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**OUTLOOK FOR U.S. TIMBERLAND
IN A CHANGING GLOBAL MARKETPLACE**

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Introduction

Two particular issues of global trade have come to the forefront for U.S. timber producers. They are:

- (1) The reduction and potential removal of the Canadian softwood lumber tariffs.
- (2) The significant growth of timberland and mill capacity overseas which could create an influx of wood product imports into the U.S.

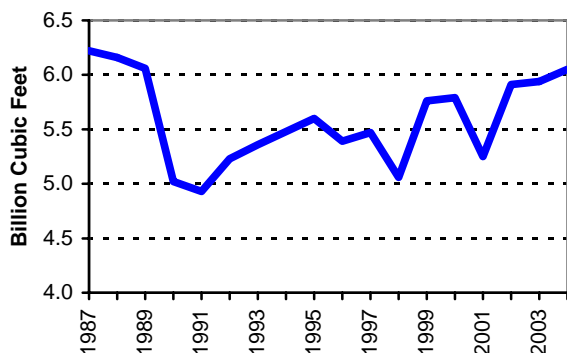
Some analysts in the industry have voiced concern that both factors could depress the domestic markets for timber in the future. For institutional investors, soft timber prices may hurt the returns for timberland investments. This paper will discuss the relevance and impact of these two issues from the perspective of an investor in the timberland asset class.

Canadian Softwood Tariffs

Background

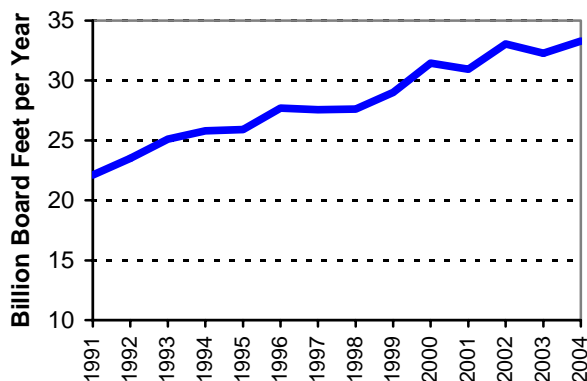
The U.S. Commerce Department announced on December 6, 2005 that it will cut duties on imported Canadian softwood lumber to 10.81%, close to half of the previous rate of 20.15%. Following years of resistance, the U.S. government may eventually drop Canadian lumber tariffs altogether in 2006. After consistently losing to the judgments of the NAFTA and WTO panels, the U.S. realized it may not be able to hold its position to keep the tariffs. In fact, in November of 2005, the U.S. government stated that it will comply with a NAFTA ruling to eliminate the countervailing duties. However, the tariffs will likely stay in place for now until the NAFTA legal process runs its course, which may take months.

In place since March 2002, these punitive tariffs originally were set at 29% of the value of softwood lumber imported from Canada into the U.S. Some members of the U.S. forest products industry are concerned that the dismantling of the tariffs will dampen softwood lumber prices in the U.S. Weakness in lumber markets, it is assumed, will eventually lead to lower prices for softwood timber.



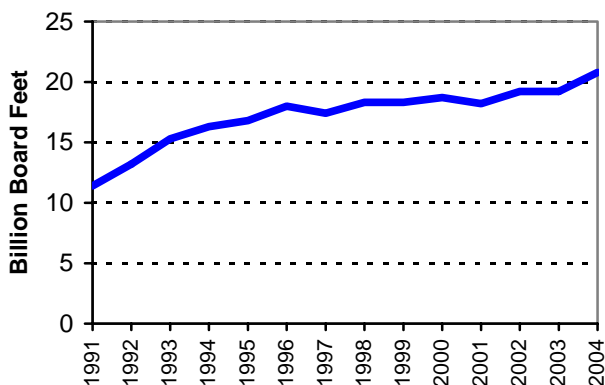
Source: Statistics Canada

Figure 1. Annual Canadian softwood harvest



Source: Statistics Canada

Figure 2. Annual Canadian softwood lumber



Source: U.S. Department of Commerce

Figure 3. Canadian softwood lumber imports into the United States.

