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Hancock Timberland Investor

North American Softwood Lumber Prices React to Market Disruptions

Softwood lumber prices in North America have been on a tear over the past 15 months, hitting a record high of \$630/MBF this past June, and retreating back 20% to \$533/MBF by August¹. The extreme volatility in North American wood products markets in 2018 reflects a convergence of factors: shifting U.S. tariffs on softwood lumber imports from Canada; restricted timber supplies in the western U.S. and British Columbia; and rail and truck shortages across North America. In response to a restricted supply of Canadian lumber for the U.S. market and the elevated prices, softwood lumber production in the U.S. ramped-up, and shipments of non-Canadian softwood lumber to the U.S. increased. The impacts of the large gains in prices and profitability in North America have flowed back to U.S. timber values in an inconsistent manner across regions. U.S. West Coast sawtimber prices nearly matched the strong increases in softwood lumber prices, while pine sawtimber prices in the U.S. South were unresponsive.

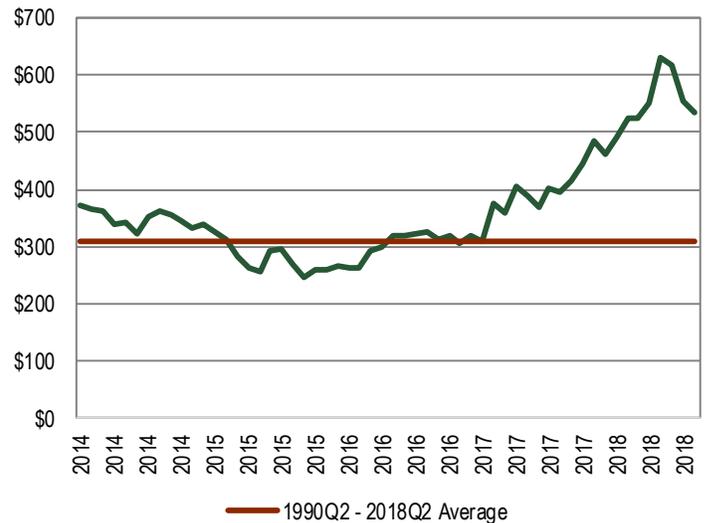
Softwood lumber prices rose to record levels in the first half of 2018, continuing and accelerating a trend of price increases that began in the early months of 2017. In the period between January 2017-June 2018, the benchmark western spruce-pine-fir price rose 103% to a peak of \$630/MBF (See Chart 1: Western S-P-F Lumber Prices), which is more than double the long-term historical average price for spruce-pine-fir lumber \$310/MBF (1990 Q1-2018 Q2).

The record price levels for North American lumber this past summer beat the previous historical record price set in early 2004, even on an inflation-adjusted basis, despite the fact that current residential construction activity in the U.S. is running at a moderate rate of 1.17 million units per year², which is far below the 2.0 million per year rate in 2004.

The key factors driving the sharp rise in lumber prices have been on the supply-side. In the fall of 2017, British Columbia experienced the worst fire season B.C. has ever recorded, during which 1.2

Western S-P-F Prices Hit Record Highs

Chart 1: Western S-P-F Lumber Prices \$/MBF



Source: Random Lengths, August 2018

million hectares and 53 million m³ of timber burnt, with a 10-week state of emergency in effect in the

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¹Random Lengths, August 2018

²APA Housing Report, August 16, 2018

province³. Multiple lumber, plywood and OSB mills closed due to fire evacuation notices, and others reduced production because of restricted log supply as harvesting operations were shutdown.

Following the fire-related production curtailments, disruptions to North American lumber distribution systems (both rail and trucking) impeded lumber shipments and depleted the North American supply-chain. In May of this year, the Canadian National railroad experienced strikes, and in July new requirements were enacted on Canadian truck operators decreasing the daily hours allowed to be on the road⁴. Adding to the transportation bottleneck has been a chronic shortage of truck drivers operating in both Canada and the U.S.

