



Industry news

- **Custom Wood Turning Company Spices Up Product Line** (July 8th)
Despite several closures of wood turning facilities, one Maine-based manufacturer is bucking the trend by growing through acquisition and undergoing strategic rebranding.

— *MaineBiz*

- **Forest Biomass Loses in Court Ruling** (July 18th)
Conservation groups won a victory last week in the fight over the regulation of biomass energy production and the strange thing is there were some liberals on the other side of the issue.

— *Earth Techling*

- **Maine Regulators Propose Expansion of Quarantine for Forest Pest** (July 29th)
The state is proposing to grow its 2007 quarantine against the spread of the hemlock wooly adelgid, an invasive pest that has caused extensive damage to trees in other parts of the nation.

— *Portland Press Herald*

- **Maine Tax Law Changes Benefit Loggers, Residential Wood Purchasers** (July 2013)
Tax exemptions on depreciable equipment that were implemented in July will provide substantial relief to those buying equipment which produces forest products.

— *Northern Logger Magazine*

Industry Overview

Forestland Operations

This summer has shaped up to be a near opposite of last summer in terms of operating conditions in the woods. While the memory of long, clear days is still fresh in our minds, the cold and rainy reality has set in and reminded us that not everything can always go as planned. After an incredibly rainy spring – one that set records – what could we really expect?

Expected or not, the forest in the Northeast has been wet almost continuously since this springtime, a fact which has hampered woods operations and forced us to seek alternatives. The good news is that P&C's foresters don't always plan for rosy weather, and are very good about keeping alternatives available in their back pocket. Suffice it to say, they had to use quite a few of those this year. Having alternatives helps us in several ways: first, and priority number one, it allows us to keep to our client's operating budgets. This is something we continually monitor and track. Second, it keeps our contractor force busy in the woods when other folks' equipment is idle. Third, it allows us to keep our volume commitments to mills, and can even sometimes help us obtain premium pricing. We heard of several harvests that had to shut down this summer due to the weather, but because of our ability to manage this process, we were able to keep our client's wood flowing and keep mills with the supply they needed without risking damage to or rutting in the woods.

Unfortunately implementing alternative plans due to wet weather also usually comes at some cost. Whether we need to construct new forest roads, maintain storm-damaged rights of way, or upgrade vulnerable roads, it takes an investment in the land in order to ensure we have infrastructure to get the wood out of the forest. It's been a busy summer in all regards.



A P&C grader works overtime to ensure our haul roads are in good operating condition.

Although it feels like it is already upon us, we are gearing up for the typical fall mud season, with one more quarter of non-frozen ground conditions to go.

Although it has fallen off slightly in the last several weeks, the price of diesel remains high, and our logging contractors are still feeling the pinch (see chart below). Transportation costs are most impacted by this – the higher the cost to deliver wood, the less distance we can deliver our timber profitably. Nearly all eyes are on this important metric, hoping that it eases in time for winter's rush.

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NUMBER 2 DIESEL FUEL PRICES - NEW ENGLAND 3 YEAR HISTORICAL MONTHLY AVERAGES



Forest Product Markets

A quarter ago, everyone was in pretty good shape. With a few exceptions, inventories were at safe levels for the season, finished product pricing was continuing its steady upswing, and everyone was optimistic for the summer. Because of the regional weather issues, the supply/demand balance of the timber markets has become out of equilibrium – the demand for the wood is heavy but the production in the forest has not been able to keep pace because of wet conditions. Rains have hindered the ability to deliver the timber out of the woods, and that has left many mills unable to “buy usage” – that is, purchase the same amount of raw materials that they can produce & sell. Nothing is more frustrating to a mill that has profitable orders lined up but their suppliers cannot get the wood delivered.

September is usually the month for sawmills to set production records – typically the cooler, more moderate weather combined with reasonably long daylight allows steady wood flow and steady production schedules. It’s also the season where their finished goods inventories are typically high. However, nearly every facility we talk to has drawn down their stocks in order to fulfill orders, and inventories are light across the board. This is something that has everyone nervous coming into fall mud season.

