



Forest Economic Advisors

North American Lumber Markets Retreat

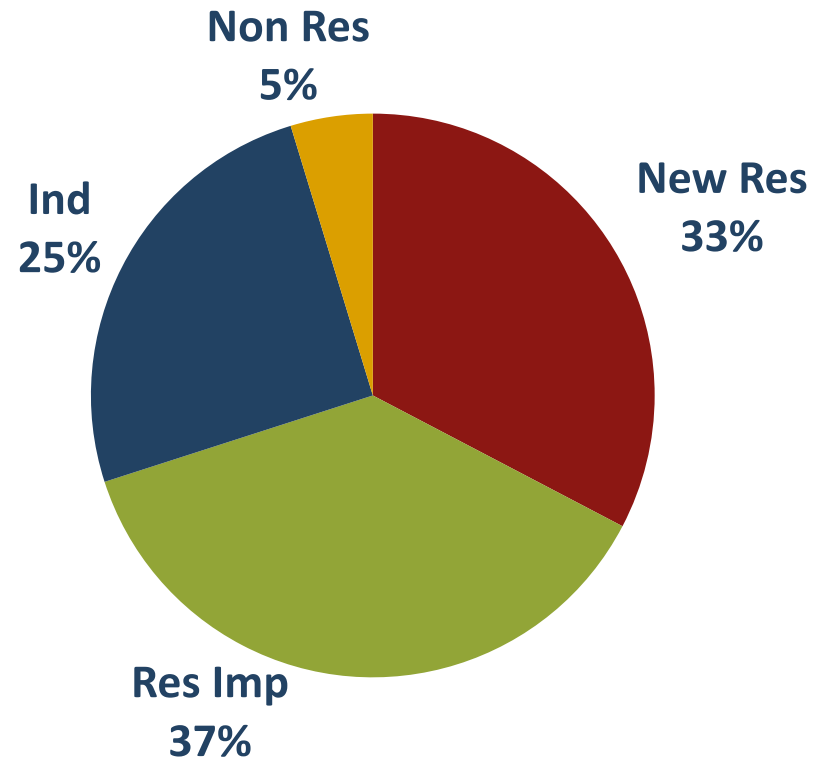
Cyclical? Or Just A Bump In The Road?