The availability of softwood lumber for the North American market in the first half of 2018 was also unsettled by the timing of changes in U.S. tariffs on Canadian softwood lumber. The U.S. had imposed a preliminary countervailing duty averaging 26.75% on Canadian softwood lumber in May of 2017

2018 Lumber Prices Surpassed Previous Record in 2004 Despite Lower Housing Demand

Table 1: Lumber Prices and Housing Starts—2018 and 2004

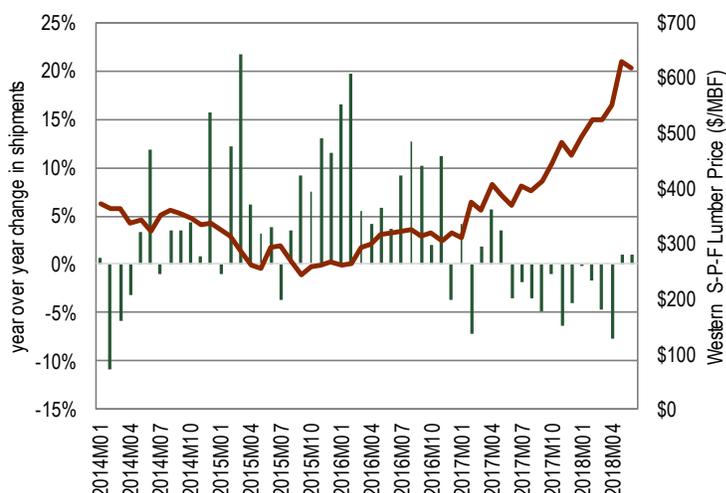
		Western S-P-F Lumber	U.S. Total Housing Starts (SAAR)
		\$/MBF (inflation-adjusted)	million units
July	2018	\$616	1.17
August	2004	\$604	2.02

Sources: Forest Economic Advisors 2018, APA August 16, 2018

elevating prices for Canadian softwood lumber shipped to the U.S. The preliminary countervailing duty terminated in late August of 2017 and a final determination imposing a permanent duty of 20.23% was not reached until late in December of 2017. Consequently, a gap of no duty occurred in the period between August 25 – December 28 2017. Canadian producers anticipating this duty free period, purged lumber inventories ahead of the gap, trying to get in-front of a fall back in prices that would result from the temporary lifting of the duties on Canadian lumber. Yet, fires and transportation shortages actually led to price increases during this gap period, and lumber buyers across North

Drop in Canadian Lumber Shipments to U.S. Boost Prices

Chart 2: Year-over-Year Change in Monthly Canadian Lumber Shipments to the U.S.



Sources: Forest Economic Advisors July 2018, Random Lengths July 2018

America found themselves scrambling to secure supplies in an environment of depleted inventories and reduced production, boosting prices to even higher levels.

Faced with production curtailments and shifting trade policy, Canadian shipments to the U.S. fell month after month, beginning in the summer of 2017 through April of 2018 (see Chart 2: Year-over-Year Change in Canadian Lumber Shipments to the U.S.).

Canada is a major component of the U.S. lumber market, accounting for 28% of U.S. lumber consumption on average, between 2010 and 2016, and Canada is also the largest foreign supplier of softwood lumber to the U.S., representing 96% of the total softwood lumber imports into the U.S. over the same period⁵. Yet, over the past year and a half, Canada’s ability to supply the U.S. softwood lumber market has been compromised. In 2017, Canadian softwood lumber imports dropped 6% from 2016 levels – resulting in Canada’s share of U.S. softwood lumber imports falling to 93%, and in the first 6 months of 2018, Canada’s share slipped to 91%⁶.

(Continued on page 3)

³<https://globalnews.ca/news/3921710/b-c-year-in-review-2017-wildfires>
⁴<https://www.trucknews.com/blogs/new-hos-regulations-effective-july-1/>

⁵RISI 2018
⁶USDA Foreign Agriculture Service, August 2018

North American Softwood Lumber Prices React to Market Disruptions *(Continued from page 2)*

The declines in Canadian shipments to the U.S., combined with the increasing consumption of lumber tied to the modest improvements in U.S. residential construction and home repairs, have helped boost output at softwood lumber mills across all U.S. producing regions. U.S. softwood lumber production increased 3.5% from January 2017 through May of 2018. The U.S. accounted for all the gains in North American softwood lumber production, and the U.S. South in particular, showing the largest increases in production (5.0% from the same period 17 months prior). Concurrently, production in Canada had almost no

U.S. Lumber Production Climbs Amid Record Lumber Pricing

Table 2: North America Softwood Lumber Production (Billion Board Feet)

	Jan. 2017 - May 2018	Jan. 2017 - May 2017	Percent Change
U.S.	48.5	46.5	3.5%
South	26.2	24.9	5.0%
Northeast/Lake States	2.3	2.2	4.2%
West	20.0	19.3	3.0%
Canada	40.5	40.6	0.0%
Western Canada	24.0	24.9	-4.5%
Eastern Canada	16.4	15.7	4.1%

Sources: Stats Canada, WWPA, Forisk Consulting

change – with increased production in Eastern Canada offsetting the 4.5% declines in B.C. (See *Table 2 North America Softwood Lumber Production*).

