

Western Timberlands - An exhausting review of recent timber prices

WESTERN LOG PRICES

Figure 1 shows quarterly log prices for the US Pacific Northwest (PNW) since 1990. The series shown are averages of prices reported by *Log Lines*, the *Pacific Rim Wood Market Report* and the Oregon Department of Forestry. Prices rose sharply in 1993 as the western US National Forests were closed to harvesting in an effort to protect the endangered northern spotted owl. Prices drifted downward slightly over the next few years. Export prices dropped sharply in 1997 as several southeast Asian economies collapsed and demand for wood from the West Coast of North America dried up. Note that there is little difference between the domestic and export whitewood grades shown here. A further indication of the loss of export markets is that *Log Lines* has ceased reporting prices for its Region 2, the Grays Harbor region of Washington, where most of the reported prices were for export-grade logs.

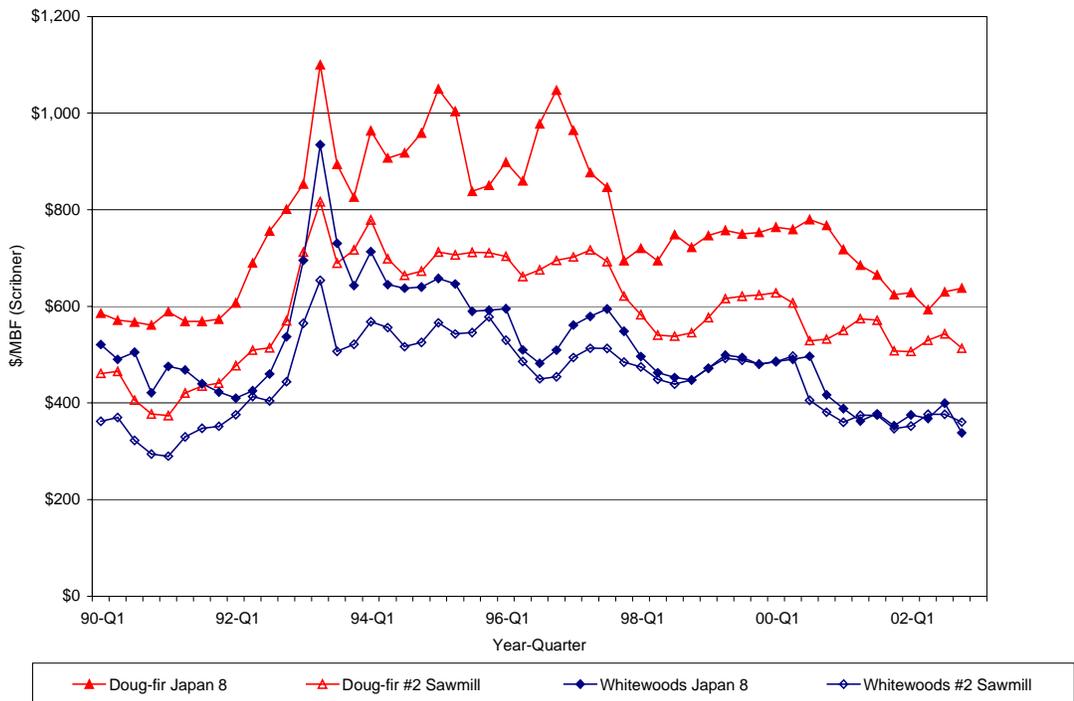


Figure 1 Pacific Northwest Log Prices (Nominal \$)

The prices are shown in *nominal* dollars. This is important, because a couple of the products are currently selling at lower nominal prices than they were in 1990! (More about that later.)

TREND ANALYSIS

There appears to be a strong downward trend since the peak in 1993. However, sometimes a statistical analysis shows something different than an “ocular estimate”. Figure 2 adds some trend lines to a chart of #2 sawmill Douglas-fir log series. These lines were generated using built-in functions of Microsoft’s Excel software. This is not an extremely sophisticated and complicated way of analyzing the data, but it gets the job done. Without getting into the details of slope (changes in price), it is obvious that the ocular estimate was correct—it is not an optical illusion, prices have been declining since 1993.