Paul Jannke

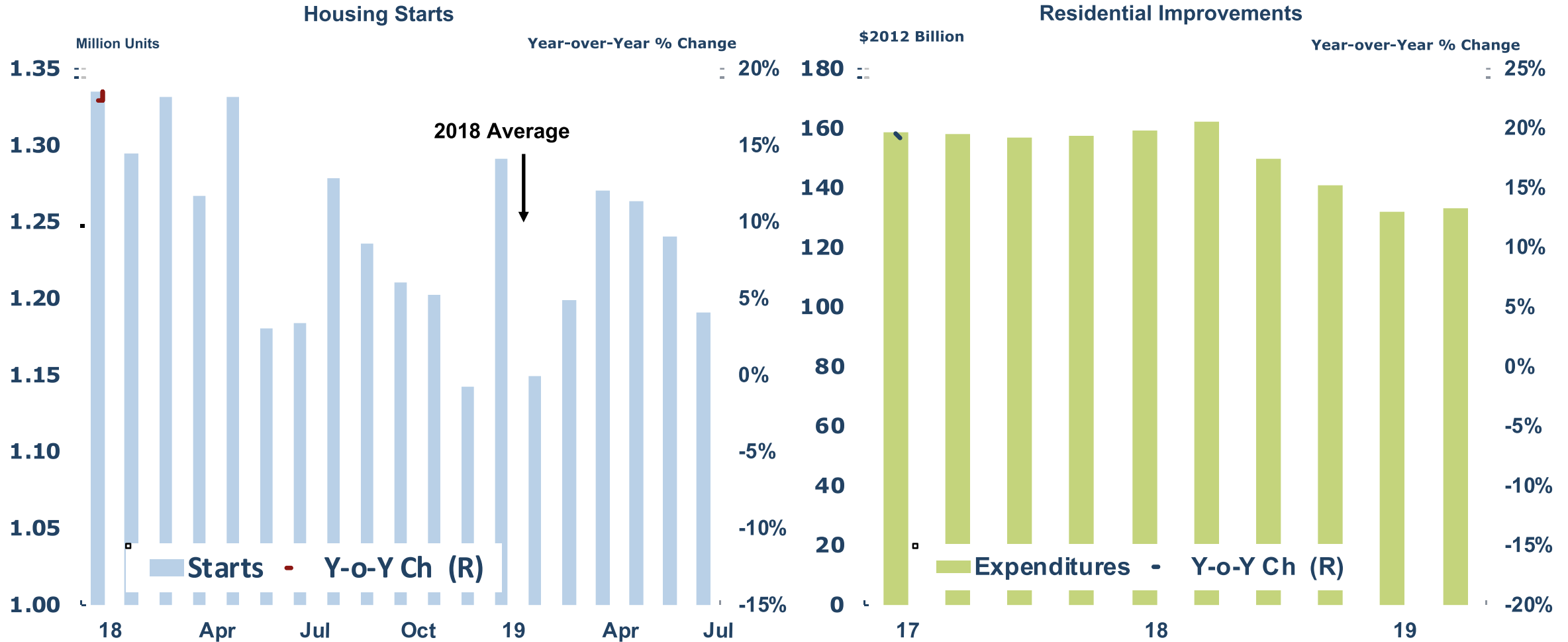
9th China Global Wood Trade Conference

September 7-8, 2019

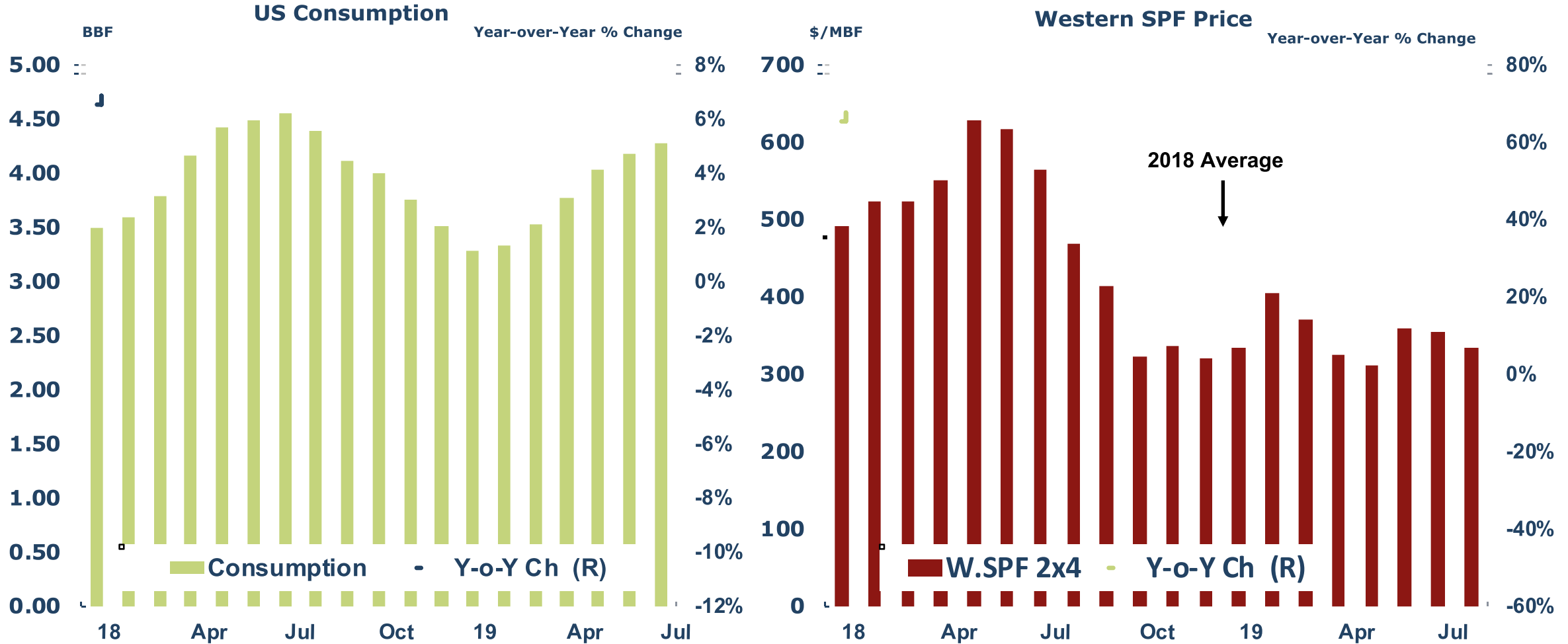
Lumber Consumption By End-Use Market



Construction Markets Have Weakened Dramatically

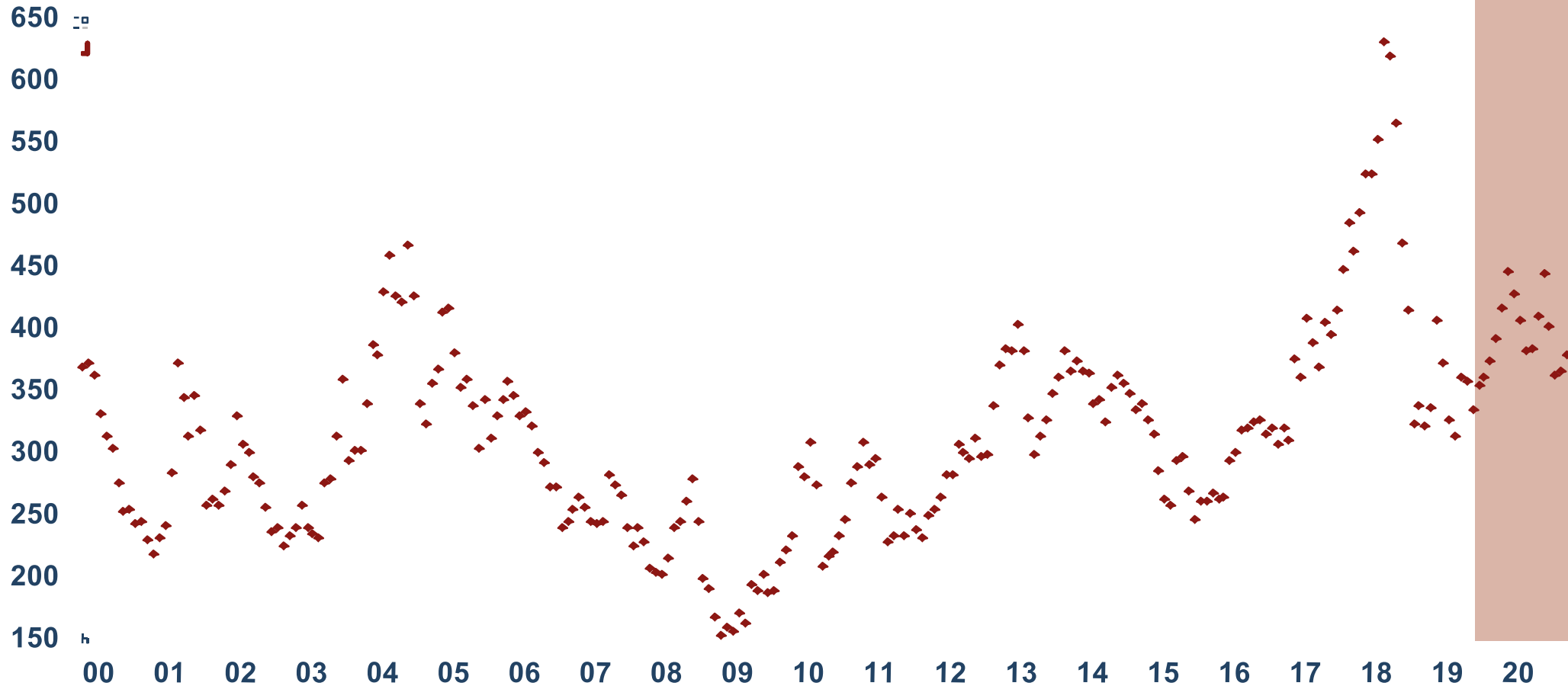


As Have Lumber Markets



So Why Are We “Optimistic”?

2&Btr 2x4, Western SPF \$US/MBF





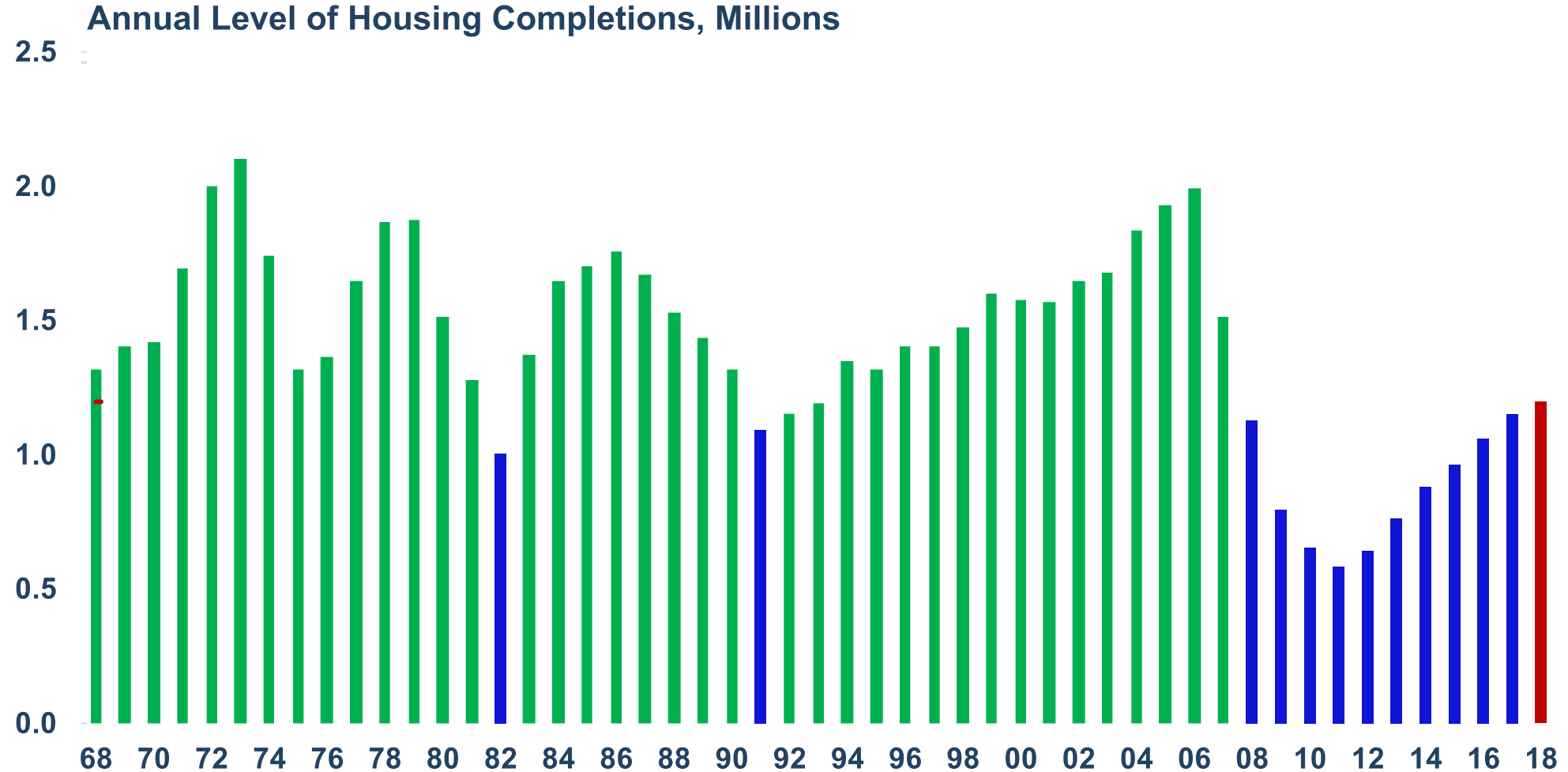
The Last Time Prices Were This Low, We Saw Significant Curtailments And It Has Begun to Happen Again

US West		
6/6/2019	Manke	1 Mill
5/31/2019	F.H. Stoltze	1 Mill
5/1/2019	Saratoga FM	1 Mill
2/26/2019	Swanson	1 Mill
12/11/2018	Rosboro	2 Mills
12/11/2018	Saratoga FM	1 Mill
12/6/2018	Schmidbauer	1 Mill
11/28/2018	Swanson	1 Mill
11/14/2018	Rosboro	1 Mill
11/13/2018	Swanson	1 Mill
11/8/2018	Seneca	2 Mills