The declines in Canadian softwood lumber shipments to the U.S. over the past 18 months has also been partially offset by increased imports from non-Canadian suppliers, attracted by the high prices for softwood lumber in the U.S. From January 2017 through June of 2018, non-Canadian imports grew by 55% from the prior 18 months. Over this same period Canadian imports fell by 1.1 million boardfeet, while non-Canadian imports increased by 592 thousand boardfeet, offsetting 60% of lost Canadian supply (See *Table 3: U.S. Softwood Lumber Imports*). Softwood lumber suppliers from

⁷USDA Foreign Agriculture Service, August 2018

Non Canadian Softwood Lumber Imports Climb

Table 3: U.S. Softwood Lumber Imports (Million Board Feet)

	Jan 2017 - June 2018	Jan 2016 - June 2017	% change
Total	22,633.4	23,133.6	-2%
Canada	20,966.2	22,057.9	-5%
Non-Canadian	1,667.2	1,075.7	55%

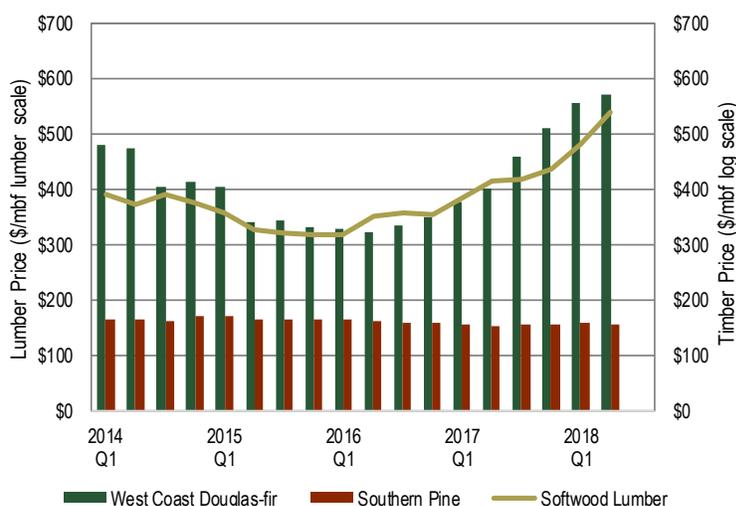
Source: USDA Foreign Agriculture Service, August 2018

Eastern and Western Europe had the largest change in import volumes; Germany in particular, with a 207% increase in imports and an increased share of U.S. imports from 0.6% to 2.0%⁷.

The impact of the run-up in softwood lumber prices and the associated profitability on timber markets has been strikingly mixed between producing regions, with softwood sawtimber prices in the West Coast moving up in tandem with lumber prices, while timber prices in the U.S. South were nearly unresponsive. West Coast producers saw record prices for timber this year, with Douglas-fir prices rising 52% from 2017 through June of 2018 (See *Chart 3*). Southern pine prices have remained flat

Record Lumber Prices Have Mixed Impact on Regional Timber Prices

Chart 3: Softwood Lumber Prices Compared to Southern Pine and Douglas-fir Timber Prices (\$/MBF)



Sources: Random Lengths August, 2018 Timber-Mart South, 2Q 2018 and RISI, August 2018

(Continued on page 4)

over the same period. West Coast timber price responsiveness to shocks has traditionally been faster than the South, due to a tighter balance between the demand and supply for merchantable timber on the West Coast. The differences in relative market tightness for sawtimber between the South and the West increased significantly over the past ten years. In the first half of the 2010s, timber harvest levels in the West were boosted by increased log exports to China, which helped to move sawtimber harvests back in-line with growth in the region's commercial forests. In the South, exposure to offshore markets was extremely limited and the recovery in sawtimber demand has been painfully slow. Southern softwood sawtimber demand is still 22% below its previous peak in 1999, and growth on the region's pine sawtimber resource is still in excess of harvest⁸. Consequently, the South is over-supplied, a legacy of the weak U.S. demand for wood products following the collapse in U.S. housing and the Great Recession of the late 2000s. Merchantable timber supply in the West Coast is now tight whereas timber supply in the South is abundant.

