
PINCHOT INSTITUTE
FOR CONSERVATION

**Industrial Timberland
Divestitures and Investments:
Opportunities and Challenges
in Forestland Conservation**

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Pinchot Institute for Conservation**

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Leadership in Forest Conservation Thought, Policy and Action

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PINCHOT INSTITUTE FOR CONSERVATION

About the Pinchot Institute for Conservation

Background

Recognized as a leader in forest conservation thought, policy and action, the Pinchot Institute for Conservation was dedicated in 1963 by President John F. Kennedy at Grey Towers National Historic Landmark (Milford, PA) – home of conservation leader Gifford Pinchot. The Institute is an independent nonprofit organization that works collaboratively with all Americans – from federal and state policymakers to citizens in rural communities – to strengthen forest conservation by advancing sustainable forest management, developing conservation leaders, and providing science-based solutions to emerging natural resource issues. Each year, the Pinchot Institute conducts policy research and analysis; convenes and facilitates meetings, workshops, and symposiums; produces educational publications; and provides technical assistance on issues that affect national-level conservation policies and the management of our national forests and other natural resources.

Current Programs

The Institute's objectives (policy research and analysis, convening and facilitation, and developing conservation leaders) are realized annually through the following programs:

Community-Based Forest Stewardship

Through technical assistance programs and training sessions, policymakers, federal and state land management agencies, and local practitioners work collaboratively to identify, address, and develop strategies on specific initiatives that sustain and improve the stewardship of multiple-objective ecosystems and enable them to serve as a basis for stable employment and generate income in rural communities.

Conservation Policy and Organizational Change

Though much effort of the sustainable to date has focused on policy development, the Institute's independent analysis and facilitation focuses on implementation to help develop natural resource management approaches and mechanisms that integrate often-political organizational structures and long-established administrative processes with emerging conservation-oriented ideas and policies.

Conservation Leadership Development

Effective natural resource conservation begins with effective leaders. Through leadership workshops and professional development seminars, which are based on participatory decision models offered at Grey Towers National Historic Landmark, the Institute helps beginning and mid-career professionals in public agencies, private organizations and conservation NGOs redefine the relationship between land management agencies and the communities they serve.

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EXECUTIVE SUMMARY

Millions of acres of timberland have been sold in the U.S. in the last several years, and estimates suggest that as much as 12-15 million acres of industrial timberland in the U.S. will be transferred out of industry ownership in the next decade. The factors driving these divestitures include: consolidation within the industry, strategic restructuring to focus on production manufacturing, and shifting of capital towards foreign timberland purchases and biotechnology research.

While other forest products companies have purchased some of the timberland, an increasing amount has been purchased by institutional investors, whose timberland assets are managed by Timberland Investment Management Organizations (TIMOs). Institutional investment of timberland increased to \$8 billion by 1999. TIMOs respond to different signals than do forest products companies, leading to questions about their acquisition, management, and disposal decisions.

Conservation organizations and government agencies have raised concerns about the timberland divestitures, particularly as they pose the potential threats of conversion or fragmentation. Trying to respond to these divestitures by conserving significant acreages with potentially high ecological value is overwhelming the financial and organizational capacity of these organizations and agencies.

The Pinchot Institute for Conservation, in collaboration with the USDA Forest Service, convened a symposium on May 22, 2000, to examine the significant increase in industrial timberland sales over the last several years, the changing ownership, and the resulting implications for forest conservation. The symposium brought together over 60 professionals operating in private forestland conservation and forest management, from nonprofit land conservation organizations, foundations, forest products companies, investment organizations, universities, and federal and state natural resources agencies.

This report synthesizes the presentations and discussion at the symposium, and offers some recommendations for future actions.

- Increased funding for existing programs, both public and private, that effectively address the land conservation opportunities.
- A strategy for conservation organizations and agencies to determine priorities for conservation, before divested timberlands come on the market, in order to bid for these lands in a timely fashion.
- Partnerships between TIMOs and conservation organizations and government agencies to protect parcels of land with significant ecological value.

Industrial timberlands have provided enormously important public benefits, including wildlife habitat, watershed protection, and recreational opportunities. If the public values these lands have historically provided are to be maintained, then public funding and support, as well as new strategies, are critically needed to conserve these lands and ensure their current and future stewardship.

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INTRODUCTION

The forest industry sector owns approximately 71 million acres of forestland in the United States, which represents almost 10% of U.S. forestland (NRC 1998). An unusually large amount of industrial timberland has changed owners during the last decade – an estimated 28% of forestland changed hands in the 1990s (Best and Wayburn 2001) – with much of it going entirely out of ownership by integrated forest products companies.

While there are various company-specific reasons for some of the major timberland transactions, there are several key drivers for these divestitures. The financial performance of the forest products industry has been weak in recent years; as a result, companies looked for ways to improve profits. Many companies began to move capital away from timberlands into lower-cost, higher-productivity timberlands in other regions of the world, as well as into investments in biotechnology research. Both strategies would allow companies to produce more fiber on fewer acres. Furthermore, the last several years has witnessed strategic restructuring among forest products companies that has led numerous companies to focus more on their core production manufacturing and less on their timber supply. While paper and lumber companies had traditionally owned timberland to supply their mills, the 1990s witnessed a reevaluation of that strategy and a movement away from vertical integration (Irland 2000). Since timber companies have traditionally not been able to capture the true value of their timberlands for shareholders, they began divesting timberlands or spinning off their timberlands into separate holdings (Best and Wayburn 2001). Finally, the last few years have produced a substantial number of mergers and acquisitions within the forest products industry, which has led to the monetization of non-strategic assets (e.g., the sale of timberlands) to alleviate debt.

Many analysts anticipate that this trend will continue, with some predictions suggesting that as much as 12-15 million acres of industrial timberlands in the US will be transferred out of industry ownership during the next decade. Who acquires these lands, and for what purposes, has important implications for forest conservation and for the protection of a variety of forest resource values.

A number of recent timberland acquisitions illustrate the challenges of responding to such divestitures to conserve large, contiguous areas of forestland, and to protect an array of values that would be diminished by fragmentation or land conversion. For example, in November 1998, The Conservation Fund purchased 300,000 acres of timberland in northern New England and the Adirondacks from Champion International for \$72 million; in December 1998, The Nature Conservancy purchased 185,000 acres of forestland in northern Maine from International Paper for \$35 million. How the forestry and conservation community will develop the organizational and financial capacity to absorb 12-15 million acres of forestland and minimize its conversion or fragmentation will soon become an urgent question.

As millions of acres of timberland have moved out of industrial ownership, new categories of owners have emerged. While forestland has traditionally been considered a personal or industrial asset, it has recently been considered an investment asset as well. An increasingly important role is being played by a relatively new and rapidly growing class of owners known as Timberland Investment Management Organizations (TIMOs). TIMOs buy, manage, and sell timberland on behalf of institutional investors. The amount of US forestland under TIMO management is increasing more rapidly than under any other type of owner. Whereas institutional investment in 1989 was under \$1 billion, it was over \$8 billion by 1999. TIMOs and the institutional investors that they represent are already playing a major role in acquiring industrial timberlands divested by integrated forest products companies. TIMOs regard forestlands as an often counter-cyclical component of a diversified investment portfolio aimed at preserving capital from pension funds and insurance, as well as generating current income. They respond to different market signals than integrated forest products companies that regard forestlands as tying up large amounts of scarce capital with rates of return significantly below corporate hurdle rates (i.e., the forestlands are not economically profitable for some forest products companies).

The issues of industrial timberland divestitures and subsequent institutional investment have raised many questions for government agencies and non-profit organizations focused on forestland conservation. What factors influence TIMOs' decisions to acquire or dispose of forestland? What role can government agencies and non-profits play in forestland conservation of industrial timberlands that have been placed on the market? What opportunities exist for partnerships between conservation groups, government agencies, and TIMOs?

The federal government has had an interest in promoting sound forestry practices on nonfederal lands at least since the passage of the Clarke-McNary Act in 1924 (16 U.S.C. 505 et al.), which charged the Forest Service with assisting state and private concerns and providing programs that would ensure the sustainability of these forests (NRC 1998). In 1998, the National Research Council (NRC), at the request of the USDA Forest Service, convened a committee to examine the role of the federal government in contributing to sustainable management of nonfederal forestlands (NRC 1998). The 1998 NRC committee views the federal role as "one of convening and promoting leadership and investment opportunities within the private sector and other units of government" (NRC 1998, pg. 2). The NRC committee made a number of recommendations to the Forest Service, who has commissioned several studies in pursuit of these recommendations.