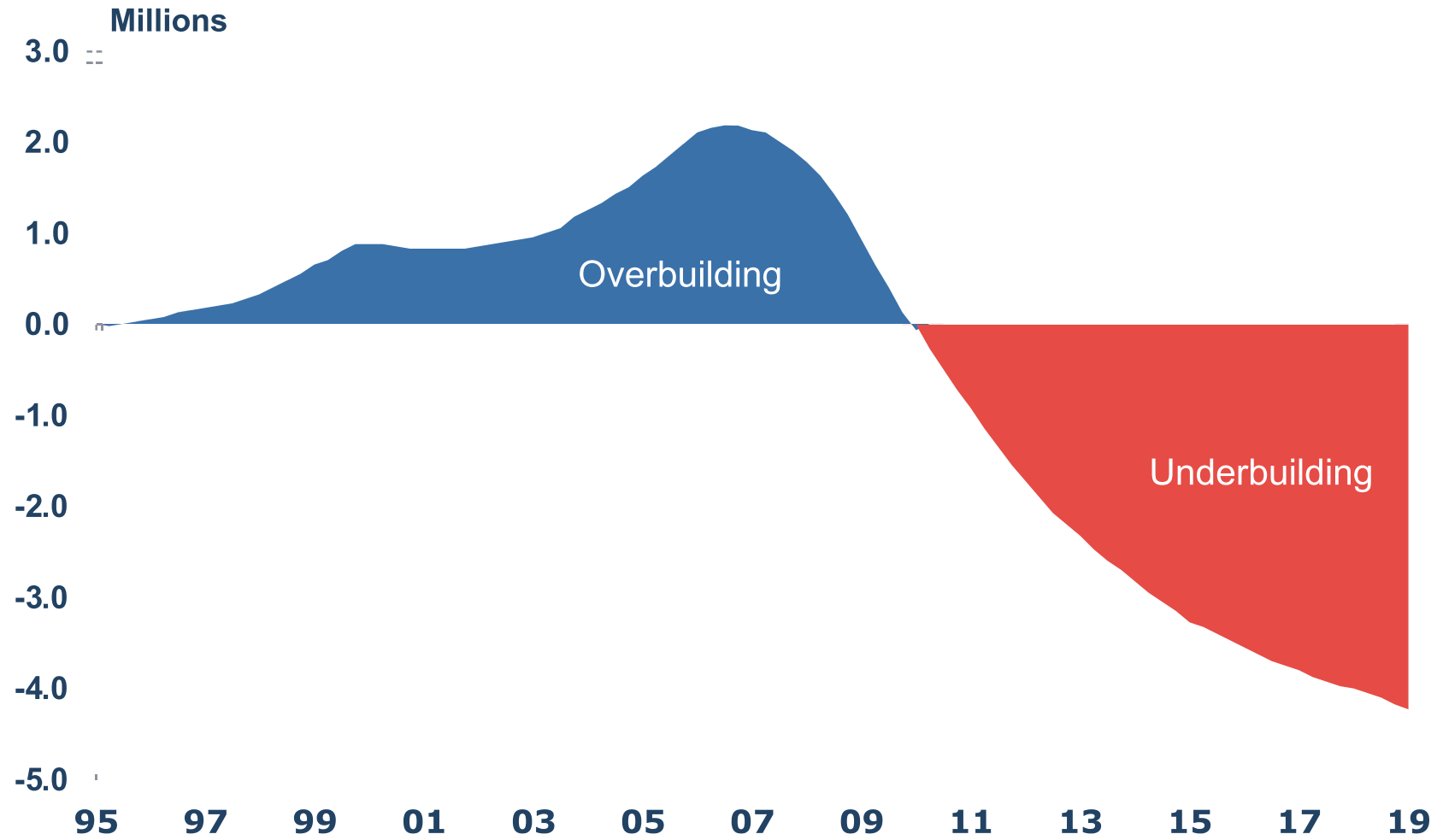
Canada		
6/5/2019	Tolko	2 Mills
6/3/2019	West Fraser	5 Mills
6/3/2019	Conifex	2 Mills
6/4/2019	Canfor*	Vavenby
5/31/2019	Aspen Planers	Remove 1 shift
5/25/2019	Interfor	All BC mills
5/23/2019	Tolko	2 Mills
5/16/2019	West Fraser	2 Mills
5/10/2019	Western	1 Mill
5/1/2019	Conifex	2 Mills
4/25/2019	Interfor	All BC mills
4/24/2019	Canfor	All BC Dimension mills

*Permanent

The US Is Dramatically Underbuilding: 2018 Level of Housing Completions Was Near Recessionary Lows in Previous Economic Cycles

