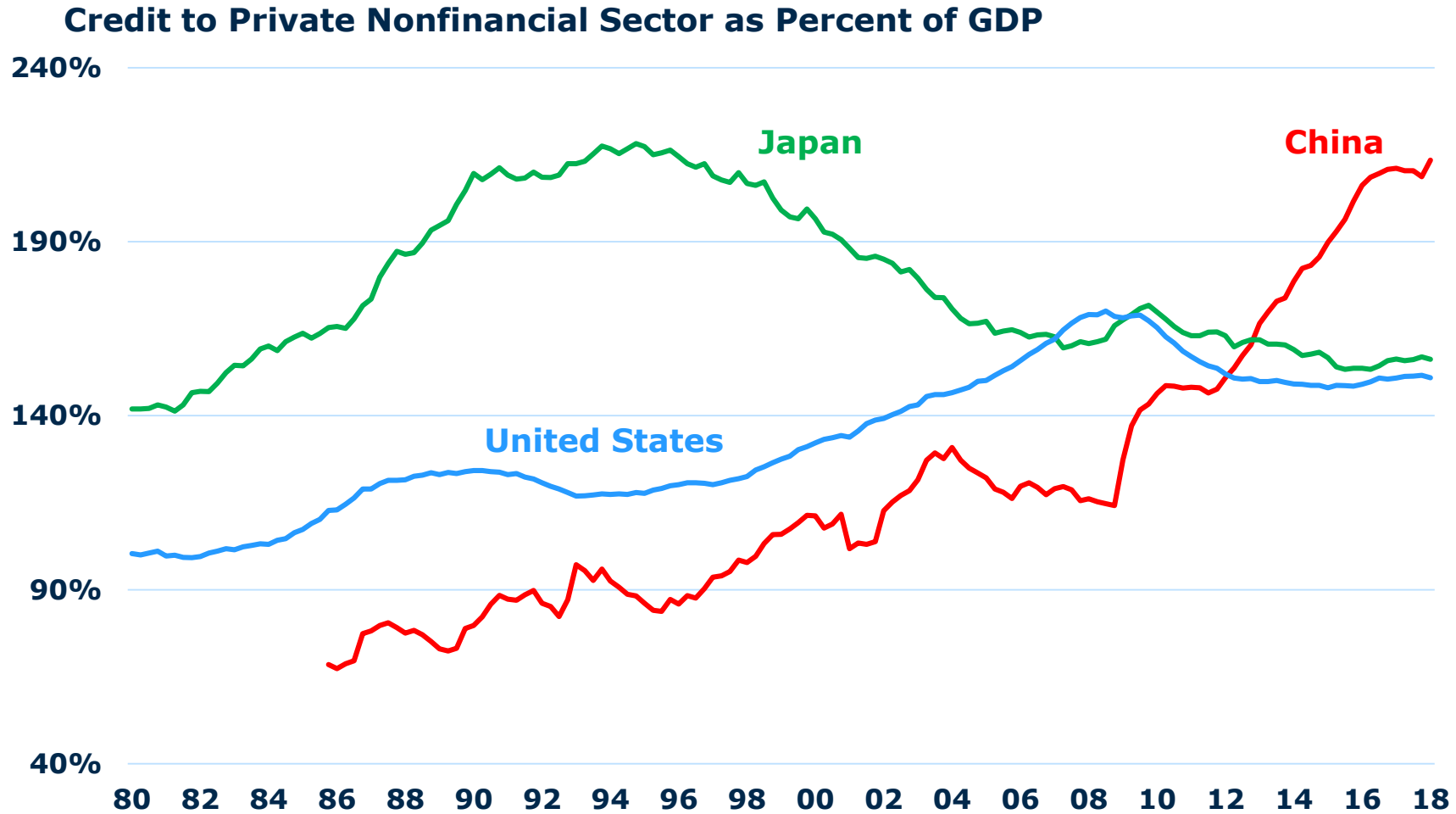


Copper Prices Have Declined by 14% Since January 2018

Copper, grade A cathode, LME spot price, CIF European ports, US\$ per Tonne

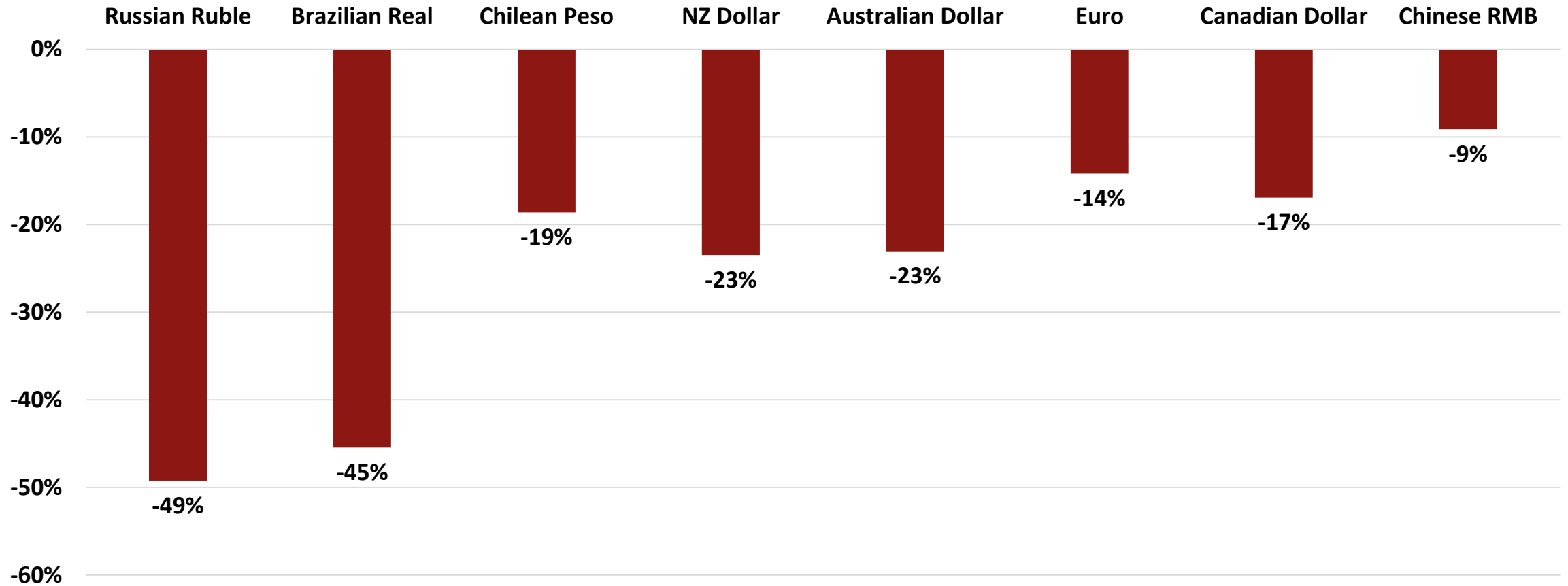


China's Debt Has Soared Since the GFC