Impact of Tariffs on U.S. Market

Contrary to this perception, research analysis indicates that the removal of the tariffs, if it does occur, will not significantly harm the domestic timber market. The supply of lumber from Canada is largely unaffected by the existence of the tariffs.

The steady supply of Canadian timber is due to the fact that harvests from public forestland (also known as Crown Lands) are dictated by a government determined level known as the Annual Allowable Cut (AAC). Since over 90 percent of all commercial timberland in Canada is publicly owned, the AAC effectively sets the volume of timber that can be harvested each year. This production, in turn, sets the limits of lumber production by the Canadian forest products industry each year.

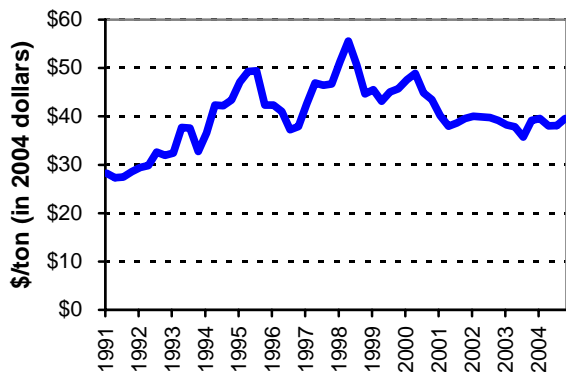
For example, the combined AAC for all the provinces of Canada totaled 8.1 billion cubic feet. Note that the AAC is determined by the provinces through a political and scientific process. Harvest levels are commonly set to maintain employment in the forest products industry, but within the limits of biological growth and the requirements for biodiversity and recreational needs. In other words, harvest is set without much, if any, consideration of current market conditions for timber.

The graph of historical softwood harvest from Canada (Figure 1) illustrates that during the period when the tariffs were in place (2002 to present), Canada produced more timber, not less.

Greater harvest volume resulted in increased lumber production, regardless of the punitive duties. Figure 2 shows Canadian mills producing 7.6% more (representing 2.35 billion additional board feet of lumber) in 2004 than they did in 2001, the last full year before the U.S. enacted the tariffs in 2002.

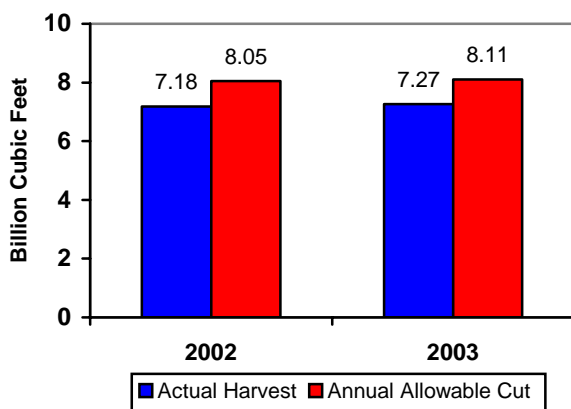
Additionally, the duties did not dampen imports. In fact, imports of Canadian lumber into the U.S. reached record highs during the period the tariffs were in place (Figure 3).

If, one may conclude, tariffs do not limit the volume of Canadian lumber coming into the U.S., then one would also expect they do not help raise domestic lumber prices. As a result, the tariffs have not provided support for domestic U.S. timber prices. Figure 4 shows the historic average pine sawtimber prices for the U.S. South, as reported by Timber Mart-South, adjusted for



Source: Timber Mart-South

Figure 4. U.S. South pine sawtimber prices, adjusted for inflation in 2004 dollars (by CPI).



Source: Statistics Canada, Paperloop

Figure 5. The Annual Allowable Cut compared with the actual harvest in Canada.

inflation (in 2004 dollars). Notice that in the period when the tariffs are in place (2002 through 2004), the real price of timber dropped. This impact seems logical given that Canadian softwood production was increasing during that period. If tariffs were intended to support domestic prices for domestic forest products, it certainly was not borne out in the markets.