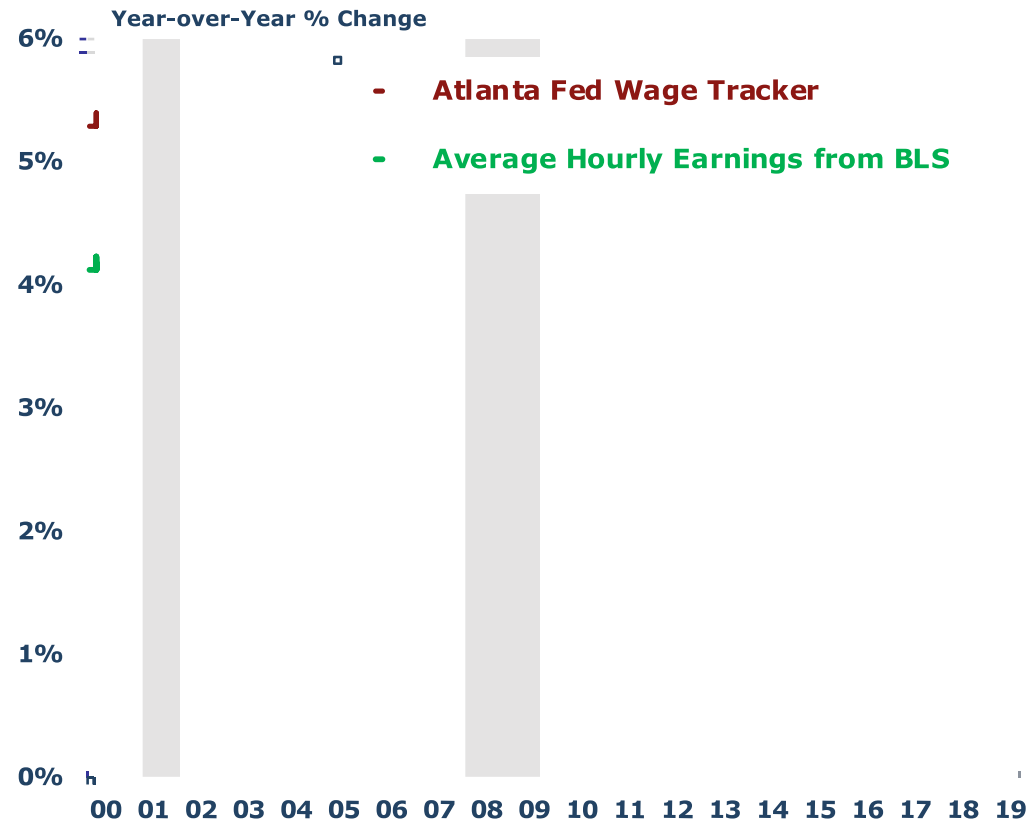


Cumulative Over-/Underbuilding of Conventional US Homes

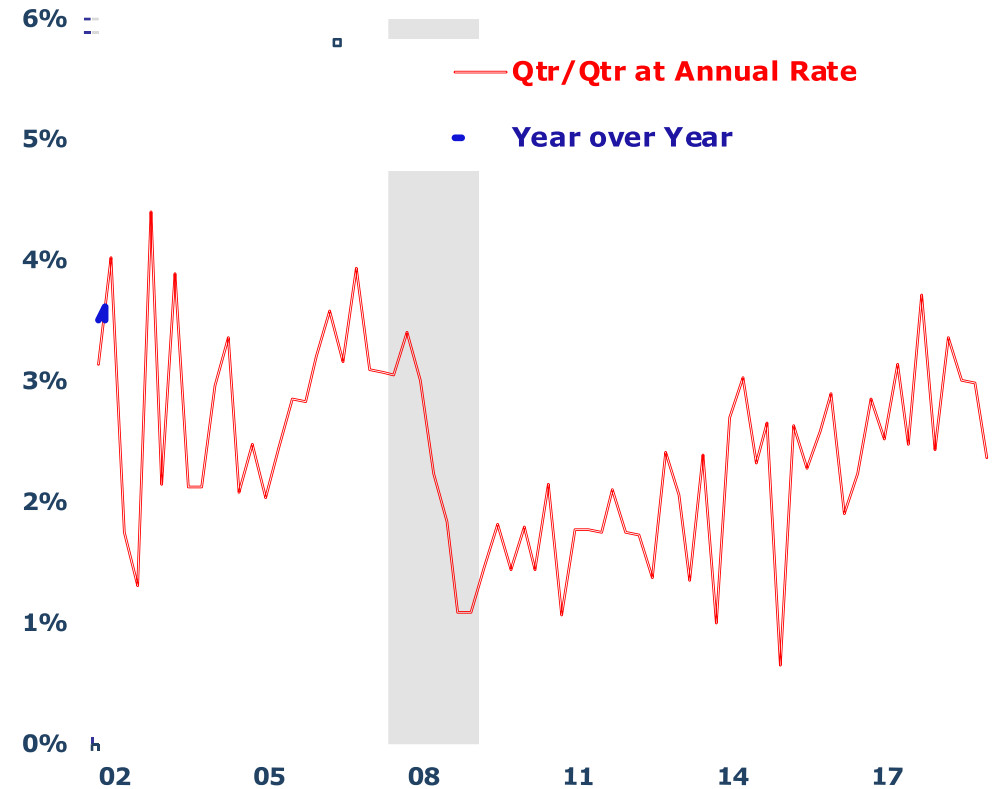


US Wage Indices Show Decent Growth

Atlanta Fed Wage Tracker and Average Hourly Earnings

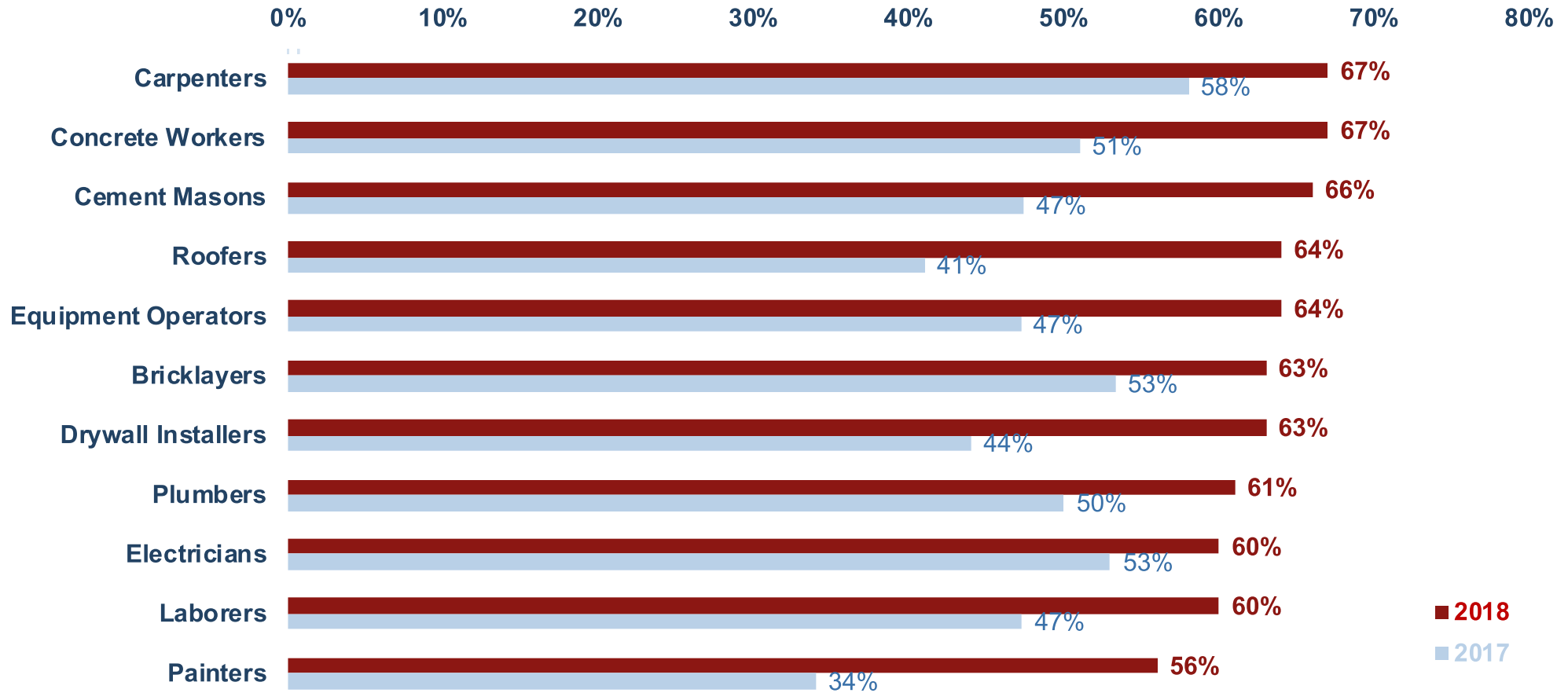


Employment Cost Index – Wages and Salaries



It's Tough to Hire in the Trades

Position Types that General Contractors are Having Trouble Filling



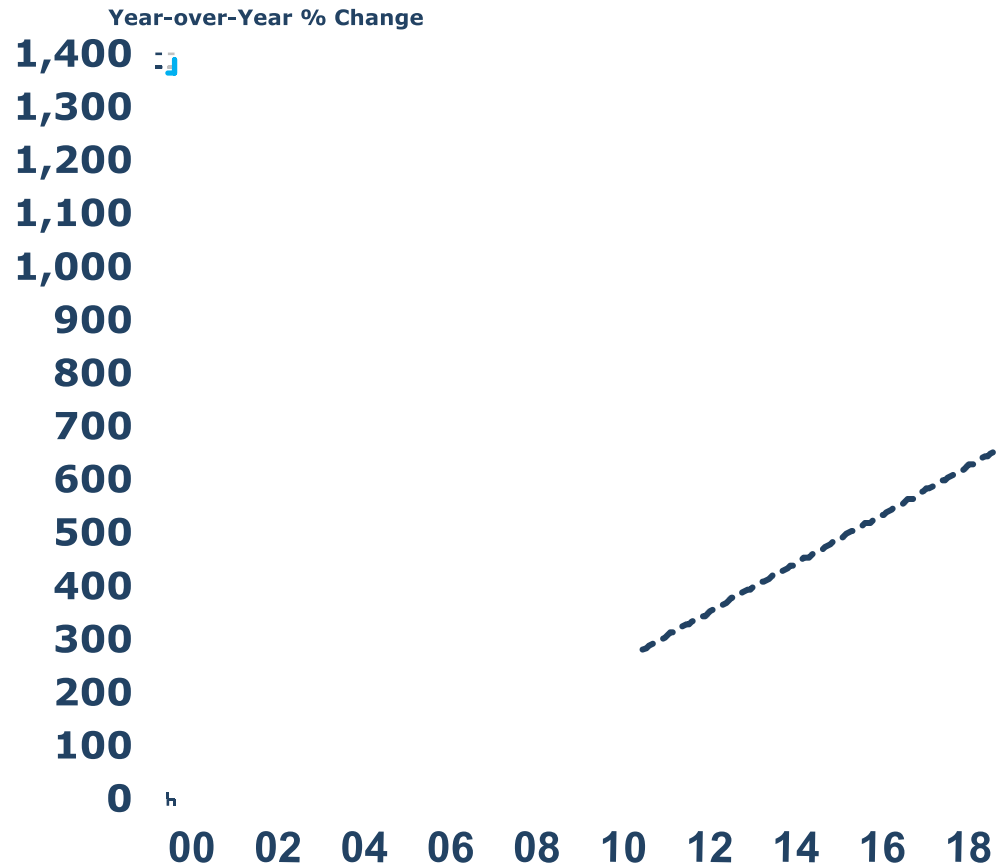
Source: Associated General Contractors of America, 2017 and 2018 Surveys

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Our Favorite Indicator for Near-Term Housing Demand Flashing Yellow

New Single-Family Home Sales



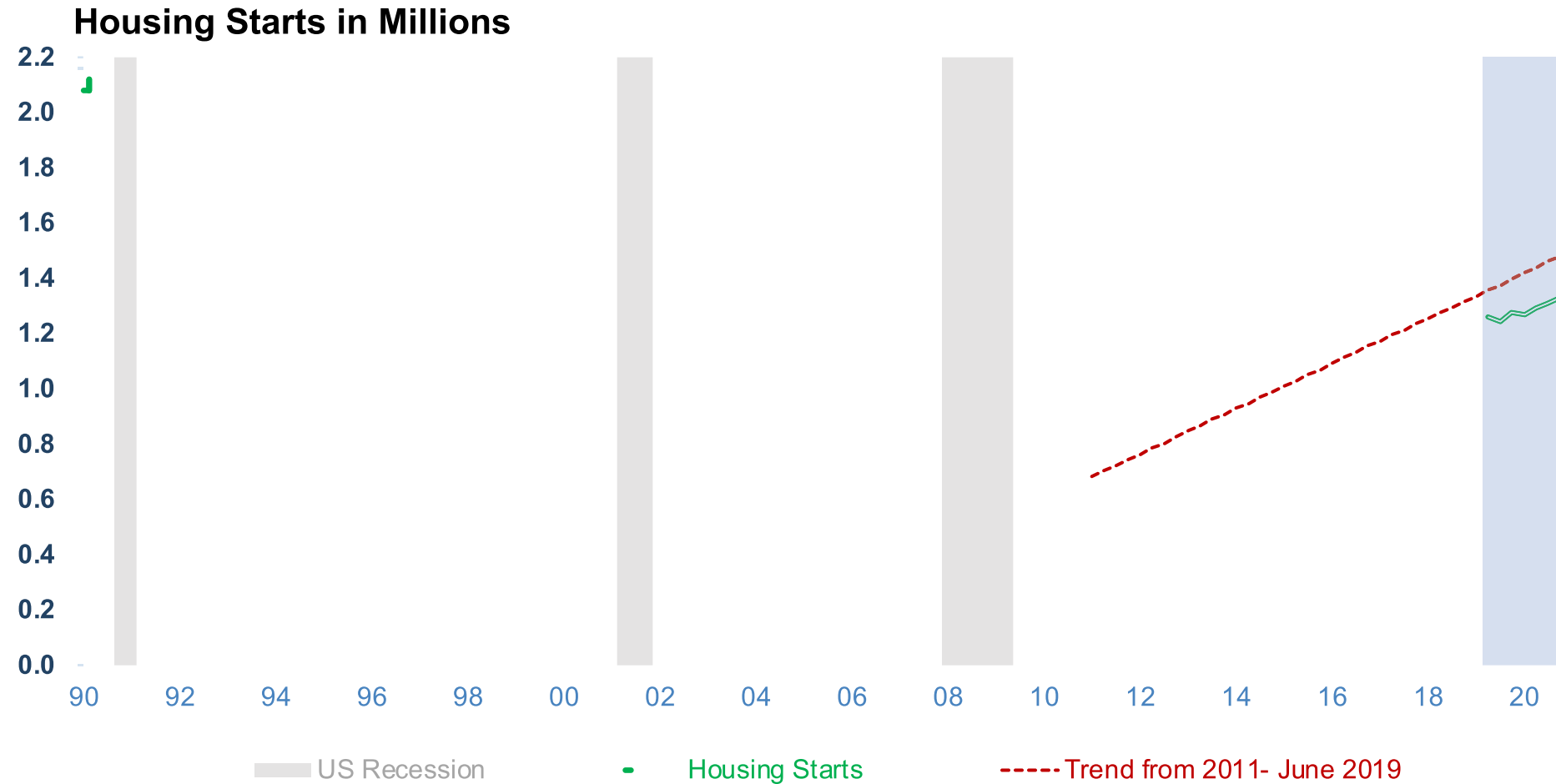
Mapping New Single-Family Home Sales to Housing Starts