The Key Currencies for Wood Products: Not Likely to Change Course

Loss in Value Against the US Dollar Since June 2014*

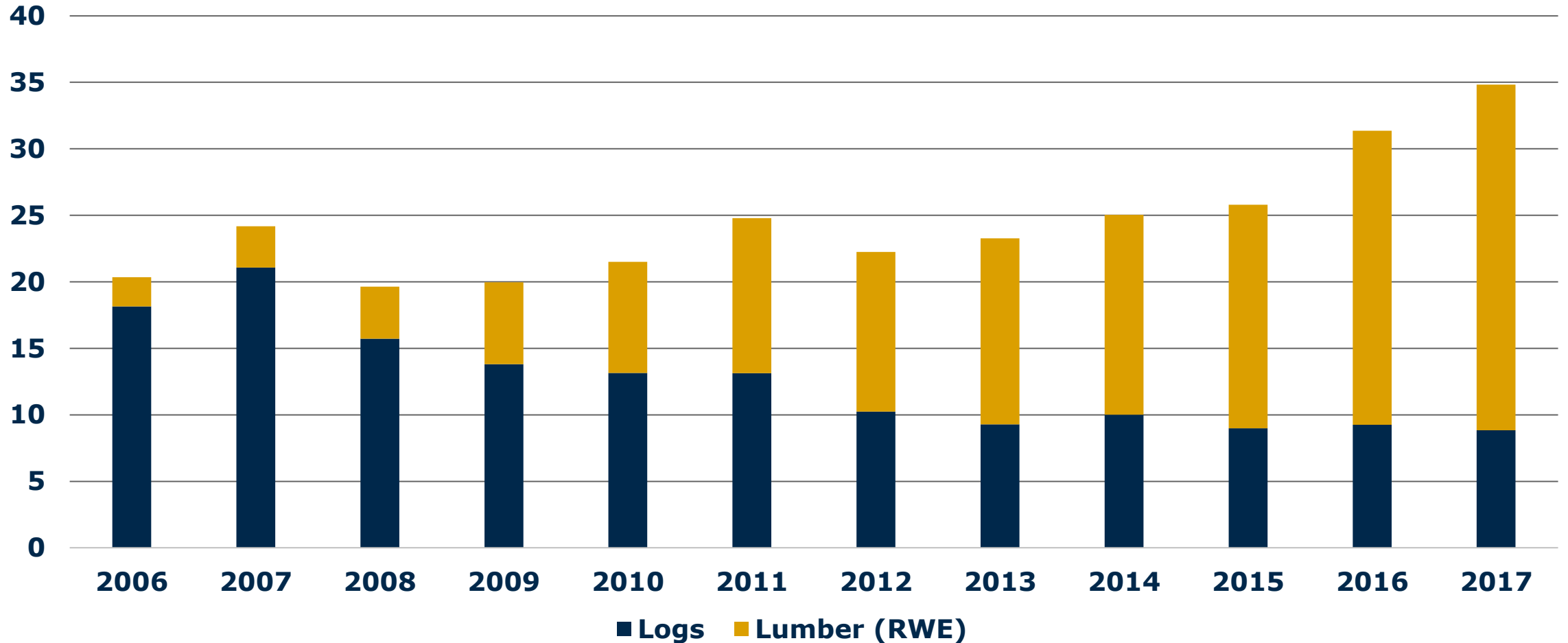


*through September 2018

www.getfea.com

Russia's Role in Supplying China's Softwood Woodfiber Rapidly Increasing

China's Softwood Log and Lumber Imports from Russia, Million Cubic Meters