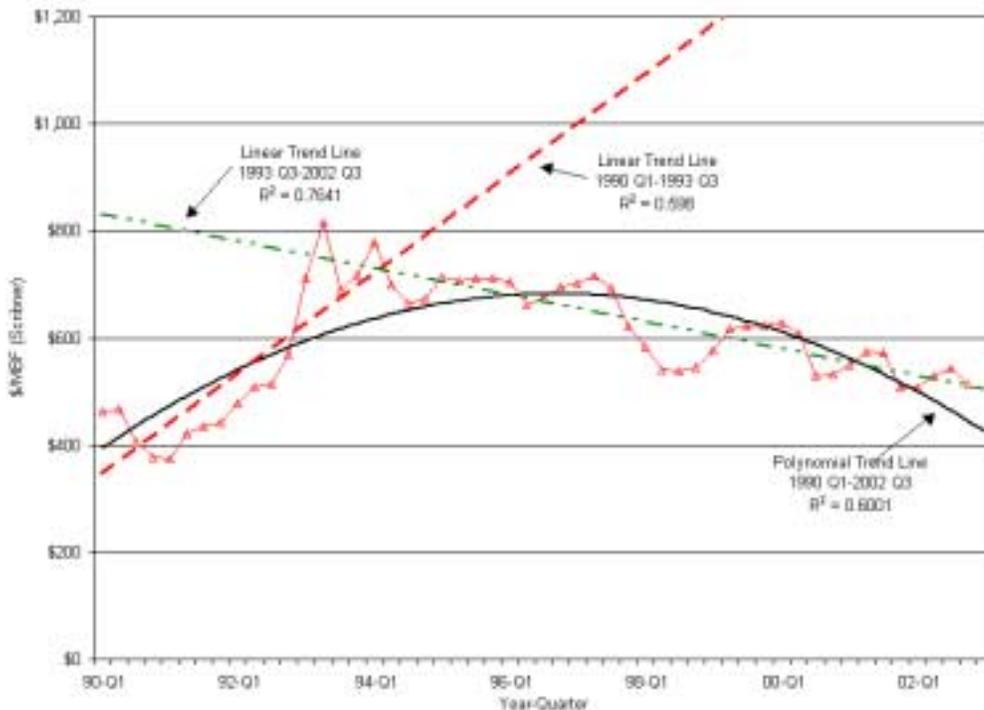


Figure 2 Trend Analysis of #2 Sawmill Douglas-fir Logs (Nominal \$)

The R^2 s are pretty strong for the linear trend line since 1993 and the polynomial trend line since 1990. R^2 for linear trend line (not shown) for 1990 through 2002 is only .0197, not a compelling fit at all.

REAL DOLLARS

Both Figures 1 and 2 present the series in nominal dollars. Figure 3 presents the price series from Figure 2 in *real* (2000 = 100) dollars. This shows #2 Doug-fir prices are at about the same level they were twelve years ago. The linear trend line for the period 1993 through 2002 has a very strong fit ($R^2 = .89$).

The polynomial trend line for 1990 to 1993 shows one of the limitations of trend line analysis. The line has the strongest fit of any trend line in the charts ($R^2 = .94$), but very few people would expect log prices to follow that trend for an extended period. If they had stayed on that line, #2 Sawmill logs would be selling at millions of dollars per MBF by now.

