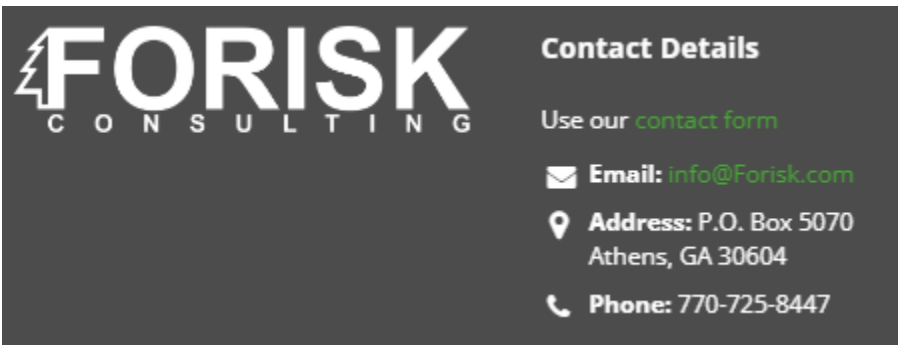


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 Brooks Mendell posted: "This post includes topics covered in the (virtual) Timber Market Analysis course on October 11th and 12th, 2023 and in the Forisk Research Quarterly. Also, for those interested in conducting this type of research, please check out Forisk's forest economics" **Forisk**

Forest Products and the Economics of Timber Markets, Part I



Brooks Mendell
Jun 6

This post includes topics covered in the (virtual) [Timber Market Analysis](#) course on October 11th and 12th, 2023 and in the [Forisk Research Quarterly](#). Also, for those interested in conducting this type of research, please check out [Forisk's forest economist job opening](#).

We use forest products daily, from (more) toilet paper at home to (less) printing paper at the office to chairs, tables, and houses, in addition to products that we may not realize contain wood fibers, such as tomato sauce, salad dressing and granola bars. We also enjoy a range of forestry services such as filtered air and water, sequestered carbon, and recreation.

At times, coverage of emerging markets for forest carbon and ESG-focused portfolios distract us from the underlying drivers for wood demand and timberland investments. Looking ahead, the underlying demand for traditional forest products continues to grow. According to FAO's "[Global Forest Sector Outlook 2050](#)" (United Nations 2022), baseline worldwide consumption of primary manufactured wood products is expected to increase 37% by 2050 from 2020 levels.

While the future of forest businesses will increasingly stack and leverage a range of environmental services and renewable products, consumers still want toilet paper and chairs and tomato sauce. While the forest products industry becomes more sophisticated, it still exists to meet basic human needs,

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however defined. In fact, for millions of people, forests supply the truest of necessities, such as food, charcoal, and sustenance level incomes.


More broadly, we often fail to see the practical connection between the things we use and where they come from. When true costs remain hidden, we may lack any sense of context or responsibility for our consumption. In economics, we refer to the indirect costs or consequences or benefits of our market transactions as “externalities.”

Consuming forest products, versus products made of non-renewable raw materials or energy intensive processes, has advantages from this perspective. When we build with wood, we send a signal to the market to replant trees and produce more wood. In this way, forest businesses comprise a set of sustainable and synergistic models supporting ESG-friendly construction and economic growth.

The value and health benefits we derive from forests reinforce the importance of active, balanced engagement with timberlands. While the demands on our forests are many, few – if any – advance through passive, disinterested management. See the fires in Oregon and California. If we want healthy, sustainable forests, [active forest management](#) and the use of wood products for our daily needs directly support these objectives.

In the United States, our successes as forest managers have grown export markets for wood. In the EU and UK, wood buyers come to the U.S. for our forest products and wood pellets. Domestically, producers and importers together meet our demand for wood and forest products, but regional and local combinations of wood users and forest supplies dictate the health and sustainability of forests at a local level.

Given the variety of markets, mills, and forest supplies, how do we organize our thinking for deciding what to do with our timberlands? We will address this in Part II.

 Brooks Mendell posted: "This post, the second of a two-part series, includes topics covered in the (virtual) Timber Market Analysis course on October 11th and 12th, 2023 and in the Forisk Research Quarterly. Also, for those interested in this type of research, please consider **Forisk**

Forest Products and the Economics of Timber Markets, Part II



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Brooks Mendell

Jun 13

This post, the second of a two-part series, includes topics covered in the (virtual) [Timber Market Analysis](#) course on October 11th and 12th, 2023 and in the [Forisk Research Quarterly](#). Also, for those interested in this type of research, please consider [Forisk’s forest economist job opening](#).

[Part I](#) addressed the importance of forest management and ended by asking, “Given the variety of markets, mills, and forest supplies, how do we organize our thinking for deciding what to do with our timberlands?” This post summarizes three approaches.

HAVE A SIMPLE FRAMEWORK FOR UNDERSTANDING HOW THINGS WORK

The late author and management “thinker” [Peter Drucker](#), a hero to my Dad and me because of his ability to communicate big ideas in simple terms, wrote “**The purpose of business is to create and keep a customer.**” Drucker taught that every activity, to the extent possible, should support and add value to those objectives.

