



Not-So-Hot Timberland Returns

The US NCREIF Timberland Total Return for the fourth quarter of 2001 was the largest negative return in the history of the index. This was driven by a large negative capital return. All three sub-regions of the index also showed negatives in both the total and appreciation returns.

EBITDDA returns (formerly labeled income returns) did not see such sharp declines. Fourth quarter EBITDDA returns were higher than the third quarter in the West and Northeast and only slightly lower in the South. In fact, EBITDDA returns for the year were not significantly different from those of prior years. This indicates that timberland managers can maintain a fairly steady cash flow in spite of fluctuating timber prices (whether prices go up or down).

So the negative total returns for the fourth quarter were the result of negative appreciation returns. What caused these sharp negative returns in the fourth quarter?

INDEX STRUCTURE

It is important to remember that almost all of the NCREIF properties are appraised at year-end. Some are appraised *only* in the fourth quarter. Some are appraised in the second quarter and very few are appraised in the first and third quarters. The value of a property that is appraised only at year-end would remain generally unchanged over the course of the year, even if timberland values were changing (up *or* down). This results in overstating the size of the value change in the fourth quarter. *Some* of the drop in timberland values would have occurred in the earlier quarters.

But all we've done here is explain that the large drop reported by the Index in the fourth quarter probably did not occur in the *just* the fourth quarter--the decline might have been spread across the year. Regardless of the timing, the end result is that the NCREIF Timberland Index is showing a decline in timberland values for 2001. What caused that?

RECENT TIMBER PRICES

Part of the drop in timberland returns across the country is due to lower timber and log prices. Figure 1 shows the NCREIF US Index, Southwide southern pine stumpage prices and #2 grade sawlog prices for the Pacific Northwest. It is a busy chart, but it clearly shows declining timber prices for three of the four species and products at the end of the year.

In the Pacific Northwest, Douglas-fir prices have continued a decline that really began after they hit historic highs in 1993. Nominal prices are still higher than those of a decade ago, but real prices might not be. Nominal whitewood/hemlock prices are as low as prices from a decade ago. 2001 real hemlock prices are lower than 1990 real prices. Southwide southern pine sawtimber stumpage prices actually rose during 2001, but pulpwood stumpage prices have fallen in most quarters since 1998

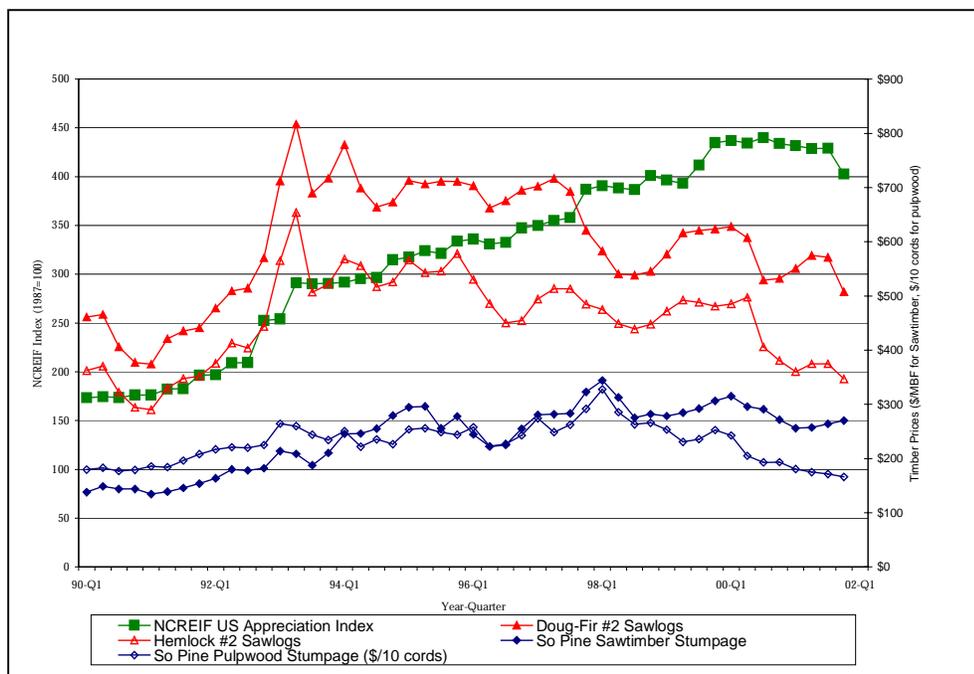


Figure 1. NCREIF Index and Timber Prices. Sources: NCREIF, Timber Mart-South, Oregon Department of Forestry, Log Lines, and Pacific Rim Wood Market Report

There is no Northeast price series shown in Figure 1 because there is no published region-wide price source. Sewall Company stumpage price surveys have found that spruce/fir sawtimber prices in Maine are down sharply from a year ago. Hardwood pulpwood prices are appallingly low across the Northeast as hardwood pulp mill closings from New Hampshire to Pennsylvania have left timberland owners with very little market for the stuff.