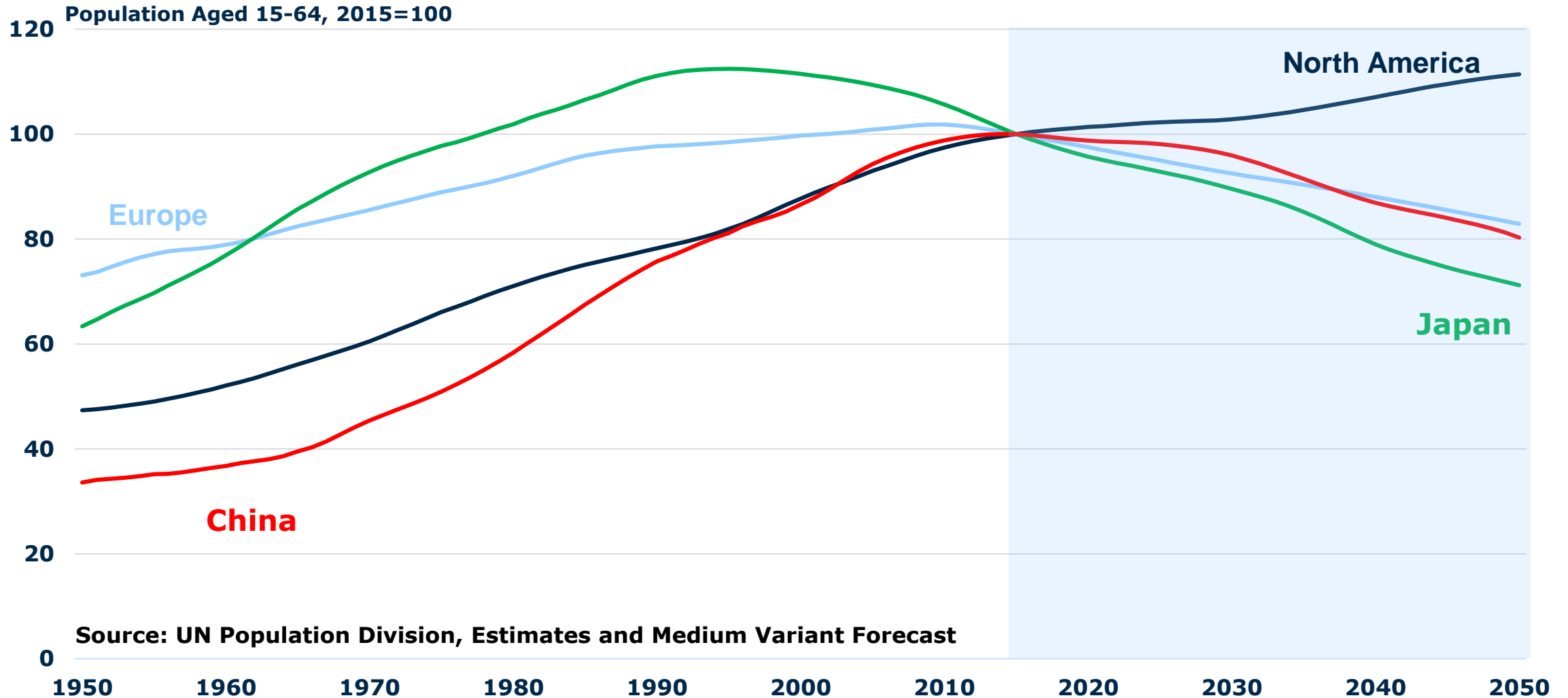


China's "One Belt-One Road" (BRI) Initiative



Rail Competitive Advantage: gained by Russia & Europe

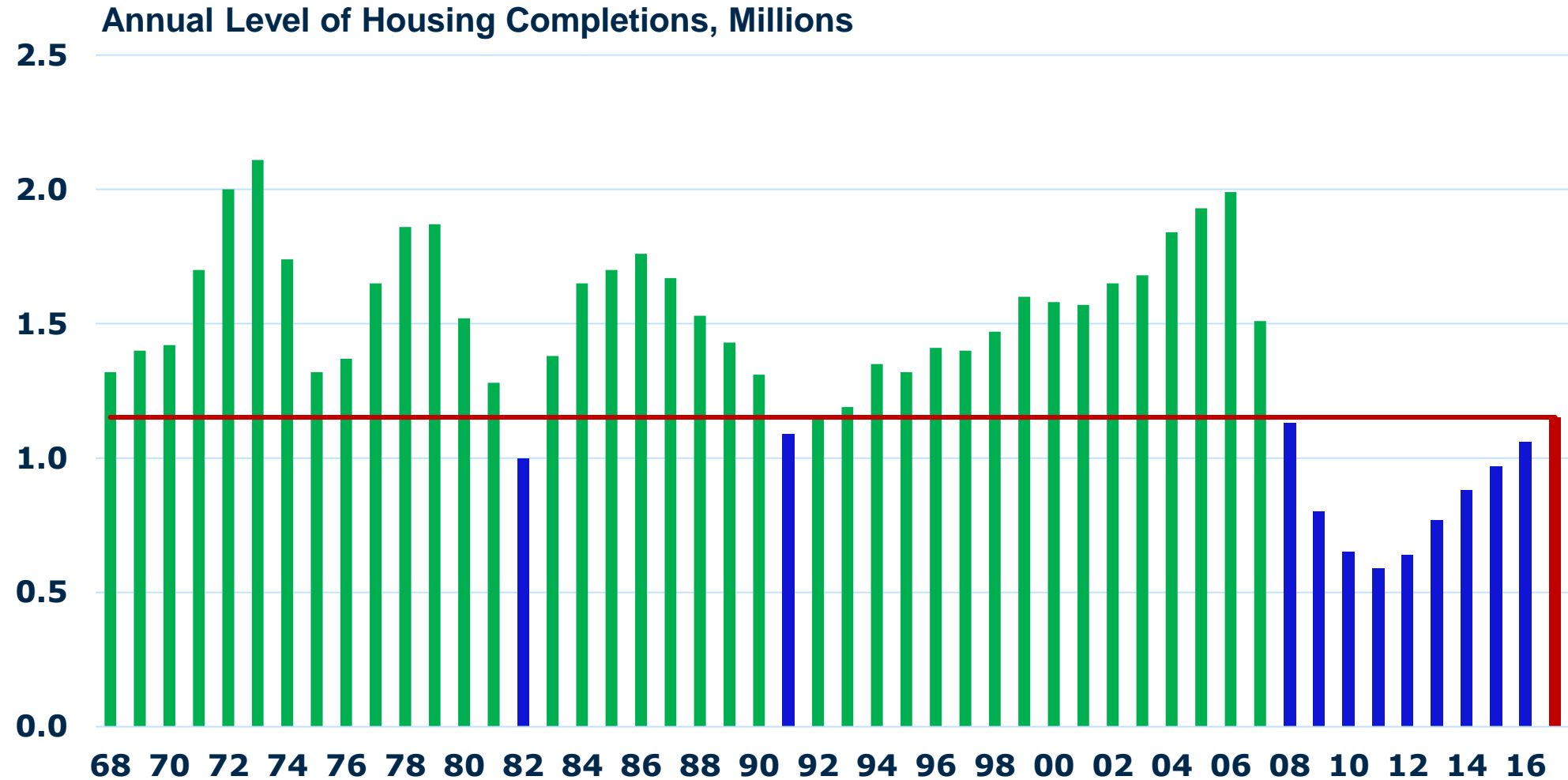
North American is Only Major Economy With Growing Working-Age Population