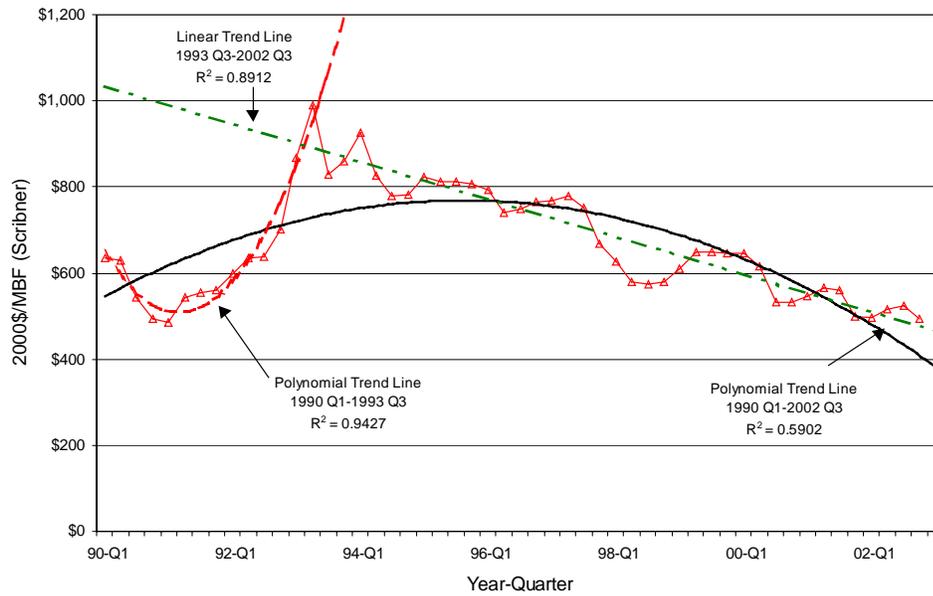


Figure 3 Trend Analysis of #2 Sawmill Douglas-fir Logs (Real 2000\$)

The problem with all three of the charts above is that they look at a very short time period. Where were timber prices before 1990? Figure 4 shows annual real (2000\$) Douglas-fir log prices since 1890. The series is derived from data from the USFS, Washington DNR and *Log Lines*.

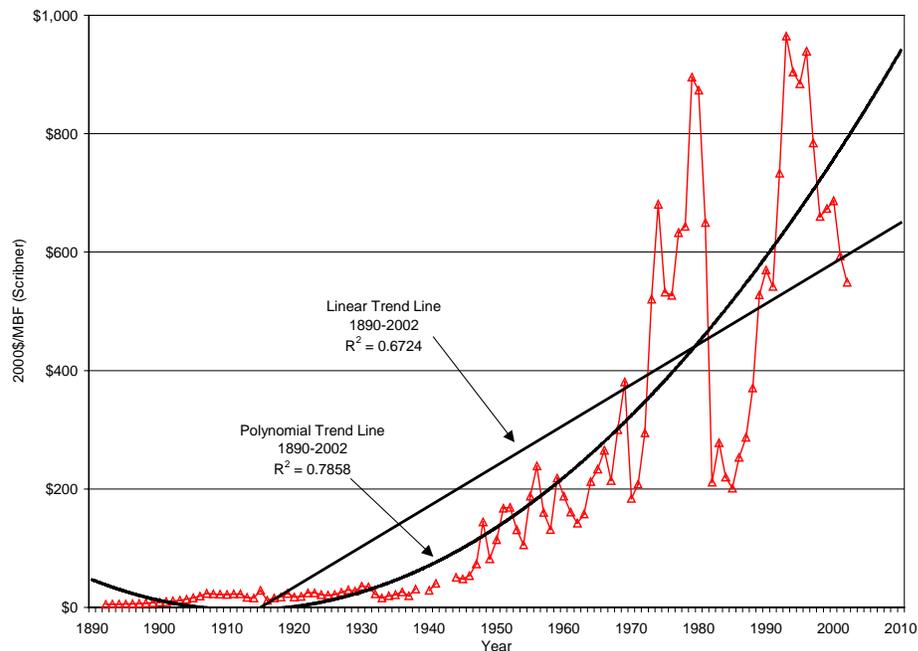


Figure 4 Trend Analysis of Douglas-fir Logs (Real 2000\$), 1890-2002

The apparently dismal performance in log prices over the last nine years (since 1993) has merely brought them down to the long-term linear trend line (or slightly below the long-term polynomial trend line). Note that these prices have shown some volatility over the past 30 years!