So if timber prices have been falling for years, why haven't timberland prices fallen along with them?

APPRAISAL STICKINESS

TIMOs have argued for years that there is a certain stickiness to appraised values—they do not rise (or fall) as fast as the market. Appraisals rely in part on historical data (comparable sales approach) and old data may not reflect the market properly in times of rapid changes in the market. Appraisals also rely in part on market *expectations* (income approach), and so are not *entirely* dependent on historical data. If the market is expecting timber values to recover, that thinking will be reflected in timberland values.

INCREASED COMPETITION FOR TIMBERLAND

My pet theory at this time is that increased demand for timberland (for investment purposes) has put upward pressure on timberland prices. This upward pressure has not necessarily raised prices, but may have kept them from falling to any degree. Fifteen years ago, there were only a half-dozen timberland investment management organizations (TIMOs). Now there are at least twenty TIMOs that cater to large institutional investors or high-net private investors and there are several publicly traded companies that invest heavily in timberland. There are a number of studies in the forest economic literature showing that more bidders means higher prices paid for timber, and I assume the same would

apply to timberland as well. Higher prices would indicate lower returns. Part of the required/expected return in timberland is from liquidity risk. But if there are now 20 institutional TIMOs where there used to be 5 or 6, the market is expanding and timberland liquidity is increasing. The increase in liquidity would lower the liquidity risk and therefore lower the required return.

So timberland prices have “finally” fallen. What has this done to investment portfolios?

PORTFOLIO BALANCES

Here we look at a *very* simple hypothetical portfolio consisting of stocks and timberland. The \$100 million portfolio was established in the first quarter of 1994 with 98% (\$98 million) to stocks and 2% (\$2 million) allocated to timberland. (We begin in the first quarter of 1994 because that is where Sewall’s S&P quarterly data begins.)

The question is: what would be the value of the assets in the portfolio today? The change in stock value was modeled using the S&P 500 Index. The change in timberland value was modeled using the NCREIF US Timberland Appreciation Index. We ignore taxes and dividend reinvestment and a host of other factors that would be important if we were trying to develop an efficient portfolio or calculate total returns. The analysis also ignores income, whether dividends or timber sales.

Figure 2 shows that the stocks climbed to about \$325 million in early 2000, while timberland barely rose above \$3 million. However, timberland values have not fallen as sharply as stock values since then. The stocks are now worth \$247 million. This is 24% less than the value at the beginning of 2000 (this is a straight percentage calculation, not an annualized return). The timberland is worth \$2.8 million (a drop of 7% since the beginning of 2000). Timberland makes up only 1.1% of the total portfolio at year-end 2001.