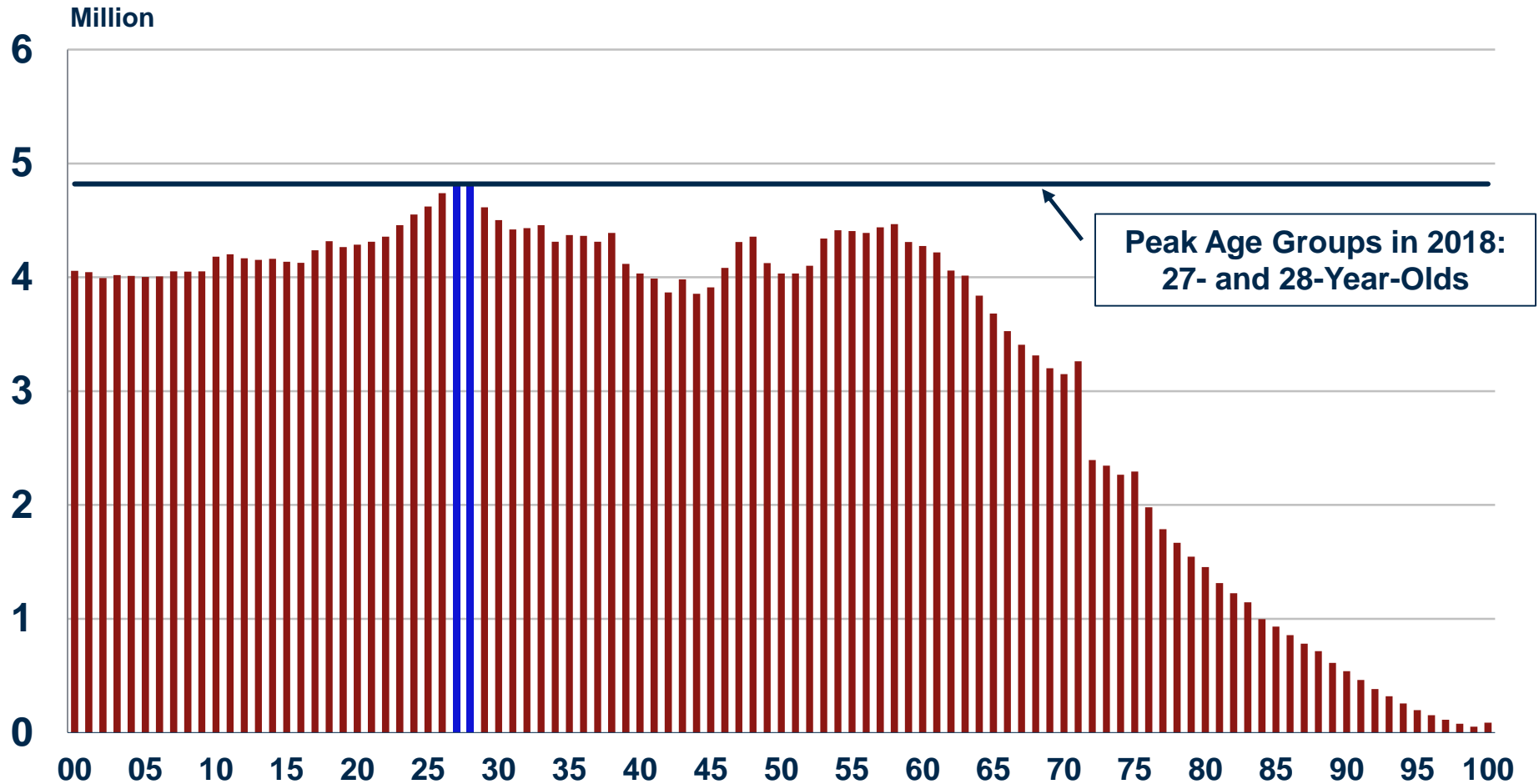
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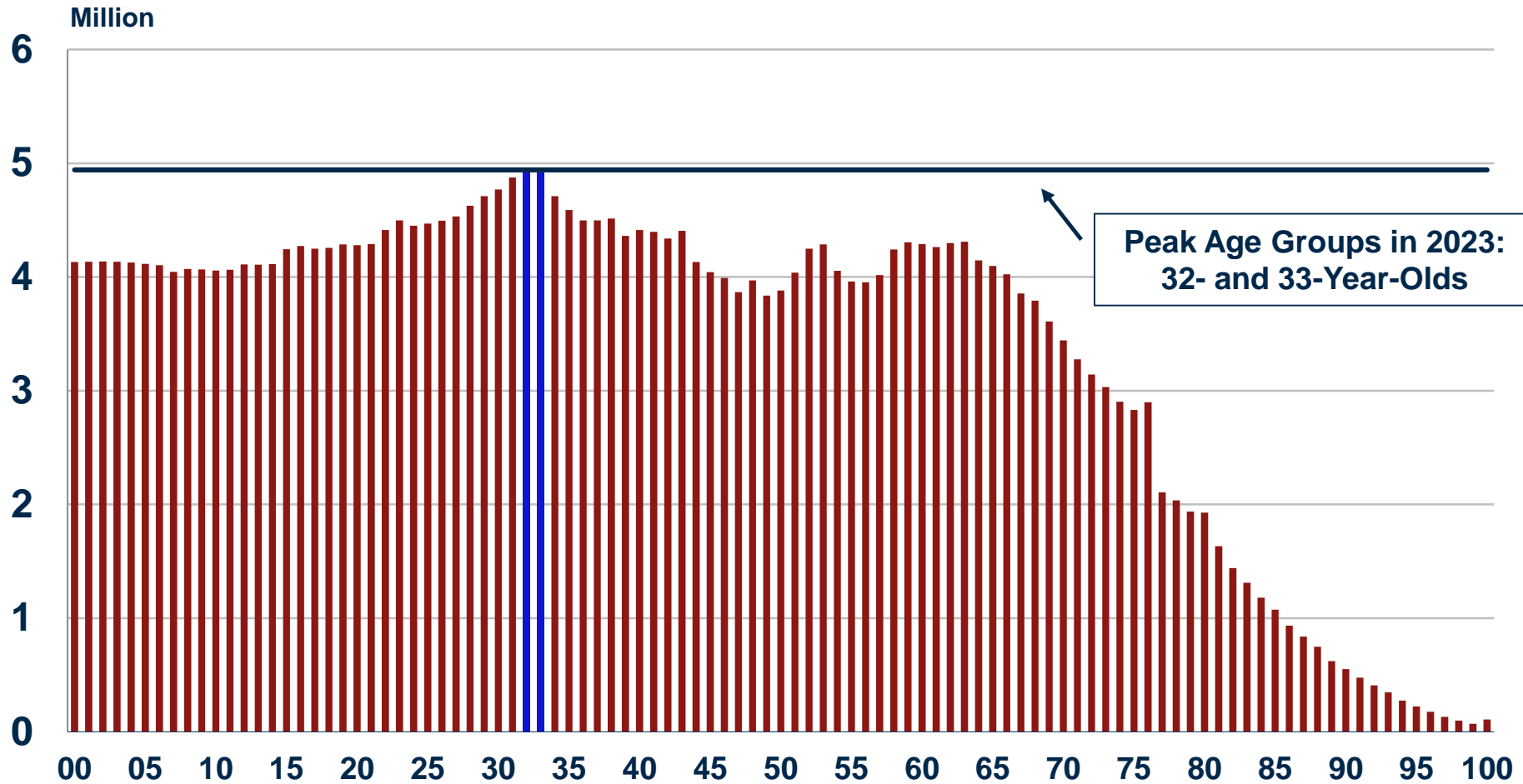
The 2017 Level of Housing Completions Was Typical of a Recessionary Low in Previous Economic Cycles



