



Timber Prices Are Not Stock Prices

Who Needs to Know?

More people own stocks than own timberland in the United States. Partly as a result, the availability of timber price data is more limited and of a different type than stock price data.

Stocks: A Gallup poll in April 2016 found just over half of American adults owned stock (Gallup 2016). Using 2010 Census data, that means about 121 mm people in the US owned stocks at that time. And this does not include those who do not own stocks personally but are eligible for pensions from pension funds that do invest in stocks.

Timberland: Table 1 shows information on forest land ownership in the US in 2006, the latest published data available (Butler 2008). It shows that there are just over 11.3 million individuals, families and other private entities that own forest land (up from about 9.9 million in 1993 (Birch 1994)).

Table 1. US Forest-Land Ownership, 2006

	000 Acres	000 Owners	Average Acres/Owner
NIPF ¹ Family/Individual	263,658	10,398	25
NIPF Other ²	108,003	909	119
Other Private ³	51,368	15	3,425
Total Private	423,029	11,322	37
Public	328,199		
All Ownerships	751,228		

¹NIPF = Nonindustrial Private Forest. These are forest owned by individuals, families, corporations and other entities that do not own primary wood processing facilities.

²Institutional investors are in this group.

³This group includes individuals, families and corporations that own forest-land and processing facilities (lumber mills, pulp mills, etc.)

Source: Butler 2008

But not all the private forest land owners in Table 1 are going to be following timber prices carefully. Not all of those owners own *timberland*.

Forest land is defined by the US Forest Services as land that is at least 10 percent stocked by forest trees—so it is land that is growing trees or can grow them, but it doesn't have to have *much* timber on it. *Timberland* is defined as forest land that is capable of producing 20 cubic feet per acre per year—so it is land that can grow trees well.

Since not all of the private forest land in Table 1 is timberland, there are less than 11.3 million *timberland* owners in the US. Further, about 60 percent of the forest land owners in Table 1 own less than 10 acres of forest land (or timberland). It is highly unlikely that these owners harvest timber from their small parcels so they are unlikely to be very interested in timber prices.

This leaves us with about 4.5 million individuals, families and other groups that are forest land owners (and probably most of these are *timberland* owners) for whom timber prices are of interest.

So, there are 121 million individual stock owners—plus additional thousands of investment managers—who are interested in stock prices, and 4.5 million timberland owners—plus additional hundreds of managers and employees—who are interested in timber prices. The number of people interested in timber prices is only a tiny fraction of the number of people interested in stock prices.

The difference in the size of the markets for price information shows in the availability and type of the price data.

How Are They Different?

Frequency/Timeliness

Stock prices are published far more frequently than timber prices.

Stocks: The web is full of up-to-the-minute stock price data. If you pay money, you can get stock prices in real time. Or, you can get stock prices with a 15-minute delay for free.

Timber: Timber prices are reported far less frequently than stock prices. The following list of US timber price sources is meant to be comprehensive, but is likely missing a few.¹

Weekly: While there are several weekly price reports for *lumber*, we are aware of only one weekly *timber* price report. Forest2Market offers a subscription for a weekly price report for southern timber. The report is based on transactions (see *Surveys vs. Transactions* below) within specific market regions (see *Living on the Edge* below). While the report is published weekly, the prices are 60-day rolling average (volume-weighted) prices. So, while this report provides the latest information available, that “latest” information could be up to two months old—though that is not “old” by timber price standards.

Monthly: The Pacific Northwest has a history of timber prices published monthly by private sources, but they delivered log prices, not stumpage prices. Two currently-available monthly price reports are RISI’s *Log Lines* and John Lindberg’s *Oregon/Washington Log Market Reports*.

Bi-Monthly: The Texas Forest Service publishes *Texas Timber Price Trends* on a bi-monthly basis.

Quarterly: About half of the US timber price reports are published quarterly. They include reports from:

- F&W Forestry (South)
- Louisiana Department of Agriculture & Forestry

- Massachusetts Cooperative Extension (includes prices for Connecticut and Rhode Island)
- Michigan Department of Natural Resources
- Missouri Department of Conservation
- University of Montana Bureau of Business and Economic Research
- New Hampshire Timberland Owners Association
- Oregon Department of Forestry
- Pennsylvania Cooperative Extension
- RISI (The *World Timber Price Quarterly* includes US regions)
- Tennessee Division of Forestry
- Timber Mart-South
 - Statewide prices from TMS are published by the forestry agencies or Cooperative Extension Services in Arkansas, Florida, Mississippi, North Carolina and South Carolina
- Vermont Department of Forests, Parks & Recreation
- Wood Resources International (*North American Wood Fiber Review* and *Wood Resources Quarterly* reports include US regions)

Semi-Annual: Semi-annual price reports are published by government agencies or the Cooperative Extension Services in California, Illinois, Ohio, New York and Washington. Prentiss & Carlisle’s *Timber Mart North* publishes semi-annual prices for Michigan, Minnesota and Wisconsin.

Annual: State agencies in Indiana, Maine, Minnesota and West Virginia all publish annual price reports.

Surveys vs. Transactions

Stock prices are transaction-based. Most published timber prices are survey-based.

Stocks: Stock price data are for actual transactions and the data include highs, lows and volumes bought and sold. The exchanges report latest prices and the volumes for all of the shares traded during the day.

