



## U.S. Housing Picks Up

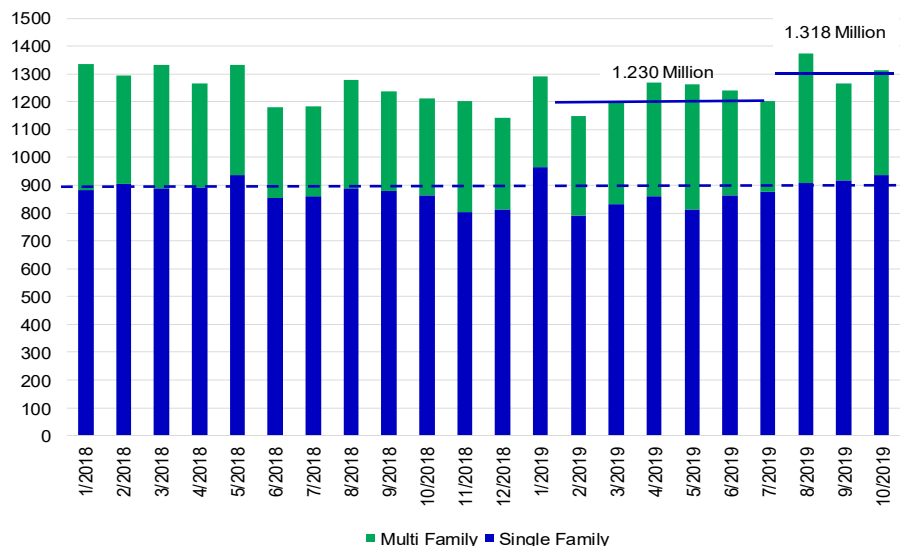
The recent pick-up in momentum in U.S. new home construction is welcome news within the forest product and timber sectors. Housing activity in recent months has responded favorably to attractive mortgage rates and an improved availability of more affordable homes. Builders are shifting their focus to building smaller, more affordable homes for new entrants to the housing market. These market factors and encouraging underlying demographics for housing demand in the U.S. are tipping the outlook for timber and wood products in a positive direction.

Total housing starts averaged 1.32 million units (SAAR) in the three months August-October compared to a 1.23 million annual rate over the first seven months of 2019<sup>1</sup>. October was also the third straight month that single family housing starts exceeded 900,000 units at an annual rate. This recent acceleration in residential construction has positive implications for U.S. timber demand. In 2018, 35%

of the total softwood wood products produced in the U.S. were used in the construction of new homes<sup>2</sup>. Roughly 6.3 boardfeet of wood is required for every ft<sup>2</sup> of house. Translated into trees, that equates to about 22 mature softwood trees for each 2,600 ft<sup>2</sup> home<sup>3</sup>. Not surprising then, the enthusiasm over the recent resurgence of new housing starts.

### U.S. Housing Starts Accelerate in the Third Quarter

Chart 1. Monthly U.S. Housing Starts (SAAR) (000s)

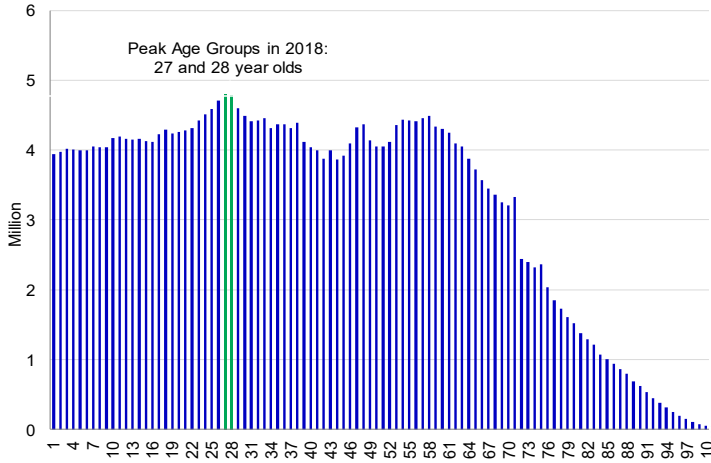


Source: U.S. Census Bureau, 12/2/2019

<sup>1</sup> U.S. Census Bureau, 12/2/2019  
<sup>2</sup> FEA, November 2019  
<sup>3</sup> <https://www.thehousedesigners.com/>

