



The Tao of Timberland

We seem to have spent a bit of time lately explaining some of the points we present here to a number of audiences, so we thought we'd explain it again to a larger audience.

The NCREIF Timberland Index is the best available indicator of timberland returns. We suggest, however, that it is not the timberland equivalent of the S&P 500, but that it is the timberland equivalent of the Dow Jones Industrial Average (the Dow).

Limited Scope

The Dow is a frequently reported indicator of the US stock market. Most newscasts and newspaper reports on the market will note that the Dow is up or down. But the Dow includes only 30 stocks, and most people think the S&P 500 is a better indicator of the broader market. We expect that very few people use the Dow as a **Benchmark** for measuring the stock market, though if the Dow is having a very bad/good day, chances are good that the S&P 500 is down/up as well.

Like the Dow, the NCREIF Timberland Index is a fairly limited indicator of timberland returns. It reports only US timberland investments that are mostly fee-owned. But there are also timberland investments made up of leased lands and timber rights. And more timberland investment money from the US and other countries has been ending up in other countries. For example, US-based TIMOs are now the largest timberland owners in New Zealand. Brazil and Uruguay are also popular targets for US institutional investment money.

In addition, the NCREIF index reports returns for only a portion of US timberland. It *does* account for a sizable portion of the institutional timberland investment in the US—but only 8 or so of the two dozen US-based TIMOs contribute data to the index. And it does not account for hundreds of millions of acres held by individuals, families and timberland REITs.

Appraisal-Based

Another thing that makes the NCREIF Timberland Index a less-than-perfect **Benchmark** is that a significant portion of its return is based on appraisals, not transactions. While the S&P 500 returns are based on transactions involving hundreds or thousands of shares of each company in the index each *day*, there are simply not enough transactions on average in a given *year* to have a transactions-based timberland index.

We know most of the timberland appraisal firms in the country and they do good work, but an appraisal is only an *estimate* of the value of the property. Five (or six or twenty) appraisers all doing good work will come up with five (or six or twenty) different values for a given property—though they are all likely to be similar—and an actual sale price might not match any of those estimates.

This is not a huge issue, especially when the market understands it, but does make the NCREIF Timberland Index less like the S&P 500.

Quarterly Volatility

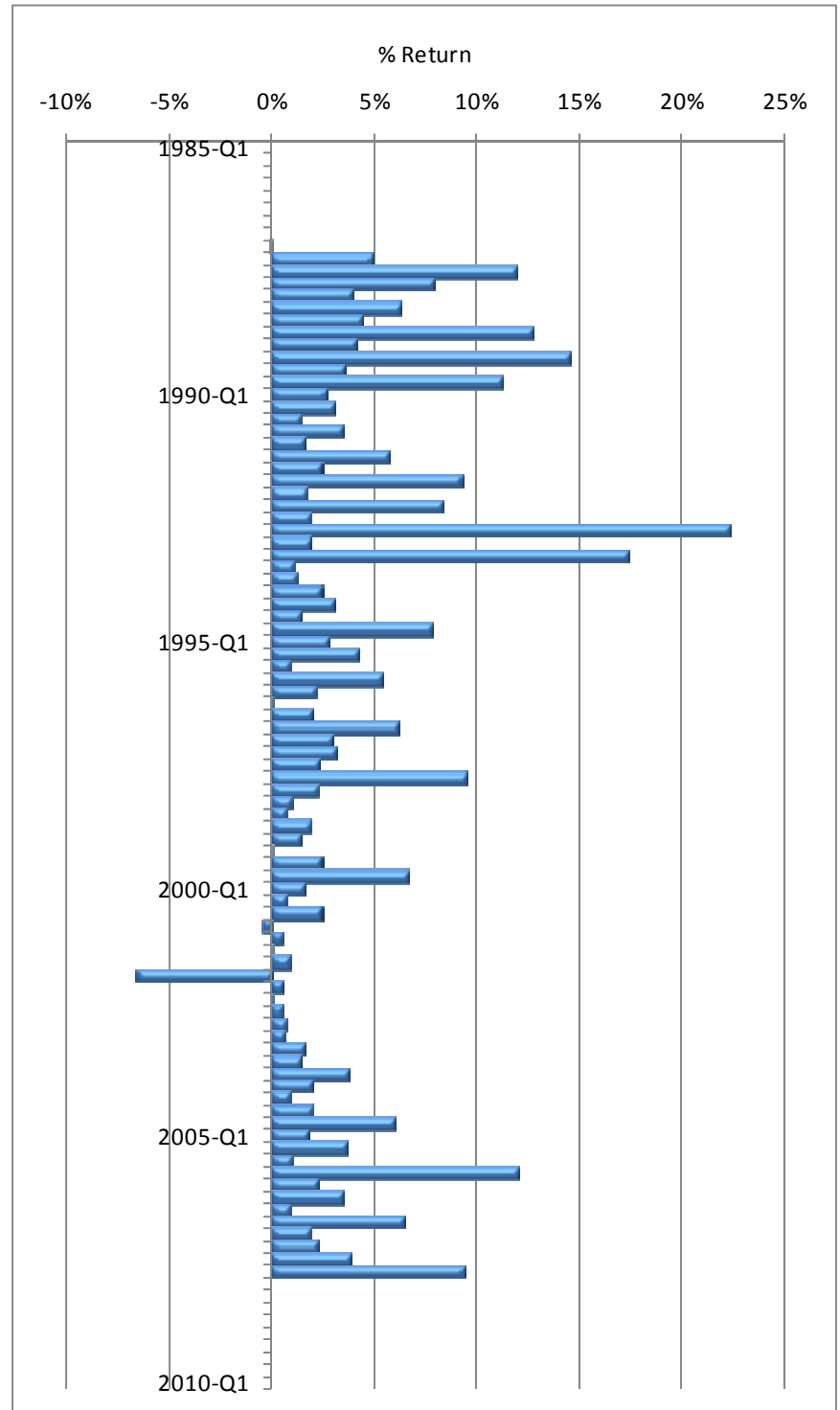
The appraisal basis of the Timberland Index really has an impact when people try to use the quarterly returns in their analyses. Historically, most timberland properties in the index have been appraised annually, and usually in the fourth quarter. There were also a sizeable portion of properties that were appraised in the second quarter. Very few properties were appraised in the first and third quarters.

