

**It's not about the trees: current income, operational execution and fees as drivers of future
timberland investment performance in the US**

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Introduction

Good morning and it's an honor to speak with you... [thank you to organizers and speakers] ... I was initially asked to talk about TIMO fee structures, but was concerned that if I said fees were likely to come down in the future, I would invite tomato throwing from my TIMO colleagues. So, I asked the RISI organizers if I could broaden the scope, and they agreed - though they couldn't guarantee no tomatoes.

As you might've guessed, the first part of my presentation title is a bit tongue-in-cheek: of course, timberland investment is about trees: tree volume, tree growth, and the price of trees. But I am going to argue that some of the unique attributes of timber, and the ones that for many years were considered the primary drivers of returns - specifically biologically compounding growth, the potential for real price appreciation, and the optionality associated with timberland - have at times been overstated and oversold.

These and other beliefs drove the flow of institutional capital into US timberland from the 1990s through mid-2000s. Many investors and managers at that time emphasized all the ways in which timberland was fundamentally different from other asset classes - less correlated, lower risk, a source of inflation beta, and therefore a required component of the institutional investor's portfolio. Indeed, these assumptions about timber have been the foundations of timberland private equity, the TIMO business model, over the past 25 years.

But while early returns in timber seemed to prove out the 'timber is different' thesis during the 1990s and early 2000s, performance of the asset class over the past 10 years has presented some real challenges. Returns have been anemic and more correlated with other assets than previously thought, and timber has proven to be far less liquid than many hoped.

In fact, timber may not be so different from other assets, and the returns realized in timber in the 1990s and early 2000s may have had a lot more to do with structural changes in the industry than with the unique - albeit very important - attributes of timberland.

I'm going to make the case that until recently US timberland has been weighed down by some core beliefs - about the role of biological growth, real price appreciation, optionality, and increasing liquidity - that emerged in the early and mid-2000s. These beliefs, while perhaps relevant to earlier periods, have not proven to be reliable foundations for investing in US timberland over the past 10-15 years.

The good news is that investors have started to pivot to some new paradigms, and the new paradigms present an attractive path forward for those looking to invest in US timberland.

I've organized the talk into three parts:

- Part I will contrast investor expectations for timberland performance in the early and mid-2000s to realities of performance over the past 10 years.
- Part II will present what happened, and four beliefs that took hold during that time that have not held up over the past decade.
- Finally, Part III will present some new paradigms for timberland investment – specifically, current income, operational execution, fee structures, and ESG considerations - that we believe will drive investment in the future.

Let me make the caveat that my comments are directed toward industrial scale timberland investment in the US – these are the markets that we know and in which Lyme has invested for the past 40 years.

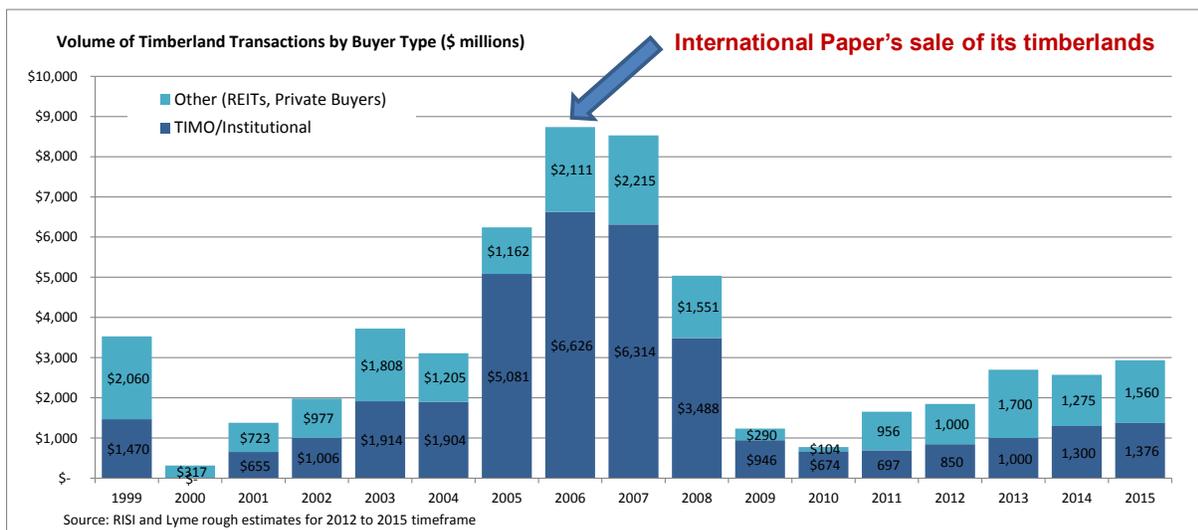
Part I: Expectations vs. Reality

Structural change in the early and mid-2000s

Before discussing the expectations of TIMO investors in the early and mid-2000s, it's worth reviewing some of the major structural changes in ownership that occurred at that time. As many of you know, until the 1990s most industrial US timberland was owned by large integrated paper companies or mills. These companies had accumulated the land over decades as a source of supply for their core manufacturing businesses.

