How did a 1960 bill that raised taxes on cigars help lay the foundation for fundamental change in forestland ownership that will reverberate into the future? The world of timber REITs and TIMOs is better understood by tracing its history.

FROM CIGAR TAX TO TIMBERLAND TRUSTS

A SHORT HISTORY OF TIMBER REITS AND TIMOS

n September 1960, President Dwight D. Eisenhower signed Public Law 86-779, a collection of unrelated tax laws known as the Cigar Excise Tax Extension of 1960 simply because that was the first one listed. However, the second half of this thirteen-page bill, which included provisions dealing with income tax in the

Virgin Islands and another allowing farmers to expense the cost of fertilizer, had the Real Estate Investment Trust Act of 1960, which ultimately changed how we view industrial timberland ownership today.¹ This act included a special provision in the IRS tax code that gave all investors—not just the wealthiest—the opportunity to invest in large, diversified portfolios of income-producing real estate. Though intended for traditional commercial real estate like office and apartment buildings, after additional changes years later, it transformed timberland-owning companies in the United States.

Meanwhile, the forest industry began its own change. In 1969, fourteen of the fifteen largest U.S. timberland owners were vertically integrated, mill-owning forest industry firms; today, only two of the top timberland owners from 1969 still hold places on the list (Table 1). Five decades ago, integrated forest industry firms dominated the industry; today, timberland specialists (in the form of real estate investment trusts) and asset managers control the largest industrial forest ownerships.

How and why have industrial ownerships restructured in the United States? What has been the role of legislative changes and real estate investment trusts?

BY BROOKS MENDELL

Table 1. Top 15 Industrial Timberland Owners and Managers, 1969 versus 2016

1969		2016	
Firm	Туре	Firm	Туре
International Paper	Forest Industry	Weyerhaeuser	Public REIT
Weyerhaeuser	Forest Industry	Hancock Timber Resource Group	TIMO
Georgia-Pacific	Forest Industry	The Forestland Group	TIMO
Great Northern Nekoosa	Forest Industry	Campbell Global	TIMO
St. Regis Paper	Forest Industry	Resource Management Services	TIMO
Boise Cascade	Forest Industry	BTG Pactual	TIMO
Scott Paper	Forest Industry	Forest Investment Associates	TIMO
Champion International	Forest Industry	Rayonier	Public REIT
Kimberly-Clark	Forest Industry	Molpus Woodlands Group	TIMO
Burlington Northern	Railroad	Sierra Pacific	Forest Industry
Union Camp	Forest Industry	The Nature Conservancy	Conservation
Continental Group	Forest Industry	Potlatch	Public REIT
Crown Zellerbach	Forest Industry	Green Diamond Resource Co	Forest Industry
Potlatch	Forest Industry	Wagner Forest Management	TIMO
Diamond International	Forest Industry	J. D. Irving	Forest Industry
	International Paper Weyerhaeuser Georgia-Pacific Great Northern Nekoosa St. Regis Paper Boise Cascade Scott Paper Champion International Kimberly-Clark Burlington Northern Union Camp Continental Group Crown Zellerbach Potlatch	International Paper Forest Industry Weyerhaeuser Forest Industry Georgia-Pacific Forest Industry Great Northern Nekoosa Forest Industry St. Regis Paper Forest Industry Boise Cascade Forest Industry Scott Paper Forest Industry Champion International Forest Industry Kimberly-Clark Forest Industry Burlington Northern Railroad Union Camp Forest Industry Continental Group Forest Industry Crown Zellerbach Forest Industry Potlatch Forest Industry	Firm International Paper Forest Industry Weyerhaeuser Weyerhaeuser Forest Industry Hancock Timber Resource Group Georgia-Pacific Forest Industry Great Northern Nekoosa Forest Industry Campbell Global St. Regis Paper Forest Industry Bright Pactual Scott Paper Forest Industry Forest Industry Forest Industry Forest Industry Forest Investment Associates Champion International Forest Industry Kimberly-Clark Forest Industry Burlington Northern Railroad Sierra Pacific Union Camp Forest Industry Forest Industry Continental Group Forest Industry