Persistently low southern pine prices are an incentive for lumber producers to relocate to the U.S. South (as B.C. producers have) and for in-place producers to add new capacity

This year's contraction in the availability of Canadian softwood lumber to the U.S. market was particularly acute, exacerbated by weather related forest fires, trade policy, transportation logistics and labor shortages. However, longer-term changes in British Columbia timber supply will likely constrain Canadian softwood lumber production in the coming decade. The BC Ministry of Forests is currently in the process of ratcheting down their targeted Annual Allowable Cut (AAC) harvest levels. These reductions in targeted timber harvests are adjusting to the end of the major salvage efforts following the pine beetle epidemic in the 1990s through early 2000s during which 50% of B.C.'s merchantable

pine inventory died⁹. As the ability to recover salvage timber ends, AACs are being reduced, and the B.C. softwood lumber industry has already begun to adapt. Anticipating further constrictions in the B.C. timber supply and potential trade restrictions, Western Canadian lumber producers have been shifting operations to the U.S., particularly to the U.S. South, attracted by the regions timber availability and competitive timber prices¹⁰.

Southern pine timber price levels are one of the lowest globally (*See Figure 5, page 7: Regional Stumpage Prices*) and have remained low for close to a decade. These persistently low southern pine prices are an incentive for lumber producers to relocate to the U.S. South (as B.C. producers have) and for in-place producers to add new capacity (upwards of 2.3 billion board feet of new capacity announced through 2020)¹¹.

The magnitude of the 2018 lumber price spikes were not expected, and were not sustainable. The weather, fire and transportation impediments proved to be temporary disruptions to the smooth functioning of the North American softwood lumber supply-chain. Looking ahead, Canadian softwood lumber supply to the U.S. is not expected to increase over the next few years. Continuing constraints on the availability of Canadian softwood lumber for the U.S. market such as declines in B.C.'s timber harvest and trade restriction will keep pressure on the overall North American softwood lumber market, supporting strong and more volatile softwood lumber prices. However, as further investment in lumber capacity in the U.S. South continue, southern pine sawtimber prices should begin to gain forward momentum and share in the renewed profitability of North American softwood lumber producers. 🌲

⁸RISI, April 2018

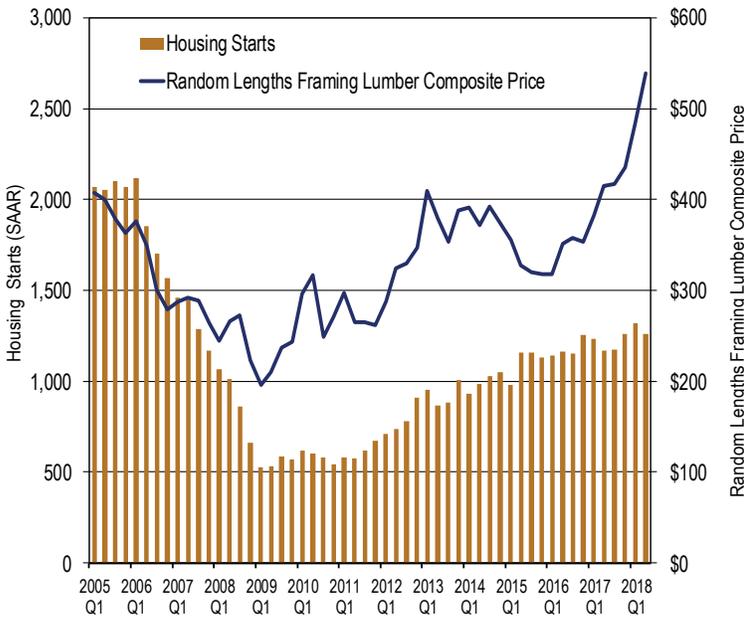
⁹<https://www.nrcan.gc.ca/forests/fire-insects-disturbances/top-insects/13381>