Why did the tariffs not reduce Canadian timber production, and thus help support domestic timber prices? The reason is simple. As long as the U.S. market price for lumber after the tariff was put in place is above the average cost of production, the Canadian mill will maintain production. Typically, the mill will push production to a point where average cost is lowest - close to full capacity. In fact, the tariffs may have created a perverse economic incentive to produce more lumber, not less. With profit margins squeezed by the tariffs, the Canadian forest products industry has a strong incentive to lower its production costs further by shifting to larger mills with greater economies of scale and improved technology.

However, production of lumber from Canada is ultimately limited by the Annual Allowable Cut. As shown in **Figure 5** below, actual harvests are running close to the Annual Allowable Cut set by the Canadian government with little room for significant ramp up in production.

Future Outlook: Reduction of AAC

Thus, the Annual Allowable Cut set by the Canadian provinces is a more important driver of U.S. timber prices than lumber tariffs. Looking ahead, the AAC in Canada will be fairly steady for the next few years but will decline in the long-run. Quebec has announced that it plans to reduce its softwood AAC by 20%, which will be phased in over the next three years. Also, Ontario is expected to follow suit and reduce its AAC. Its "Land's of Life" program promotes sustainability and non-industrial forest values.

Over the medium-term, these reductions in harvest by the eastern provinces will be countered by an elevated level of salvaged softwood timber in British Columbia. The western province is facing its largest outbreak of Mountain Pine Beetle, and 80% of the lodgepole pine is estimated to have been killed by the infestation. It will take several years to cull out the salvaged timber. Afterwards, British Columbia's timber inventory will be



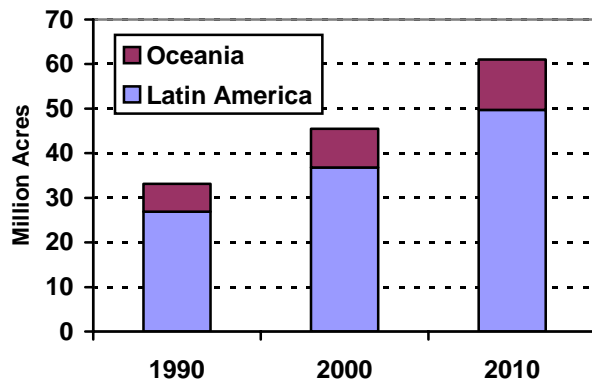
diminished by an estimated 25%, creating a significant reduction in their timber harvests.

Conclusion

The tariffs that were placed by the U.S. in 2002 against Canadian softwood lumber imports have reduced the profits of Canadian lumber producers. However, they absorbed the cost of the tariffs and continued to export lumber into the U.S. at levels equal to or above the amount exported before the tariffs. To minimize unit production costs, lumber producers pushed mill production up to maximize economies of scale, limited only by the government set limit of the AAC.

As a consequence, Canadian exports continued unabated, and the tariffs had little or no net positive effect on timber prices in the U.S. Likewise, the removal of the tariffs will have no significant long-term effect for timberland investors in the U.S. The harvest levels set by the AAC are a more important factor than tariffs in driving imports from Canada. Fortunately for U.S. timberland investors, the long-term outlook is positive, as Canada, overall, is expected to maintain or lower its harvest rates in the future due to resource constraints and conservation efforts.

Growing Global Timber Trade and Capacity



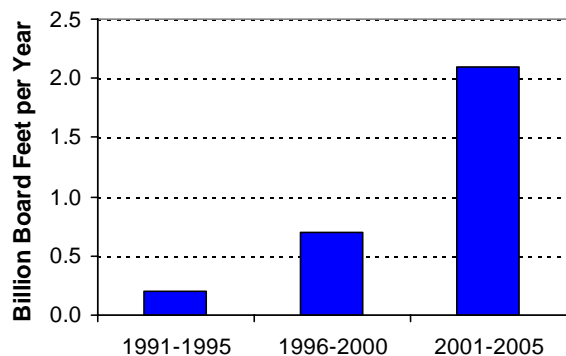
Source: Paperloop

Figure 6. Past and projected area of timber plantations in the Southern Hemisphere.