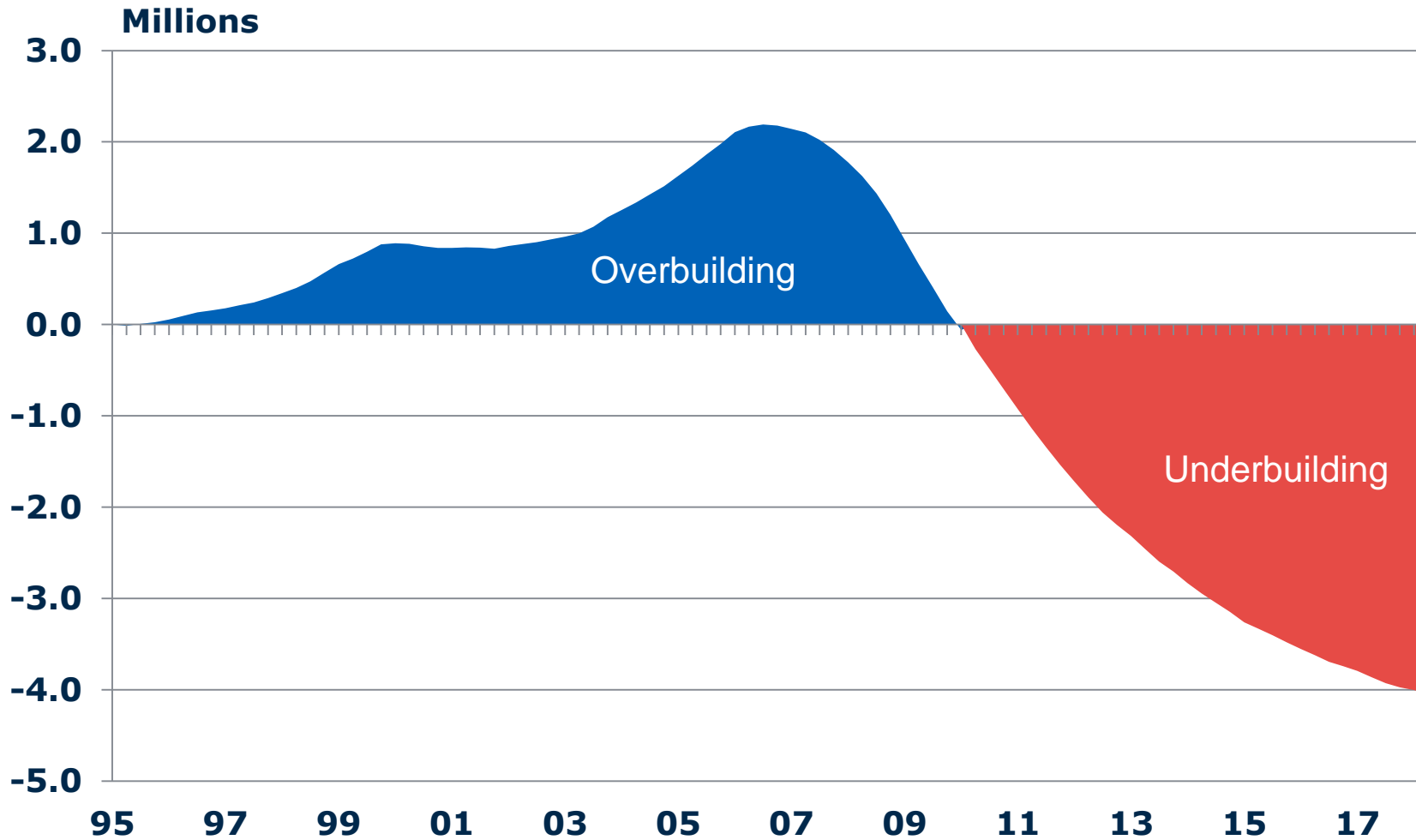
US Population by Age (as of July 1, 2018)



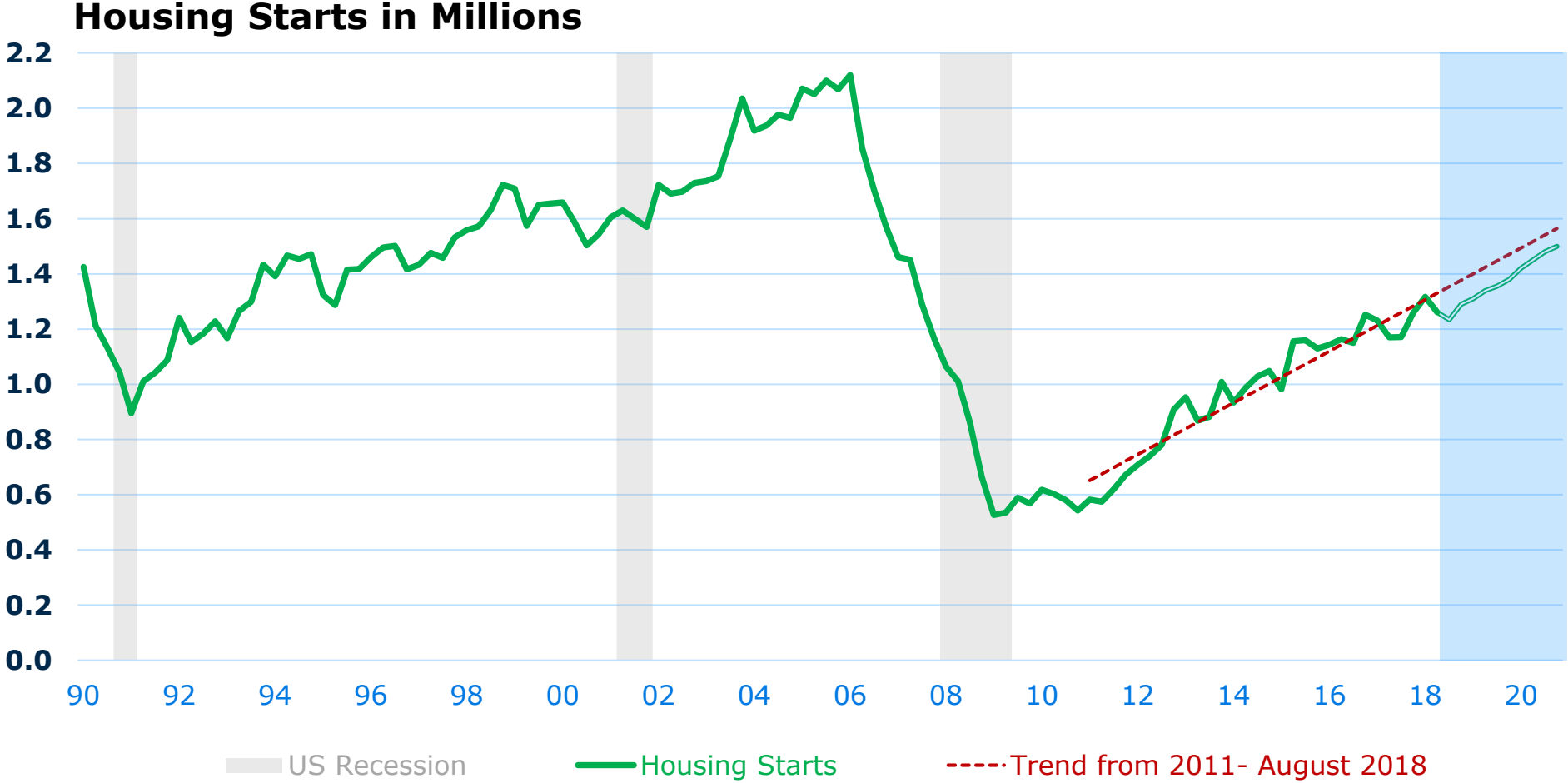
US Population by Age (as of July 1, 2023)