New Single-Family Home Sales	664*	669**
Owner Build Share	25%	25%
Single-Family Starts Needed to Replenish Sales	885	892
Not All Starts Completed	98%	98%
Single-Family Starts Needed to Replenish Sales	899	910
Single-Family Share	70%	70%
Total Housing Starts Needed to Keep Inventories Flat	1,284	1,300

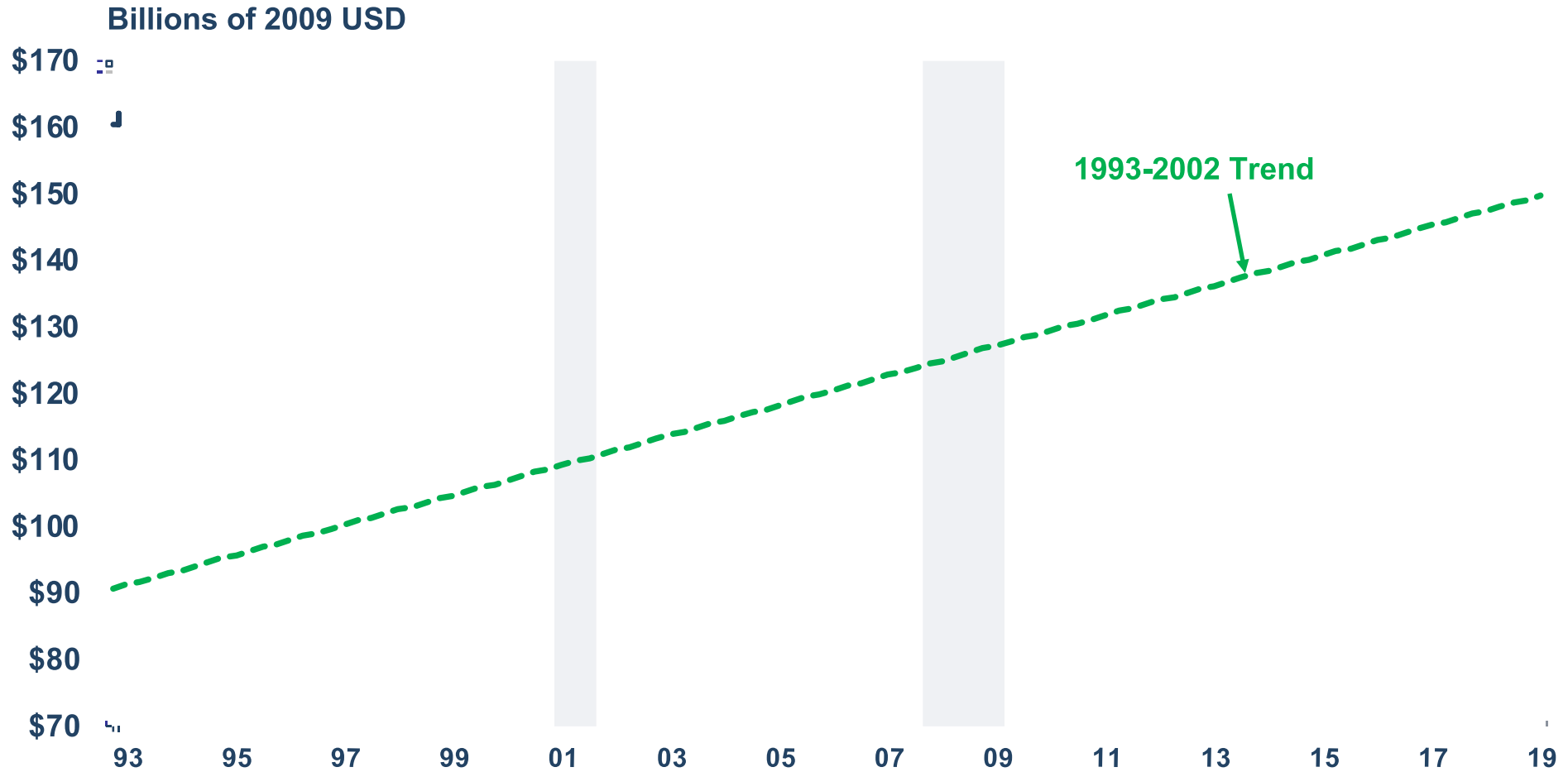
* Last six months

** Number required to meet 2020 Forecast

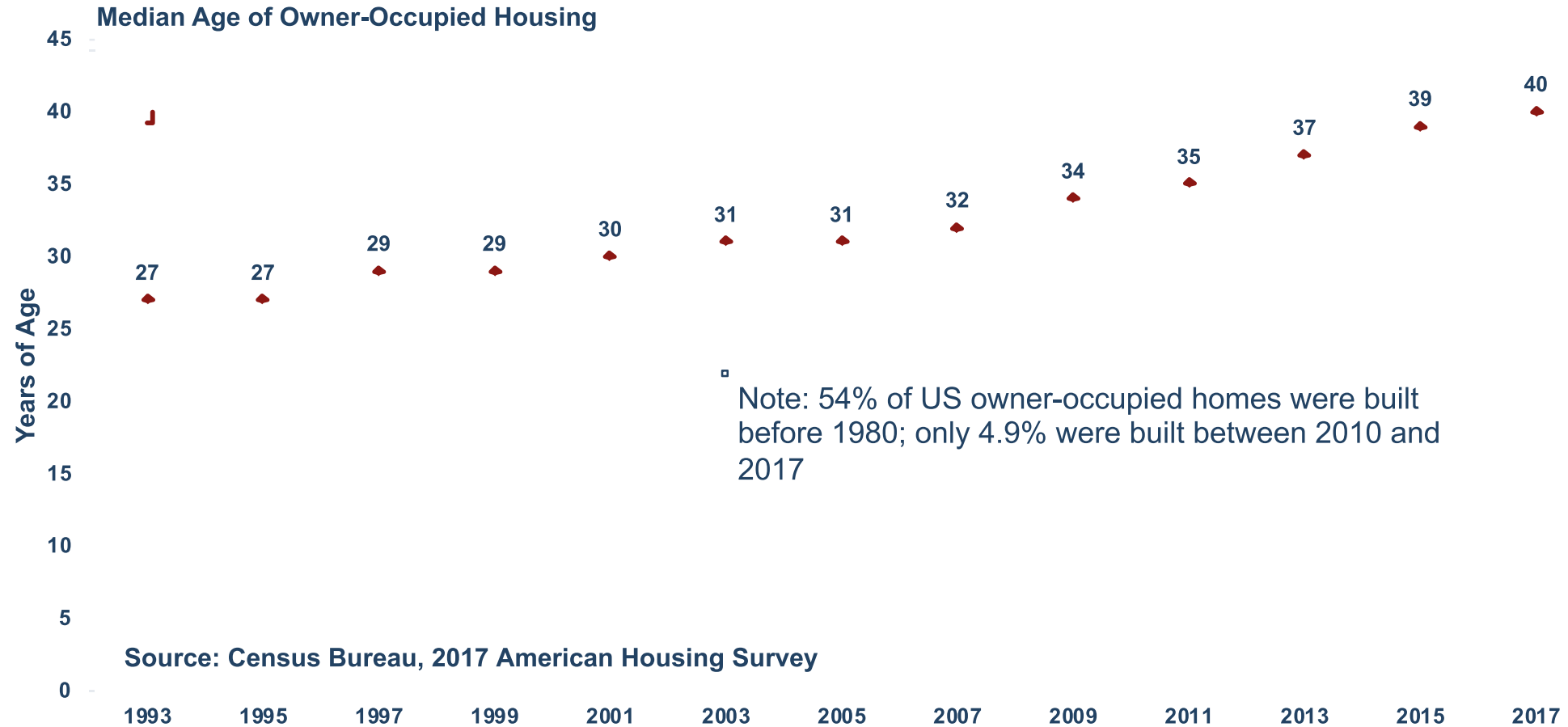
US Housing Starts Continue Grinding Recovery