Then, beginning in the 1990s, the industrial companies began facing pressure from investors to divest their timberlands, which were buried on balance sheets and not fully valued in their share price. Income from these lands was also taxed unfavorably relative to private or REIT ownership structures.

A new class of institutional investor was willing to buy the lands, and often deliver back supply agreements, at much higher multiples of earnings than those applied to the industrial companies that were selling the land.



These divestitures reached a peak in 2006 with IP's \$6 billion sale of its core timberland. Institutional investment in timberland went from a few hundred million per year in the early 1990s to \$2 billion per year in the early 2000s, to \$6 billion in the 2005-2007 timeframe.

This represented a massive new allocation of investment dollars to timberland, much of it in 10- to 12-year partnership structures or separate accounts with similar time horizons. In many ways, today's timberland markets are being shaped by the expectations – and recalibration of expectations – of those investors who got into timberland during the heyday of TIMO investing in the early to mid-2000s.

Investor expectations in mid-2000s

What were investor expectations in the mid-2000s? If you were attending a conference such as this one back then, you would have seen presentations that emphasized timber's special attributes – its increased liquidity, history of attractive returns, inflation hedging characteristics, and negative correlation with other assets. These are just a few examples of published materials from that time.

Expectations in the mid-2000s

Smart Money
 THE WALL STREET JOURNAL MAGAZINE OF PRIVATE INVESTMENT
 SPECIAL ARTICLE REPRINT FEATURING GRANTHAM, MAYO, VAN OTTERLOO
 NOVEMBER 2001
 www.smartmoney.com

Stockscreen
 BY PAUL STURM

Timber!
 You want growth? Buy trees—they've been outperforming the S&P 500 for decades.

LONG BEFORE there was Mary Meeker or Abby Joseph Cohen, there was Irving Fisher. Fisher, a Yale economist, stuck his neck out in 1929 and predicted that stocks had reached a permanently high plateau. He got that wrong, but

Since the days of Robin Hood and King John, the wealthy and powerful have owned woodland. But about 20 years ago, a few insurance companies and big pension funds started buying forests as a hedge against inflation. For the first time, economists

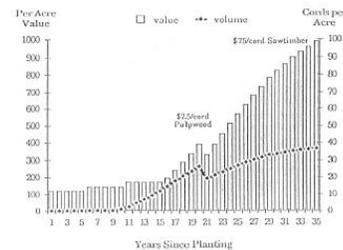
companies that own trees are particular opportunities now.

The best reason to invest in timberland is the simple fact that trees grow. Silently and unattended, the average North American forest produces about 8 percent more

Liquidity is not an Issue!

- An estimated \$4 billion is currently available to invest.
- Resale market is a positive factor.
- Forest product companies are not the sole source of available timberland.
- TIMO growth in the last decade has led to:
 - More efficient markets,
 - Increased liquidity,
 - Reduced risk,
 - Reduced investment returns.

Biologic Growth is Predictable



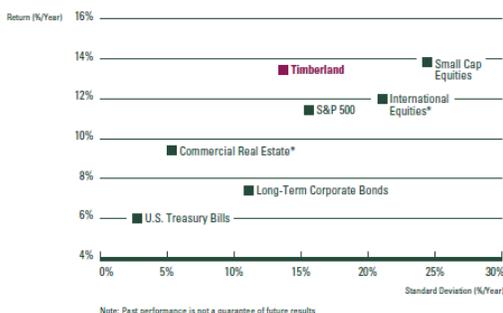
In their investor pitches, TIMOs also emphasized the efficiency of timber in the institutional investor's portfolio. Charts like the one on the lower left (below) were common, and they always showed timber all by itself, well above and to the left of the capital market line.

Expectations in the mid-2000s

Table 1
Level and Volatility of Annual Returns (before fees)
for Timberland and Other Assets

Asset Class	1960-2000		1971-2000		1981-2000		1991-2000	
	Return	Std Dev						
Timberland	13.30%	13.12%	15.19%	14.28%	12.49%	11.28%	15.12%	6.97%
Commercial Real Estate*	9.43%	5.55%	9.52%	6.70%	8.31%	5.90%	6.69%	7.11%
S&P 500	11.64%	15.65%	13.21%	16.18%	15.68%	13.69%	17.46%	14.49%
Small Capital Equities	13.99%	24.55%	14.71%	21.77%	13.33%	17.40%	17.49%	15.83%
International Equities*	12.00%	21.23%	13.05%	21.38%	12.69%	21.84%	8.56%	14.38%

Figure 1
Risk and Return of Alternative Investments (before fees)
1960-2000



There were also charts and presentations that emphasized the potential for timber prices to continue an upward trend driven by population growth and global demand for fiber. And, of course, you would have heard about the early successes of Harvard, Yale and other institutional investors.