¹⁰Random Lengths International, June 6, 2018

¹¹Forisk North American Forest Industry Capacity, 2018

Lumber Prices Set New Record Highs

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

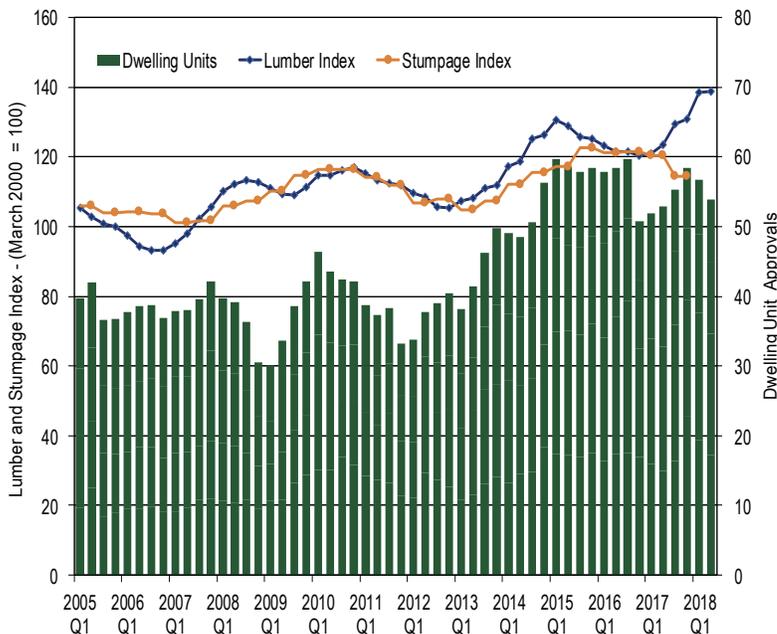


Sources: Random Lengths Lumber Report June 2018, U.S. Census Bureau June 2018

U.S. housing starts lost forward momentum in the second quarter of 2018, with total starts slipping 4 percent from the previous quarter to 1.26 million units, which was still a healthy 7.8 percent increase compared to the same period a year earlier. The weakness in second quarter home construction was concentrated in multi-family starts, while single family starts posted a slight increase (1.2 percent) from the previous quarter and were up a strong 8.7 percent compared with the second quarter of 2017. Wood product prices reached new highs in the second quarter, with the Random Lengths Composite Index gaining 11.6 percent over the previous quarter and increasing 30.1 percent compared to the second quarter of 2017. The factors driving this year’s surge in North American lumber and wood panel prices are fully explored in the cover article of this edition of the HTI.

Australia Lumber Prices Move Up Sharply

Figure 2: Australian Softwood Lumber Prices, Timber Prices, and Dwelling Unit Approvals

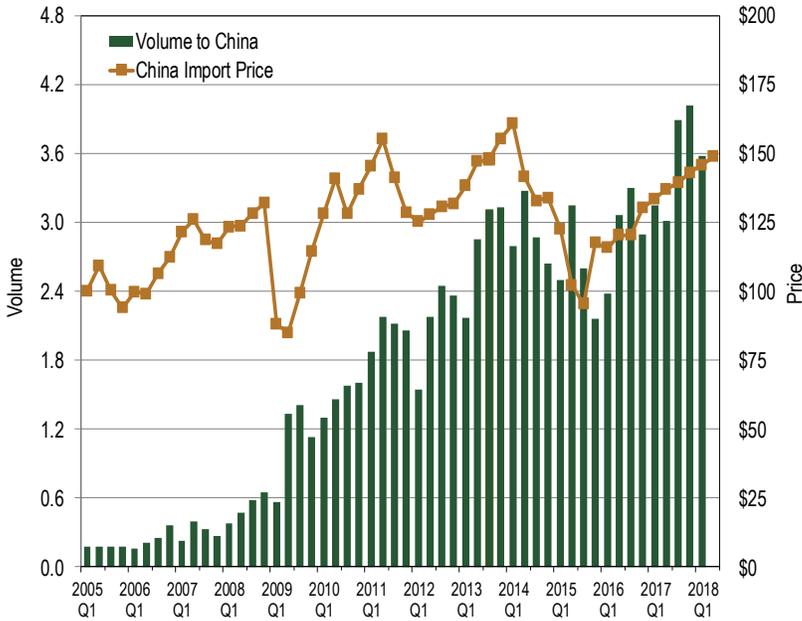


Sources: Australia Bureau of Statistics June 2018, KPMG December 2017 and Indufur Timber Market Survey June 2018

In the second quarter of 2018, Australian dwelling approvals (a key indicator of residential construction activity) continued to lose ground slipping 5.0 percent from the previous quarter and down 8.0 percent from the cyclical peak set in the final quarter of 2017. This slow-down in Australia’s housing activity reflects an easing in the forward momentum in the overall Australian economy, as well as a reaction to the elevated price levels for Australian housing. Australian structural lumber prices held steady in the second quarter, but at their current elevated level could be vulnerable to a downward price correction if housing activity slows further. Australian sawlog stumpage prices are reported biannually, and the release for June 2018 is still pending.