REITS: A BRIEF HISTORY

Real estate investment trusts, or REITs (pronounced "reets"), are companies that own and manage income-producing real estate of various types, such as office buildings, warehouses, and timberlands (Figure 1). To address "double taxation," whereby a firm would pay corporate income taxes, then make dividend payments from after-tax income to shareholders, who would have to pay taxes on those dividends, the law allows REITs to deduct the dividends they pay to shareholders from corporate taxable income. With REITs, shareholders pay taxes on dividends received, but firms do not pay taxes on the rental income generated from their real estate holdings.

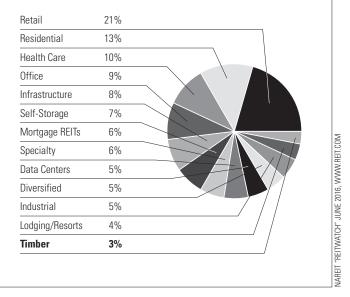
The REIT arrangement comes with strict rules. To qualify under IRS rules, a firm must, among other criteria, distribute at least 90 percent of its taxable income as dividends. In the end, REITs, which were patterned after mutual funds, provided regular investors a way to buy shares in real estate businesses that distributed tax-efficient real estate income.

REITs are big business. As of May 2016, according to the National Association of Real Estate Investment Trusts, nearly 200 REITs with a combined market value of nearly \$1 trillion trade on the New York Stock Exchange alone.³ This does not include hundreds of privately managed REITs that do not trade on public exchanges.

THE FOREST INDUSTRY RESTRUCTURES

As the real estate sector evolved in the 1960s and 1970s, forest products firms experienced their own shakeup. In 1978, analyst Thomas Clephane issued a report from investment bank Goldman Sachs dissecting the forest products industry. His report, "Timber Survey: Ownership, Valuation, and Consumption Analysis for 57 Forest Product and Paper Companies," indicated that the stock prices of most of the largest public forest products and paper companies





were trading below the value of their timberland holdings. According to Clephane, firms such as Crown Zellerbach, Weyerhaeuser, International Paper, and Potlatch owned timberlands valued at two to three times their stock prices: their trees were worth more than their shares.⁴

For savvy and aggressive investors, this apparent gap in value between the timberlands and the shares of certain companies provided an investment opportunity. And for forest industry firms, REITs provided a means to generate cash in tough times. The forest industry began selling timberlands prior to the recession

SK 2016, ENK 1974

of 1981 and 1982. At the time, firms were experiencing losses associated with timber-cutting contracts on U.S. Forest Service lands. In October 1984, President Reagan signed legislation giving dozens of forest products companies the right to cancel \$2.5 billion in pre-1982 contracts to harvest timber in the Pacific Northwest on federal public lands.

In January 1985, the New York Times reported that major U.S. forest products companies, such as International Paper, Champion International, Boise Cascade, and Crown Zellerbach, continued to struggle "amid an oversupply of lumber and declining timberland values." Firms were closing mills, laying off workers, and writing off hundreds of millions of dollars. And analysts and executives questioned "the long-term benefits of owning vast acres of forests." 5 So the sale of timberlands accelerated.

TIMBERLAND INVESTMENTS GO INSTITUTIONAL

Sellers need buyers, and timberland owners found interest from institutions looking to diversify their pension plans. The Employee Retirement Income Security Act of 1974 (ERISA) triggered a major change in how pension funds invested. Congress designed ERISA to regulate private pension plans, requiring them to diversify beyond bonds and stocks. Timberlands, with their regular cash flows and inflation-hedging characteristics, became an attractive asset.

Timberland investment management organizations (TIMOs) stepped in to facilitate and advise institutions on these timberland transactions. TIMOs provide management services; they do not own any timberland themselves. Institutions placed funds with the TIMOs as their intermediaries, and the TIMOs, acting as middlemen, would acquire and manage timberland investments on their behalf.