## Millennials Moving to Prime Home-Buying Years

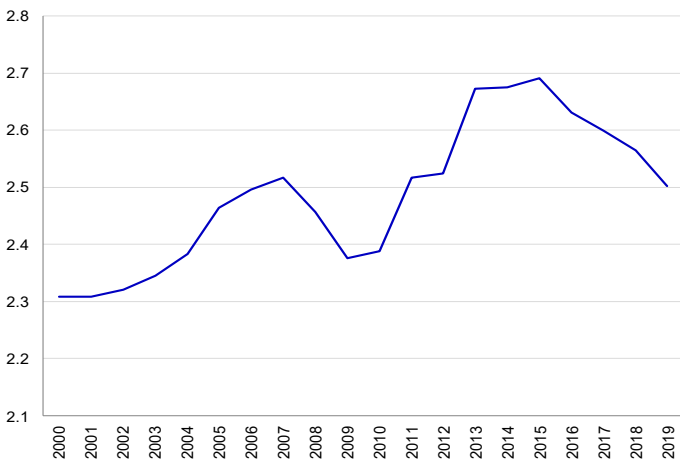
Chart 2. U.S. Population by Age as of July 2018. Millions



Source: U.S. Census Bureau, Population division as of July 2018

## The Size of Single Family Homes being built in the U.S. is getting smaller

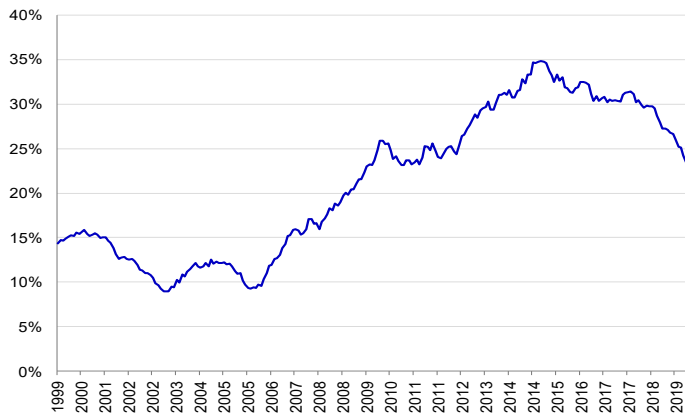
Chart 3. Square footage of U.S. single family homes



Source: U.S. Census Bureau, 12/2/2019

## The Price Premium for New Construction is Falling

Chart 4. Price premium for new vs existing single family homes (12 month rolling average), percent



Source: FEA, November 2019

In addition, single-family home starts have held steady at a 70% share of total housing starts over the course of the year<sup>4</sup>. This is particularly important to wood products demand, since single family construction uses two-thirds more wood products per square foot of construction as multi-family residential buildings.

The return to a healthy upward trend in new home construction over the past few months is consistent with several underlying factors, including the delayed entry into the housing market of the millennial generation and significant deficiencies in the U.S. housing stock.

## A demographic tailwind

The short-fall in U.S. housing activity over the past decade is illustrated by comparing the rate of home construction and change in population. From 1960 to 2000, the U.S. averaged 1.51 million housing starts per year while the U.S. population expanded at an annual rate of 1.1 million people per year over this 40 year period. In contrast between 2007-2018, U.S. population grew at an annual rate of 0.75 million people per year, with average annual housing starts of 0.95 million units built per year<sup>5</sup>.

Millennials, ages 27 – 28 years old, make up the largest age cohort of the population today, and in the 2020s, they will be in what historically has been the prime home-buying age, their early to mid-30s. (Chart 2. U.S. Population by Age as of July 1, 2018). The millennial generation has faced more obstacles to forming separate households, and entering the home-buying market, than their parents from the baby boom generation. The U.S. Census Bureau reports 32% of the current population age 18 – 34 still live with their parents, which compares to just 28% of baby boomers living with parents when they were in the 18 – 34 year old age cohort. Marriage is a trigger for establishing separate households and is positively correlated with homeownership. Millennials have delayed marriage compared to the baby boom generation, with just 21% of millennials married by the age of 28, compared to a marriage rate of 42% for baby boomers at the age of 28<sup>6</sup>.

Millennials' financial capacity to enter the housing market has also been constrained by the relatively sluggish pace of economic expansion and wage growth over the past decade, in combination with the significant burden of rising student debt obligations. Despite the slow start for millennials positively impacting housing markets, the age-class distribution of the population bodes well for future housing demand.