New Zealand Imports Dip Lower, Log Prices Move Higher

Figure 3: Quarterly New Zealand Softwood Log Export Volume to China (million m³) and Price in China (USD per m³ CIF)

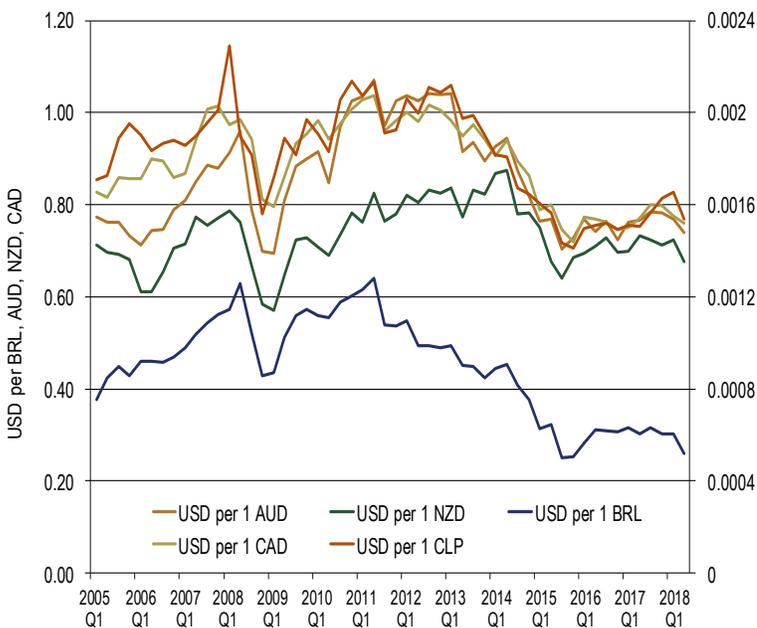


Source: International Wood Markets Inc. June 2018

New Zealand log export volumes to China started off 2017 strongly, rising 8.5 percent in the first quarter, which was 32.3 percent above the volume shipped to China from New Zealand in the first quarter of last year. The robust demand from China in the first quarter supported another upward step for the price of New Zealand sawlogs delivered to China, denominated in USD, which gained 2.6 percent over the previous quarter.