An example of the federal commitment to the sustainability of nonfederal forestlands is the USDA Forest Service's Forest Legacy program, which has acquired land and interests in land through full fee and conservation easements on over 207,000 acres since 1993. Recently, the program has engaged in several large projects with States and other partners to conserve extensive blocks of private industrial forestland. For example, the multi-phased West Branch project in Maine conserved 72,500 acres in Phase I through a conservation easement and is attempting to secure 585,000 in Phase II with industrial and timberland investment management organizations' acquisitions. The Thompson Fisher

project in Montana involved the acquisition of a conservation easement over 13,000 acres from Plum Creek, and over 31,000 acres in northeast Vermont through a conservation from Hancock Timber Resource Group.

In response to the growing concerns about the numerous industrial timberland divestitures and the trends in changing ownership, the Pinchot Institute for Conservation initiated a study to examine the factors driving divestitures, and the implications and opportunities for changing ownership. The study objectives were to:

- Highlight the nature and causes of private timberland divestitures in the U.S. by integrated forest products companies and the organizations acquiring those lands;
- Develop a better understanding of Timberland Investment Management Organizations (TIMOs), and their increasing role in forestland ownership and management; and
- Explore opportunities for ensuring conservation of forestland through closer collaboration among timberland investment managers and public, private, and nonprofit forestland conservation programs.

The Pinchot Institute, in collaboration with the USDA Forest Service, convened a symposium on May 22, 2000 in Washington, DC to explore these issues. Presentations were made by market analysts, TIMO executives, and representatives of conservation organizations (see **Appendix A** for the full agenda and **Appendix B** for the list of speakers). The symposium brought together over 60 individuals interested in private forestland conservation, from nonprofit land conservation organizations, environmental grantmaking foundations, major forest products companies, investment organizations, and federal and state natural resources agencies (see **Appendix C** for the list of participants). This report synthesizes the presentations and discussion at the symposium, and offers some recommendations for future actions.

MARKET CHANGES IN THE INDUSTRIAL TIMBERLAND LANDSCAPE

Bruce Kirk¹

Historic View

Beginning in the 1800s, industrial timberland owners began to accumulate timberland to provide a secure fiber resource for pulp, paper/paperboard, lumber and panel manufacture. Approximately 75-80 million acres were accumulated by these owners in aggregate. Typically, only about one-third of fiber for pulp, paper and paperboard manufacture was derived from this secure, owned source, while lumber-panel facilities were very highly integrated with secure timber resource, especially in the western states. This was due to the fact that raw material costs relative to product costs are very high for lumber, and much lower for pulp and paper, so lumber manufacturers did not want to be reliant on purchasing timber from an external source.

Corporate annual reports focused on the benefits of timber ownership, and the financial community on Wall Street viewed timberland ownership favorably. The actual financial rewards from timber ownership were never disclosed so analysts, in the days when timber income was taxed at capital gains rates, delved into corporate income taxes in order to make estimates of income derived from timber harvest. Analysts in Europe regularly waxed at length about timber as a 'hidden asset.'

Corporate reporting has advanced and companies such as Weyerhaeuser Co. and Georgia-Pacific Corp. now disclose income derived from timberlands. Timberlands are no longer a 'hidden asset,' whether in this country or elsewhere. The financial community now views timberlands as ripe for imminent sale and as a cash hoard to benefit shareholders.

Industry Results

Over the past decade, forest products company financial results, whether for pulp-paper or for lumber-panel producers, have been mediocre. The industry has recorded only one or two good years since 1990. Cash flows have been weak which, in the face of relatively high capital expenditure rates and acquisitions undertaken for cash, ballooned debt burdens. Equity performance has been poor. In the face of relatively poor cash flows, most companies have assigned a very low priority to enlarging their timber holdings.

Since the mid-1990s, some companies have reassessed businesses, operations, and regional activities. These reassessments have led to unique sales of timberlands whereas traditionally timberlands were sold together with production facilities to another industry or strategic buyer. In some instances, a production facility and its supporting timberlands

¹ Bruce Kirk is Managing Director, BK Associates.

were transacted separately. This separation may have attracted a broader array of specific-asset motivated buyers. Companies have frequently cited debt reduction or debt containment and share repurchases as the driving force of these transactions.

As a result of strategic management reassessment, the last few years have witnessed a relatively high number of timberland sales, compared to historical trends. Companies have trimmed excess timberland assets and/or exited entire timber basins. Examples of major timberland sales in the last few years include:

- International Paper: Sale of selective Maine timberlands and Oregon timberlands.
- Champion International: Sale of selective northeast timberlands
- Georgia-Pacific: Sale of California, Maine, and New Brunswick timberlands.
- Weyerhaeuser: Sale of Klamath, OR, region operations and timberlands.
- Chesapeake: Sale of West Point, VA, facility and timberlands.

Companies have also refocused activities and sold under-performing assets, resulting in timberland sales. Examples of businesses that have refocused, and the assets they have sold, include:

- Kimberly-Clark: Coosa Pines, AL, newsprint-pulp and timberlands.
- Boise Cascade: Newsprint and coated paper.
- Bowater: Great Northern Paper and timberlands.
- Louisiana-Pacific: Sale of California timberlands.
- St. Joe Paper: Linerboard mill and timberlands.

Asset sales have also been the result of expenditures required to meet environmental regulations.

Industry Consolidation

The forest products industry has and is undergoing consolidation. The consolidation is occurring throughout the North American industry, not just within the U.S. or within Canada. Consolidation is also more prevalent with offshore companies but such activity has not yet reached the level of that within the U.S.

Crown Zellerbach and St. Regis Paper, for example, disappeared during the 1980s, as a result of being bought or incorporated by other companies. Since 1995, a few of the well-known companies that have been consolidated include Federal Paper Board, Scott Paper, Fort Howard, Avenor, Union Camp, Stone Container, and Donohue. Current consolidations include Consolidated Papers to Enzo, Champion International to International Paper, and St. Laurent to Smurfit.

Acquisitions of individual production facilities, with or without timberlands, have been and are almost always cash transactions. Until the early 1990s, acquisitions of companies

were also largely cash transactions. The industry's mediocre results and limited excess cash flows precluded subsequent debt reduction.

Acquisitions for cash that have subsequently resulted in timberland sales to reduce debt include:

- SAPPI (S. D. Warren): Sale of Maine timberlands.
- Smurfit-Stone Container: Sale of southern timberlands.
- Alliance Forest Products: Sale of Coosa Pines, AL timberlands.

Since 1995, mergers or acquisitions, such as those noted earlier, have been undertaken for equity or a combination of equity and cash. While debt levels have moved higher in some instances, the pressure to sell timberland or other assets is not as acute as in some past cases. It is anticipated, however, that timberland sales will result from International Paper's acquisition of Champion International either from Champion's holdings or from excess arising from the earlier acquisitions of Federal Paper Board and Union Camp.

Current Industry Conditions

Industry cash flows for 2000 and for 2001 will be healthier as compared to the 1996-1998 years. Net cash inflow (retained earnings plus depreciation) are forecast in a \$14-\$16 billion range. Industry capital expenditures in 1999 were at maintenance levels of \$9 billion. Expenditures for 2000 and 2001 are forecast in a \$9-\$10 billion range and may include some catch up of projects deferred from earlier periods. Pressure to sell timberlands to contain debt or provide for share repurchases has eased.

The North American industry is not undertaking any new greenfield pulp-paper mills and only one new paper machine is planned. Plans for new oriented strand board panel plants continue but plywood plants are an endangered species. On balance, the industry is not required to assemble timberland basins to support new mills or add to timberland holdings to support major plant expansions.

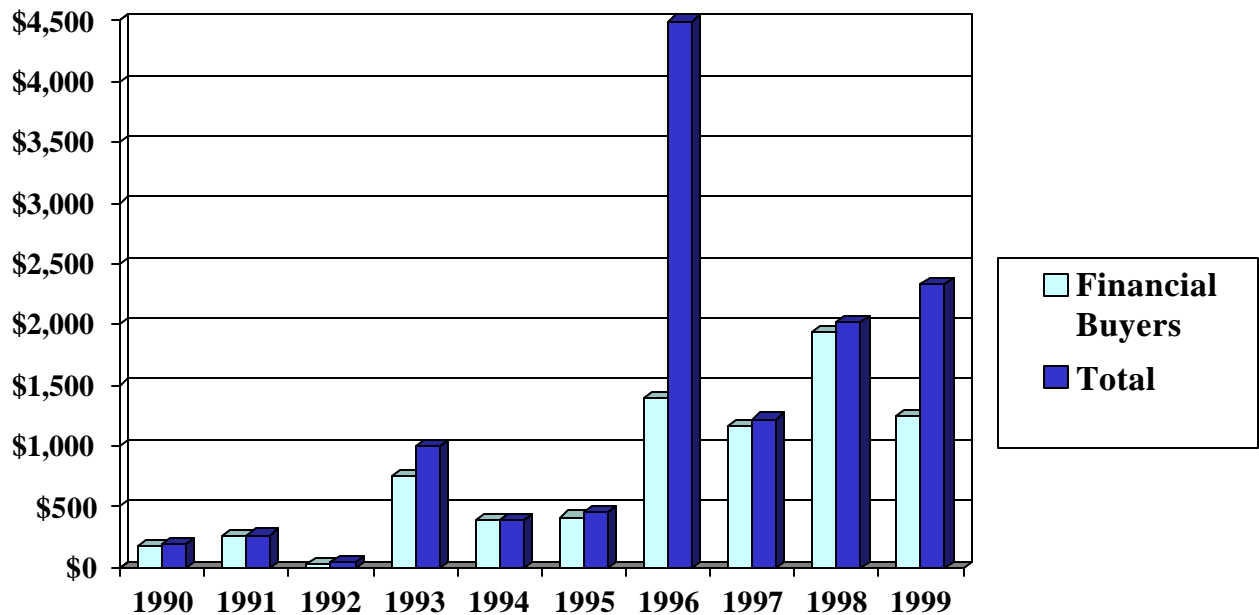
The use of recycled fiber has climbed to 37% of fiber furnish for paper-paperboard as compared to 25% ten years ago and will exceed 40% within one or two years. Most of the recent and forecast growth in paper-paperboard production is based on recycled fiber, which suggests that pulpwood demand will remain flat.