Millennials' ability to achieve home ownership is facilitated by builders specifically targeting the lower-end of the

4. US Census Bureau 12/2/2019

5. APA, October 2019, U.S. Census Bureau, November 2019

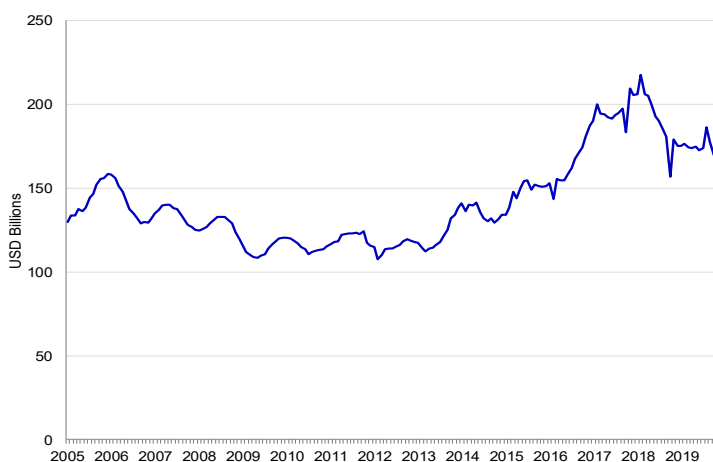
6. U.S. Census Bureau, 12/2/2019

housing market. Although the median home price at \$325K is still high relative to a median U.S. household income of \$65K, markets are adapting. A key indicator of builders refocusing on new entrants to the housing market is the downward trend in the average size of new homes built. The average size of a new single-family home dropped from a peak in 2015 of 2.7 thousand ft<sup>2</sup>, to 2.5 thousand ft<sup>2</sup> in 2019 (*Chart 3. Square Footage of U.S. Single Family Homes*)<sup>5</sup>. The movement to building more affordable homes is also illustrated by the shrinking premium on the price of new single-family homes sold compared to the price of existing single-family houses sold (*Chart 4. Premium for New vs Existing Single-family homes, 12 months moving average*).

In addition to the solid support from new home

### Wood products and timber markets are going to be supported by R&R

Chart 5: U.S. Total private construction spending minus new construction spending (billions)



Source: US Census Bureau, December 12/2/2019

construction in the coming decade, wood products and timber demand should also benefit from robust repair and remodeling (R&R) demand. According to Forest Economic Advisors calculations, the residential improvements sector (repair and remodeling) consumed 54.2M cubic meters of softwood wood products in 2018, accounting for 35% of total consumption. Tracking R&R expenditures can be difficult, due to volatility and revisions in the data, however R&R activity is positively correlated with overall activity in the housing sector, as people tend to undertake major projects in preparing a home for sale or modifying a newly purchased home (either new or existing). The median age of an existing home is now at a record 40 years old. In the 1970s, the average size of a home was 1,400 sqft compared to the average home size today of 2,300 sqft. This points to significant potential demand for upgrades to the existing

housing stock as homes change hands or baby boomers retire in-place. With the upward movement in home prices over the past decade, homeowner equity has returned to record levels providing a pool of capital that can potentially be tapped into for additions and improvements to existing homes.

### Moderating Forces

Not all future demographic trends will be working to the advantage of stronger residential construction activity. The aging of the baby boomer generation will eventually result in a significant number of homes being vacated. Over the next two decades, seniors will sell roughly one-quarter of the homes in the U.S., as they die, move in with children, or enter assisted living facilities. The Wall Street Journal estimates that 21 million homes are expected to be vacated by seniors by 2037<sup>6</sup>. The impact and timing of this possible headwind to residential construction remains unclear. The bulk of this supply of senior-owned properties is concentrated in places that younger buyers do not have a preference to live which include traditional retirement communities in Arizona and Florida or parts of the Rust Belt that have been losing population for decades. Consequently, a regional mismatch between supply and demand for housing could develop, negatively impacting construction in areas of Florida, Arizona, and Nevada as we move into the late 2020s and beyond.

