

FA Green

September 2011 issue

Go Hug A Forest

Impact investors can foster change while earning handsome returns in one of the only asset classes where there's real growth.

By Ellie Winninghoff

What's the cross between a tree hugger and a capitalist?

An investor in sustainable forests.

That's something quite different from—and often more profitable than—conventional timberland investing, a favorite alternative investment vehicle for top-performing endowments like Harvard and Yale.

"Timberland is unique in the investment universe because it's one of the only asset classes where there's real growth that you [can see] and measure," says Eric Becker, chief investment officer at Clean Yield Asset Management, based in Norwich, Vt. "Trees grow at a certain rate. You can figure out what a sustainable yield is from a forest, manage that, and therefore benefit from that financially.

"Most other investments somehow go beyond the limits of growth," he adds. "This is really one of the greenest investments available."

As an asset class, timberland is actually fairly new. During the last 30 years or so, pension funds and other institutional investors have picked up nearly 40 million acres in the U.S., reaping average annualized real returns as high as the high single digits, but more like 6.5% to 10% in the past five years. For the most part, they bought it from forest product companies that, because of unfortunate accounting rules, were forced to carry this increasingly valuable real estate on their books at historical cost. The companies sold the timberland so that shareholders could realize the value of their holdings and then invested the proceeds in mills and other more profitable operations.

Traditional Timberland Investing

So how do the economics of traditional timberland investing play out? In general, there are two sources of returns. First, the income generated from timber sales. Second, the capital gains generated from divvying up large plots of land and selling them in smaller chunks for real estate development. Whereas the income from timber sales can make for a relatively steady annuity, sales of land for real estate development are more cyclical, depending on housing demand, etc.

Here's how it works: If the land is nursing seedlings or pre-merchantable timber, it is generally valued at the price of the bare land, plus the discounted future value of the young trees. If the timber is merchantable—that is, big enough to sell as timber or pulpwood—the price will also include an amount anywhere between 10% and 15%, or up to 45% to 70%, of the value of the merchantable timber. In recent years, that's become extremely volatile. That includes the cost of logging and hauling, which are variable.

As trees grow, their value grows. Harvests yield cash flow. Forest economics also differ substantially by species, and prices for the same species can vary by as much as 25% to 30% between mills in the same micro-market.

For example, Southern yellow pines harvested from the ages of 15 to 20 (for pulpwood and paper) currently sell for \$8 or \$9 a ton. From the ages of 18 to 24, some of it is used for pulpwood and the rest for construction lumber and 2-by-4's, and sells for \$15 to \$18 per ton. And from ages 27 to 35, when it's mostly used as structural lumber, it fetches \$24 to \$27 per ton. (These prices are the lowest in decades, no doubt because of the financial crisis and the slowdown in construction.)

Note the S curve: A tree grows fastest physically—and reaps its largest economic gains—during its teenage years. After it reaches maturity, both its physical growth and its financial value grow at a slower rate.

While the principles are the same, timber economics differ by species. Douglas fir and hemlock, which grow in the Northwest, are not merchantable until they reach middle age, during the ages of 30 to 45. (They are harvested for saw logs; pulpwood

and paper are residuals.) But at maturity (between the ages of 55 and 70) they are four times as voluminous as a Southern yellow pine. That renders their quality, and pricing, superior.

Then there are the old-growth giants. Twenty years ago, such trees commanded premium prices. But while trees grow after their teenage years, they do not grow as fast. So the forest industry, in an effort to maximize profits, no longer grows them and the mills no longer saw these beauties. The market for old-growth lumber has completely disappeared.

The bottom line: Timberland investors maximize returns from biological growth in two ways. First, they buy the forest as it enters its fastest-growing “emerging growth” years, when the timber from the trees is illiquid and undervalued, and then sell as the trees approach their slower-growth but merchantable mature years, when the price reflects the market value of the timber.

And second, investors seek out the fastest-growing, highest-volume trees in the world. For example, New Zealand's radiata pines mature in 30 years—but are three times as voluminous as Southern yellow pine. Eucalyptus plantations in Chile, with real biological returns of 20%, have also been hot.