Sawn Products

Softwood

In recent months, dimensional lumber sawmills have seen an upswing in their finished goods pricing. Random Lengths’ lumber pricing indexes have bounced back after a fairly large dip this past winter (see chart below). Some had talked of a pricing bubble being evident last year – and there is indeed a speculative component in this market – however, we believe the underlying economic conditions and the slow but steady recovery are driving true demand in this market.

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P&C DEMAND INDICATORS

Representing our opinion of market demand for timber products in the Northeastern U.S.

	Current	Outlook
Sawn Products		
Spruce & Fir	██████████	██████████
Pine Logs	██████████	██████████
Hardwood Logs	██████████	██████████
Pulpwood		
Hardwood	██████████	██████████
Spruce & Fir	██████████	██████████
Pine & Hemlock	██████████	██████████
Biomass		
	██████████	██████████

■ **Housing Market Improving, But Plenty of Headwinds Still Present** (Aug 2nd)

Optimism for a speedy housing recovery has tempered as some indicators continue to improve and others point to slower growth.

— *Hardwood Review*

■ **As Key Partner Departs, Future Dims for Michigan Cellulosic Biofuel Plant** (Aug 6th)

The exit of its majority owner and operator leaves the future uncertain for a long-delayed project that has attracted at least \$120 million in public financing to turn wood from Michigan’s Upper Peninsula into fuel for vehicles.

— *Midwest Energy News*

■ **China Has Become World’s Largest Importer of Hardwood Chips** (Aug 13th)

Because of a lack of competitively priced wood fiber in China, the two pulp companies with the largest pulp mills in the country are procuring much of their wood fiber needs from out-of-country sources.

— *PaperAge*

■ **Aroostook County Sawmill to Reopen & Expand** (Aug 20th)

After closing the facility in 2008, J.D. Irving sees opportunity in the region, and plans to invest \$30M to reopen the their Pinkham mill and produce spruce/fir dimensional lumber.

— *MaineBiz*

■ **Irving Subsidiary Considering Acquisition of MM&A Rail Line** (Aug 20th)

Conglomerate J.D. Irving is keeping its options open about a possible acquisition of the bankrupt railway at the center of last month’s deadly train crash in Lac-Mégantic, QC, that killed 47 people.

— *Canadian Manufacturing*



PRICE TRENDS IN SOFTWOOD LUMBER

2 YEAR TREND OF WEEKLY AVERAGES



In general, our regional softwood sawmills are running at the highest capacity they can manage, and demand is very strong. A common theme among these mills is that they would like to be running extra hours, and producing more lumber, but they are nervous about running out of wood. All this leads us to believe they are operating profitably. However, once again, the wet weather is the story here – thin raw material inventories have left softwood lumber mills pretty nervous coming into October.

The oversupply in chips that was a sore spot for sawmills last winter has abated to some degree. In general, sawmills appear able to move their residual chips, albeit not at the pricing they would like to see.

Interest in pine logs appears to be coming back. During the early parts of the 2nd quarter, pine mills were comfortable and cautious about buying. In August, we started to hear mills talking about needing more wood and it appears millyard inventories have begun to slide below comfort levels. The root cause? Loggers and forest managers tend to steer away from pine during the summer spoiling season, and the recent rainy weather has caused a lag in the ramping up of pine supply to mills.

Even though hemlock pulp is stable (even a little hot – see our comments on pulpwood below), the logs just don't seem to be available. All over the Northeast, we're hearing of a lack of supply. Getting the right quality eastern hemlock logs is also an inherent problem for mills. The tree tends to grow with a lot of sweep, so even though it grows as high-quality wood, mills have difficulty sourcing longer-length logs.

Cedar sawlogs are as much in demand as we've ever seen in summer months. Because cedar tends to grow in wet soils, wintertime is when most cedar is produced. Mills put together winter plans that are designed to carry them through the following summer, but this year the wet weather has left cedar mills seeking wood.