Figure 1 shows quarterly total returns through 2007 for the Timberland Index (available at <http://www.ncreif.org/indices/timberland.phtml?type=total>). Note that these quarterly returns are quite volatile, with higher returns in the second and fourth quarters especially apparent in the stretch between 1990 and 1995

Figure 2 shows the average contribution to appreciation return from each quarter from 1987 through 2007. Over the life of the NCREIF index, the first and third quarters have each contributed about 7 percent of the total annual appreciation return. The third quarter has contributed just over 25 percent and the fourth quarter has contributed just under 60 percent.

This variation in returns is completely unrelated to how trees grow in any region of the United States.

Figure 1. Quarterly NCREIF Timberland Returns



Source: NCREIF

In central Maine, the leaves begin appearing (and the trees begin growing) in mid-May (second quarter) and have turned color (and the trees have stopped growing) by mid-October (fourth quarter). Most of the growth occurs between June 1 (second quarter) and September 30 (third quarter). So most of the growth occurs in the third quarter, but the NCREIF index does not reflect this.

A survey of western timberland owners and managers a few years ago found some disagreement among them, but all agreed that most of the growth in the Pacific Northwest took place in the third quarter. (The disagreement involved the amount of growth that occurred in the second and fourth quarters.) So most of the growth occurs in the third quarter, but the NCREIF index does not reflect this.

Figure 3 takes the analysis in Figure 2 and looks at different time periods. In the early 1990s, the first and third quarters contributed even less to the total annual appreciation return, but the second quarter's contribution increased to 40 percent. Over the last seven years, the first three quarters each have contributed 10-12 percent of the total appreciation return, while the contribution by the fourth quarter rose to 65 percent.

Since there is very little tree growth anywhere in the country during the fourth quarter, we suggest that the quarterly returns are not a good indicator of actual changes in timberland values.

Figure 2. Average Contribution to Appreciation Return by Quarter, NCREIF Timberland Index