Over the past thirty years, TIMOs have grown in number and size. As of February 2016, approximately twenty TIMOs managed nearly 25 million acres in the United States on behalf of institutional investors. Table 2 lists the top six that manage nearly 2 million acres or more each, for a total of 16.2 million acres.

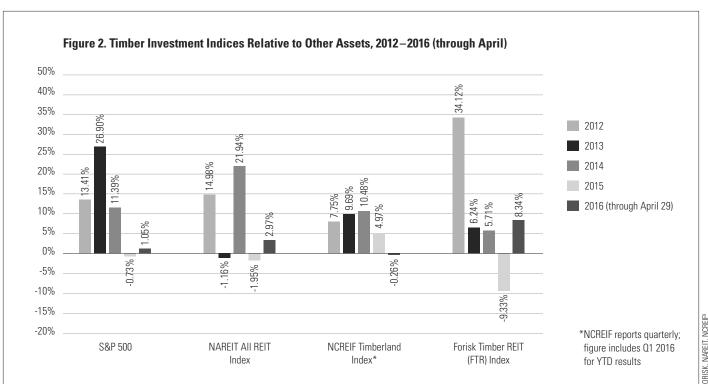
Table 2. Largest TIMOs, by U.S. Acres under Management, 2016

Type	U.S. Acres
TIMO	4,042,990
TIMO	3,055,015
TIMO	2,597,683
TIMO	2,286,541
TIMO	2,252,001
TIMO	1,974,033
	TIMO TIMO TIMO TIMO TIMO TIMO

TIMBER REITS ARE BORN

The institutional timberland investment sector came of age in the 1980s, but timber REITs did not hit the market until 1999, beginning with the conversion of Plum Creek from a master limited partnership to a REIT. Between 1999 and 2006, four publicly traded forest products firms converted more than 12 million acres of industrial timberlands into these corporate structures. In addition to Plum Creek, the new REITs included Rayonier, Potlatch, and briefly, Longview Fiber.6

At the time, the direct effects on shareholder value of these timber REIT conversions remained unclear. In 2007, Forisk conducted the first peer-reviewed research evaluating timber REIT performance, asking how the equity markets responded to timberland restructurings."7 The study analyzed stock market (shareholder) responses to announcements by forest industry firms of their decisions to restructure from traditional corporations to more tax efficient REITs. The analysis concluded that investors prefer holding industrial timberlands in a REIT structure, reinforcing the importance of tax policy on investor preferences.



In 2009, Weyerhaeuser announced its board's approval for converting to a REIT. Weyerhaeuser made the conversion in 2010, becoming the fifth firm to convert. Finally, in December 2013, CatchMark Timber Trust, formerly the private REIT known as Wells Timber, became the sixth timber REIT to trade publicly. As of year-end 2015, there were five public timber REITs still on the market: CatchMark Timber (symbol CTT), Plum Creek Timber (PCL), Potlatch (PCH), Rayonier (RYN), and Weyerhaeuser (WY).

The Forisk Timber REIT (FTR) Index, commonly called the "footer index," is a market-weighted index of all publicly traded timberland-owning REITs. Initiated in 2008, it assigns a weight to each firm based on its individual market share. Figure 2 provides summary analysis of the timber REIT sector relative to other asset classes since 2012 through the first four months of 2016.8

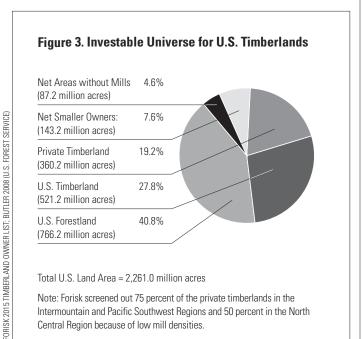
AND THEN THERE WERE FOUR

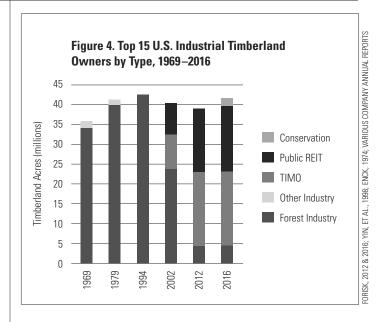
In February 2016, the completion of the merger of Plum Creek and Weyerhaeuser, the two largest timber REITs, reshaped the sector once more. The new firm held more than 13 million acres across 20 states (and Uruguay) and three dozen forest products manufacturing facilities. However, the merger requires historical and spatial context.