U.S. Dollar Gains

Figure 4: Quarterly Exchange Rates Between USD and Commodity Currencies

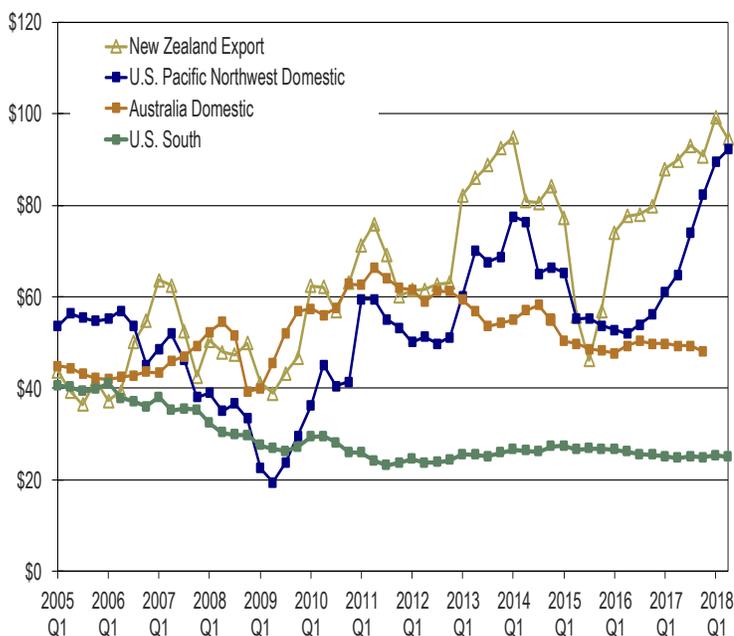


Source: Macrobond June 2018

The U.S. Dollar gained ground in the second quarter against most currencies, benefitting from strong growth in the economy and further tightening in monetary policy. Compared to the prior quarter, the U.S. Dollar gained 2 percent relative to the Canadian Dollar, 6 percent against the New Zealand Dollar, 7 percent versus the Chilean Peso and 14 percent versus the Brazilian Real. The currencies of New Zealand, Chile and Brazil were all impacted by signs of a slowdown in China (a key market for their exports) and concerns about increasing restrictions on global trade. The Brazilian Real also felt downward pressure from the political uncertainty surrounding the upcoming national election this fall.

U.S. Pacific Northwest Sawtimber Prices Soar

Figure 5: Regional Softwood Sawtimber Stumpage Prices (USD per m³)

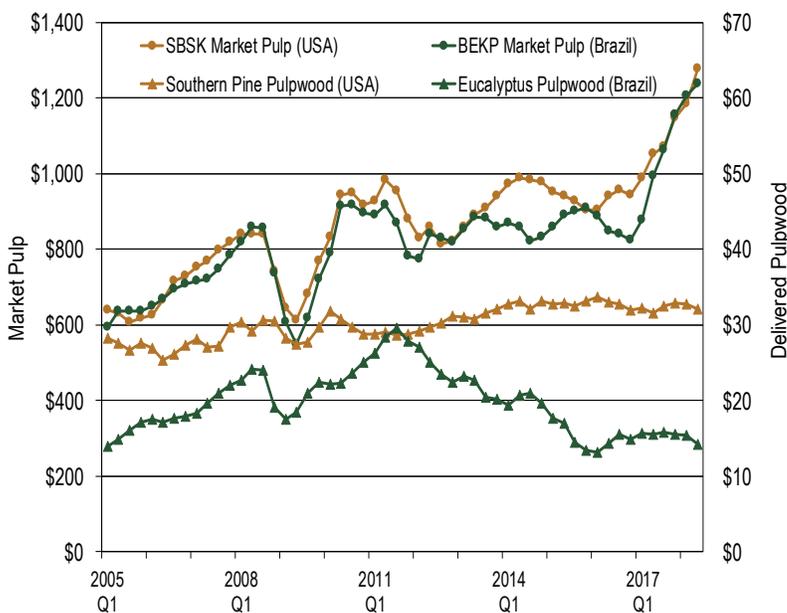


Sources: Log Lines June 2018, Timber Mart-South June 2018, NZMPI and Agrifax June 2018 and KPMG December 2017

In the second quarter New Zealand softwood sawtimber prices (in USD) eased (down 4.6 percent) after reaching peak levels in the first quarter, while U.S. Pacific Northwest prices made moderate gains (up 3.2 percent) nearly closing the gap with the price of New Zealand sawtimber stumpage. The modest downward movement in New Zealand prices reflected moderation in Chinese demand and rising shipping costs. In the U.S. Pacific Northwest price gains were supported by the strong demand and profitability at the region's lumber and plywood mills (*See pg. 1 cover story*). Despite rising production and record prices at sawmills in the U.S. South, southern pine stumpage prices languished, down 1.4 percent from the previous quarter. Australian pine stumpage prices for June 2018 have not yet been released.