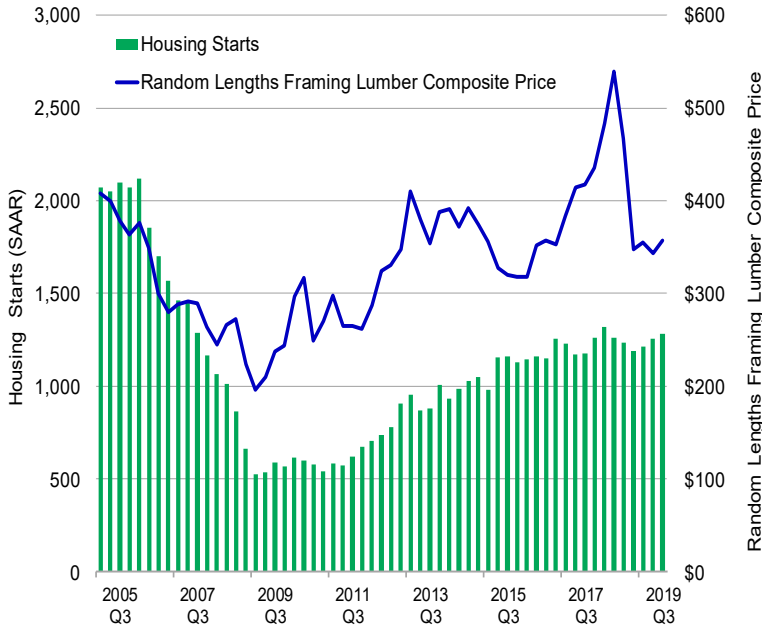
In the shorter term, housing momentum should remain strong over the coming year leading up to the U.S. national election, supported by record high employment and low interest rates. Looking out to the 2020s, particularly the first half, demographics and a relatively tight housing supply should provide a strong foundation for continued gains in residential construction activity.

# Timberland Market Indicators

Data as of 9/30/2019

## Lumber Prices Move Higher As Housing Starts Strengthen

Figure 1: Quarterly U.S. Housing Starts (1,000 units) and U.S. Softwood Lumber Composite Price (USD per MBF)

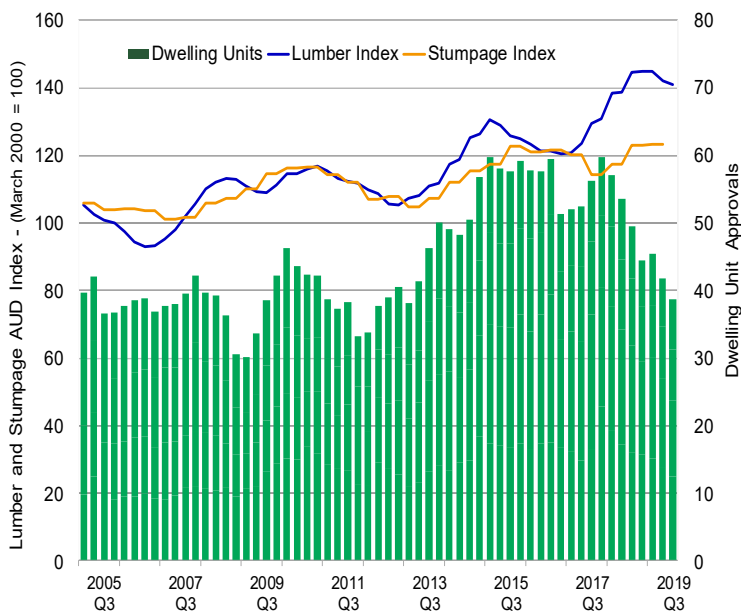


U.S. housing starts increased by 2 percent in the third quarter with total starts at 1.28 million units (SAAR), which was also 4 percent higher than a year earlier and the highest quarterly level since the first quarter of 2018. U.S. housing starts received a boost from declining mortgage rates in the third quarter. The Random Lengths Composite Index gained 4 percent over the previous quarter but was down 24 percent compared to the previous year. Lumber markets did not experience any major supply disruptions due to fires, weather or transportation logistics in 2019, allowing softwood lumber markets to remain well supplied. Lumber prices upward trend in the second half of 2019 has been supported by the production curtailments, extended down-time and announced mill closures in B.C..