And then there's the NCREIF index of timberland returns that you would have seen over and over again. In 2000, you would have heard about the 19.1% returns on timberland since 1987. In 2004, you would have seen the reported 14.6% since inception returns. and in 2008 you would have seen the 14.8% returns and historical yields of 6.1%.

NCREIF Timberland Returns

Time Period	Total Return	EBITDDA Return
1987 – 1999	19.1%	7.3%
1987 – 2003	14.6%	6.4%
1987 – 2007	14.8%	6.1%
2007 – 2016	5.8%	2.6%

Not surprisingly, institutional investors who bought timberland in the 1990s and who sold prior to 2008 did exceptionally well.

Knock on Wood

The Case for Timberland Investing From an Investor's Viewpoint

Not long ago, a very successful real estate adviser explained to me how real estate is not rocket science, and you don't need an engineering degree from MIT to make money in the asset class. He was right, it is simple. That is why I like real estate. Once you know the fundamentals, and estate is fairly easy to understand. Location, location, location, buy right, add value, fix it up, lease it out, raise the rents and then sell.

After years of buying, showing, negotiating, leasing, building and rebuilding, reorienting, developing, managing, and then selling (so we can start the cycle again), however, I've come to the following conclusion: For "simple," I'll take timber any day. There are fewer variables with timber than real estate and, best of all, there are definitely fewer sleepless nights with this asset class.

Before the mid-1990s, timberlands were primarily owned by forest-products companies or were managed as national or state forests. In the past two decades, timber's popularity with tax-exempt institutional investors has been growing. Today, public funds, endowments, foundations and high-net-worth individuals own more than \$12 billion in timberland.

OUTPERFORMING STOCKS, BONDS, COMMODITIES — AND REAL ESTATE
Yale's University spent a number of years evaluating timberland as a potential investment and concluded the asset class is worthy of the time, energy and brainpower needed to become knowledgeable about its nuances and, subsequently, to become an active investor.

Executive Summary

- Timberland has a low correlation to other asset classes and is negatively correlated to real estate.
- The major risks revolve around supply, demand and pricing.
- Buying timberland makes sense if you are cynical about inflation, want to diversify away from equities and believe the world's population will continue to grow.

Current conditions evidence why timberland is a high-quality asset for the long-term investor. When big prices are depressed, good timberland-management organizations will slow down harvest activity. While remaining on the stump, the trees continue to grow and gain value until an opportune time to harvest and sell the trees presents itself. There is no need for a warehouse to store excess inventory; leave the trees as they are, and they grow.

In fact, we believe this is the best reason to invest in timberland — the simple fact that trees grow. This one characteristic differentiates the timberland asset class from any other. Growth is also an automatic, built-in escalator that performs better than the consumer price index (a common measure for inflation). Compare timber's value-growth rate of 4.5 percent per year to inflation

of 2.5 percent on average over the past 10 years. Since 1960, standing timber has provided an annual return of 9 percent over and above inflation, according to a Yale School of Forestry study. That is a percentage point better than the S&P 500 index's real return.

In addition to the growth and inflation hedge attributes, timberland has outperformed the S&P 500 Index, the Lehman Corporate Bond Index, the Goldman Sachs Commodity Index and NCREIF real estate returns over the past 10 years.

In the last three bear markets, standing timber outperformed the S&P 500. Furthermore, only 34 percent of timber price fluctuations can be attributed to broad market index fluctuations. This suggests that when the S&P falls, timber doesn't tend to tumble with it. During the worst three market downturns of the 20th century — 1911 to 1920, 1929 to 1941 and 1966 to 1981 — directly owned timber acreage easily outperformed the S&P. From 1929 to 1941, for example, timber returned 233 percent, adjusted for inflation, while the real price of stocks fell 71 percent, according to Forber.