Cumulative Over-/Underbuilding of Conventional US Homes



US Housing Starts Continue Grinding Recovery



Increasing Softwood Lumber Supply in North America Difficult

- **British Columbia**

- Increasing impact from Mountain Pine Beetle epidemic
- More capacity closures likely

- **Eastern Canada**

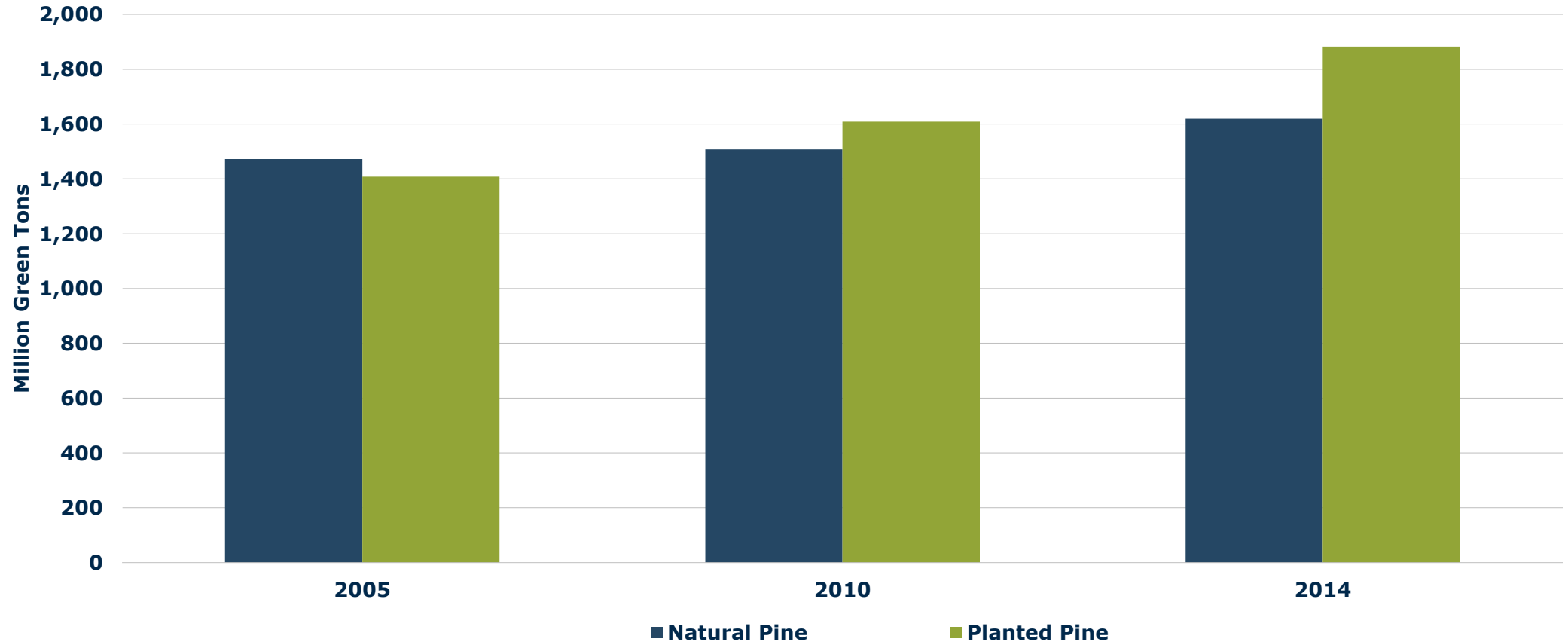
- Annual Allowable Cuts in Quebec
- Declining market for residuals

- **US West**

- Weak domestic demand during downturn offset by log exports
- Ability to increase harvest above current levels limited