Sources: Random Lengths Lumber Report September 2019, U.S. Census Bureau September 2019

## Australia Dwelling Approvals Step Down Again

Figure 2: Australian Softwood Lumber AUD Price, Timber AUD Price, and Dwelling Unit Approvals (1,000 units)



In the third quarter of 2019, Australian dwelling approvals (a key indicator of residential construction activity) continued to decrease, falling by 8 percent from last quarter and were down 35 percent from the cyclical peak set in the final quarter of 2017. The slow-down in Australia's housing activity reflects an easing in the forward momentum in the overall Australian economy and a correction in property values. Australian structural lumber prices decreased slightly from last quarter, but were still close to the all-time peak reached in the fourth quarter of 2018. Australian lumber prices, at current elevated levels, are vulnerable to a further downward price correction, given the sustained retreat in housing activity. Australian sawlog stumpage prices, reported biannually, were basically flat during the first half of 2019, at a +0.2 percent increase from reported prices in the second half of 2018.

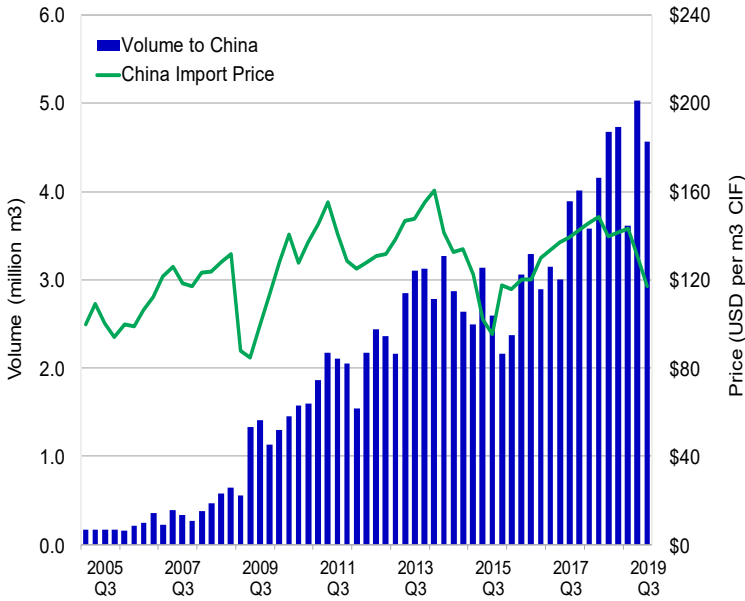
Sources: Australia Bureau of Statistics September 2019, KPMG December 2018, Indufor Timber Market Survey September 2019

# Timberland Market Indicators (continued)

Data as of 9/30/2019

## New Zealand Exports Volumes Slip Lower, As Log Prices Continue To Lose Ground

Figure 3: Quarterly New Zealand Softwood Log Export Volume to China (million m<sup>3</sup>) and Price in China (USD per m<sup>3</sup> CIF)

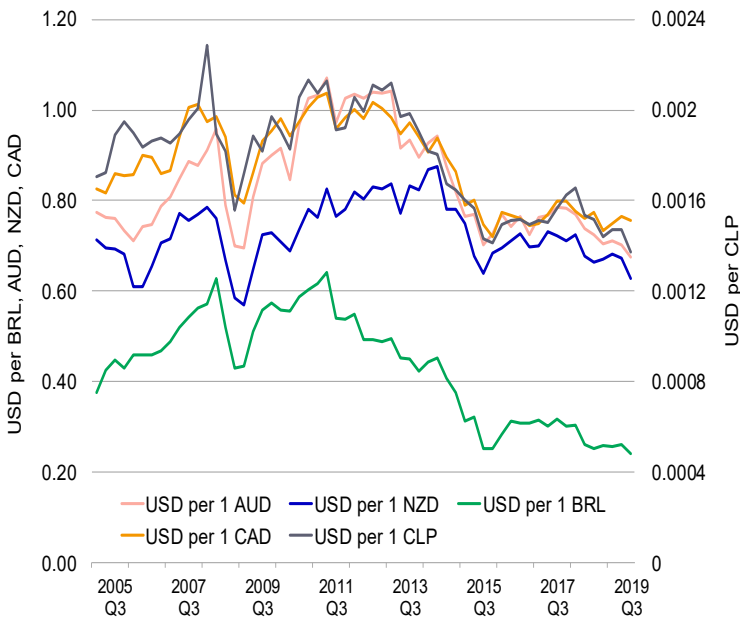


In the third quarter of 2019, New Zealand log export volumes dropped 9 percent from the second quarter. The price of New Zealand sawlogs delivered to China, denominated in USD, declined by 10 percent from the second quarter. Low cost supply from the beetle and storm-damaged sawlog being shipped from Central Europe are providing strong price competition to NZ suppliers. The slowdown in China's economy and construction sector is expected to continue to hold down growth in import volumes going forward, which will be in addition to the usual Chinese New Year slow down expected into the first quarter of 2020.