THE TOLERANCE-FOR-PAIN FRONTIER

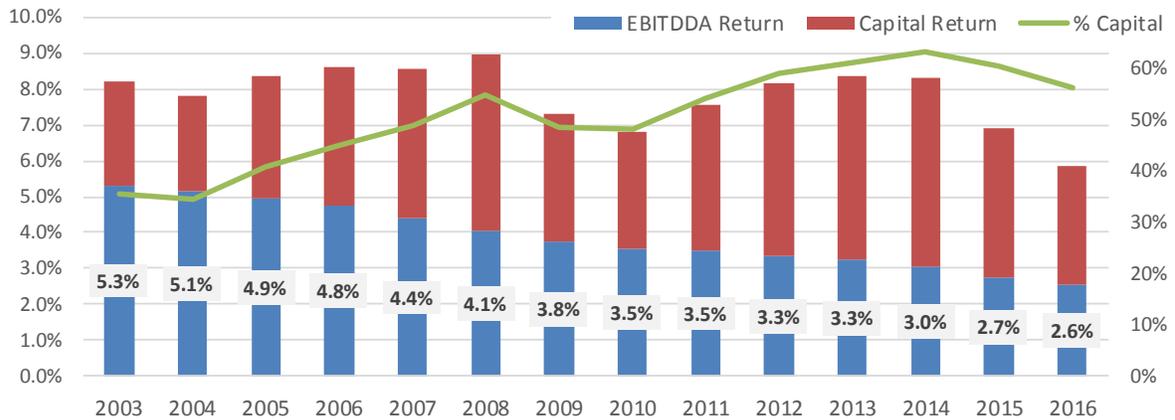
As investors, we all look for the greatest return with the least amount of risk, commonly referred to as the Efficient Frontier. I call it the Tolerance-for-Pain Frontier. I'm always surprised by how many different responses one gets to the question, "Which asset would you pick?" When investors begin making decisions regarding the desired amount of diversification in a portfolio to achieve the ideal balance between risk and return, the

Realities – underperformance over the past 10 years

But also not surprisingly, those who bought in at the time when capital flows into timber were at their peak didn't do so well. The NCREIF returns since 2007 have underperformed the S&P and other asset classes, and while some may argue that 5.8% returns aren't all that bad, it's also worth noting that these are gross returns before investment management fees. Moreover, much of this index reflects appraisal-based and therefore unrealized performance.

It's also significant that during this timeframe of falling returns, the income component of those returns was falling as well, and consequently a greater portion of reported returns in recent years has come from appraisal-based, unrealized capital appreciation. Investors over the past 10 years have experienced lower than expected, and largely unrealized, returns with low levels of current income and yield.

NCREIF 10 Year Trailing EBITDDA, Capital and Total Returns and Contribution of Capital Appreciation to Total Return



NCREIF EBITDDA Returns

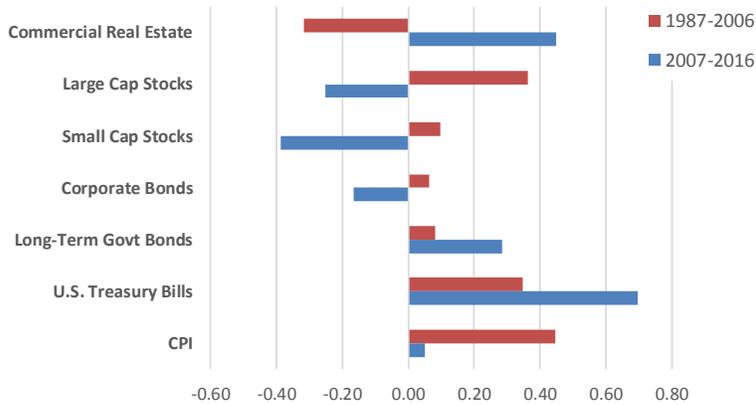


More Correlation than predicted ...

As for timber's efficiency within a portfolio, you can see here that some of the low and negative correlations that were observed in the mid-2000s have not held over the past 10 years.

Low and negative correlations to other assets don't persist over long periods

Pre and Post 2007 Correlation coefficients between US timberland and other assets



Source: Forest Research Group, Morningstar, NCREIF

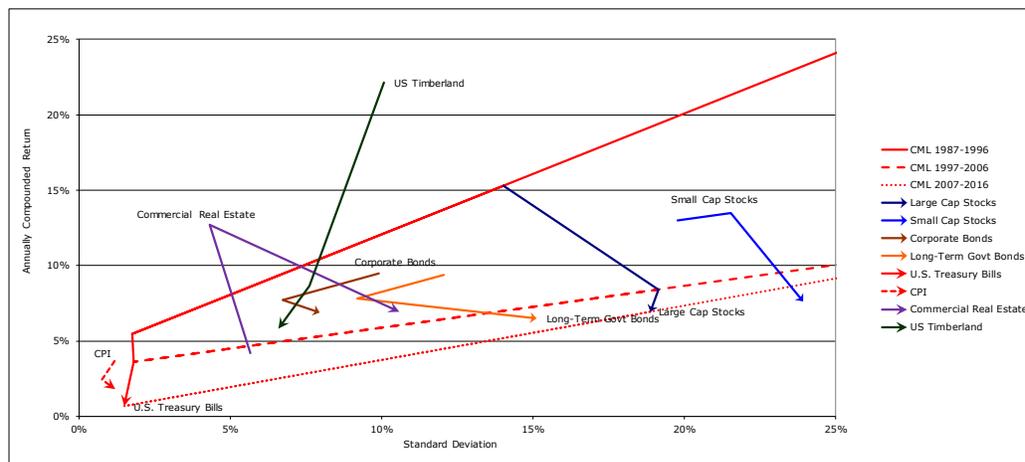
The red bars represent correlations between the NCREIF and other assets during the period from 1987 to 2006; the blue bars represent the correlations over the past 10 years. You can see that where timber was negatively correlated with commercial real estate from 1976 to 2006; it was positively correlated from 2007 to 2016.