Hardwood

Similar to softwood mills, most hardwood sawmills have been able to increase production in 2013 despite the poor logging conditions. Grade logs remain in high demand regionally. For the Northeast, hard maple and yellow birch are the dominant players in hardwood logs. Hard maple continues to hold its price well; it's been flat but we're able to move it quickly.

■ **North American Wood Pellet Exports Reached New Record in Q1 (Aug 21st)**
Pellet exports from the US & Canada have shown no signs of slowing down, and reached a new record of over 1 million tons for the first quarter of 2013.
— *Wood Resources International*

■ **Newsprint Mills Look for Options to Offset Continued Drop in Basic Demand (Aug 2013)**
Newsprint manufacturers struggle to keep production in equilibrium; are concerned about shrinking demand and the rapid demise of newspaper print advertising.
— *PaperAge*

■ **Logging Company Billed \$600,000 for Negligence in Northern WI Forest (Sept 9th)**
An investigation has determined that a logging crew is responsible for not having properly maintained fire suppression system after harvesting equipment ignited a 7,400-acre blaze.
— *Rivertowns Magazine*

■ **40,000 Acres of Quimby Land Opened to Hunting (Sept 9th)**
After several years of a no-hunting policy, Elliotsville Plantation, Inc. reverses course and allows hunting & recreation on a portion of their ownership and indicates plans for more
— *Bangor Daily News*

■ **Native Birds Help Fight Ash Parasite (Sept 16th)**
Some native wasps and birds are giving scientists hope that the Emerald Ash Borer outbreak in the US can be managed without extensive use of chemicals.
— *Mother Nature Network*

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Pricing on yellow birch logs has stabilized after some volatility, but mills don't appear to be sawing a lot of it.

Soft maple trended up in the early parts of the quarter (often times pricing of soft maple tracks that of hard maple) but has begun to slip recently. All indications are that this market is in balance for current demand and we don't expect much movement next quarter.

Oak logs have been off mark this year, up until recently. Oak appears to have slowly worked itself back into the desirable category for a sawmill to produce, and in consumer tastes – however, pricing has yet to reflect the increase in demand.

The market for white birch has been very good. One of our major customers recently told us they plan to add some shifts to their production line, which is a good sign. We've been able to move white birch all summer long (weather permitting), and at a relatively good margin.

Industrial-grade hardwood, which has recently garnered a lot of attention in our regional market, appears to be stable at the moment. Most of this type of product consists of the center cant portion of the log, which not too long ago was considered a byproduct of sawing the whiter wood. There have been some new entrants in this space, which has increased competition for industrial grade sawlog supplies. Although there has been a notable drop recently in regional infrastructure projects (such as powerline work), there's enough money in these products that it's worth transporting them fairly long distances and therefore demand for the wood has not tapered off.

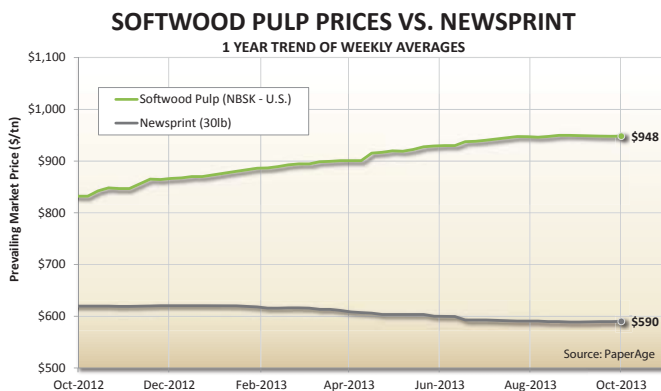
Pulpwood Products

Softwood Pulpwood

We came out of last spring with pulp mills being pretty cautious of buying in big summer inventories. The freshness of the wood is very desirable – the fresher the better – and they did not want to overextend the raw materials in their woodyard and be at risk of it aging. This held markets in check in the early part of the summer. However, as the weather turned wet in late July and early August, the softwood pulp mills found themselves having consumed what little inventory they were able to build.