Pine Plantations are Boosting Southern Timber Inventory Levels

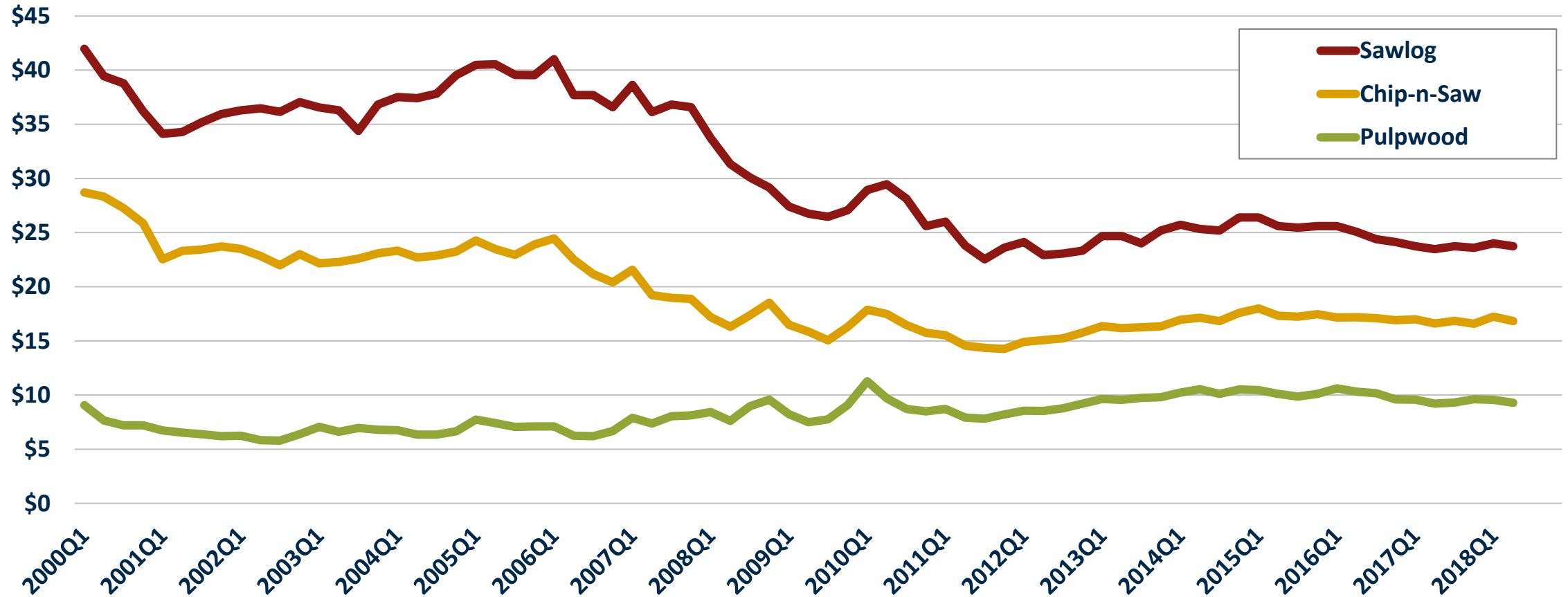
Historical Privately-Owned, Natural and Planted Pine Inventory