The Financial or Non-Strategic Timberland Buyer

The non-strategic or "financial" timberland buyer has dominated timberland transactions over the past five years. Financial buyers include Timberland Investment Management Organizations (TIMOs), Real Estate Investment Trusts (REITs), and other entities whose primary purpose is the ownership and management of timberlands to produce financial returns and whose production activities, if any, are minimal.

Financial buyers have accounted for 60% of the publicly reported timber transactions during the 1995-1999 period and this figure would be 70% if the 1996 Cavenham transaction were excluded. Of the three largest transactions in each of the past three years, 66% of the buyers were in the financial category. Over the past five years, strategic or industry owners accounted for 73% of timberland sellers.

Timberlands Transacted to Financial Buyers (\$ mil.)



The financial category has clearly come of age during a period in which the forest product industry was largely out of this market and, in fact, motivated to sell timber assets for a range of reasons. This new category added efficiency to the timberland asset market. The new buyers also benefited from the forest products industry's changing view of timber supply contracts as contrasted to fee ownership. The Hancock Timber Resource Group was the early and dominant force in the financial buyer category but there has been a broadening array of financial buyers as the 1990s progressed.

Conclusion

Forest industry timberland ownership is estimated to have declined into the low end of a 70-75 million acre range. Where do we expect things to go from here? Further sales, not yet announced, by industry owners will largely occur due to rationalization following mergers and acquisitions. The depth of the resources available to financial buyers for timberland investment is unknown, although it is likely that financial buyers will play an increasing role in the timberlands market.

CHANGING OWNERSHIP PATTERNS: AN OVERVIEW OF INSTITUTIONAL OWNERSHIP AND RESULTING OPPORTUNITIES

Mason Browne²

Changing Forest Ownership Patterns

The ownership pattern of forestland is changing, especially in the U.S. There is an accelerating trend of industrial forestland owners selling their properties to institutional owners. This trend began in the early to mid 1980s and has resulted in over \$7.9 billion currently invested in by pension funds, foundations and endowments in U.S. timberland. In addition, a new vehicle for ownership has emerged, the Real Estate Investment Trust (“REIT”). The catalysts for this changing ownership pattern are:

- The large amount of capital available by the institutions for investment,
- Recent changes in the federal laws governing REITs, and most importantly,
- The powerful economic incentive to minimize taxes.

These new classes of owners are not taxed at the corporate level, thus avoiding the ‘double taxation’ effect whereby most corporations pay taxes on their earnings, only to have their shareholders pay additional taxes on the dividends.

In addition, other new significant buyers have emerged, including wealthy individuals, families, and large conservation organizations.

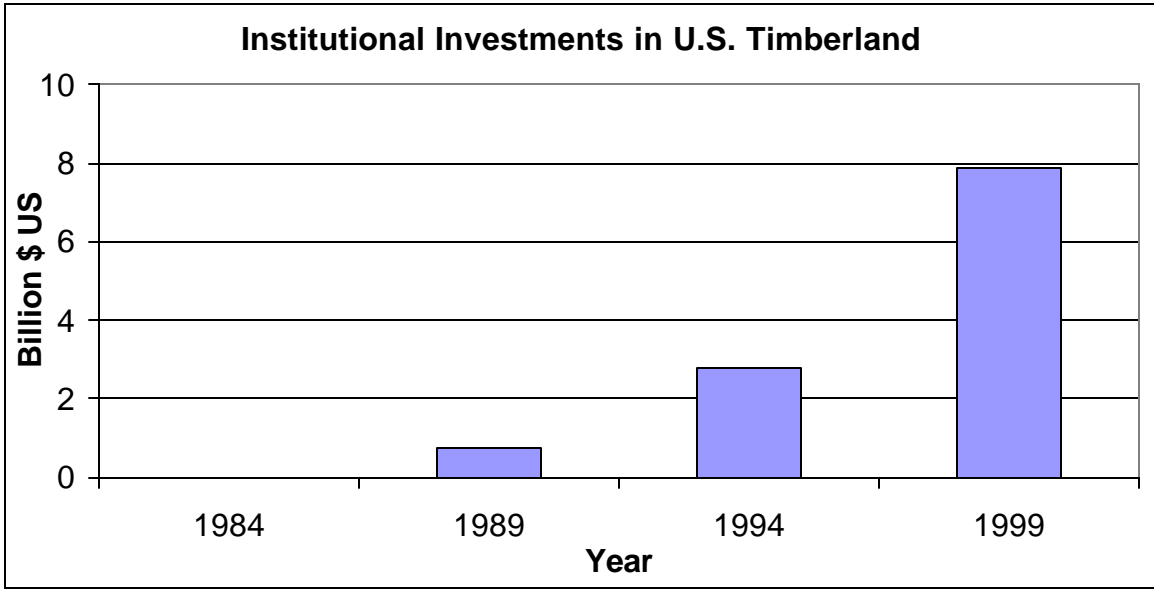
Who specifically are these new owners? What factors drive their decisions and how will they manage their lands as compared to the previous industrial owners? Finally what are the conservation implications of this trend?

The following comments focus on the institutional and REIT owners only, not on the individuals, families, and larger conservation organizations. In addition, Master Limited Partnerships (MLPs) are not included in the discussion. Although different than a REIT, MLPs are more similar to a REIT than to the other structures. As such, general comments on REITs could serve as an approximation for a similar discussion on MLPs.

Accelerating Institutional Ownership of U.S. Timberland

The institutional ownership trend is clearly accelerating. Approximately \$150 million were invested per year during the first five-year period, ‘85-’89, accelerating to about \$400 million per year from ‘90-’94, to approximately \$1 billion per year from ‘95-’99. The estimated institutional ownership of U.S. forestland has approximated the following curve.

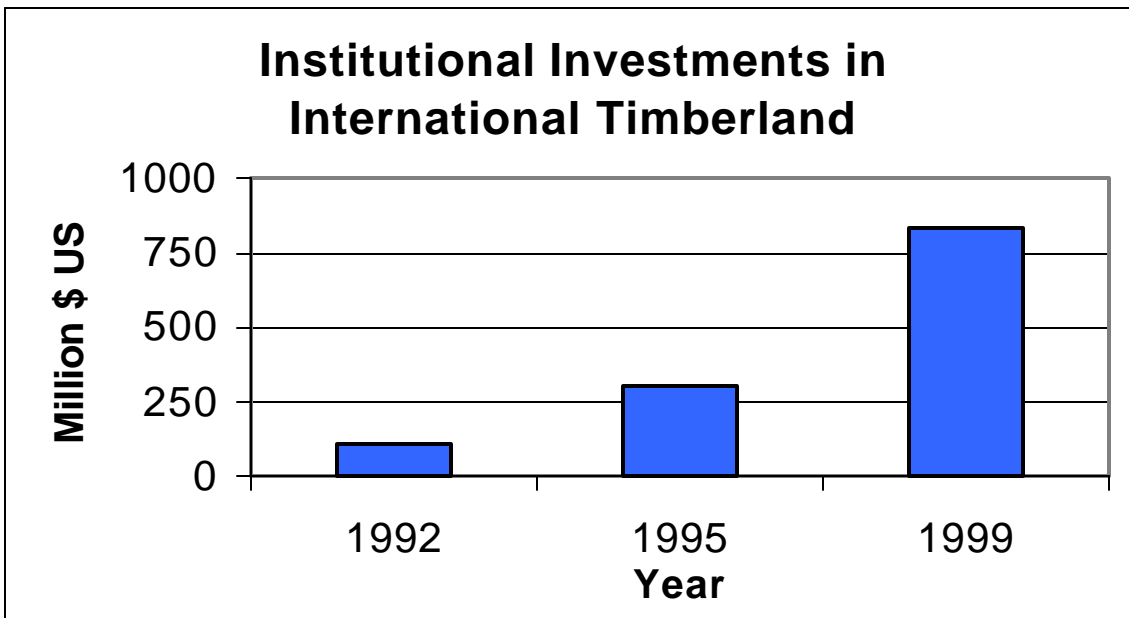
² Mason Browne is Director of Timber Investments, UBS Brinson.