The result of this shortage is that many softwood pulp mills appear within 4 - 5 days of running out of wood at any given time. This is cause for quite a bit of concern. Furthermore, they are reaching longer distances to get the supply they need, increasing their operating costs and reducing their margin. The industry produces only so much pulpwood, and consumption is outpacing the ability to produce and deliver the wood. Mills are supplementing their supply with longer hauls and increasingly buying into the sawlog/hygrade market.

Although rising pulp prices might seem to be an enticing trend for a landowner to see, it is also in some ways a cause for concern. Many paper manufacturers use kraft pulp as a secondary raw material to fine tune manufacturing process and augment their local supply of pulpwood.



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■ **Turmoil in the Middle East Creates a Lumber Buying Buffet for China** (Sept 19th)

Market uncertainty in Egypt and Syria are causing European lumber producers to seek out alternative markets, and North American exporters are finding themselves competing.

— *Forest Business Network*

■ **Future Uncertain for 2013 U.S. Farm Bill** (Sept 27th)

The new U.S. farm bill, already a year behind schedule, is on the congressional equivalent of a slow freight train - rolling from acrimony to limbo with a layover in stalemate. And Washington's disputes over the federal budget and national debt could mean further delays.

— *Reuters*

■ **Feds Want More Land Protected For Canadian Lynx, Angering Timber Interests** (Sept 26th)

A proposal by the US Fish & Wildlife Service to set aside 325,000 acres in Maine as federally-protected Lynx habitat has industry members concerned.

— *MPBN*

■ **Government shutdown could have 'sizable impact' on housing recovery** (Sept 29th)

With government-backed mortgages not being issued, some are concerned that the headway that was made in the last 18 months in the housing market is due for a pullback.

— *CNNMoney*



The upward trend means that input costs are rising for these mills. This, combined with a declining trend for newsprint, means that newsprint manufacturers are seeing their margins squeezed from both directions.

Pulp mills that use hemlock and pine pulpwood have been pretty desperate of late to get their supply. We started out this season with very little hemlock or pine pulp committed; as it turns out, the mills have been hungry, cannot source it locally, and again are having to extend their reach.

We continue to receive quite a few recent inquiries about the possible export of clean hemlock chips to overseas markets. So far, the economics have not been favorable for this to be viable long-term, but we're optimistic that when the currencies, demand, and pricing become favorable (and when the stars align just right), this market will open up for our lower-end products to be shipped overseas.

Hardwood Pulpwood

The story with hardwood pulpwood is going to sound very familiar by this point. Demand for hardwood pulp has been very strong, and these mills are huge consumers of forest products. As you can imagine, nobody is exempt from the weather-related sourcing difficulties, and while raw material inventories are at low levels at these mills, they're not running quite as thin as some are on the softwood side of things. Consumption and demand of poplar groundwood in particular is very heavy, and we expect these levels of demand to continue through the fall.

Biomass

All of this wet weather means that there's not much biomass available in the regional market for the time being. Instead it is being used in the woods, hauled back in to the forest to prevent or limit ground disturbance. Biomass acts to stabilize the ground and can help keep the heavy logging equipment from causing damage. Although we are enjoying current pricing for biomass (up about 10% over the last two years), the industry cannot afford to not use most of it in the process of extracting other higher-value products.

Benjamin D. Carlisle
PRESIDENT

Global, Regional and Local Considerations in Valuing Timberland

I recently moderated a panel at the "Who Will Own the Forest?" conference sponsored by the World Forestry Center in Portland, Oregon (<http://wwotf.worldforestry.org/wwotf9/>). This was the ninth annual conference in this series, which has become one of the two most important events in the timberland investment space, the other being the bi-annual conference hosted by the University of Georgia's Center for Forest Business (<http://www.ugacfb.com/timberland-investment-conference-update/>).

Our WWOTF session was entitled "Global, Regional and Local Considerations in Valuing Timberland", and featured Jeff Wikle (TerraSource Valuation, tvalue.com), Roger Lord (Mason, Bruce & Girard, masonbruce.com) and Bryan Beck (The Beck Group, beckgroupconsulting.com). The theme of the session grew out of an observation that the phrase "location, location, location" implies that real estate value is largely a function of local factors. In fact, timberland value is determined by a variety of factors that range from local to

Figure 1. Timberland Value Factors Range from Local to Global.