In his latest research note, Jack Lutz looked at how these correlations have changed in the three 10 year periods over the past thirty years, and concluded that the positive correlation between timberland and inflation was the only correlation that held over all three timeframes.

... And less portfolio efficiency than predicted

Finally, this slide shows how timber has moved over time relative to the capital market line – as you can see it has migrated from well above the line, to still above the line, but much closer in.

Timberland is still above the capital market line, but much less so than in the past



Source: Forest Research Group, Morningstar, NCREIF

The bottom line is that beginning in the early 2000s, US timberland had been fully discovered by financial investors. Although the early returns were attractive, the capital invested during the 1980s and 1990s that produced those early returns was a fraction of the capital that would be invested in the early and mid-2000s. In short, timberland became more like other asset classes, with the potential for investors to lose money, and the need for discipline.

Part II: What went wrong and the underlying assumptions about timber that have not panned out

This brings me to Part II: what went wrong, and specifically, the underlying assumptions about timber that have not panned out over the past 10 years. While compressed discount rates in the mid-2000s may have contributed to below expectation returns, our view is that aggressive underwriting assumptions and beliefs offer a better explanation for the under-performance of US timberland over the past 10 years.

I am going to discuss four underwriting assumptions that were commonly held by investors in the mid-2000 era, each of which helps to explain below-expectation returns:

1. Expected capital appreciation from biological growth and storing value on the stump
2. Assumed long-term real price appreciation in log markets
3. Belief in optionality as a driver of returns
4. Expectation for increasing liquidity in timberland markets

#1: Expected capital appreciation from biological growth and storing value on the stump

I'll start with capital appreciation from biological growth. I thought about calling this presentation: "the problem with timber is that trees grow," but figured such an inflammatory title would raise too many eyebrows and possibly invite more tomato-throwing.

But the fact that trees do grow, and that in both practice and theory it is possible to forego current income and "store value on the stump", creates both challenges and opportunities for timberland investors. Under some circumstances, storing value makes a great deal of sense. If you are a small, non-industrial landowner with a few hundred (or even a few thousand) acres, you might harvest timber only once every 10-15 years. Therefore, it makes sense for you to defer the harvest if log markets are weak, and to accelerate the harvest when log markets are strong.

For larger, industrial landowners, however, the calculation is a bit more complex. Implicit in the decision to forego income today is the expectation that you can more than recover the foregone income in the future. Logically, the future income or value should exceed the foregone income by at least the investors cost of capital. In theory, the increase in value can come from combination of biological growth – having more timber to harvest in the future – and real price appreciation.

In practice, however, there can be many practical limitations on a large, industrial timberland owner's ability to increase harvest levels to make up from past harvest reductions. Contractor availability is one such factor: in some regions, there is not enough logging capacity to significantly ramp up harvest levels, especially if those harvest levels cannot be maintained. Mill capacity is another factor. Even in good markets, localized wood baskets and pulp mills can only absorb so much wood, and the landowner seeking to ramp up production may find themselves subject to quotas and other market limitations.

In short, it's easy to turn the spigot off, but it's not always so easy to turn it back on. Of course, sometimes the landowner has no choice but to reduce harvest levels – mills simply cannot absorb the wood, as occurred for many during the recession. But when this happens, it's not necessarily a neutral outcome for the investor, as some of the stored value may never be recovered.

Harvest reductions can also hurt investment returns if log prices do not recover, or do not recover quickly enough. As many investors in southern US timberlands know all too well, that much-anticipated price recovery may not occur, or may be significantly delayed, especially so if many landowners in the region have stored value on the stump at the same time and thereby ensured an abundant supply of timber in the future. If nothing else, this pent-up supply dampens price recovery.

Finally, even in situations where prices recover in real terms and the accumulated volume can be harvested and sold in future years, it's entirely possible that higher discount rates in the future can more than offset higher levels of projected income in the future. This is a particularly relevant concern in today's low discount rate environment, and it's especially relevant for term funds where the investor wishes to capture the value of stored timber at the time of its exit.

Given persistently low EBITDDA yields over the past 10 years – as shown on the chart - it's clear that investors who bought timberland in the 2004-2007 era have made bets on capital appreciation and future income potential of their lands. But with yields remaining low in 2016, these bets do not appear to have paid off, at least not yet, and time will tell as to whether they will down the road.