Improvement Expenditures



The US Housing Stock Has Aged Considerably



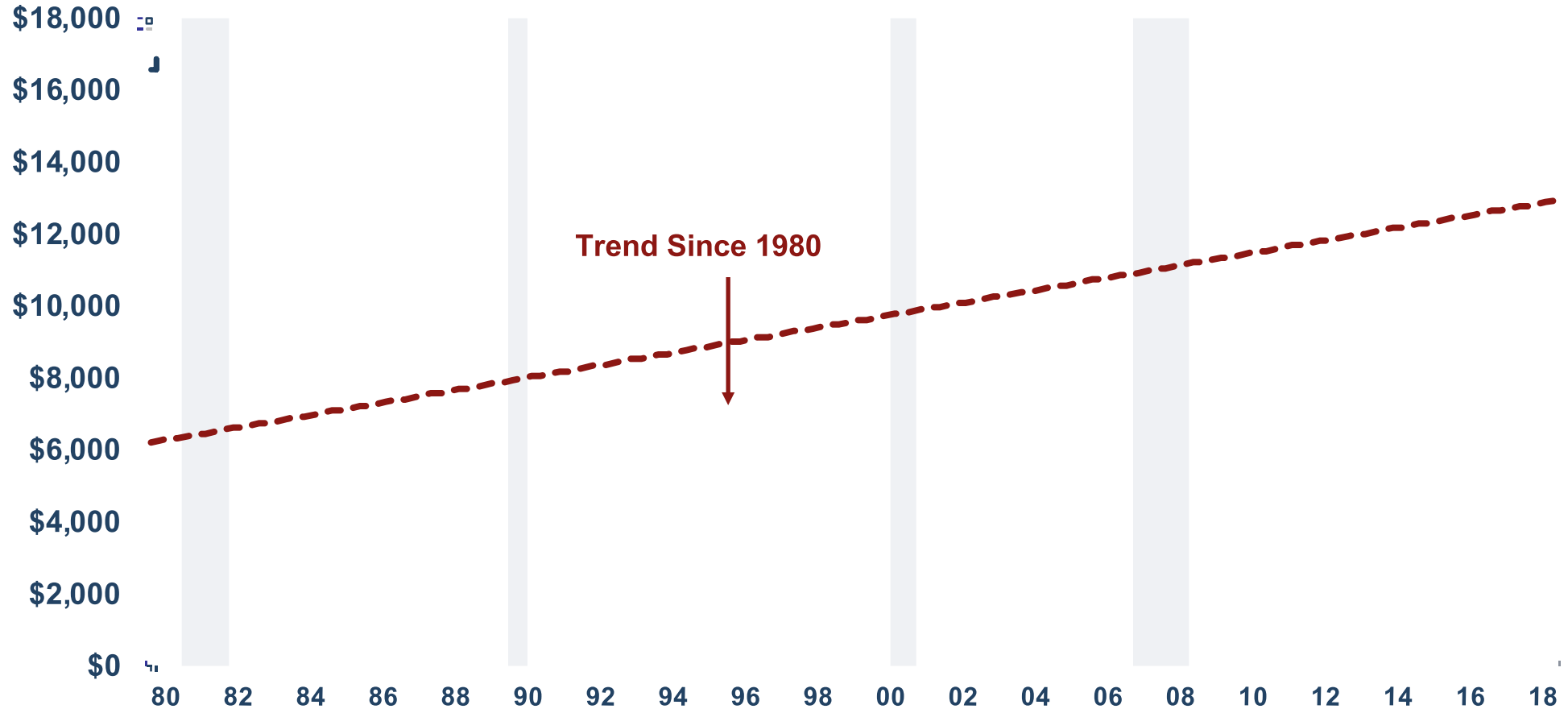
Home Prices Relative to Rents

Median Home Price-to-Rent Measured in Years of Rent Required for Purchase

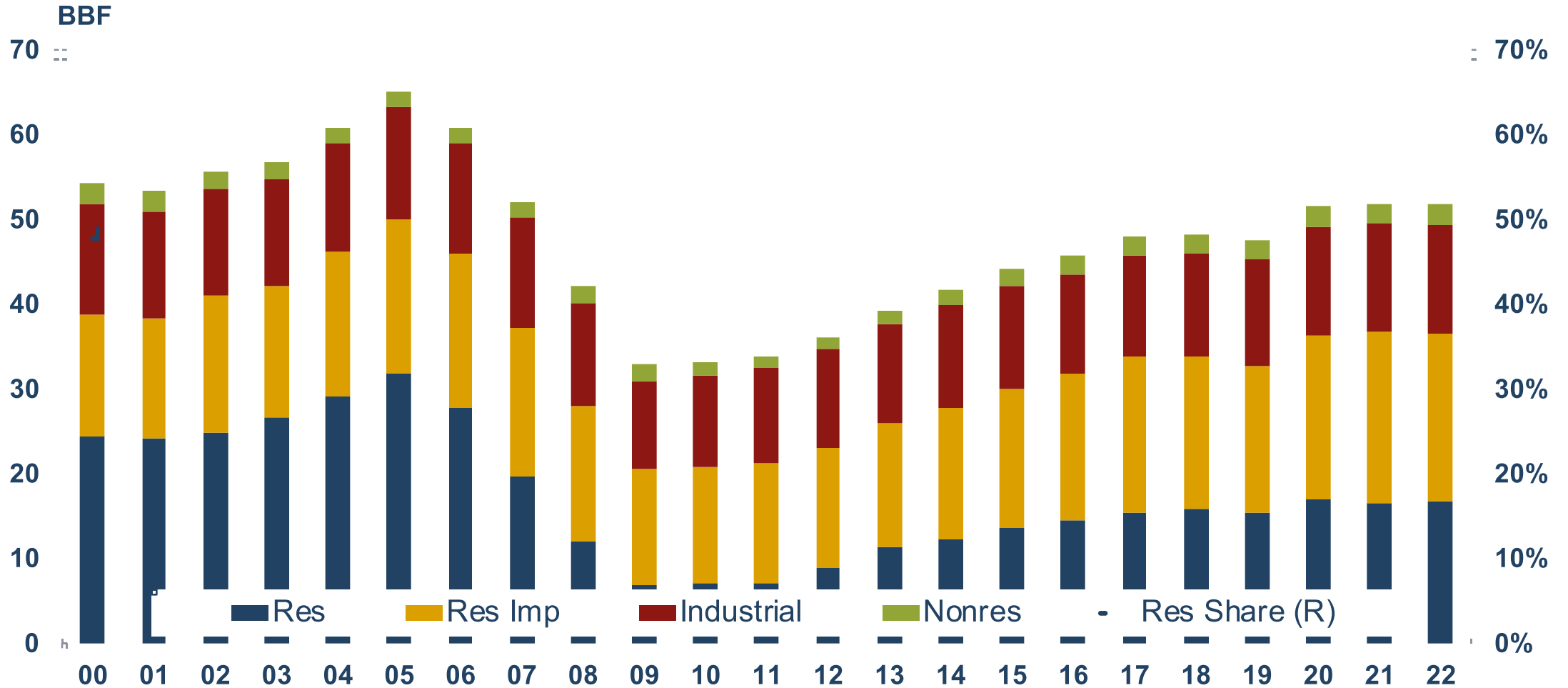


Rapid Increase in Home Equity Should Boost Improvements

Real Owners' Equity in Household Real Estate - Net Worth in Billion 2018 \$US

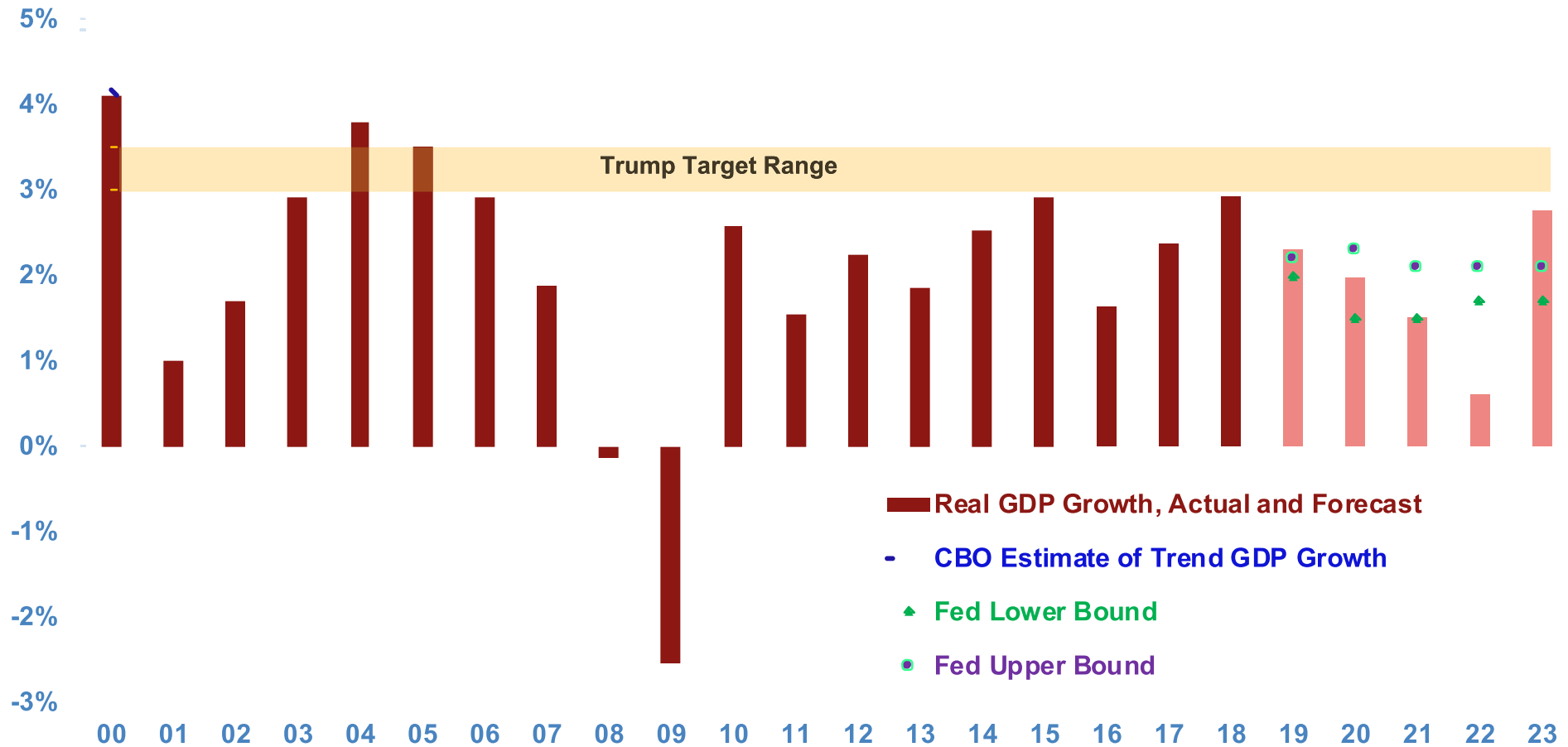