FACTOR	LOCAL	REGIONAL	GLOBAL
Property Demand	Hunt Clubs	Rural Developers	International Institutions
Product Demand	Biomass	Roundwood	High Value Logs; Carbon Credits; Wood & Paper Products
Economic Metrics	Timber Prices	Industry Health	Interest Rates
Operating Conditions	Climate; Soils	Contractor Availability	Fertilizer Prices
Property Markets	HBU Potentials	Comparable Properties	Asset Class Supply

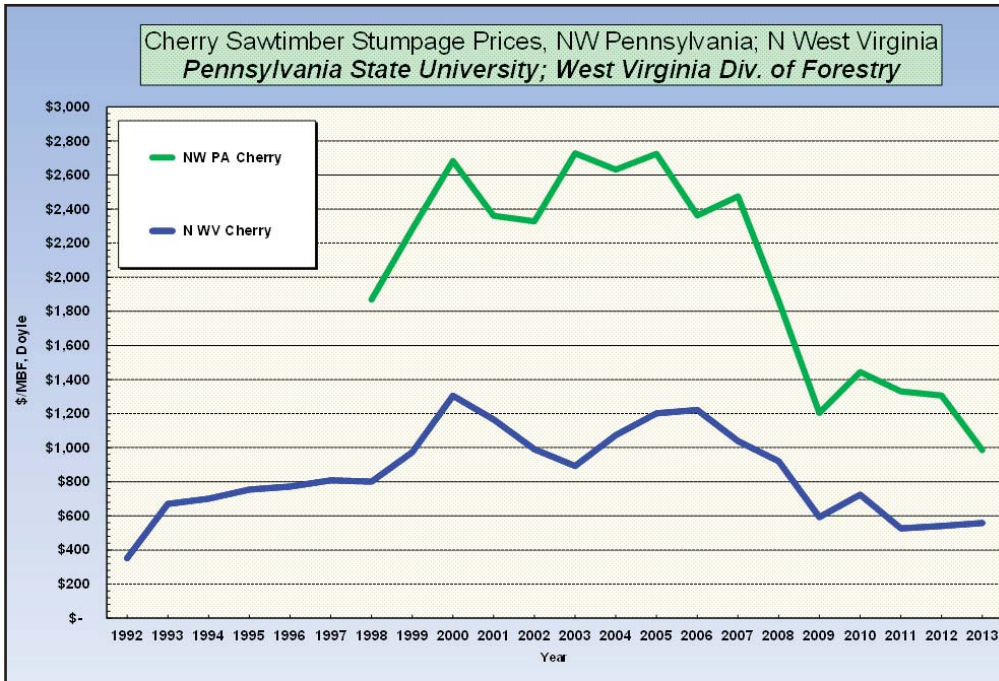
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global (Figure 1). For example, the demand for investment grade timberland properties today ranges from local (and well capitalized) hunt clubs to international institutions. Even operating conditions, which are typically thought to be strictly local, can be influenced by globally-determined prices for such inputs as fertilizer.

Jeff Wikle kicked off the session by highlighting local considerations that can trip up appraisers. An interesting point: beware of properties that are close to borders, as markets may be quite different on either side of the border. This does not necessarily exclude domestic borders – one of his examples related to the divergence in cherry prices between Pennsylvania and West Virginia (Figure 2). Jeff cited another example near and dear to our hearts – the relationship between Maine timberlands and the Quebec “border mills”.

Figure 2. Divergence Between Cherry Stumpage Prices in Boardering States (TerraSource Valuation).