NCREIF EBITDDA Returns



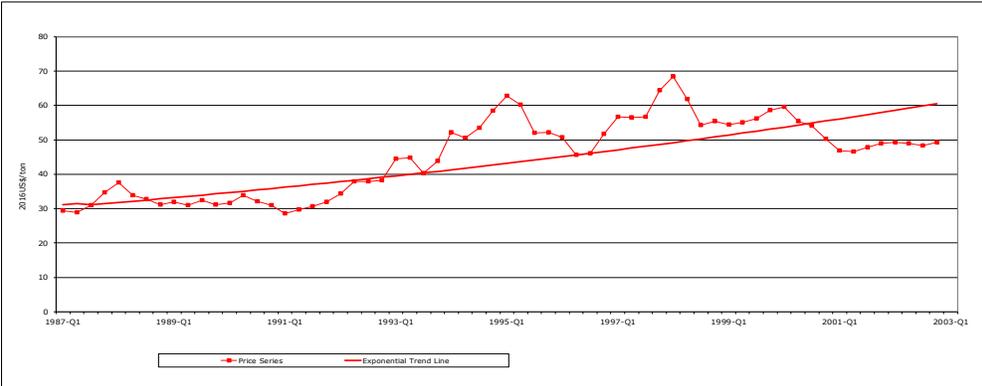
If, as we believe will occur, investors start to value timberland on current income – at today's log prices and with full consideration for contractor capacity and mill demand constraints - then some investors may find that their expectations for capital appreciation never materialize. We're seeing this happen in some of the markets we target.

#2: Assumed Real Price Appreciation in Log Markets

The next mid-2000s-era underwriting assumption is assumed long-term real price appreciation in log markets. It's not surprising that many timberland investors in the 1990s and early 2000s believed that real price appreciation would persist. Across multiple species and markets, timberland managers had experienced extended periods of price appreciation.

Here's a chart showing southern pine prices from 1987 to 2002. By the mid-2000s, southern pine prices had come off record levels driven by supply shortages in the west. An analyst at that time could reasonably conclude that the 15 year trendline of real price appreciation would persist.

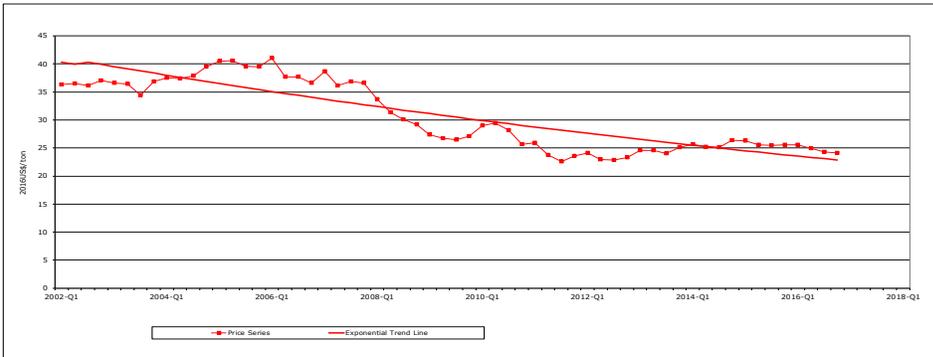
South-wide Pine Sawtimber Stumpage Prices, 1987-2002 (2016\$)



Source: Forest Research Group, Timbermart South

But as with many trends, the timeframe of measurement matters a great deal. Here are pine sawtimber stumpage prices since 2008.

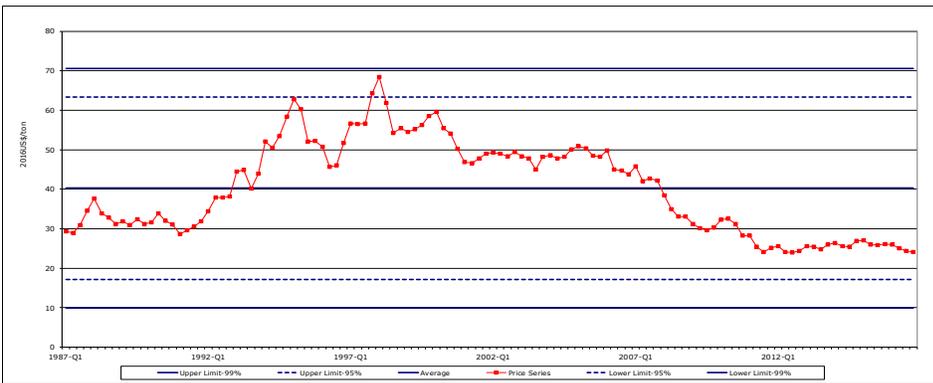
South-wide Pine Sawtimber Stumpage Prices, 2002-2016 (2016\$)



Source: Forest Research Group, Timbermart South

When you expand the series to look at real prices over much longer timeframes, you find almost no evidence for real price appreciation. This is a control chart showing southern pine prices over a 60-year period. What you see is that prices appear to be mean-reverting, and the cycles can be quite drawn out. The best predictor of near- and mid-term prices are prices in recent years.