Lumber Consumption Sees A Decent Recovery In 2020, But Little Growth After That



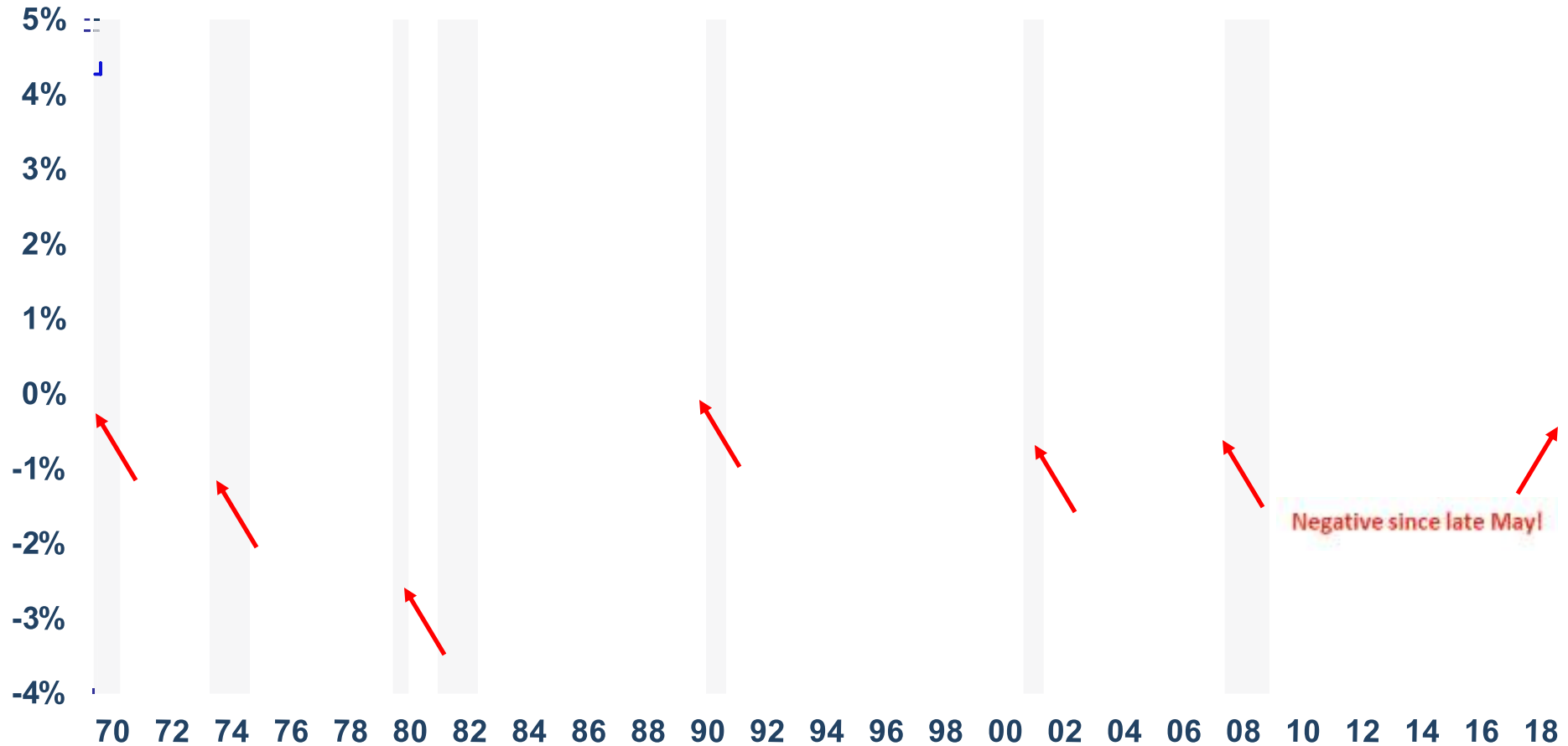
Real GDP Growth Will Slow Over The Next Few Years

Real GDP Growth



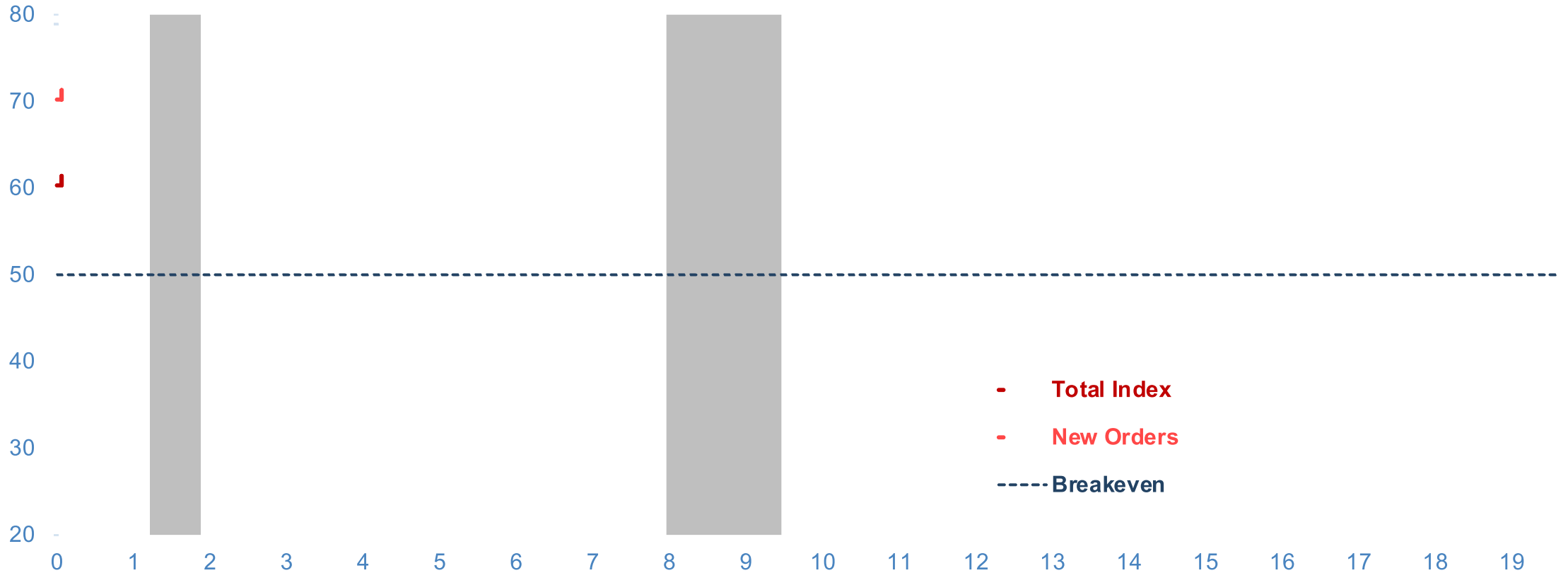
The Yield Curve Is Sending An Ominous Signal

10-Year Treasury Yield Minus 3-Month Treasury Yield



Purchasing Managers' Indices Show Manufacturing Sector is Now Shrinking

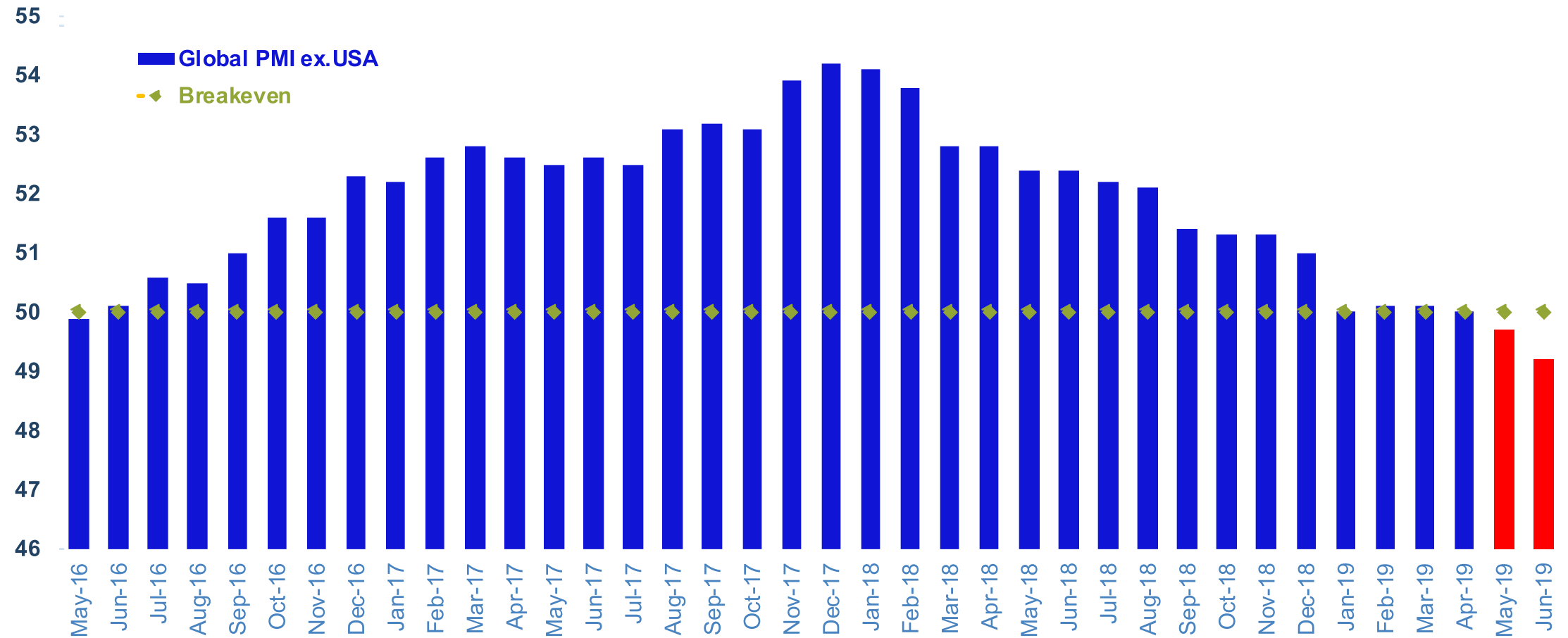
Purchasing Managers' Indices, Breakeven Level = 50