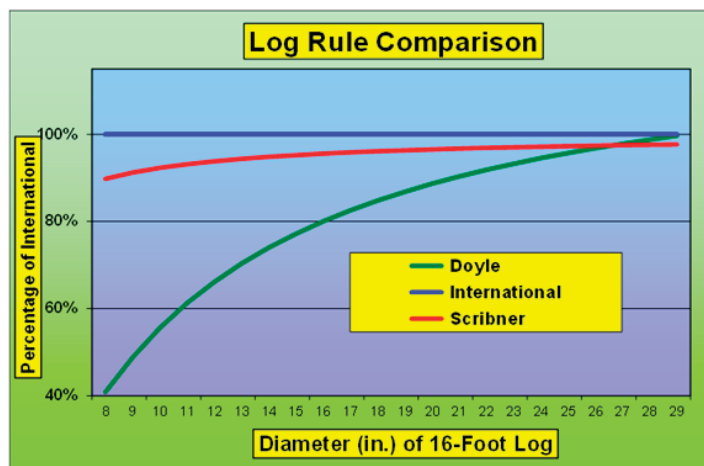


Measurement standards and techniques vary from one locality to the next and can trip up the unwary appraiser. As Jeff pointed out, this variance results largely because of historical reasons that have no relevance to today’s manufacturing techniques. The most obvious example is the use of different log scales, which as (Figure 3) shows can lead to dramatically different volume and value conclusions.

Roger Lord addressed more global valuation factors. He identified numerous drivers of global demand for (Figure 4) and supply of (Figure 5) timber. His conclusion, supported by numerous other speakers at the conference: the projected demand/supply balance points to increasing timber prices.

Roger spent some time discussing the timberland discount rate – a favorite topic of the WWOTF audience as well as this column. He made an interesting comparison of the discount rates for timberland and commercial real estate, which show a surprising correspondence, both in absolute levels and correlation over time (Figure 6).

Figure 3. Log Rules in Use Vary from One Locality to the Next, and Can Lead to Dramatically Different Volume Estimates (TerraSource Valuation).



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Figure 4. Global Drivers Point to Net Increasing Demand for Wood Products (Mason, Bruce & Girard).

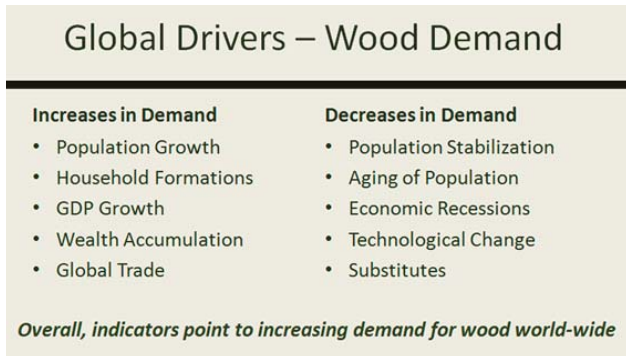


Figure 5. Global Drivers Point to Net Decreasing Supply of Timber (Mason, Bruce & Girard).



Using the commercial real estate discount rate as a proxy for the timberland rate, **Figure 8** shows its relationship to the “risk-free rate” – a topic covered in our 2nd quarter newsletter. The spread, or “risk premium” had been declining prior to the financial crisis of 2008, but has since increased and stabilized. Given that the risk-free rate, represented by long-term US Treasury bonds, is policy-driven rather than market-driven, Roger pondered the impacts of the Federal Reserve’s eventual “tapering” policy that will drive the risk-free rate up.

Figure 6. Real Discount Rates for Timberland Correlate Strongly to Commercial Real Estate Rates (Mason, Bruce & Girard).