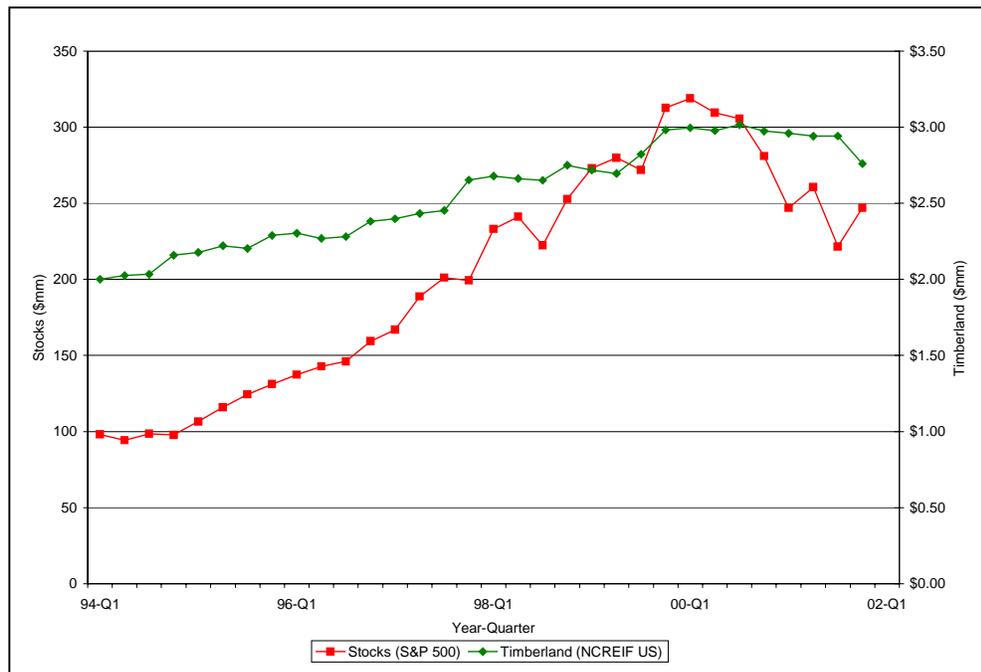


Figure 2. Hypothetical Portfolio Starting With 98% Stocks and 2% Timberland in 1994

When I showed Figure 2 to one of my colleagues in the office, his first reaction was that it looked like stocks were the better investment over the past seven years. However, Figure 2 shows only the appreciation or capital returns—it does not include income returns. Income returns for timberland tend to be higher than income returns for the S&P. Table 1 shows returns for the year 2000. While this is a very small sample, has been common for annual timberland income returns to range 200-400 basis points higher than the annual S&P 500 income returns since 1987.

Asset	Total Return	Appreciation Return	Income Return
S&P 500	-9.11%	-10.14%	1.10%
NCREIF Timberland	4.41%	-0.22%	4.65%

Table 1. Comparison of Returns for 2000 Calendar Year

Finally, this is one of those analyses where the starting point is very important. Figure 3 shows the same portfolio created in the first quarter of 1998. Again, it looks like stocks outperformed timberland in 1999, but those paper gains have disappeared. Timberland makes up exactly 2.0% of the portfolio at the end of 2001. (Timberland made up 2.4% of the portfolio at the end of the third quarter of 2001, again illustrating the impact of the analysis period selected.)

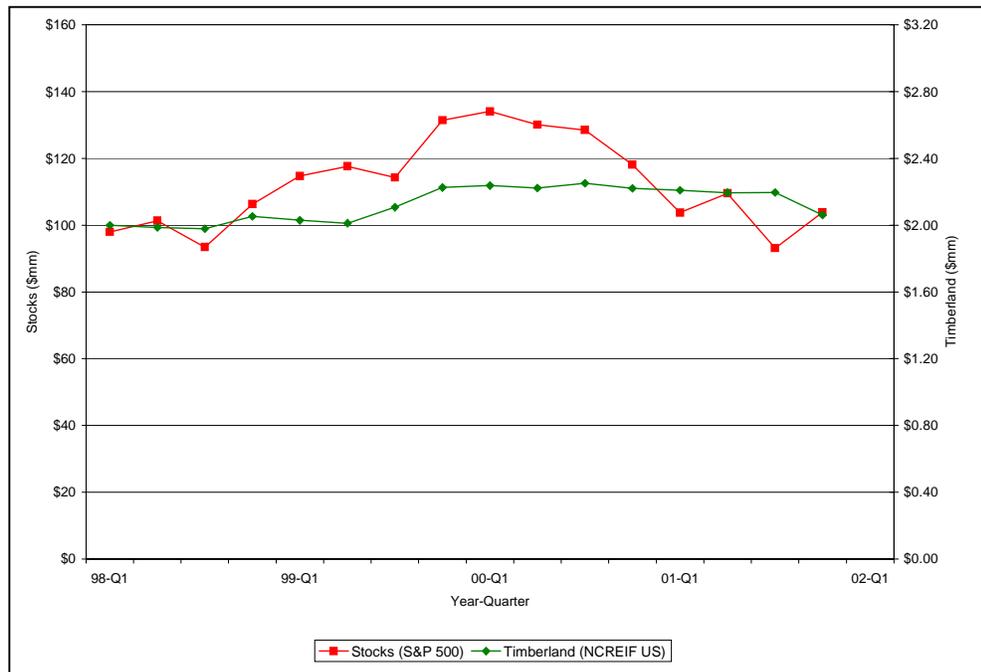


Figure 3. Hypothetical Portfolio Starting With 98% Stocks and 2% Timberland in 1998

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Editor: Jack Lutz, Ph.D., LPF, Forest Economist
 (207) 827-4456 (207) 827-3641 (fax)

jlutz@jws.com

www.jws.com