These estimates are based on: Binkley et al. 1996; unpublished documents; estimates by author; and the *Wall Street Journal* Feb 12, 2000.

Global Institutional Ownership

Whereas institutional ownership of U.S. forestland began in the early 1980s, this trend began about a decade later for overseas markets. The estimated institutional ownership of international forestland has approximated the following curve.



The amounts shown are U.S. dollars of invested equity.

Similar to the trend within the U.S., the ownership of timberland outside North America by institutions is increasing. Institutions are beginning to view timber as a global asset class.

Institutional Ownership and REITs

Institutions

The institutional owners of timberland are typically the large public and private pension plans, foundations, and endowments.

	Total Assets (Billions)
Public Institutions	
California Public Employees Retirement System (CalPERS)	\$174
State Teachers Retirement System of Ohio	\$46
Washington State Investment Board	\$48
Private Plans	
Teachers Insurance and Annuity Association (TIAA-CREF)	\$300
General Motors	\$95
Delta Airlines	\$14
United Parcel Service	\$8
Foundations/Endowments	
Harvard University	\$13
Howard Hughes Medical Institute	\$10
Yale University	\$7

Sources include: individual websites and “The Money Market Directory of Pension Funds and their Investment Managers, 1999” by Standard and Poors.

‘Ownership’ of timberland by institutions can take many forms. It is usually not direct fee simple ownership, but rather is an interest and/or share in: a fund, partnership, limited liability corporation, or an insurance company’s group annuity contract.

These institutions have very large asset values and are considered good candidates for investing a small percentage of their portfolio in timber. Even a 1% or less allocation of their capital to timber can represent very large dollar amounts. For example, the two largest pension plans that include timber in their portfolios are TIAA-CREF and CalPERS. Respectively, these plans have \$300 billion and \$174 billion in total assets. Even a 1% allocation of their portfolios to timber would represent almost \$3.75 billion.

At present it is not known the exact number of pension funds, foundations and endowments that own timberland. However, it is estimated that the number of commercial timberland-owning institutions currently totals less than 150.

The forests that these institutions own are spread throughout most of the commercial forestry regions of the U.S. The largest concentration of ownership is in pine plantations in the southeast U.S., followed by conifer plantations in the Pacific Northwest (west of the Cascades), and mixed softwood and hardwood holdings in the Northeast, with minor holdings in the Great Lake States.

Internationally, institutional holdings are concentrated in New Zealand, Australia, Chile, Argentina, Uruguay, and Brazil. These properties are typically plantations of Radiata Pine, Southern Yellow Pine, or Eucalyptus species.

REITs

In addition to institutions becoming a new class of timberland owner, the real estate investment trust (“REIT”) is another emerging tax efficient vehicle to own timberland. The first private timber REIT was formed in 1998 by Anderson-Tully Company on its 300,000 acres in the southeast U.S. In ’98 and ’99, Potlatch and Strategic Timber Trust each announced separate plans to create publicly traded timber REITs. Although unsuccessful, these efforts clearly demonstrate an interest in this form of corporate structure. Finally, in 1999, Plum Creek Timber converted an existing Master Limited Partnership into the first publicly traded REIT on 3.3 million acres of property located in the Northwest, Southeast, and Northeast.

It is too early to draw any conclusions as to the future success of the REIT structure in acquiring and managing timberland. The benefits of the REIT are appealing: elimination of double taxation plus financial liquidity created by their securities being publicly traded. However, there are complex ownership, operating, accounting, valuation, and tax issues that need to be addressed upon establishment and/or conversion to a REIT.

TIMO’s: Managing the Institution’s Timber Investments

Institutions typically do not directly manage their money; instead they hire professional money managers to manage specific pieces of their portfolio. In timber, the institutions hire what have become known as TIMOs (Timber Investment Management Organizations) to buy, manage and sell timberlands on their behalf.

Who are these TIMOs and what do they manage?

See text box on following pages.

WHO MANAGES THE INSTITUTIONS' TIMBER INVESTMENTS?

Hancock Timber Resource Group

- Subsidiary of John Hancock; a public corporation
- Headquartered in Boston
- Manages over \$3 billion in timber assets
- U.S. (NW, SW, NE), Australia
- Property managers include: Resource Management Service, Olympic Resource Management, and Wagner Forest Management

UBS Timber Investments

- Part of the asset management business of UBS, which is one of the world's largest banks, headquartered in Zurich, Switzerland, and a public corporation.
- UBS Timber Investments is headquartered in West Lebanon, NH
- Manages over \$1.2 billion in timber assets
- U.S. (SE, NE), New Zealand, Australia, Chile, Argentina, Uruguay
- U.S. property managers include Canal Forest Resources, and Larson & McGowin
- Frequent use of joint venture structures with industry in their off-shore investments; also manages property directly

Forest Investment Associates

- Privately held.
- Headquartered in Atlanta, GA
- Manages over \$1.1 billion in timber assets
- U.S. only (SE to mid-Atlantic, including Pennsylvania)
- Manages property using a variety of consultants including: Canal Forest Resources, Natural Resource Planning, Bennett & Peters, and Forest Resource Consultants

Campbell Group

- Subsidiary of United Asset Management, a publicly held corporation
- Headquartered in Portland, OR
- Manages over \$1.1 billion in timber assets
- U.S. only (WA, OR, CA)
- Manages property directly

Wachovia Timberland Trust

- Part of Wachovia, a publicly held bank holding corporation
- Headquartered in Atlanta, GA
- Manages approximately \$900 million in timber assets
- U.S. only (SE, Mid-Atlantic and Lake States)
- Manages property through various managers including; Shaw, McLeod et al., Milliken Forestry, F&W Forestry Services, and Canal Forest Resources

WHO MANAGES THE INSTITUTIONS' TIMBER INVESTMENTS?
(continued)

Prudential Timber

- Part of Prudential, a publicly held corporation
- Headquartered in Boston, MA
- Manages about \$500 million in timber assets
- U.S. only (SE and Hawaii) at present
- Property managers include Canal Forest Resources, and Forest Resource Consultants

Forest Systems

- Privately held
- Headquartered in North Easton, MA
- Manages approximately \$400 million in timber assets
- U.S. only (SE, NW)
- Manages properties directly

The Forestland Group

- Privately held
- Headquartered in Chapel Hill, NC
- Manages approximately \$300 million in timber assets
- U.S. only (NE, mid-Atlantic, and Wisconsin); hardwood focus
- Uses various forest managers including LandVest, Forecon, and Shaw, McLeod et al
- Capital from foundations, endowments and high wealth individuals

Timberland Investment Services

- Privately held
- Headquartered in Woodstock, GA
- Manages approximately \$300 million in timber assets
- U.S. only (SE, NE, and California)
- Buys smaller parcels
- Uses various consultants

GMO Renewable Resources

- Part of Grantham, Mayo, Van Otterloo (“GMO”), a privately held investment advisor
- Headquartered in Boston, MA
- Manages approximately \$100 million in timber assets
- U.S. (NE, NW), Brazil, New Zealand, and Australia
- Use various forest managers including Rayonier, and LandVest

Note: The Molpus Woodlands Group was not listed in the above as they do not currently manage for pension funds. They are, however, a large manager for high net worth individuals and families. Their current assets under management total \$750mm, containing 580,000 acres throughout the Southeast. They are privately held and are located in Jackson, MS.

Factors that Drive Decision Making

What factors drive the decision-making criteria for TIMOs and REITs? How are these different from the traditional industrial owner? The following characteristics apply to a **typical** owner in each category, although lumping all owners of a certain category together is an over simplification of the many differences in the existing ownership structures.

Industrial owners:

The industrial owners that are selling their properties to the institutional owners are primarily publicly traded corporations.

Financially, these owners are concerned with:

- After-tax earnings per share
- After-tax cash flow
- After-tax return on investment
- Value added to shareholders

One common element of these indicators is that all are “after tax.” Taxes are a major decision making factor for this class of owner. In addition to taxes, the amount of cash that the corporation can generate through time and the timing of these cash flows are critical. Near term cash is much more important than cash that is generated at a later date.

The typical industrial owner has historically owned both the processing facilities (sawmills, pulp mills, etc.) and the associated timberland. These owners view these lands as a strategic wood supply for their mills.

Strategically, these owners are concerned with:

- Controlling enough wood fiber to support their mills
- Maintaining low raw material costs
- Obtaining a total cost advantage over their competitors
- Having a high market share for their end products
- Creating brand recognition

Institutional owners:

For institutional owners, taxes and accounting issues are generally less applicable as they are mostly tax-exempt. Also, institutional owners usually own timberland only, not the associated processing facilities. Therefore, this class of owner has no strategic supply issues. Instead, its timber is usually sold to the highest bidder in open market auctions. (Although, currently, there is a trend for institutional buyers to purchase timberland with a long-term wood supply agreement back to the mills.)