Market Pulp Prices Gain Momentum While Pulpwood Prices Languish

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

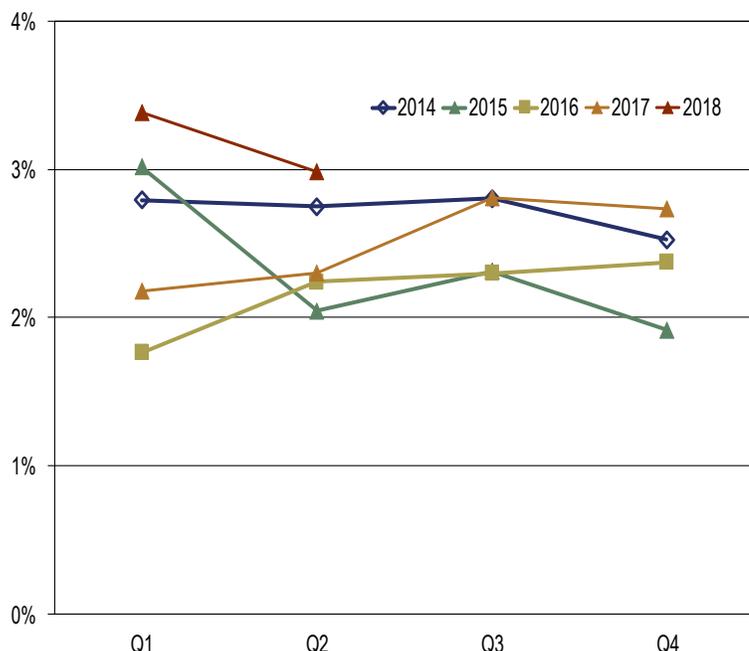


Sources: Hawkins Wright June 2018, Timber Mart-South June 2018 and STCP June 2018

Prices for Bleached Eucalyptus Kraft Pulp (BEKP) and Southern Bleached Softwood Kraft (SBSK) continued to set new highs in the second quarter of 2018, with BEKP up 2.7 percent compared to the previous quarter and SBSK up 7.8 percent. The expanding restrictions in China on recovered paper imports has boosted global demand for market pulp and supported record price levels. Even with record pulp prices, pine pulpwood delivered prices in the U.S. South barely ticked upward (0.5 percent) compared to the prior quarter, as southern pulp mills tap into the growing supplies of manufacturing residuals made available from expanding production at the region's lumber mills. As was the case for pine pulpwood in the U.S. South, Eucalyptus delivered pulpwood prices in Brazil moved lower by 8.1 percent from the previous quarter on a U.S. Dollar basis, largely due to the downward movement in the Brazilian Real relative to the U.S. Dollar.

Cash Yields Hit Highest First Quarter Level in Five Years

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

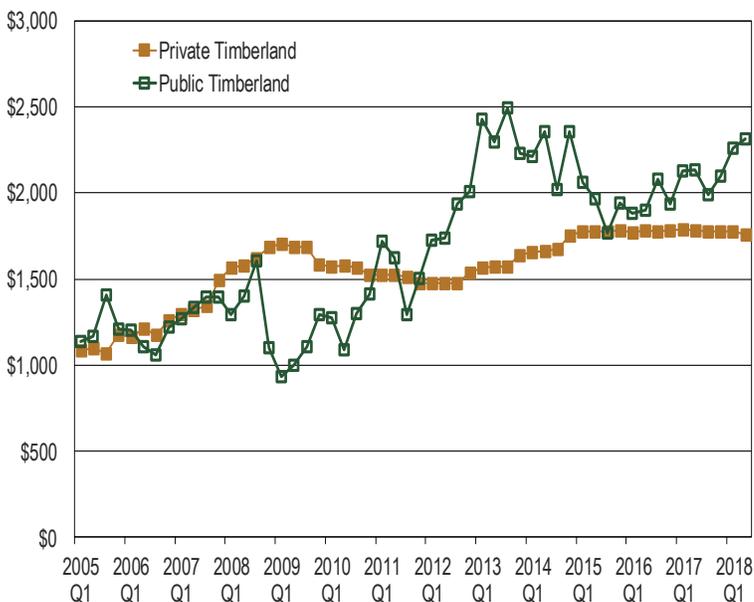


Sources: NCREIF June 2018, HTRG

U.S. cash yields from timberland operations in the second quarter of 2018 were 3.0 percent annualized, which is the highest second quarter cash yields generated over the past five years (2.5 percent on average).

Timberland Values Mixed

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



Sources: NCREIF June 2018, HTRG .

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.

In the second quarter of 2018, the value of privately-held timberland in the U.S. South fell slightly, falling to an average of \$1,758 per acre which represents a \$15 (0.88 percent) decrease from last quarter, and a \$24 (1.3 percent) decrease from the year prior. Public timberland values, measured by the Timberland Enterprise per Southern Equivalent Acre (TEV/SEA), increased 7.7 percent, from \$2,260 to \$2,312 per acre. Year over year, the TEV/SEA rose by 6.2 percent. The relatively muted changes in quarterly values hide substantial day-to-day volatility brought on by high lumber prices. This is the highest TEV/SEA since fourth quarter of 2014.

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/m³. 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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