Control Chart for South-wide Pine Sawtimber Stumpage Prices, 1987-2016 (2016\$)



Source: Forest Research Group, Timbermart South

It turns out that timber is a lot like other commodities, and the forces of substitution and increased efficiency tend to work against long-term real price appreciation.

Despite this evidence, however, timberland appraisals and forecasts have for years projected near-term price recovery and, in many cases, long-term real price appreciation. We regularly see appraisals with real price appreciation assumptions that range from 1/2 percent to 3-4 percent. We saw these assumptions even in falling log markets, such as we experienced from 2007 to 2012, and never once have we seen an appraisal that projected near- or long-term price depreciation. I've asked appraisers about this bias, and they tell me that their job is not to forecast markets, but rather to reflect the views of market participants.

#3: Belief in Optionality as a driver of returns

The third 2000s-era assumption is what I call the optionality bias in timberland. This is the idea that embedded within timber are many real options - the potential to subdivide land, pursue development or agricultural conversion, carbon credit sales, and conservation sales. Research in this area occurred in the early 1990s, and was largely theoretical. But it created a framework for the investor to accept lower expected returns because timberland provided the investor real option value.

The expectation of future option value and capital appreciation may help to explain why timberland investors have accepted such low current income yields from US timberland in recent years.

Some of the early work on this subject pointed to the need for empirical evidence to support the theory. I'm not aware of any further research, but experience over the past 10-15 years would suggest that the optionality benefits of US timberland have not been major drivers of performance.

While it is true that new and sometimes very attractive opportunities have emerged – agricultural conversions and carbon credit sales are two examples – these options have been realized on only a very small percentage of investable timberland. For the most part, investors who bought timberland as timberland are selling the same timberland as timberland, and with the exception of highly selective niche strategies, the options realized by investors over the past 10-15 years have been fairly limited.

#4: Expectations for increasing liquidity in timberland markets

This brings me to last of the mid-2000s-era underwriting assumptions that may not to have worked out: the assumption that US timberland would become increasingly liquid with growing interest in the asset from institutional investors. While there's no question that timberland has become more familiar to institutional investors, it's not at all clear that the asset class has become more liquid, at least relative to the liquidity we experienced in the mid-2000s.

While International Paper could confidently sell \$6 billion of timberland in 2006 in a process that lasted less than a year, investors such as Calpers looking to get out of large holdings today must do so over multiple years, and there's no real evidence that this phased approach will yield higher returns. While there continues to be capital formed and on the sidelines, there may be substantially more capital looking to exit US timberland, albeit gradually and in a staged manner. This is one of the reasons why TIMOs have extended funds and held onto properties for longer than they initially planned.

Of course, liquidity is also a function of price and what appears to be lower liquidity may more accurately be described as low liquidity at the asking price of sellers. To illustrate this point, we did a quick analysis of hardwood properties that were offered for sale – either privately or through an orchestrated bid process - in 2015 and 2016. We came up with a total of 24 properties offered for sale, out of which only 8 sale transactions occurred. On fully two thirds of the properties offered for sale, the seller elected not to proceed with the sale process, or the sale process was delayed.

Part III: Paradigms that will define private timberland investment in the future

Now let me turn to part III: the paradigms that we believe will define private timberland investment performance in the future and help to make investing in US timberland more attractive.

Where timberland in the 1990s and early 2000s was viewed as an essential part the investor's portfolio because of its many unique attributes, it is now viewed more opportunistically, and for many investors it needs to compete on the basis of returns with other illiquid private investments. For some investors, this means double-digit hurdle rates, and consequently timber is simply not a viable investment for them. For others, this means more realistic return expectations in the upper single digits.

I am going to talk very briefly about four paradigms that we believe are most important to investors making new allocations to US timberland:

1. current income
2. operational execution
3. lower cost and aligned fee structures
4. ESG considerations

#1: Current Income

This first is current income. While a tilt towards capital appreciation may have made sense in an era of compressing discount rates, it makes less sense in markets where discount rates range from 5.0% to 6.0% real. In this market context, current income yield helps to validate the investment thesis and offers the investor a form of downside protection.

By realizing income each year, the investor makes a smaller bet on capital appreciation and is less exposed to assumptions about real price appreciation, logging capacity, and local mill capacity. With a baseline return from current income, many of the unique attributes of timberland – the ability to modulate harvests on the margin, the potential for price recovery, and the embedded options of timberland ownership – become attractive sources of upside, not the underlying investment thesis.

Current income also helps to make valuation more transparent and less theoretical. With current income, the appraiser has a historical dataset on which to base log prices, harvesting costs, and management expenses. Indeed, our industry would be well served by the use of some simple income-oriented metrics which are commonly used in other industries to calibrate valuation – we find it very helpful to think in terms of EBITDDA multiples or EBITDDA yields.