Source: Wood Markets International Inc. September 2019

## U.S. Dollar Mixed

Figure 4: Quarterly Exchange Rates Between USD and Commodity Currencies



The U.S. Dollar strengthened against competing currencies in the third quarter as a result of the continued strength of the U.S. economy compared to other countries. Compared to the prior quarter, the U.S. dollar gained: 4 percent compared to the Australian dollar; 1 percent relative to the Canadian dollar; 7 percent compared to the Chilean peso; 7 percent relative to the New Zealand Dollar; and 8 percent relative to the Brazilian Real

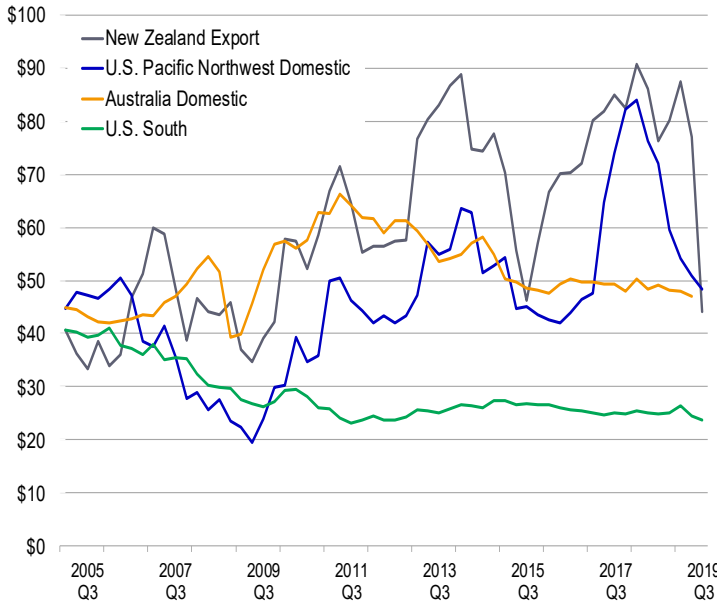
Source: Macrobond September 2019

# Timberland Market Indicators (continued)

Data as of 9/30/2019

## U.S. Softwood Sawtimber Prices Move Lower

Figure 5: Regional Softwood Sawtimber Stumpage Prices (USD per m<sup>3</sup>)

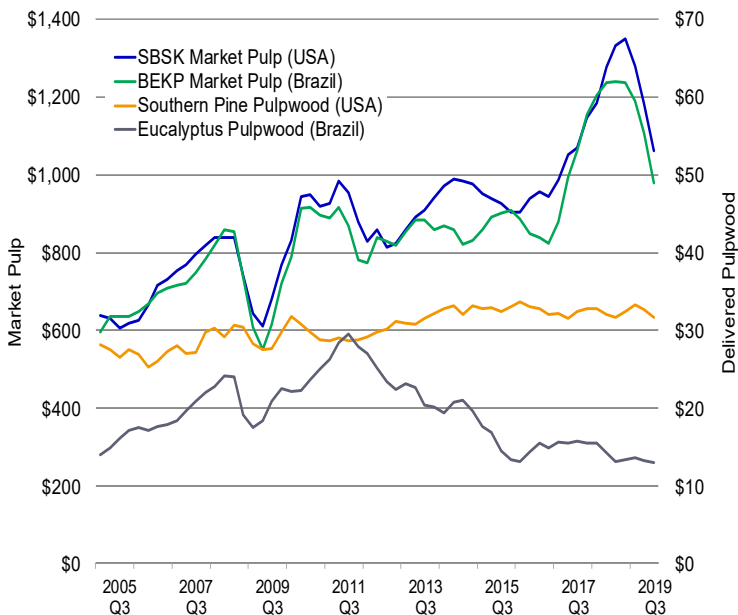


Global softwood sawtimber stumpage prices on a USD denominated basis fell in the third quarter of 2019. New Zealand softwood sawtimber prices decreased by 43 percent from the second quarter as a result of a over-supply in the Chinese market. U.S. Pacific Northwest prices drifted downward, dropping 5 percent from the previous quarter. Reduced timber availability in B.C., coupled with a mild recovery in softwood lumber prices in the fourth quarter, should reverse the downward trend for PNW sawlogs. In the U.S. South, southern pine stumpage prices decreased by 3 percent from the second quarter as good weather improved accessibility of timber harvesting operations. Australian pine stumpage prices, reported biannually, dropped 2 percent (in USD) during the first half of 2019 from average prices during the second half of 2018.