First, the merger of Plum Creek and Weyerhaeuser reminds us of the relative insignificance of timber firms to the REIT sector generally and the stock market overall. Timber REITs accounted for 6 percent of the REIT sector three years ago, but that share has shrunk to 3 percent today (see Figure 1).

Second, Weyerhaeuser still accounts for a small portion of private U.S. timberlands and only a fraction of the entire "investable universe" of industrial and institutional quality assets in the country (Figure 3). Clearly, 13 million acres represents a meaningful share of the industrial timberland universe. However, these acres are only part of a broader, actively managed space that includes millions of small and mid-sized private landowners.

Third, the merger reminds us of the limited growth options for REITs and TIMOs. Few opportunities remain to acquire timberlands from integrated forest industry firms. Increasingly, TIMOs





and REITs are buying and selling timberlands from and to each other. Figure 4 summarizes the concentration and conversion among the fifteen largest timberland owners and managers over the past five decades.

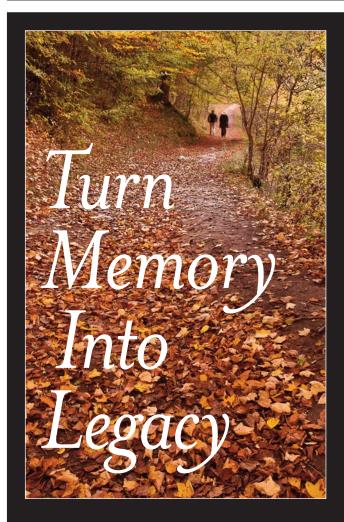
WHAT DOES THE FUTURE HOLD FOR TIMBER REITS?

Over the past fifty years, U.S. industrial timberland ownership has shifted from vertically integrated firms that owned sawmills and paper plants to forest management specialists such as REITs and TIMOs. The financing and history of timberland investments continues to teach us how alternative timber-related investments—though anchored to a common asset—provide distinct investment opportunities, market structures, and performance.

The critical events driving change in industrial timberland ownership relate to new legislation, tax policy, and mergers. ERISA's passage in 1974 essentially created a market and spurred demand for timberland by institutional investors. Plum Creek's successful reorganization from a master limited partnership to a REIT in 1999 demonstrated how other firms could become IRS-qualifying, timberland-owning REITs. And Weyerhaeuser's REIT-conversion provided the path for its ultimate merger with Plum Creek. 10

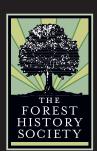
The world of timberland investing will continue to struggle with within-industry maturity and outside-of-industry demand for financial returns. Public REITs purchased and divested more acres in 2015 and early 2016 than any other type of owner. The presence of TIMOs and REITs as both buyers and sellers continues to speak to the relative maturity of the sector, as investors continue to grapple with the reality of a constrained "solution set" of investment opportunities. And global investors dissatisfied with "negative yields" in Europe and falling yields for U.S. Treasury instruments seek more attractive alternatives. Timber REITs offer one option, along with other real estate investments, for those seeking tax-efficient cash flows and protection from inflationary uncertainties.

Brooks Mendell is president of Forisk Consulting. He is the author of the forthcoming book Liquid Trees: Forests as Financial Assets, from which portions of this article are drawn. With Amanda H. Lang, he is the coauthor of the Forest History Society Issue Series book Wood for



Honor a loved one by helping to preserve forest history.

A commemorative or memorial gift to the Forest History Society is an action that gives back to us all. It's a thoughtful way to affirm your values, and honor these values shared by other special individuals.



THE FOREST HISTORY SOCIETY (919) 682-9319

Preserving the Past. Informing the Present. Shaping the Future. Bioenergy: Forests as a Resource for Biomass and Biofuels (*Forest History Society, 2012*).