Forests—The Key To Investing Sustainably

On the surface, it might seem that this tree farm model of timber production, based on the land as an underlying factory, can be “sustainable”—as long as the biological growth of the trees is properly measured and accounted for, and only a small percentage of the trees logged each year. But it has become increasingly clear that, as Ecotrust founder Spencer Beebe writes in his new book, *Cache: Creating Natural Economies*, “Trees do not a forest make.”

In addition to trees, forests provide a host of “ecosystem services”—clean water, flood control, habitats for fish and wildlife, soil building, carbon storage, etc. According to the United Nations-backed Millennium Ecosystem Assessment (2005), there are 24 main ecosystem services—most of them found in forests. Another United Nations-backed project, the Economics of Ecosystems and Biodiversity (TEEB), has estimated the negative externalities from forest loss and degradation at \$2 trillion to \$4.5 trillion per year—an amount equivalent to nearly half the U.S. GDP.

As a result, there is a growing interest in investing in bona fide forests with their ecosystem services intact—not just timberland and the wood it produces. Although this is still a nascent movement and different models are emerging that reflect in part the various characteristics of disparate ecosystems and forests, they are generally based on partnerships between nonprofits and private investors, and often consist of tax credits and other types of public finance.

In the U.S., the pioneer in this field is Peter Stein, managing director at the Lyme Timber Co., based in Hanover, N.H. In January, the company closed Lyme Forest III, a \$160 million fund that attracted nearly half its capital from families and institutions with an impact bent. Although Stein will not disclose his track record, he says the total returns from Lyme's first two funds were 10% to 25% higher than those for conventional timberland investments.

Lyme's secret sauce: a creative use of “working forest conservation easements,” along with a sprinkling of old-fashioned financial engineering using new markets tax credits where applicable and the occasional sale of ecosystem services such as carbon or “mitigation banks.” Mitigation banks are offsets against habitat damage and loss caused by development. They generally involve restoration and the protection of additional lands.

According to Stein, there has been a sea change in the use of easements, the legal right to use property you don't own. Conservation easements generally protect wildlife habitat, open spaces, recreational land, etc., by eliminating the right to develop land. Up until 15 to 20 years ago, most conservation easements were “forever wild,” meaning all economic use of the land was strictly prohibited. Until then, most easements were bequests donated by families for income tax deduction and estate tax relief, and were fairly small scale.

Today, entire watersheds—often tens of thousands of acres—are preserved using the technique. The newer, more complex “working forest conservations easements” (WFCEs) that have accompanied landscape-scale conservation often include comprehensive stewardship requirements, including forest management plans. Although there are still gifts and bequests, buyers often include local, regional or national land trusts, local or state government or even federal agencies such as the U.S. Forest Service.

The result: WFCEs allow the private landowner to keep the land working—in a truly sustainable manner, usually certified by a third party like the Forest Stewardship Council, or FSC.

While the economics of timber remain the same under a sustainable forestry model, a different management style can change the game substantially. Compared to conventional timberland managers, Stein says that Lyme typically garners 10% to 20% less annual income from timber sales—something that does not preclude clear cuts, the FSC certified.

“Five to ten percent of our harvest, in areas where it’s the appropriate silviculture treatment, is done through small patch clearing,” he says. “We have 250,000 acres in the Adirondacks, where we will be logging ten to ten and a half months of the year. Each year, maybe 4,000 acres would have some logging activity on it, year in and year out.”

Lyme generally buys property with all the rights intact and grants an option to a land trust to buy an easement—a process that can take two to four years. In general, the easement garners one-third to one-half of the land’s market value. Then, between years seven and ten, Stein sells easement-encumbered property to other institutional investors—at a price that is a 20% to 25% premium beyond his own breakeven.

Why is he able to make such a profit on land that should be worth less because some of the future opportunities for making money (in the form of real estate development) have been removed?

Two reasons. First, he has a bigger forest to sell because Lyme has harvested less than annual growth each year. “Literally, when we sell in years seven, eight, nine or ten, it is a bigger forest,” he says. “There is more volume in the form of the diameter of the trees.”

Second, Lyme has perfected the operations of the forest in terms of the easement and under the certification programs.

“We have an optimally managed forest,” he says. “It’s almost like a turnkey operation. The next buyer does not have to figure everything out.”