Sources: Log Lines September 2019, Timber Mart-South September 2019, NZMPI and Agrifax September 2019, KPMG December 2018

## Market Pulp Prices Lose Momentum, Pulpwood Prices Weaken

Figure 6: Quarterly Prices for Market Pulp and Delivered Pulpwood (USD per metric ton)



Prices for both Bleached Eucalyptus Kraft Pulp (BEKP) and Southern Bleached Softwood Kraft (SBSK) continued lower in the third quarter of 2019. Compared to the previous quarter, BEKP slipped 12 percent and SBSK was down 10 percent. Slower growth in China's overall economy is undercutting demand for market pulp and putting downward pressure on global pulp prices. Pulpwood prices in both the U.S. South and Brazil also declined in the third quarter. Pine pulpwood delivered prices in the U.S. South decreased 3 percent as good weather made timber easier to access. Eucalyptus delivered pulpwood prices (denominated in USD) in Brazil moved downward by 1 percent from the previous quarter, impacted by the weakness in the real.

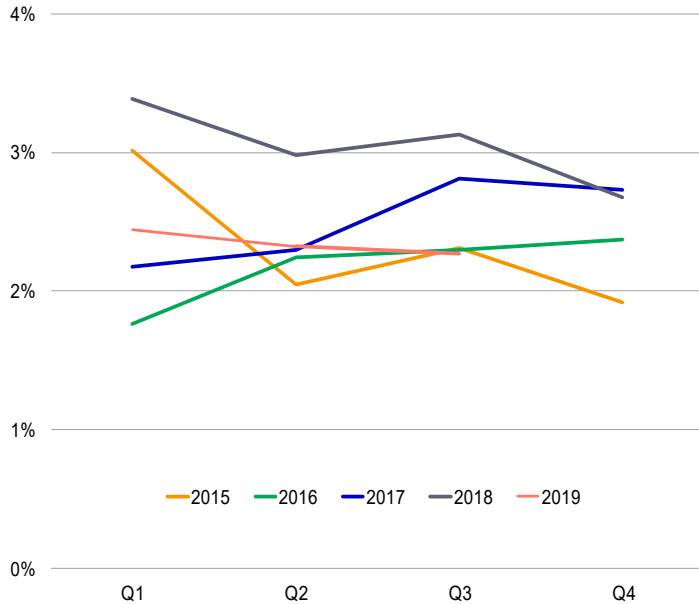
Sources: Hawkins Wright September 2019, Timber Mart-South September 2019, STCP September 2019

# Timberland Market Indicators (continued)

Data as of 9/30/2019

## Cash Yields Retreat

Figure 7: U.S. Timberland Annualized Operating Cash Yields (percent per year)

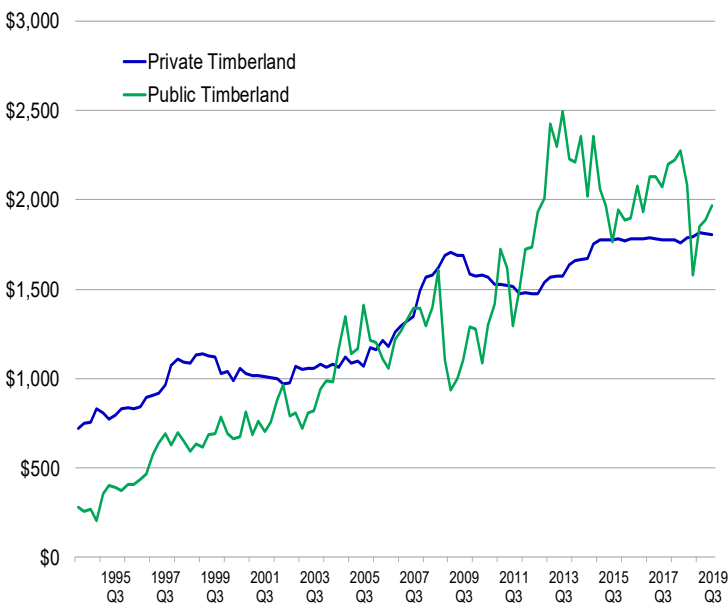


Sources: NCREIF September 2019, HNRG September 2019

U.S. timberland cash yields edged lower in the third quarter of 2019, reflecting the ongoing downward correction in timber prices in both the U.S. West and South. In the third quarter, cash yields from timberland operations were at a 2.3 percent annualized rate, a rate more similar to cash yields in 2015 and 2016.