Emergence of New Timber Producers

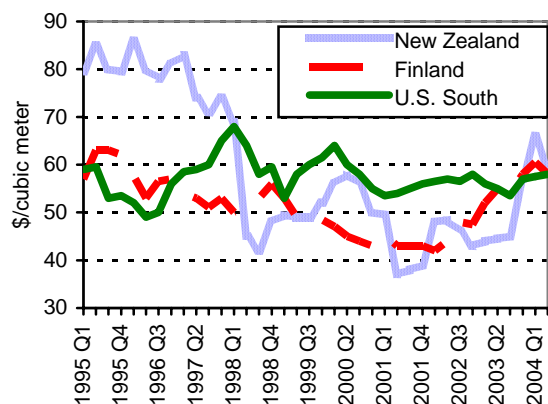
Canadian imports are only one part of a larger picture of global trade affecting U.S. markets. Over the past decade and a half, we have seen the emergence of new players in the global forest products sector. Fresh sources of timber and expanding mill capacity have emerged in several selective regions in the world, particularly with new high-yielding plantations in the Southern Hemisphere (**Figure 6**). Leading producers include New Zealand, Chile, and Brazil. Not far behind are emerging players such as South Africa, Central Europe, Australia, Russia and possibly China.

This growth of timber plantations in new emerging markets has caused analysts to project the supply of timber to grow over the next decade and beyond. Hard estimates are difficult to determine, but natural resource economists Brent Sohngen and Roger Sedjo, from research funded by the U.S. Department of Energy and



Source: U.S. Department of Commerce

Figure 7. Annual off-shore (non-Canadian) softwood lumber imports.



Source: Paperloop

Figure 8. Softwood timber prices of three different regions: New Zealand, Finland and U.S. South.

Resources for the Future, believe global harvests will increase at an annual rate of 0.58% through 2050.¹ In comparison, projections by Tromborg, Buongiorno and Solberg have timber production growing 1.2% a year through 2010.²

Increased Trade through Globalization

Coinciding with the emergence of new producers of timber and wood products are the results of globalization: (a) lowered trade barriers, (b) improved efficiencies in transportation, and (c) more open flows of capital and products. This confluence allows wood products to move more freely across borders. With all this new timber and wood product capacity coming into the market, the concern is that it will flood the domestic market with wood product imports, thereby pressuring domestic timber markets. Already, non-Canadian imports into the U.S. have grown significantly. In the case of softwood lumber, off-shore imports made up 0.4% of U.S. market in the early nineties, about 0.2 billion board feet per year. This level has now reached a 3.5% market share, or 2.1 billion board feet per year out of a total market of 60.9 billion board feet (**Figure 7**).

Convergence to a Global Market

A key factor to consider in the globalization of the forest products industry is the gradual emergence of a single global market. Prices across regions will likely converge, with differences in price reflecting the variances in transportation costs and product quality. **Figure 8** below shows softwood prices in three different regions.

Increased Global Production Does not Necessarily Mean Price Pressures

While it is true that global trade and imports will play an increasing role in the U.S. market, this does not necessarily mean lower timber prices. To the contrary,

¹ B. Sohngen and R. Sedjo. "The potential role of plantations in future timber supply." January 1999.