ADDITIONAL READINGS

- C. S. Binkley, "The Rise and Fall of the Timber Investment Management Organizations: Ownership Changes in U.S. Forestlands," Pinchot Distinguished Lecture (Washington, DC: Pinchot Institute for Conservation, 2007).
- R. L. Block, *Investing in REITs: Real Estate Investment Trusts*, 3rd ed. (New York: Bloomberg Press, 2006).
- R. Imperiale, Getting Started in Real Estate Investment Trusts (Hoboken, NJ: John Wiley & Sons, Inc., 2006).
- B. Mendell, "Benchmarking Timberland Investment Performance, Part II: Valuing Publicly Traded Timber REITs," *Forisk Research Quarterly* (Q4 2015): 7–15.
- B. Mendell and H. Clark, "U.S. & Canadian Timberland Ownership: 2016 Summary Analysis of Trends, Changes and Transactions," *Forisk Research Quarterly* (Q2, 2016): 13–16.
- J. O'Laughlin and P. V. Ellefson, "Strategies for Corporate Timberland Ownership and Management," *Journal of Forestry* 80, no. 12 (1982): 784–88, 791.
- R. Yin, J. P. Caulfield, M. E. Aronow, and T. G. Harris, Jr., "Industrial Timberland: Current Situation, Holding Rationale, and Future Development," *Forest Products Journal* 48 (1998): 43–48.
- F. C. Zinkhan, W. R. Sizemore, G. H. Mason, and T. J. Ebner, *Timberland Investments* (Portland, OR: Timber Press, 1992).

NOTES

- The entire act is available at https://www.gpo.gov/fdsys/pkg/STATUTE-74/pdf/STATUTE-74-Pg998.pdf
- Forisk Consulting, "North American Timberland Owner & Manager List, 2016," available at: http://forisk.com/product/forisk-timberland-ownerlist; and Gordon A. Enk, "A Description and Analysis of Strategic and Land-Use Decision Making by Large Corporations in the Forest Products Industry," PhD dissertation, Yale University, 1975.
- NAREIT updates statistics monthly at https://www.reit.com/dataresearch/data/industry-snapshot.
- 4. Thomas Clephane wrote a series of articles and reports on this theme, including *Timber Survey: Ownership, Valuation, and Consumption Analysis for 57 Companies* (New York: Goldman Sachs Research, Investment Research Publication, 1978), and "Timberland Investment Increasing as Means of Improving Profitability," *Pulp & Paper* (November 1980): 72–73.
- Thomas C. Hayes, "The Timber Glut's Legacy," New York Times, January 19, 1985.
- $6. \ Longview \ Fiber (LFB) \ traded \ publicly \ as \ a \ timber \ REIT \ temporarily \ in \\ 2006 \ prior \ to \ its \ acquisition \ by \ Brookfield \ Asset \ Management \ in \ 2007.$
- 7. B. C. Mendell, N. Mishra, and T. Sydor, "Investor Responses to Timberlands Structured as Real Estate Investment Trusts (REITs)," *Journal of Forestry* 106, no. 5 (2008): 277–80.
- The FTR Index methodology is explained at http://forisk.com/wordpress//wp-content/assets/FTR-Indices-Calculation-Methodology-2016.pdf.
- 9. The National Council of Real Estate Investment Fiduciaries (NCREIF) publishes the most widely referenced indices for private timberland investment performance in the United States. The quarterly indices measure the performance of timberland properties acquired in the United States for investment purposes. For the most part, TIMOs acquired these properties for tax-exempt institutional clients such as pension funds and endowments. NCREIF has published the Timberland Index since 1994, with returns dating back to 1987.
- 10. As of 2016, Weyerhaeuser is the largest nongovernmental owner of U.S. timberland and the highest-ranking REIT in Fortune Magazine's list of the 500 largest corporations as ranked by revenue. Weyerhaeuser is 373. Only two other (nontimber) REITs appear in the Fortune 500.