At Forisk, we have a simple model. Conduct and deliver forest industry research relevant to clients, and support clients in their application of this research to make better decisions. Our daily activities and improvement efforts prioritize research quality and relevance, the delivery of this research, and supporting clients in their use of it. We do our best to prune the rest.

How might we frame the forest products industry? The economics point to a set of simple, overlapping models that accept the fact that **wood is heavy**. Distance and the [ability-to-pay for wood](#) drive value and risk. For example, logging and hauling, to quote a late friend and colleague Kelly Stanley, is about “getting rubber under the wood.” Timberland management is about maximizing value per acre, which is a function of growing and selling logs to mills that can buy those logs and turn them into something else at a profit, which is largely a function of, to bring it full circle, mileage and manufacturing margins.

Having a clear and clean understanding of how things work helps us choose appropriate questions, which in turn creates a need for relevant information and benchmarks.

SUPPORT COOPERATIVES AND BENCHMARKING

In sectors such as forestry, **we often gain more from participation than from secrecy**. That is my belief after years of conducting and delivering applied research. Aside from the confidentiality necessary



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SENT TO LSU AGCENTER/LOUISIANA FOREST PRODUCTS DEVELOPMENT CENTER - FOREST SECTOR / FORESTY PRODUCTS INTEREST GROUP for mergers, transactions, and personnel decisions, the operational and asset management aspects of forestry benefit from pooling resources. As an industry, anything we do to enhance viability, sustainability, and career opportunities supports the long-term.

As a firm, we support and subscribe to cooperative research, such as supply modeling at [SOFAC](#) and timberland investment benchmarking at [NCREIF](#). We are members of and participate in multiple forest industry associations, where we learn, network, and contribute. In addition, we conduct and deliver [timberland management and silviculture research](#), which now includes dozens of participating firms in the South and Pacific Northwest, covering over 36 million acres across both regions.

Supporting well-organized and relevant cooperative research is efficient. For the industry as a whole, it mitigates risk and enhances value. This is especially true when we leverage this research in our business operations and scenario planning.

DEVELOP DETAILED SCENARIOS

For firms that own forests and mills, realizing value from a given timber market is a localized resource allocation exercise. Previously, we posted [basic models for framing the fundamentals](#), from volume-based scenarios to those focused on value-per-acre. Making better forest management and investment decisions relies on the detailed application of relevant information and experience. Simple frameworks (approach #1) and cooperative benchmarking (#2) clarify what’s important so we can prioritize.

Detailed scenarios test our strategy and thinking through the upside and downside associated with factors in and out of our control. Consider log-by-log (spec-by-spec) outlooks by basin with potential log prices and realizations. Breaking down assumptions across scenarios makes visible the ideas, value drivers, and implications. For example, consider this approach for a 10” DBH chip-n-saw log in a Southern timber market or wood basket:

Scenarios to Optimize Value for 10” CNS Logs (EXAMPLE)

| End Market | Base Case | High Case | Slow Case | Mechanism/Risks |
|--|------------------|------------------|------------------|---|
| <i>Dimension lumber: sell stumpage</i> | <i>\$20/ton</i> | <i>\$24/ton</i> | <i>\$16/ton</i> | <i>Macro, housing markets, lumber prices</i> |
| <i>Dimension lumber: sell logs delivered</i> | <i>\$38/ton</i> | <i>\$42/ton</i> | <i>\$32/to</i> | <i>Macro, harvest/haul costs</i> |
| <i>Pulp: sell CNS blends</i> | <i>\$18/ton</i> | <i>\$22/ton</i> | <i>\$14/ton</i> | <i>Pulp markets, lumber to residual chips</i> |
| <i>Forest carbon</i> | <i>\$20/ton</i> | <i>\$30/ton</i> | <i>\$10/ton</i> | <i>Legislation, verification</i> |



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Scenario planning exercises can include probabilities by scenario, along with volumes and cash flow modeling to quantify the annual implication of one scenario versus another. This highlights value and risk in one market versus another. This can be especially helpful as the restructuring of North America's lumber industry settles in.

Strategic planning and scenarios remind us that resources are limited and committing to priorities is difficult. If all mills upgrade (in a region), then lumber production variance is more a function of the local resource (who can buy cheaper logs easier or who can manufacture product more efficiently) than it is of beetles or fires in Canada. Scenarios help us build these stories from the ground up to stack our options and make firm decisions.

CONCLUSIONS

What is the best way to preserve forests? We only need a reasonable and defensible answer. We need intuition and experience how things work from the ground up to develop and test reasonable projections and decisions. Understand your data, frameworks, and models.

Efficient and knowledgeable management support success and profits. To me, each word is important. Efficient means reduce waste; knowledgeable means apply insight and experience; management refers to good decisions and implementation with our teams and operations.

Simply, I have come to believe that, at least in forestry, our sector tends to grow and learn better together, that through certain areas of collaboration and cooperation we build better teams, more efficient operations, and a healthier industry. From there, we live another day to tell our stories and help others succeed, as well.

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