Unlike taxable corporations, institutions can immediately report higher returns and/or losses due to changes in the market value of their asset (i.e. they can ‘mark to market’). For example, if the timber grows 3% during the year, and timber prices increase by 5%, the institutional owner will recognize an 8% return without even having to sell any wood.

Institutional investors also apply modern portfolio theory to their decision criteria on when to buy, sell and hold the property. They are interested in diversifying their holdings among regions, timber types, and age classes. The use of portfolio theory results in frequent evaluation of their holdings to reposition their assets as the current value and/or projected future value of their assets changes.

Many of the institutional ownerships are held in closed end funds. These funds typically have 10-15 year time horizons and will be sold within that time span. Some of the larger investors have non-pooled funds that are open-ended in duration.

Finally, most institutions buy using 100% of their own cash and do not use bank loans to finance the purchase.

Financially, institutional owners are most concerned with:

- Cash flows
- Timing of the cash flow
- Total realized and unrealized returns on investments
- Portfolio allocations
- Hold/Sell decisions
- Portfolio diversification
- Obtaining the highest portfolio returns for any given level of risk

Strategically, TIMOs are most concerned with:

- Having superior total returns on their investments as benchmarked against their competitors
- Building total assets under management
- Developing new financial products to attract new pools of capital to the timber asset class
- Maintaining low management costs

REITs

Publicly traded REITs are driven by a need to generate a consistent growth in Funds from Operations (“FFO”) per share. Although not precisely correct, for this discussion it is most simple to think of this as merely a constant growth in the REIT’s ability to generate enough cash from operations to pay its distribution per share. Plum Creek, for example,

is currently distributing \$2.28/share/year. Investors want the distribution to at least be maintained, and hopefully to grow. Plum Creek's yield (distribution divided by share price) is currently 8.9 %. This is much higher than most publicly traded timber companies. For example, Deltic's and GP Timber's yields are 1.2% and 4.1% respectively.

Financially REITs are most concerned with:

- Maintaining and growing their Funds from Operations ("FFO")
- Creating higher stock prices and thus lower yields on their distributions

Strategically, REITs are most concerned with:

- Acquiring property that will not dilute their FFO
- Maintaining harvest levels so as not to create volatility in their FFO

What Does All This Mean for Conservation?

Each ownership class will be driven by its own financial and strategic criteria. Therefore, each class will react differently to conservation issues. The following is a list of various conservation issues and the expected reaction by each class of owner, with the underlying reasons. The reader can use the same understanding of the owner's decision-making criteria to predict what each class of owner might do for issues not listed. For this discussion, the simplifying assumption is that the 'typical' REIT will own only timber, not operating facilities. This is presently not the case with either Anderson-Tully or Plum Creek. However, it is too early to know exactly what the 'typical' REIT will look like.

Selling Environmentally Sensitive Lands and/or Conservation Easements

Industry

Industry may be concerned with losing timber supply and therefore may not be interested in selling. However, they have the ability to either donate or bargain sale their property and benefit from the tax write-off. Conclusion: industry will be a 'moderately interested' seller.

TIMOs

If a sale can be made at or above Fair Market Value, most TIMOs can improve their financial performance by selling such assets. Frequently, environmentally sensitive properties are difficult to operate and are poor cash generators. Selling these properties unlocks or 'monetizes' their conservation values. These values are frequently higher than their operational values. Most TIMOs are prohibited

by pension fund laws from either donating or granting bargain sales; being tax-exempt, they have no incentive to do so.

Conclusion: TIMOs will be very willing sellers, but only at full value.

REITs

Most likely will behave similar to a TIMO because of the need for increased FFO.

Longer Rotations

Industry

An industry owner that is fully integrated with its pulp operations frequently manages its properties on a pulp rotation. Other owners that are integrated with sawmills will manage on longer, saw-log rotations. Also, financial leverage and/or a need to generate consistent earnings can force premature harvests and thus shorter rotations. Conclusion: rotation lengths will be variable, although they will be at, or shorter than, financial maturity. To maintain earnings, they will operate on a sustainable basis.

TIMOs

A TIMO is driven by financial performance and will likely manage on a rotation length that maximizes financial maturity. In the southeast U.S., this typically results in rotation lengths that are at least 23 years and older, sometimes as high as 35 years. Conclusion: rotations will be targeted for financial maturity. They too will operate on a sustainable basis as this makes good financial sense.

REITs

Same as TIMOs, but there will be increased pressure to cut to pay off debt and/or to meet distribution requirements. Conclusion: rotations may be near financial maturity. They will also operate on a sustainable basis.

Silvicultural Investments

Industry

Most owners intensively manage their properties, as this will provide an on-going ability to generate earnings through time. There is also a need to produce significant volumes within each company's strategic wood basket. However, there can be periods where such owners have little available capital and/or other capital needs (such as mill upgrades) are deemed more urgent. This may result in periodic scarcity of capital for silvicultural investments. Conclusion: most properties will be intensively managed, but there can be significant variation of intensity among owners.

TIMOs

TIMOs will typically intensively manage their properties to provide the best financial returns. Capital is generally not a limiting factor. Each silvicultural

practice will be viewed as an investment that must provide an appropriate return. Conclusion: properties will be intensively managed, but probably not to extreme levels where returns may become questionable.

REITs

Most REITs' silvicultural intensity levels will be 'pushed' by needing to maintain future volume to provide future distributions, but also will be 'squeezed' by needing to provide current distributions. Conclusion: most properties will be intensively managed but with significant pressure to focus on the most cost efficient investments.

Research

Industry

The forest products industry, along with the U.S. Forest Service, has provided the major source of funding for forestry research. A desire to increase fiber supply within a strategic wood basket, and a desire to increase long-term earnings, are the two key reasons for this. Conclusion: research is 'fully' funded.

TIMOs

Although this opinion is not fully researched, I would expect that TIMOs have not been providing their 'fair share' of funding for research. Issues include whether it is a good financial investment if the fund has a term of only ten years, and also whether the various investment vehicles were established in a way that these costs can be allocated to the investors.

REITs

The REITs will most likely be driven by the same criteria as the industry. Conclusion: It is in the best interest of a REIT to 'fully' fund research.

Conversion of Forestland

Industry

The aggressiveness with which various industry players convert their lands to non-forest uses is highly variable. This may relate to how much control the local foresters have on this decision, versus how much control the Chief Financial Officer has (foresters are reluctant to sell their land base). Also, maintaining a strategic supply of fiber may be of concern. Some industrial players are involved in the actual development of the lands as opposed to merely selling to a developer. Conclusion: on average, industry is reasonably aggressive in converting its higher and better use properties.

TIMOs

It is in the best interest of the TIMOs to capture any incremental value from the sale of property for its highest and best use (versus its value as forestland).

Depending on the legal structure of the investment vehicle, TIMOs may need to take a 'passive' approach to capturing this value. This means that the TIMOs may sell to a developer, but will not develop the property themselves.

Conclusion: TIMOs will be very willing to sell their higher and better use properties.

REITs

For the same general reasons REITs will tend to behave similar to the TIMOs.

Long-term Ownership and Stability

Industry

Some view industry as a long-term holder of timberland. This is certainly true in the aggregate. In 1992, the U.S. Forest Service estimated that industry owned 79 million acres in the U.S. However, the ownership of these acres periodically changes due to mergers, acquisitions, and dispositions. I do not know what the average holding period is for any specific industrial acre. Conclusion: industry has been a long-term owner of timberland, at least in the aggregate. However, the average acre experiences turnover at some unknown rate.

TIMOs

TIMOs' funding sources are considered 'long-term, patient money.' This is true when viewing the portfolio in total, but not when viewing any specific acre within the portfolio. I would suspect that the **average** acre is sold every 10 to 15 years. This is because annual hold/sell analyses, close-out of funds, and re-balancing of portfolios, creates a turnover rate within the total portfolio of possibly 10 to 15 years, on average. It is not clear what, if any, impact this may have. How does this turnover rate compare to other owners, who are the buyers, what uses do the new buyers put to the land, etc.? (Also, it is important to note that the TIMOs are beginning to sell properties among themselves.) Conclusion: expect periodic turnover of the average acre, but a long-term holder in the aggregate.

REITs

The REITs are likely to be long-term net holders of properties because their stock provides liquidity and therefore there is less need to provide liquidity by selling property. Conclusion: REITs will likely be long-term holders.

Landscape Planning and Habitat Conservation Plans

Industry

The forest products industry has the concentrated ownerships, the more environmentally sensitive ownerships, the manpower base, and the strategic supply reasons, to make long-term, costly planning efforts viable. Conclusion: industry is a major player in generation of expensive long-term plans.