Source: Institute of Supply Management

Global Manufacturing Sector Has Been Declining Since Late 2017

Markit Purchasing Managers' Index Excluding US

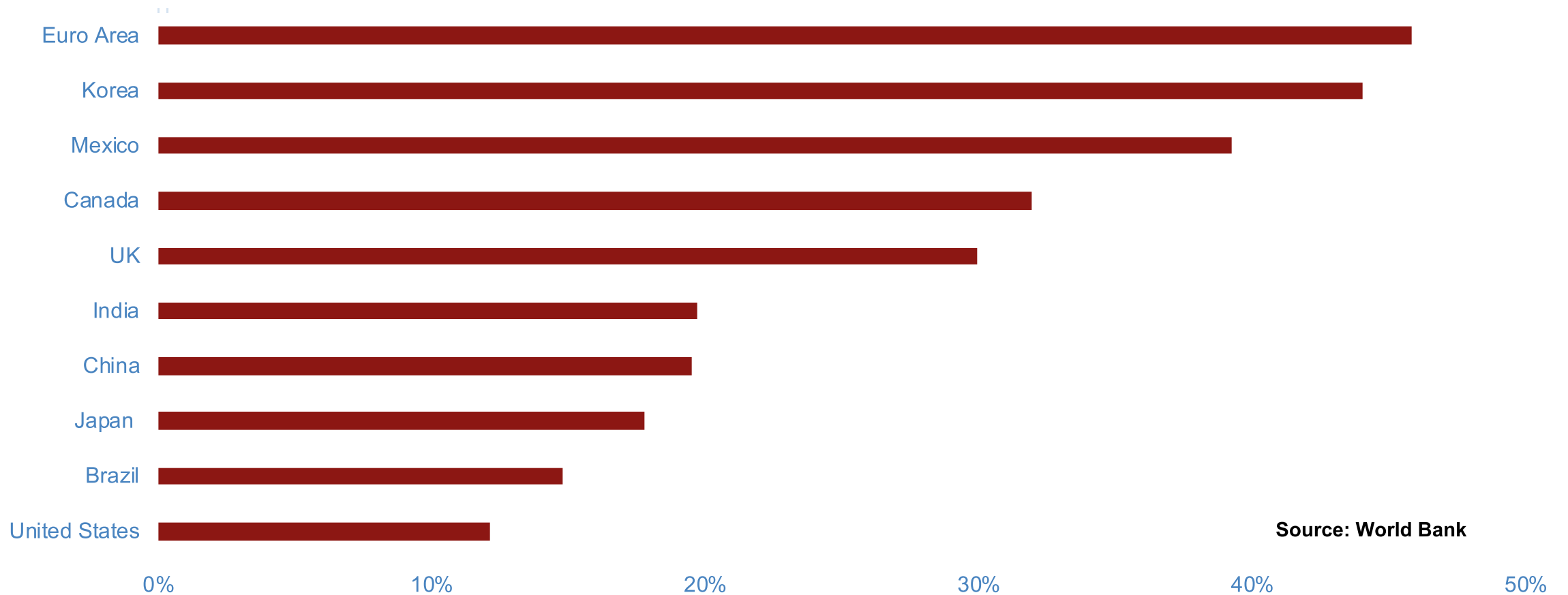


Global Supply Chains are Reacting to China-US Trade Dispute

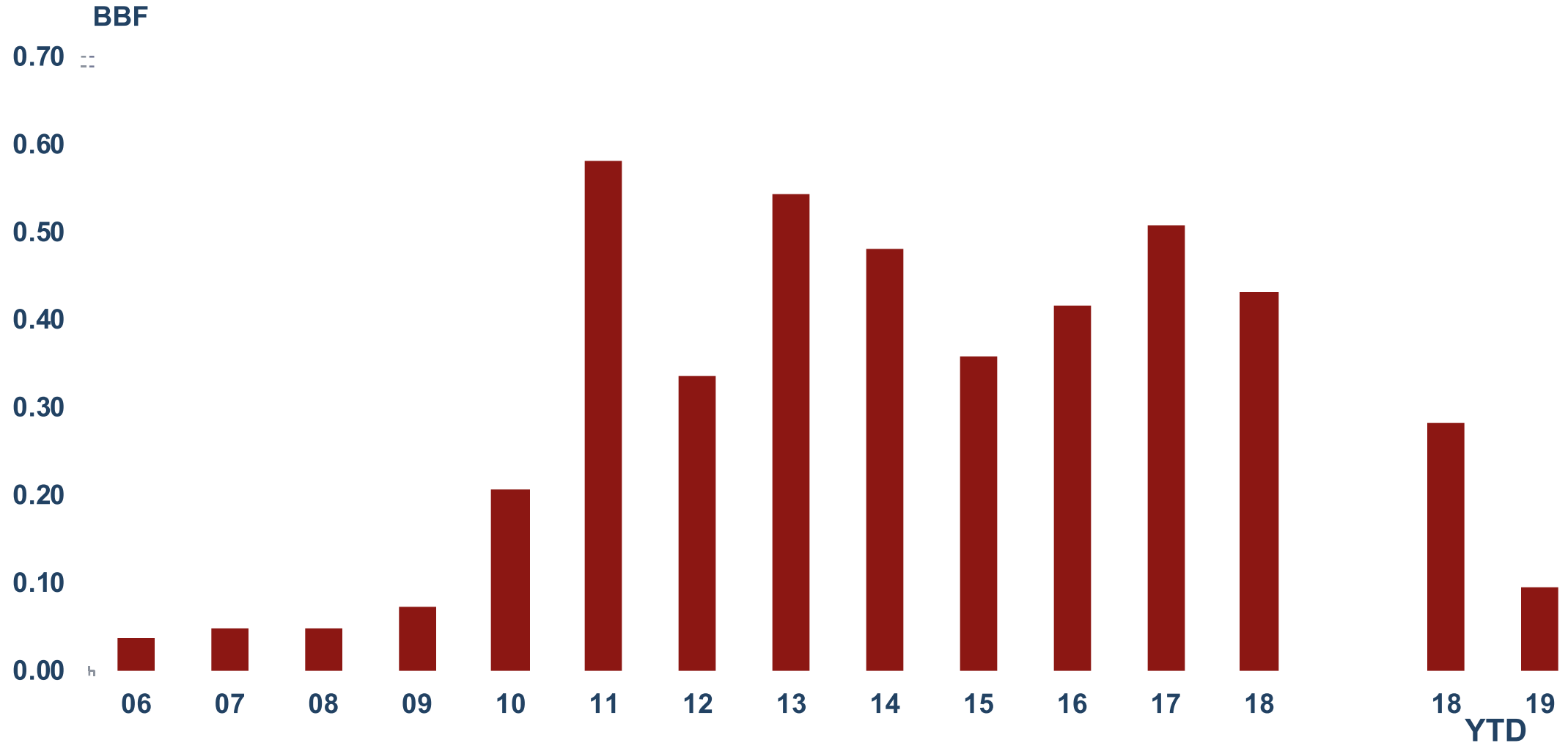


Trade is a Small Share of US Economy

Exports as a Percent of GDP



Chinese Imports Of US Softwood Have Collapsed



Chinese Tariffs On US Softwood Log and Lumber Imports

Products	Tariff before June 1 st , 2019	New Tariff after June 1 st , 2019	New Tariff after Sep 1 st , 2019	New Tariff after Dec 15 th , 2019
SYP log, 15cm+	25%	25%	25%	25%
SYP log, <15cm	10%	20%	20%	20%
Hemlock log, 15cm+	5%	5%	5%	5%
Hemlock log, <15cm	10%	20%	20%	20%
Douglas fir log, 15cm+	5%	5%	5%	5%
Douglas fir log, <15cm	10%	20%	20%	20%
Spruce log, 15cm+	10%	20%	20%	20%
Spruce log, <15cm	10%	25%	25%	25%
Douglas fir lumber	10%	20%	20%	20%
SYP/Hemlock lumber	10%	20%	30%	30%
Fir and spruce lumber	25%	25%	25%	35%

Take Home Points

- End-use markets for lumber will improve in 2020.
- The supply side will not be able to keep up with demand growth.
- We should see prices increase.
- However, the economy will slow and end-use markets will stagnate in 2021-22.
- This will cause prices to fall again.
- Global economic activity is also slowing.
- We don't see an end to the trade war between the US and China in the next 12 months. This will continue to put downward pressure on Chinese imports of US logs and lumber.