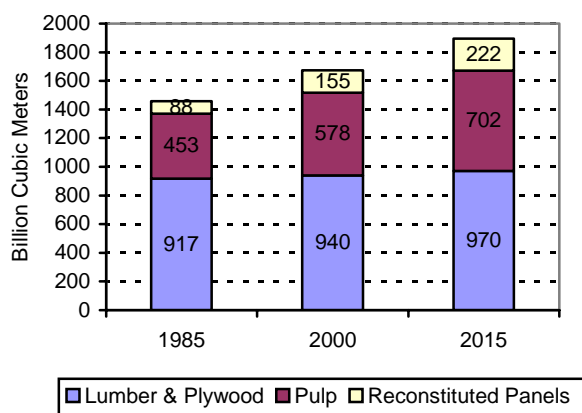
² E Tromborg, J. Buongiorno, and B. Solberg. "The global timber market: implications of changes in economic growth, timber supply and technological trends." *Forest Policy and Economics*: 1(1): 53-69. 2000.



domestic sawtimber prices are expected to remain relatively firm for two reasons.

- (1) Importers face ocean freight shipping costs that domestic producers do not.
- (2) Global demand is also increasing, absorbing the new capacity.

Ocean shipping of bulky products such as logs and lumber can add 30% to the price of imported lumber (assuming typical shipping rates of around \$30 per cubic meter for timber and a price of \$100 per cubic meter for lumber – which is equivalent to \$348 per thousand board feet).



Source: Rainer Häggblom, "Global Forest Trends" 7 May 2004 presentation in Helsinki, Finland for World Bank.

Figure 9. Global demand for wood fiber for commercial use: historic and projected.

While supply is increasing, demand is increasing as well. The current outlook is that the world appetite for wood is expected to expand as the global economy maintains robust growth rates in GDP over the next two decades. Jaakko Pöyry, a leading engineering and consulting firm for the forest products industry, expects total demand for wood to rise 13% over the next decade from 2000 levels (**Figure 9**) – resulting in approximately 1% growth in world consumption per year.

The source of rising demand for wood is from strong economic growth across most regions. The economists at Resource Information Systems International (RISI) project world real GDP growth to average 4.1% from 2004 through 2019. This rate is a step above the 3.1% average exhibited over the last 15 years. As wood product consumption is closely tied to global economic activity, Keith Balter of RISI has projected global timber demand to grow from 1.79 billion cubic meters in 2005 to 2.02 billion cubic meters in 2015.³ That projection suggests demand for timber will grow at a 1.23% annual rate over the next decade. Also, in a recent survey of the scientific literature covering 30 sets of projections from 13 sources, Rebecca Weiner, Fellow at Harvard University, and David Victor, Director of the Program on Energy and Sustainable Development at Stanford University, reported that the average projected growth of

³ Keith Balter. "Global Timber Trends: Implications for the U.S. Products Sector." Presentation to the National Council for Science and the Environment. February 2005.



timber demand is 1.3% per year through 2010 and 1.0% through 2050.⁴

Balance Between Supply and Demand

The price of timber is the result of not just supply or demand, but the interaction of both. Current projections of timber availability range from 0.6% to 1.2% growth per year. Matched closely is the global appetite for timber, which is estimated to range from about 1.0% to 1.3% per year. Effectively supply and demand will roughly balance out in the long-run. An investor in timberland should therefore look forward to a long-term market trend of stable timber prices across market cycles, as increasing global demand meets increasing global supply.

Conclusion

Increasing trade from globalization combined with the emergence of new producers of timber and wood products means a more competitive (and uniform) global market which the U.S. forest products sector must face.

The implication is that the domestic price of timber is as much affected by global supply and demand as it is by domestic supply and demand. Looking ahead, while the supply of timber and wood products is increasing at rates of around 1% a year, global demand is expected to increase at the same rate as well. The growing per capita income of industrialized nations such as the U.S., Western Europe and Japan in addition to the rapid economic growth of emerging markets such as China and Latin America will drive global appetite for wood products for decades to come. For an investor considering timberland with a long-term investment horizon, the outlook of price stability provides a basis to invest in the asset class with confidence.

⁴ Rebecca U. Weiner and David G. Victor. "Industrial Roundwood Demand Projections to 2050: A Brief Review of the Literature." In *The Great Restoration: The Potentials for Forest Protection to 2050*. Presented January 2000.