TIMOs

The TIMOs can generally avoid habitat conservation plans by not buying properties that are fraught with environmental problems, thus making the issue moot. Also, if the average acre is subject to periodic turnover, do such expensive plans make economic sense to initiate? Conclusion: TIMOs may be a very minor player in expensive land planning exercises.

REITs

REITs are not likely to perform an annual hold/sell analysis of their properties. In effect, it could be argued that the public capital market is performing a constant hold/sell analysis of their stock instead. REITs will likely have long holding periods for their lands. A REIT may have the ability to selectively choose which properties to purchase, again making this issue moot. Conclusion: REITs may be a moderate player in expensive land planning exercises.

Do we need to worry that TIMOs are accessing pension capital, and because the population is aging, that there will be a major sell off of forest assets to pay the pensioners upon their retirement?

This is not a source of concern, for a number of reasons:

- The TIMOs penetration into the forest asset class is still very small. Currently their total investments are approximately \$7.9 billion in the U.S. and approaching \$1 billion internationally. The total estimated 'institutional investable universe' in U.S. timber alone is estimated by Prudential (8/99) to be \$217 billion (out of a gross timberland total of \$466 billion). This puts the current TIMO penetration rate into the U.S. forest asset class at only 7.7% (or only 1.7% of the total productive forest base). There is ample room for further penetration by the institutions.
- The amount of U.S. pension assets is currently over \$10 trillion, as reported by Pension & Investments on March 20, 2000. Presently only about half of this is 'reachable' given the current timber investment vehicles being offered the pension funds.

- TIMOs have yet to directly tap the 401K retirement pool directly. This represents \$2.5 trillion in assets. This pool is rapidly growing.

Do we need to worry that the current pool of pension capital that provides the majority of the funds to the TIMOs (i.e. the defined benefit plans) is being overtaken, and may be replaced, by contributions to defined contribution plans (i.e. 401K plans)?

Again, the answer is no, for the following reasons:

- Other factors such as the penetration percent, mentioned above, will be much more important.
- New investment products may be developed by the TIMOs to access the 401K capital.
- The value of the defined benefit plans is still growing.
- This issue is a ‘future issue;’ it is not of immediate concern today.

What opportunities for conservation are available given the change in ownership trends?

Following are suggestions on how both the conservation community and the business community can best benefit from the changing ownership patterns of forestland.

- Focus on the **opportunities** that the change in ownership trends provides.
- Realize that there is a tremendous opportunity for the conservation community to purchase fee simple land and/or conservation easements. This trend is well underway as demonstrated by recent large purchases by both The Nature Conservancy and The Conservation Fund.
- Stretch the value of the available conservation capital by expanding the use of conservation easements. Currently this vehicle is being used very effectively in the Northeast, but less so in other regions. In the West, the landowners are rightly cautious about conservation easements with the grantee being the federal government as this may expose the landowner to federal laws that they are not currently exposed to. It would be very useful for the conservation community to seriously address this issue. One possible solution is to expand the ability of non-government entities to hold the conservation easements.
- Also consider stretching the conservation dollar by looking at the potential of buying future conservation rights as opposed to more costly ‘present’ rights.
- Keep the conservation easements simple. Many are too complex and merely will lead to future litigation.

- Focus on keeping large forests from being subdivided into smaller parcels. Also focus on acquiring the underlying development rights.
- The Northeast is an area where conservation investments produce the biggest incremental environmental gain as expressed on a per acre basis. This is because the underlying cost of the Northern Forest on a per acre basis is approximately one-fifth the value of the Southeast's forests and one-tenth the value of the Northwest's forests.
- Look for new funding sources for conservation efforts. The Conservation and Reinvestment Act ("CARA"), as initially proposed, would provide up to \$900 million annually for the acquisition of environmentally sensitive lands. Such funding sources should benefit both the conservation community **and** the landowner. Landowners should not oppose such efforts to increase conservation funding, **provided that purchases are only from willing sellers.** The conservation community also needs to focus on making sure that their existing properties are well managed and well funded. Otherwise, the CARA bill and other similar bills will be more open to criticism.
- The conservation community should work cooperatively with the landowners. Some in the environmental community appear to use a surrogate measure of the conservation benefits of a proposal, by measuring how much economic damage it causes industry. A more positive approach is to realize that the private sector has the ability and the resources to make a positive difference to the environment. Building bridges is more powerful than creating enemies.
- In turn, the business community should be more willing to work with the conservation community. In the long run, both the business community and the conservation community need to recognize that the goal is to make business and conservation compatible and complementary concepts. "Good business should equal good stewardship."
- Do not be afraid to explore creative concepts that use this changing ownership trend to the benefit of both the landowner and the environment. Here is one idea that could do that.

How could both the conservation community and the business community benefit from the changes in ownership patterns?

The economic fundamentals of having forestland owned in tax-efficient structures such as by institutions, REITs and other single taxation structures, are very powerful. This trend will only accelerate. This is creating an uneven playing field of the 'double' taxation landowners competing against the 'single' taxation owners. The 'double'

taxation owners are dealing with this issue, plus addressing their earnings and cash needs in the following ways:

- They are selling their lands to the single taxation buyers.
- They are selling timber-cutting rights to these same buyers (witness International Paper's recent 'timber only' sales).
- They are converting or attempting to convert to single taxation structures (e.g. Anderson-Tully, possibly Rayonier etc).
- Some are looking to 'partner' with TIMOs.

However, the tax consequences of a double taxation corporate structure directly converting to a single taxation structure can be enormous. This is hindering the speed at which the transfer of the forest into a more tax efficient structure will occur. **But this transfer will occur.** Why not facilitate the inevitable, but do so in an environmentally friendly manner?

Such a transfer could occur if the federal and state governments would allow the following. They could provide the opportunity to make a direct conversion of a double taxation forest entity into a single taxation entity without serious tax consequences, **provided** that the entity agrees to certain incremental environmental standards.

Some might argue that this is not fair. Why isn't it?

- A large portion of the tax consequences of such a conversion is merely the capital gain tax on a corporation's built in gain due to inflation. Inflation should not be taxed.
- The corporations would have to give up something for this right.
- Corporations have already figured out how to sell land (perfectly legal) in a way that defers taxes for approximately ten years by using the installment note sales method.
- Taxes would still be paid (single layer only), and everyone would be on a more equal playing field.

Conclusion

The key message is that the conservation community should focus on the opportunities that this changing ownership trend could have for conservation.

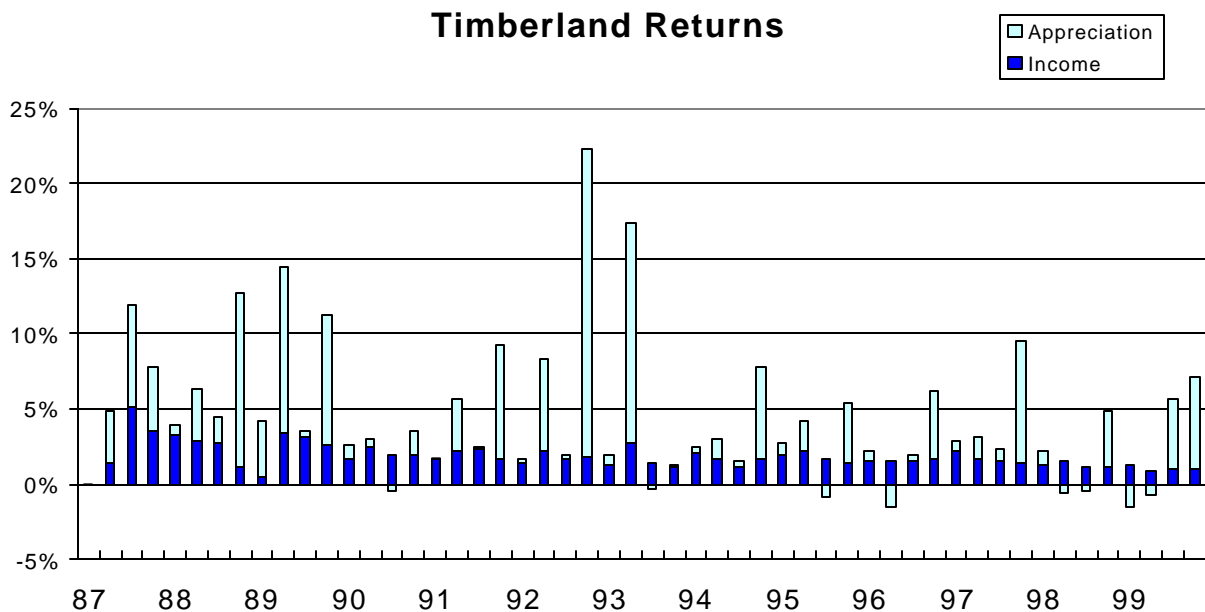
TIMBERLAND INVESTMENT: OWNERSHIP MOTIVATIONS, INVESTMENT GUIDELINES, AND IMPLICATIONS³

The passage of the 1974 federal Employee Retirement Income Security Act (ERISA) for private pension plans, and subsequent similar state legislation for public pension plans, endowments, and foundations, opened the door for institutional investment in timberland. These laws encouraged institutional investors (such as pension plan managers) to diversify from their traditional reliance on fixed-income securities such as government and corporate bonds (Binkley et al., 1996). Direct ownership of timberland provided an opportunity for diversification. Timberland Investment Management Organizations (TIMOs) were created to handle these investments on behalf of the institutions.