From: Timber Supply Dynamics in the US South, FEA & Timberland Appraisal

No Strong Rebound Expected in Southern Wood Costs

Softwood Stumpage, US South Average



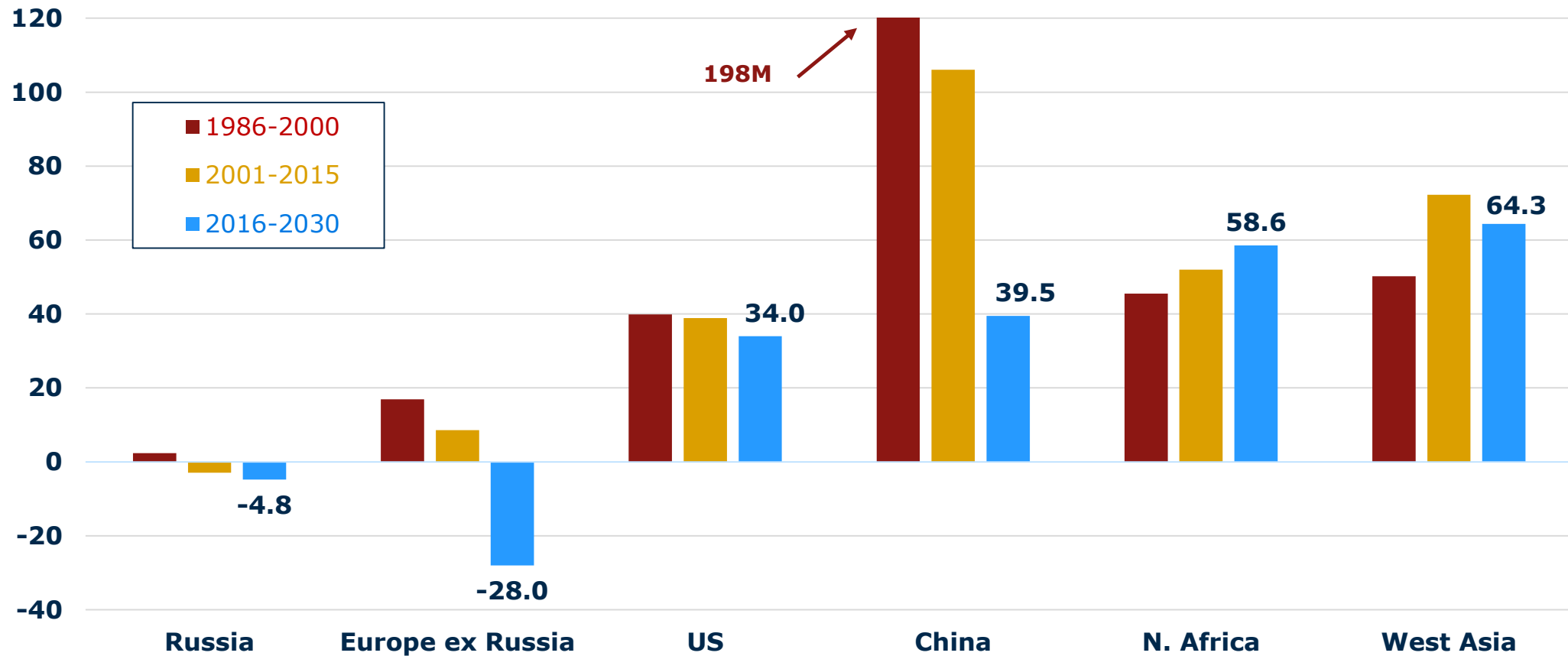
Source: Timber Mart South

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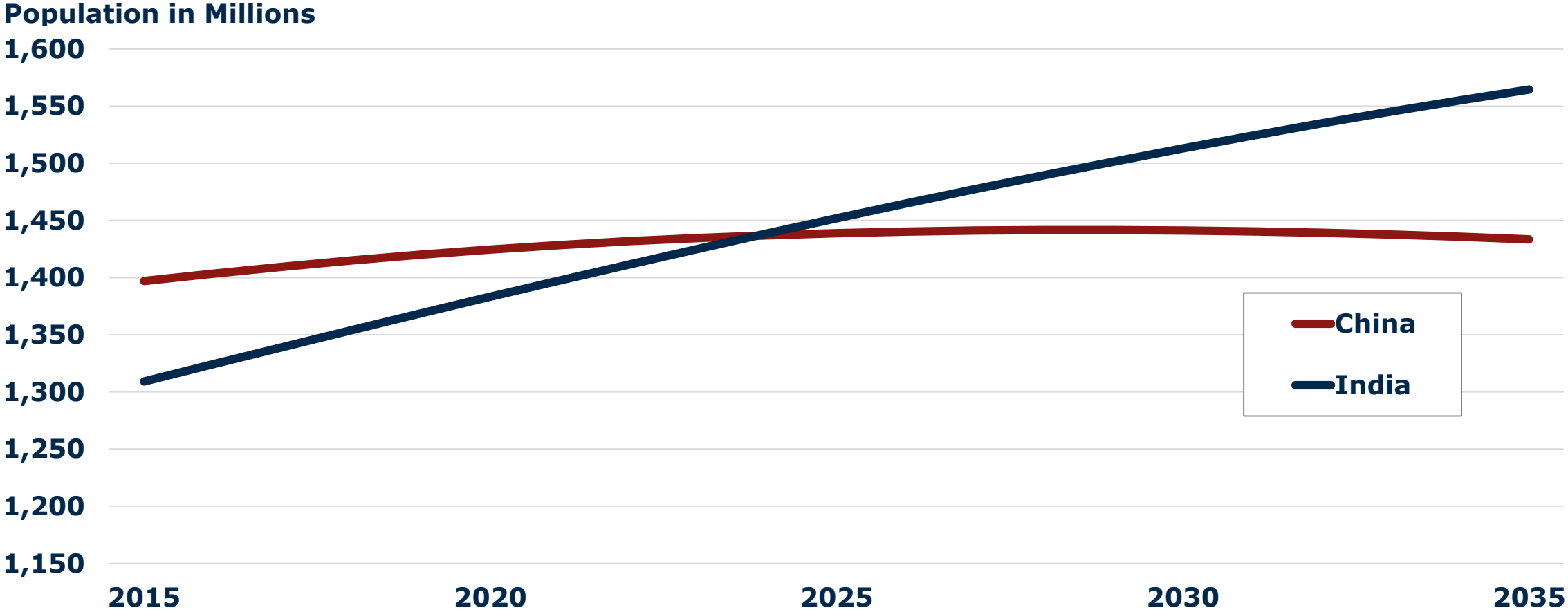


Population Dynamics Between Major Economies and Middle East and North Africa Are Striking

Population Change in Millions



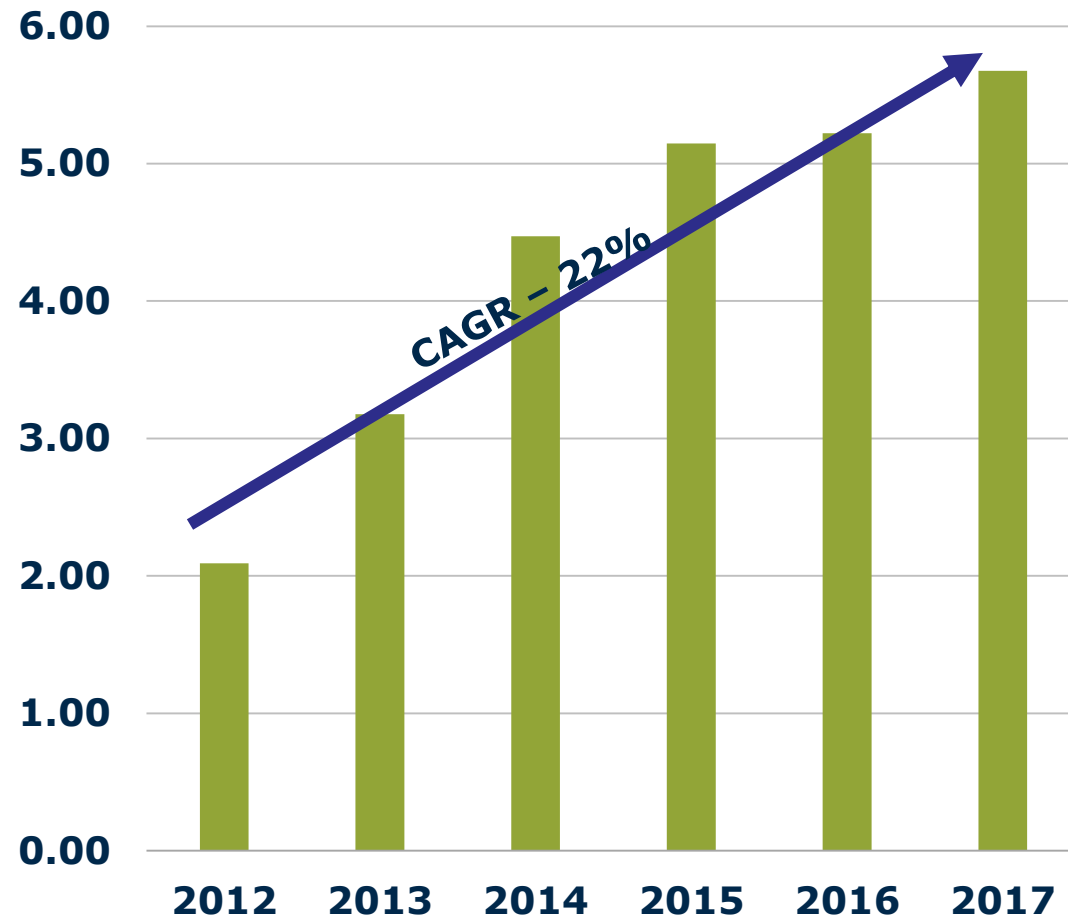
Population Growth in India Will Outpace China



Source: UN Population Division
Medium Variant Projections

US Wood Pellet Export Growth

Wood Pellet Exports, Million Tons



- Policies aimed at increasing renewable energy/reducing greenhouse gases lead to the increase in demand for industrial wood pellets.
- Wood pellet exports from the US South have expanded rapidly, primarily to Great Britain.
- Growing markets in South Korea and Japan present opportunities for further expansion.

Key Messages

- China, the primary growth driver of global forest products demand over the past decade is slowing.
- Current trade dispute is severely limiting opportunities for Southern exports to China. Past trade dispute, currency and competition from other regions will remain significant challenges in China.
- The South's competitiveness will remain favorable, benefiting from ample fiber supply from a well-managed resource and investment in the region's forest product industry.
- US domestic recovery for forest products will remain slow but steady. The South will play a greater role in meeting domestic demand, but offshore trade will be an important component to expanding and diversifying markets. Increasingly producers/exporters will need to look to new markets for future growth.

Thank You

If you have questions or comments please contact me at:

Rocky Goodnow
Forest Economic Advisors
1-978-496-6337
rgoodnow@getfea.com
www.getfea.com