One big problem with this data series is that it does not take into account changes in utilization standards and changes in technology. The logs being sold in 2002 are almost entirely second-growth timber, and the logs being sold in 1990 were old-growth timber. Mills in 1990 could not have efficiently processed most of the timber being harvested today. In addition, the sharp increase in the level and volatility of prices beginning in the 1950s is due as much to changes in government policies as to any fundamental changes in demand.

WESTERN TIMBERLAND VALUES

Figure 5 shows how timberland values the PNW have changed since 1990. These are based on nominal returns, but it looks like real values in 2002 would be higher than real values in 1990.

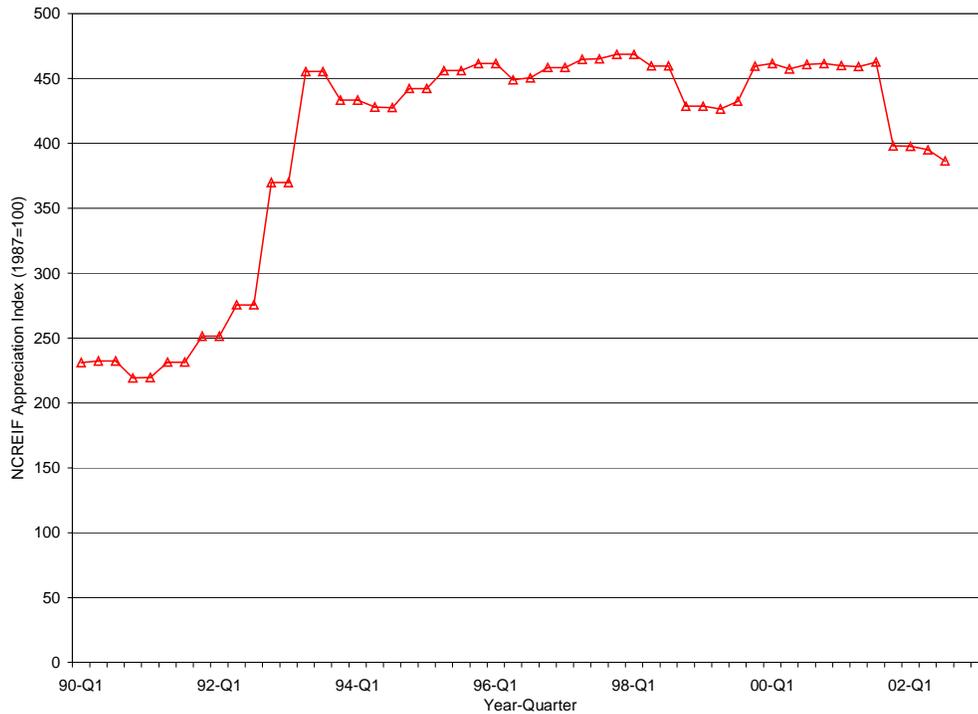


Figure 5 NCREIF PNW Timberland Appreciation Index

Why have timberland values held up so well in spite of falling timber prices? This appreciation index is heavily dependent on appraisals of properties in the index. Appraisals, in turn, depend on recent sales and the market's expectations of future timber prices. An optimist could look at Figure 4, say that prices have simply fallen to the long-term trend line and should now begin to climb again, and be willing to pay a hefty price for timberland in the region, in spite of current low timber prices. (A pessimist would point out that price behavior in the 1980s suggests there is still plenty of room for prices to fall.)

Timberland Report VOL. 4, NO. 2 Copyright © 2002 James W. Sewall Company. All rights reserved.
 The *Timberland Report* looks at the timberland investment industry with an emphasis on the United States. The opinions expressed are those of the editor, who is solely responsible for its content, and may not reflect the opinions of James W. Sewall Company.

Editor: Jack Lutz, Ph.D., LPF, Forest Economist
 (207) 827-4456 (207) 827-3641 (fax) jlutz@jws.com www.jws.com