In order to fully understand the environment in which the TIMOs operate, it is useful to address the following questions: Why do TIMOs invest in timberland? What factors determine TIMOs' investment decisions? What are the implications of TIMO ownership?

Why do TIMOs invest in timberland?

The main reason that TIMOs invest in timberland is that timberland returns have been strong (Binkley, 2000). The following chart (Binkley, 2000), based on figures reported by the National Council on Real Estate Investment Fiduciaries (NCREIF), shows appreciation and income generated from timberland from 1987 through 1999. Returns (appreciation plus income) have averaged 20.7% per year over that period, which is equivalent to the S&P 500 returns. Of that, 7.8% has been cash income and 12.3% has been appreciation.

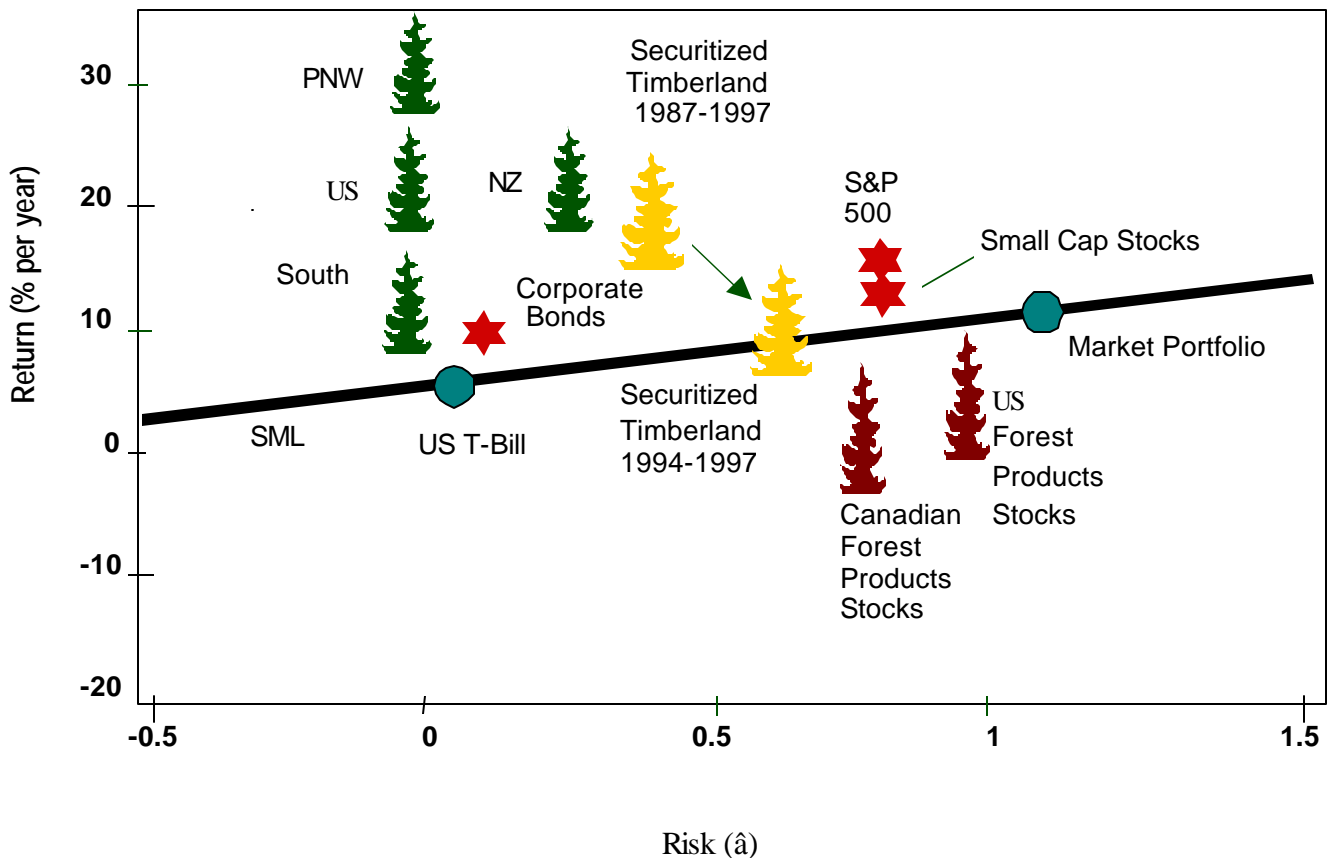


³ Based on May, 2000 presentations by Clark Binkley, Charley Tarver, and Chip Collins.

Another key reason that TIMOs like to invest in timberland is that they can recognize the total returns, both appreciation and income (Binkley, 2000). Publicly traded forest products companies cannot recognize the appreciation return. Under US “Generally Accepted Accounting Principles” (US GAAP standards), this appreciation does not exist, and publicly traded companies are limited by these rules. On top of this, GAAP accounting says that you must record as you deplete the timberland (cut the trees). Generally, the book depletion exceeds the true economic depreciation of the asset.

Furthermore, private equity investors (i.e., TIMOs) appear to value timberland more than public equity investors do (Binkley, 2000). Publicly traded companies are valued based on only a few quarters of earnings or cash flow, while private equity investors look at a longer time frame. As such, timberland is worth more to private equity investors than to publicly traded companies.

Timber has unique properties as an asset class, and some interesting risk characteristics. It represents relatively low risk yet high returns (Binkley, 2000). The following chart (Binkley, 2000) shows return on the vertical axis and risk (represented by the Capital Asset Pricing Model beta), on the horizontal axis. Lower CAPM beta numbers represent lower risk. Securitized Timberland represents publicly traded timber companies. Their risk has gone up while returns have dropped slightly over the last few years. Private equity timberlands show strong returns and low risk. This helps explain why TIMOs can purchase timberland that forest products companies have a hard time holding.



What factors determine TIMOs' investment decisions?

Once a decision to invest in timberland has been made, certain guidelines are followed for determining suitable investments (Tarver, 2000).

Equity managers of stock market investments ask certain questions, such as:

- Which industry segments will be selected?
- Choose small cap, mid cap or large cap stocks?
- How much weighting in each category?
- What are the limitations and expectations for individual stocks and the portfolio as a whole?

Similarly, the guidelines for an institutional timberland investment portfolio may consider the following issues (Tarver, 2000):

1. *Length of Investment*: Short, intermediate or long-term?

Most TIMOs and their clients are long-term investors. They understand that timberland characteristics favor patient, long-term investors. In the 20-year history of timberland investment, most TIMOs have stayed invested. Most pooled funds have 10-year lifespans with option to extend (and most have extended). Direct investors usually have a stated long-term, open-ended horizon.

2. *Location of Investments*: What determines a suitable location?

Location is determined by the availability of acceptable property in quantities to permit portfolio establishment in a reasonable timeframe; the presence of a strong, competitive timber stumpage market; the geographic diversification goals of the portfolio; the feasibility of avoiding multiple manager conflicts; and regulatory considerations, such as constraints on forest management. For foreign investments, additional factors include currency risk, country risk (government stability), and tax implications.

3. *Quality of Property*

This factor is often referred to but seldom defined. In theory, "any property is a good investment at the right price." Perhaps for short-term investors and traders, but not for long-term investors. If investing for the long-term, a manager will do better to invest in higher quality properties. What characteristics do TIMOs use to define a "high quality" property? The characteristics would include:

- Productivity. Good site index, good soil that will produce good tree growth rates.
- Minimum amount of non-productive land
- Good stocking. Proper distribution and desirable species
- Tree age classes that meet portfolio needs for age diversification, future cash flow
- Good access, both internal and external

4. *Tract Size*: How small is too small and how large is too large?

This is a guideline that generally relates to the anticipated overall size of the portfolio and the importance of diversification within the portfolio. How much of the total investment

should you put into one property? There is no best answer, but limiting maximum size to 20% of portfolio is prudent policy. What about minimum size? The tract should be large enough to avoid the “retail” market and large enough to benefit from economies of scale in price, acquisition expense, and management, but not so large that quality, diversification, and future marketability are sacrificed.

5. *Rate of Return Hurdle and Financial Assumptions*

Important questions to ask include:

- What is the minimum acceptable projected return for an individual property? For the portfolio as a whole?
- What is the expected (required) level of annual cash flow (for property and portfolio)?
- What limitations are placed on assumptions used in financial analysis?
- What assumptions are made about the discount rate? Inflation? Timber and land future price appreciation rates? Property taxes, management expenses and other costs of ownership?