As Becker points out, it’s not a perfect strategy.

“This is a different approach because it does depend upon these easements, and it is based on transactions—getting a good price when you buy and a good price when you sell,” he says. “There’s going to be volatility based on the economy and state finances and the ability of environmental groups or land trusts to participate in these deals.”

Still, his firm’s clients were attracted by the diversification that a forest investment offers.

“People are scared of the stock market now, and the bond market has such lousy yields,” he says. “Finding an alternative asset class like this where you can get a decent investment return while really aligning your portfolio with your values is a real opportunity for our clients.”

According to Elise Lufkin, managing director at Impact Assets, the donor-advised fund spun out of the Calvert Foundation, one of her donors, was excited to invest in Lyme because he felt the forestry investment was a good way to conserve land for animals and birds without having to completely lock it up in an old-fashioned “forever wild” easement.

“He was looking at it as a donor,” she says. “What would he have to donate in order to have this kind of impact? Since he’s interested in ecosystem preservation, he felt like this was a really cost-effective and efficient way to have an impact with his charitable dollars without having to give them away.”

Of course, the next sea change in forestry economics—one that Stein has been able to exploit only occasionally—is the actual sale of specific ecosystem services like carbon or mitigation banks. This is a way to “internalize the negative externalities,” or to actually pay for the negative effects of various transactions that have contributed to degradation but have been discounted for the millennia because they are free. Stein has engaged in mitigation bank transactions totaling \$15 million, or nearly 8% of the capital invested in Lyme II.

“If we said we were only going to do timberland deals that also have a wetland mitigation banking opportunity,” he says, “we wouldn’t make any investments. Different properties have different opportunities. It is rare that we will get all the ecosystem services stacked on one property.”

In fact, the rich forests of the Pacific Northwest have the capacity to store much more carbon than any other forest type in the U.S. As trees grow larger, the carbon in the forest increases, and the value of carbon offsets has the potential to skyrocket as well—market willing, of course. Even so, it’s the incremental carbon that you add—the so-called additionality—that allows investors to monetize the value of that carbon.

Last year, Ecotrust Forest Management, a Portland, Ore.-based manager of an open and perpetual fund and FSC-certified lands, sold carbon credits on the voluntary market to the EcoProducts Fund, a group that bought the credits on behalf of pre-compliance buyers.

“Our strategy is to engage in a style of forestry that enhances carbon, and we’re doing that in the most carbon-rich forests of North America,” says Bettina von Hagen, managing director of Ecotrust Forest Management. “Our strategy can enhance the carbon storage of a forest by a factor of two or more.”

Ultimately, she projects that one-third of the group’s returns will emanate from ecosystem services, including carbon. “What’s absolutely certain is that this is a great place to grow carbon,” she says. “What’s not clear is the specific timing. The carbon story has not played itself out all the way yet because the carbon markets are still fairly nascent.”

According to von Hagen, there is little opportunity to exploit WFCEs in the Pacific Northwest, where there is more public land than on the East Coast. Besides emphasizing the competitive advantage of the region’s unique (and thus potentially pricy) set of red cedars, redwood and spruce and the region’s proximity to China and Japan, Ecotrust Forest Management stresses its capacity to improve the well-being of communities.

“All of our properties have been financed with new markets tax credits, and we have social as well as environmental objectives,” she says.

New markets tax credits, which are designed to spur investment in distressed communities, are authorized by Congress and allocated by the Treasury’s CDFI Fund. They allow the purchaser to reduce its basis in property acquisitions by 20% to 25%, thus increasing its ultimate returns.

Yvon Chouinard, the founder and owner of Patagonia Inc., the outdoor clothing company, took his money out of his IRA and invested it with Ecotrust Forest Management. “My money was just sitting around in the stock market,” he says. “Nobody really knows what’s happening in the companies they’re investing in, and it just seemed too risky for me. Taking it all out and buying into something that people need, rather than what [they] want, is the safest thing I can do.

“With us being in a period of peak resources of every kind,” he adds, “I feel good about owning trees; the stock market goes up and down, while my trees are growing every day.”

Different woods, different strategies. That’s what biodiversity—and natural competitive advantage—is all about. And with biodiversity at its heart, sustainable forestry investing continues to evolve.

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