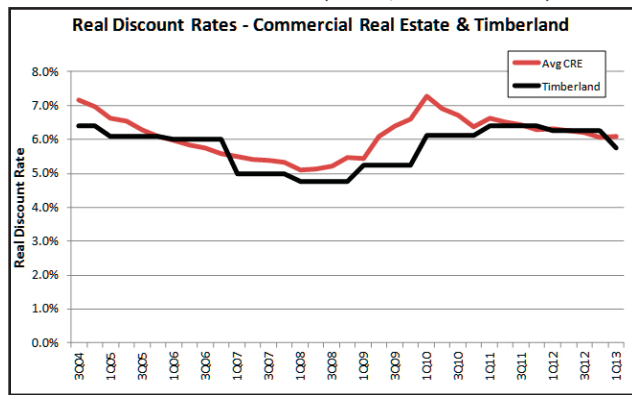
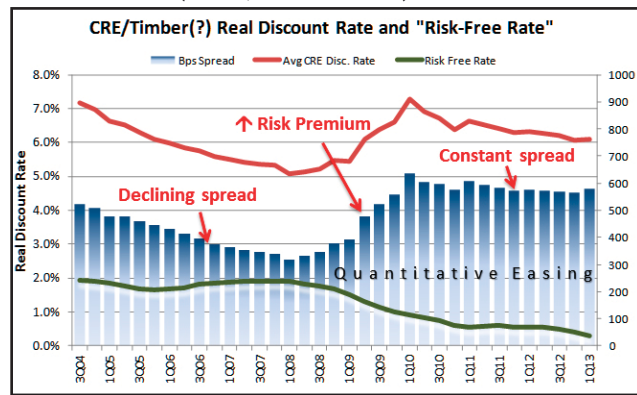


Figure 7. Spread between the Discount Rate and the “Risk-Free Rate” (Mason, Bruce & Girard).



The impact on timberland values depends entirely on the direction the risk premium takes. If the recent stable premium is maintained, a higher risk-free rate will lead to higher discount rates and lower timberland values. However, reversion to the pre-crisis risk premium levels will result in further discount rate compression and constant or increasing timberland values. Such reversion could be explained by the favorable demand/supply drivers that Roger identified.

Bryan Beck, a wood products expert, argued that appraisers need to understand the health of the regional wood-consuming industry in order to develop a complete understanding of a property’s value. There is a large profitability gap between the top performers in an industry and the industry average (**Figure 8**). This profitability gap translates into a gap between what different mills can pay for timber, which in the case of lumber and wood products accounts for a large share of the mill’s total variable costs. Obviously, the prices paid for timber regionally translate directly into property value.

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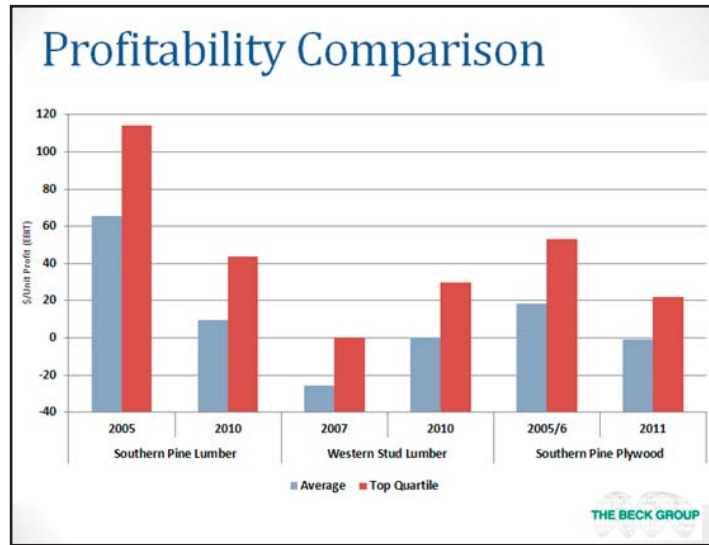
Bryan listed numerous criteria by which manufacturer survivability can be evaluated:

- Financial performance
- Operating history
- Management team
- Market advantages
- Scale
- Technology
- Timber supply
- Debt
- Byproduct market
- Other (labor pool, infrastructure, etc.)

This is just a taste of the interesting presentations and discussions that are a part of every WWOTF conference. The tentative dates for next year's

conference are September 16-18, 2014 at The World Forestry Center in Portland. The next University of Georgia conference is scheduled for February 18-20, 2015 at the Ritz Carlton on Amelia Island, Florida.

Figure 8. The difference between average performing manufacturers and top quartile performers is dramatic. (The Beck Group)



Sam Radcliffe
VICE PRESIDENT

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