When an investor sees an EBITDDA multiple of 50x last year's cash flow or, stated another way, a 2% current income yield, they had better have confidence in the growth potential of that forest. After all, the valuation implies a current income yield that is well below the yield of a 10-year Treasury bond.

Sometimes low levels of recent income reflect the deliberate decision of the owner to forego income and store value on the stump; in other cases, however, lower levels of recent income reflect market limitations within a woodbasket or operational constraints. Further, on large properties, it is rarely possible to turn on a dime, and it can take multiple years and sometimes higher management costs to ramp up harvesting operations.

As I mentioned earlier, we are starting to see opportunities to buy timberland on the basis of current income yield in the 4-5% range, and to us this represents a meaningful shift in the market. And, in some regions, a resetting of timberland prices.

Whether or not this resetting occurs more broadly remains to be seen.

#2: Operational Execution

The next paradigm is operational expectation: If current income rather than capital appreciation will drive returns in the future, it stands to reason that managers who can enhance current income through operational execution will create value.

By operational execution, I mean everything from harvest planning, to budgeting, to log marketing, to land and conservation sales, to reforestation – each of these areas has a cost, and there's the potential to do too much or too little. The challenge is to do the work well and cost-effectively.

Executing strategy can help to de-risk the investment by returning capital to the investor, and a track record of yield can help to drive down the discount rate of cap rate that a future buyer applies to the property at exit.

#3: Lower cost and aligned fee structures

This brings me to a third driver for timberland investment performance in the future: fees, cost structure, and manager value. Fees obviously impact the current income yield to the investor, and the combination of investment management and property management fees can be as much as 2% of timberland value. This is especially significant in the context of prevailing EBITDDA yields in the 2-3% range.

But investment and property management fees cannot be thought of strictly in terms of cost. What really matters is value – what the investors get for their fees. And there are many situations where more management, not less, is the way to achieve results on timberland. What matters to the investor is that these costs are fair and transparent.

There are three components of fees and costs that I will briefly touch on:

- i. *Property management costs:* Property management costs are the compensation and overhead costs associated with the people doing the on-the-ground work to manage the property. This is an area that is often overlooked, but the costs and tradeoffs to an investment can be significant.

Some TIMOs outsource property management to third party consultants; others provide management through in-house or related party property managers. The third-party approach reduces conflicts between the TIMO and the investor, but can mean greater cost and exposure to conflicts among clients of the third-party manager;

The in-house or “vertically integrated” approach can be more cost effective but can also create conflicts between the TIMO and the investor, especially if the TIMO generates a profit on the property management function. Neither approach is perfect, and both must compete against the fully internalized property management models used by the public REITs.

We believe that more transparent property management models in which the TIMO does not generate profit from management are likely to emerge in the future, and these will reduce management costs while also creating better alignment with investors.

- ii. *Investment management fees:* Investment management fees are the fees paid to the TIMO for making and looking after investments. As with all asset classes, these fees are under pressure and will likely come down in the future.
- iii. *Incentive Fees:* Finally, incentive fees: these are the fees paid to the TIMO for achieving investment hurdles. The key here is for these hurdles to be realistic; otherwise, the TIMO is likely to look at the incentive as an option, not a fundamental part of the business model.

I’ve never understood 8% preferred returns in timberland strategies that are based on 5% real property level discount rates in a low inflation environment. Investors would do well to consider the extent to which TIMOs have a realistic expectation of earning back-end incentive fees and, if they do not, to consider whether the fee structure creates a suitable level of incentive alignment.

#4: ESG considerations

Lastly – Environmental, Social, and Governance or “ESG” considerations. I don’t have the time to discuss these matters, but I can say that ESG and impact investors have become a larger and larger part of our investor base over the past 10 years. In our last \$250 million fund, investors with an ESG mandate accounted for over half of the capital commitments. We are now reporting on ESG outcomes and the bar for performance and monitoring is being raised every year. The following are some of the programs under which we now report.



Closing thoughts – how to evaluate an investment manager

Let me close by saying that investors who believe that these dimensions – current income, operational execution, fees, and ESG considerations – will drive timberland performance in the future are in a much better position to evaluate TIMOs and TIMO business models than they were 10-20 years ago. When the timberland investment thesis was about capital appreciation and optionality, it was important to find the manager with the best crystal ball, and perhaps to diversify among managers.

But if the timberland thesis is more about these paradigms, the investor has at its disposal the ability to objectively evaluate managers on the basis of their recent investments and existing portfolios. The investor can evaluate EBITDDA yields in the existing portfolio; they can look at underwritten (modelled) performance vs. actual performance on historical investments; they can analyze the TIMO cost structure to determine whether the costs are reasonable and the incentives aligned; and they can review ESG policies.

These expectations, and how TIMOs respond to the challenges, will shape private timberland investment in the US for years to come.