## Public Timberland Values Remain Near Last Quarter Levels

Figure 8: Quarterly U.S. South Timberland Values (USD per acre)



Sources: NCREIF September 2019, HNRG September 2019

In the third quarter of 2019, the value of privately-held timberland in the U.S. South decreased slightly from last quarter, averaging \$1,805 per acre but, increased 1 percent from the third quarter last year. Public timberland values, measured by the Timberland Enterprise Value per Southern Equivalent Acre (TEV/SEA), increased by 4 percent, from the second quarter, yet a 6 percent fall from values a year ago.

Note: Hancock Timber Resource Group is a participating member in the NCREIF Timberland Property Index. The Index requires participating managers to report all eligible properties to the Index. Usage of this data is not an offer to buy or sell properties.

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Hancock Natural Resource Group, Inc. is a registered investment adviser and part of Manulife Investment Management's Private Markets platform. We specialize in global farmland and timberland portfolio development and management on behalf of our investors worldwide. Our timber division manages approximately 6 million acres of timberland across the United States and in Canada, New Zealand, Australia, and Chile. Our agricultural investment group oversees approximately 300,000 acres of prime farmland in major agricultural regions of the United States and in Canada and Australia.

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# Notes Timberland Market Indicators

**Figure 1.** The source for the U.S. Housing Starts is U.S. Bureau of Census. The Housing Starts data includes Single-family and Multi-family starts. Random Lengths Lumber Report is used for lumber prices.

**Figure 2.** Quarterly Australian Dwelling Unit Approvals is published by the Australian Bureau of Statistics. The Lumber Index is published by Indufor Timber Market Survey using Softwood Structural lumber prices (Blended Price - 60 percent MGP 10 90x35x4800, 40 percent MGP 10 70x35x4800). Log Price Index is calculated using the (APLPI) Radiata Pine Domestic Stumpage prices. The log price is an average of Intermediate and Medium sawlog prices

**Figure 3.** Quarterly New Zealand softwood log export volume to China and China Import prices are published by International Wood Markets Group Inc.

**Figure 4.** Monthly average Exchange Rates are from Macrobond.

**Figure 5.** Quarterly Softwood Sawtimber Stumpage Prices for the U.S. Pacific Northwest is reported in Loglines published by RISI. The weighted index is made up of 50 percent Domestic Douglas-fir (47 percent #2 and 53 percent #3 Sawmill sorts) and 50 percent Whitewoods (47 percent #2 and 53 percent #3 Sawmill sorts). U.S. South prices are published by Timber Mart-South (60 percent Southern Pine Sawtimber and 40 percent Chip-n-Saw). Australian domestic prices are calculated using the KPMG Australian Pine Log Price Index (APLPI) Radiata Pine Domestic Stumpage prices. The log price is an average of Intermediate and Medium sawlog prices converted to USD/m<sup>3</sup>. New Zealand radiata pine export log prices are a blend of Agri-Fax A and K log sort prices and A,K and J log prices published by New Zealand Ministry of Primary Industries converted to USD.

**Figure 6.** Quarterly Market Pulp prices are published by Hawkins Wright. U.S. Southern Pine Pulpwood prices are published by Timber Mart-South. Brazil Eucalyptus Pulpwood prices are published by STCP Engenharia de Projetos Ltda.

**Figure 7.** Annualized Operating Cash Yields are published by National Council of Real Estate Investment Fiduciaries (NCREIF). Yields are calculated using 60 percent U.S. South and 40 percent U.S. West.

**Figure 8.** Public equity values are derived from our Timberland Enterprise Value per Southern Equivalent Acre (TEV/SEA) calculation for five timber-intensive publicly traded companies as compared to southern timberland values per acre calculated from the NCREIF database. TEV is a quarterly estimate based on total enterprise value (total market equity + book value debt) less estimated value of processing facilities, other non-timber assets and non-enterprise working capital. SEA uses regional NCREIF \$/acre values to translate a company's timberland holdings in various regions to the area of southern timberland that would have an equivalent market value.



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