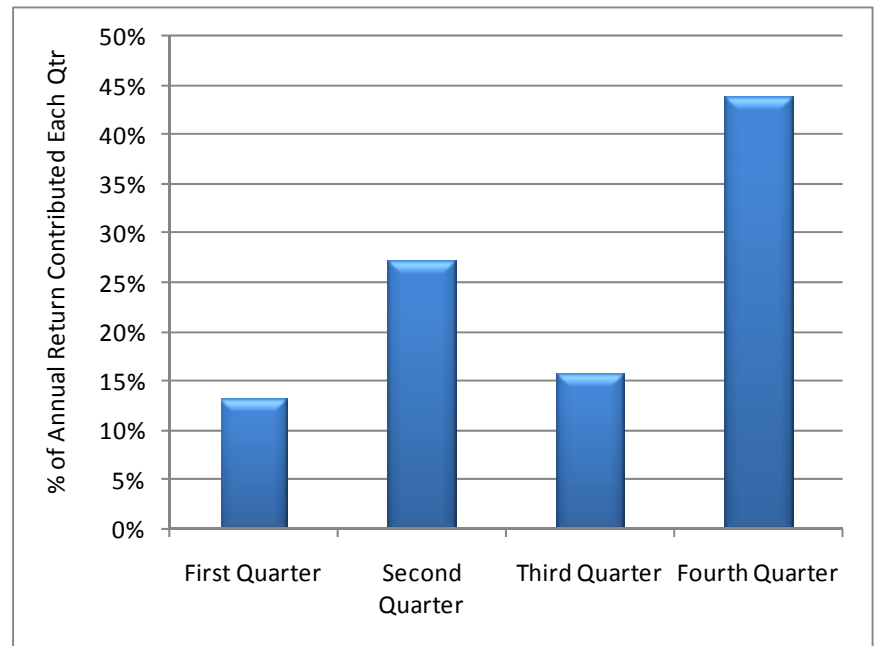
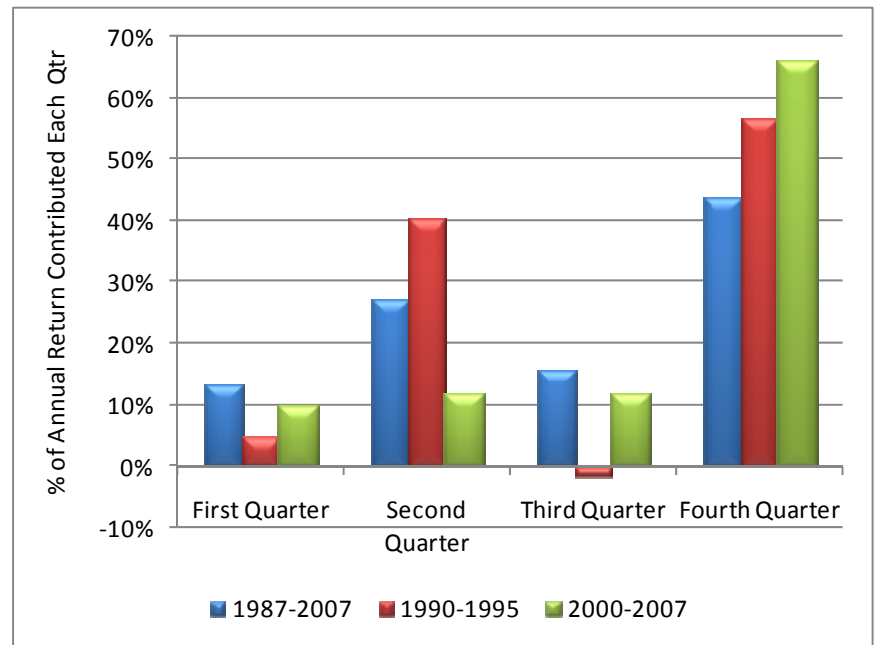


Figure 3. Average Contribution to Appreciation Return by Quarter, for Different Time Periods



Summary

As we said in the beginning, the NCREIF Timberland Index is the best available indicator of timberland returns. But it is important to understand its limitations.

It represents US timberland investments only, and only a subset of those (though it represents a large subset). The index incorporates transactions reported by its contributors, but it relies heavily on appraisals. The annual scheduling of appraisals creates an artificial seasonality to the appreciation returns that does not accurately reflect the real-world changes in value of timberlands in the US.

Given its limitations, comparing your timberland investment with the NCREIF Timberland Index should be done with caution. If your returns are, say, 200 basis points lower than the Index, you probably don't need to be worried. Conversely, if your returns are 200 basis points above the Index, you probably shouldn't get too excited.

We've Moved

As of August 22, 2008, we are now located in Rowley, Massachusetts a small rural community about an hour north of Boston.

Forest Research Notes, Vol. 5, No. 2
Copyright © 2008, Jack Lutz

Jack Lutz, PhD
Forest Economist
Forest Research Group
385 Central Street
Rowley, MA 01969
978-432-1794

jlutz@forestresearchgroup.com
www.forestresearchgroup.com

Up-Coming Events

I am scheduled for three speaking engagements in the near-future:

Who Will Own the Forest 4

Portland, Oregon, USA

September 8-10, 2008

<http://wfi.worldforestry.org/wwotf4/>

I will be present a brief history of timberland investment and discuss what has changed over the past 20 years. I will also present some analysis of how land prices have been behaving recently. Latest word is that well over 300 will be in attendance.

Eastern CANUSA Forest Science Conference 2008

Orono, Maine, USA

October 17-18, 2008

Lloyd Irland (Yale University and The Irland Group) and I will be presenting a paper entitled "How Will Expensive Oil Affect Maine Timberland?", which should have application to other parts of the country and the world.

University of Georgia's Timberland Investment Conference

London, England

November 10-11, 2008

<http://www.ugatimberlandinvestment.com/>

I will be presenting on a timberland investment topic to be determined later.