Timber: Most timber price reports are based on market surveys, not transactions, and they do not include data for all timber sold. The publication editors talk with both buyers and sellers to get an unbiased view of the market, and usually require a

¹ Our readers will let us know if we are missing any. The sources change over time, usually as public agencies gain or lose funding that supports price-reporting efforts

minimum number of sources—often three—for each market region in order to publish a price for a particular species and product for that region. So, unlike with stock prices, the published prices are the price report's *estimate* of the current market prices.

There are exceptions to the survey approach used by most price reporting services. There are a few reports that use transaction-based data—though unlike stock exchanges they do not necessarily report *all* the transactions. As noted above, Forest2Market publishes transaction data, including number of timber sales and total volumes. This is approach is also used by the Texas Forest Service and the Missouri Department of Conservation.

The Maine Forest Service (MFS) does collect price and volume data for *all stumpage sales* in the State. However, the MFS collects information on stumpage prices only, and most of the large institutional and industrial timberland owners sell delivered wood, not stumpage, so the MFS report does not include the majority of the timber sold in the state. (There is also a significant lag time with this report as the stumpage price report for a given year is usually published in the 3rd or 4th quarter of the following year.)

Real Estate vs. Financial Instruments

Stocks are highly uniform financial instruments, while timber is highly variable and more like real estate.

Stocks: It is generally accepted that the value of *your* stock (e.g., Ford) is the same as the current price of that stock on the NYSE or the NASDAQ exchange. And it is generally accepted that the value of *my* Ford shares is the same as the value of yours.

Timber: Timber is far more variable than stocks and other financial instruments. Unlike those shares of Ford that are identical, trees of the same size and shape on abutting properties can have very different values.

Timber prices are more like house prices. You can get the sales prices of all the houses in your neighborhood, but they only give you an indication

of the value of your house. Each house is different to a greater or lesser degree. The house next door might have sold for \$150,000 or \$500,000, but your house has hardwood floors instead of carpet and is 400 square feet larger and you have an additional half bath and one less garage stall, so yours is not worth the same amount.

Most price reports include notices that the value of *your* timber will be different than the published prices for a variety of reasons. The New York Division of Lands & Forests provides one of the more comprehensive lists of reasons in its *Stumpage Price Report* (NYDLF 2017):

Some Factors Affecting Value of Standing Timber

1. Timber quality
2. Volume to be harvested per acre
3. Variability of terrain
4. Market demand
5. Distance to market
6. Season of year
7. Distance to public roads
8. Costs of harvesting
9. Size of timber
10. Species mix
11. Type of logging equipment
12. Landowner requirements for harvest
13. Landowner knowledge of values
14. Insurance costs
15. Performance bond and other requirements

Knowing how much sugar maple sold for on a property a few miles away may provide some indication of the value of your sugar maple. But if your forest, compared to *that* forest:

- contains a higher percentage of sugar maple
- contains older(/bigger) sugar maple trees
- has gentler and dryer terrain
- has direct access to a major state highway (on which heavy loads can be hauled year-round)

then the price you get for your sugar maple should be higher.

Living on the Edge (of the Price Region)

Stock prices are not geography-dependent, but timber prices are.

Stocks: Stocks are traded on central exchanges under standard procedures and conditions. Location makes no difference.

Timber: All price reports provide data for regions and sub-regions. These regions are almost always defined by political boundaries. State lines are common boundaries: The Texas Forest Service reports prices for Texas, but not Louisiana or Oklahoma. Most reports break states up into sub-state regions defined along county lines. The reported prices represent averages for the defined regions and sub-regions.

However, timber markets are independent of political boundaries, they depend on the location of mills and road systems. So if your timberland is near the edge of a price region, your timber values are being influenced by the timber market in the neighboring region.

Timber Mart-South deals with this by showing a wide, fuzzy boundary between sub-state regions in its price region maps. If you are in the middle of any state, it is difficult to tell from that map which price region you are in—which is appropriate because both regions are influencing your timber values.

Forest2Market ignores state borders and has created 39 micro-market price zones based on their analysis of timber markets in the South.²

Take Your Lumps

With stocks, we always know the total volume and per unit price. We don't always know that with timber.

Stocks: Volumes and prices are always reported.

Timber: Large timberland owners frequently sell logs delivered to mills. Their contracts with the buyers specify volumes to be delivered and a per-

unit price. But timber can also be sold lump-sum.³ In a lump sum sale, the seller gets an agreed-to total payment regardless of the actual volume harvest. The buyer assumes the risk that the actual volume harvested may be different than the volume expected (e.g., the lump sum sale might be for \$1.0 mm, but the buyer might actually end up with \$0.9 mm or \$1.1 mm worth of timber). There are no prices developed or reported for individual species and products.

Summary

Timber prices are not stock prices. Published stock prices are based entirely on transactions and the published price applies to all shares of a given stock. Some published timber prices are based on transactions, but most are based on surveys. Because timber is not a uniform commodity, published timber prices cannot be applied directly to a timber property, but can provide an indication of the value of the timber on the property.

References

Birch, Thomas W., 1996, *Private Forest-Land Owners of the United States, 1994*, USFS NE Forest Experiment Station, Resource Bulletin NE-134

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Gallup, 2016, *Just Over Half of Americans Own Stocks, Matching Record Low*, <http://www.gallup.com/poll/190883/half-americans-own-stocks-matching-record-low.aspx>

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² Given my personal experience (and Murphy's Law), no matter how many price regions there are and how they are drawn on the map, my timberland property would be located near the edge of a region.