What are the implications of TIMO ownership?

TIMOs make investments on behalf of hundreds of thousands of investors. They have no charitable goals and objectives for these funds; they are seeking highest return on investment (Tarver, 2000). Fiduciary obligations override all other obligations. The ERISA law indicates that funds must be managed for the *sole* benefit of the retirees (Binkley, 2000). Forest products companies have a similar obligation to their stockholders, but not to the same degree. As a result, TIMOs manage actively, which does not necessarily mean that they buy and sell frequently. They are seeking optimum productivity, optimum growth, and optimum markets and prices.

However, it is important to keep in mind that behind the TIMOs are the individuals who invest in them. This is significant because individuals have environmental sensitivities. They want their investment managers taking care of the environment on their behalf (Binkley, 2000; Tarver 2000).

The investment objectives and environmental considerations are not contrary to each other; in fact, returns can be optimized while soil, water, air, and wildlife are protected. Sales of sensitive lands reduce management costs and increase returns; conservation easements can be a good way to enhance conservation; and recreation leases and carbon credits may provide opportunities for conservation (Binkley, 2000). The economic perspective of TIMOs is long-term, which is consistent with many conservation objectives as well. The collective portfolio of TIMOs is healthy, providing attractive financial returns over the long term, and providing environmental benefits to society (Tarver, 2000).

TIMO ownership of timberlands will continue to grow. TIMOs will have to be comfortable with engaging the public about their management practices (Collins, 2000).

It is likely that both increased collaboration among and increased competition between TIMOs, forest products companies, and conservation organizations over timberland purchases will occur. Conservation groups now have the capacity to compete on big deals; in the future, they will likely have even greater involvement.

EXAMPLES OF RECENT TIMBERLAND TRANSACTIONS

Following are examples of successful conservation transactions involving the sale of timberlands by a forest products company. The buyers represented non-profit organizations, government agencies, and TIMOs. None of these transactions were simple, but instead involved numerous obstacles and tremendous effort on the part of the participants to overcome those obstacles.

The Forestland Group's Purchase of Champion Lands in New York⁴

In December of 1998, Champion International announced plans to sell 300,000 acres in the northeast as a single package. The sale included 140,000 acres in New York, 130,000 acres in Vermont, and 30,000 acres in New Hampshire. This transaction presented a challenge to the conservation community, since the properties are a focal point of interest in the Northern Forest. No public agency or conservation entity had sufficient financial resources or public support to acquire all the lands. Furthermore, there was a strong political and community desire to keep the majority of the lands as working forests.

A solution was developed by the Conservation Fund, who negotiated the purchase of the entire 300,000 acres. The Conservation Fund brokered a deal with the state of New York and The Forestland Group (TFG), a timberland investment management organization, to buy the New York lands (similar public/private partnerships were developed in Vermont and New Hampshire). According to the Conservation Fund, their negotiation of the 300,000 acres was the largest financial transaction to date for an effort involving governments and private investors (Revkin, 1998).

TGF purchased 114,000 acres in New York, within the Adirondacks, and plans to manage the land for long-term timber production. The state of New York purchased 29,000 acres, mostly ecologically sensitive areas, to be placed in "Forever Wild" status. The state also purchased a "working forest" conservation easement on TFG's lands. The terms of the transaction allow TGF to focus capital on the timber resource and lower their "risk" by selling rights, via the conservation easement, that it preferred not to exercise in the future. The state was afforded the opportunity to permanently protect ecologically sensitive sites and areas with key recreational values, as well as to open previously closed areas to recreation. Furthermore, the state was able to stretch limited public dollars and reduce its long-term management burden. Most importantly, the transaction brought together public and private partners in a way that allowed each party to maximize their financial resources. Besides the investors, approximately 20-30 conservation groups were involved in helping resolve the details.

TFG was motivated to take part in this partnership because of the added benefits that the partnership and public funding provided. The easement sale served to reduce the tax burden by lowering the property taxes through the restrictions. Furthermore, it provided

⁴ Presented by Charles Collins, Managing Director, The Forestland Group.

a greater degree of clarity for all partners regarding TFG's future management options by documenting land-use practices that would be available under the easement. The easement will allow TFG to manage the land for timber, but with certain harvesting restrictions that will encourage sustainable management. It is important to keep in mind that tax benefits through easement donations are not a tremendous incentive for a TIMO, since their investors are mostly tax-exempt.

Trust for Public Lands Purchase of Lindbergh Lake Lands⁵

Lindbergh Lake is a scenic, glacial lake located in the upper Swan Valley, 80 miles northeast of Missoula, Montana. The densely wooded slopes surrounding the narrow, four-mile long lake support mature forested stands of fir, spruce, pine, and larch, as well as grizzly-bear habitat and bull trout. Ownership of Lindbergh Lake and the surrounding land followed a checkerboard pattern of private and public property. Plum Creek Timber Company owned 2,500 acres of the watershed adjacent to the lake, including five miles of shoreline. The Forest Service is also a significant owner of land in the area.

Plum Creek was interested in divesting the land, valued at approximately \$13 million. The company considered a land swap with the Forest Service, but there was no public support for it. Plum Creek then started exploring development options in the area, which raised community concerns. The Trust for Public Land (TPL), a non-profit land conservation organization, was asked in December 1997 to negotiate an alternative arrangement. Under an agreement reached by TPL and Plum Creek, Lindbergh Lake would be brought largely under public ownership under the management of the Forest Service. The agreement provided TPL with a three-year phased option to acquire approximately 2,500 acres of Plum Creek property surrounding the lake. TPL would then make this property available for purchase by the Forest Service, which would incorporate it into the Flathead National Forest. This action would substantially consolidate public ownership of this sensitive lake for recreation and habitat protection.

Funding for the agreement was sought from the federal Land and Water Conservation Fund (LWCF), which allocates money for land acquisition nationwide and is funded by revenues from the government's sale of offshore oil leases. Under the agreement, funding would be acquired in three phases over the next three years. TPL discovered that raising the necessary funding in a relatively short amount of time was a great challenge, due to working within the constraints and funding obstacles of Congress, but was successful in raising \$10 million in the first year alone, and was then able to raise the balance in the next year. Another challenge was trying to coordinate the numerous partners involved, including conservation groups, communities, Plum Creek, and the Forest Service.

In the end, TPL was successful in raising the necessary funding and achieved its goals of protecting the watershed. A key to the success of the transaction was the support of

⁵ Presented by Lesley Kane-Szyna, Trust for Public Land.

numerous organizations, including the Fish and Wildlife Service, Montana's governor, Montana state and county agencies, local communities, and land trusts. Another key component was creating a well-designed deal that aligned the agendas of the numerous partners involved, and then coordinating the communication regarding the deal. TPL was pleased that they were able to compete with for-profit companies to get the desired transaction, and that this agreement laid the base for future conservation opportunities in the state.

Nature Conservancy Purchase of IP lands in Maine⁶

In December 1998, the Nature Conservancy (TNC) purchased 185,000 acres of forestland along the upper St. John River in northern Maine from International Paper for \$35 million. The acreage includes 40 river miles, roughly one-third of the upper St. John River. TNC had initially planned to purchase this land in cooperation with a timber investor, but the timber investor backed out and TNC decided to complete the purchase alone. TNC was able to raise \$31 million of the total \$35 million in the first 12 months, illustrating the strong commitment to forest conservation in the region.

The land purchase is contained within the northern boreal forest, 22 million acres of unbroken forest in New York, Vermont, New Hampshire, and Maine, with tremendous river frontage and numerous lakes. The Northern Forest is close to urban development, but is relatively untouched. There has been great concern for the area, which was targeted by TNC for conservation. TNC has struggled with determining an appropriate conservation goal for the region. Some have suggested that the goal is to buy everything, but that is clearly not economically feasible nor appropriate, since other uses are equally valid. Of the total acreage, TNC identified 5.3 million acres that have special attributes. Some of that acreage is already conserved through National Forests or National Parks, but TNC would like to see about 2.7 million acres added to core conservation areas. The focus is not simply on conserving isolated units, but on connecting to other important areas, since fragmentation is a threat to biodiversity. A strong reason to focus on the Northern Forest is that little is already protected. For example, only 3% of Maine falls under conservation status. Furthermore, the recent high turnover of land has created opportunities today that might not be available tomorrow. Land prices are inexpensive, with conservation purchases averaging \$150/acre.

The large purchase offers TNC the opportunity to work at the landscape scale. TNC plans to manage the land, protecting the river's unique natural and recreational resources. The challenge for TNC is planning the management of the timberland and determining how much of the land should remain as working forest. TNC is not a timber company, but has found itself owning timberland with committed timber contracts to uphold, so needs to consider its position as a timber manager. The organization is weighing the possibility of selling some of the less ecologically-valuable land to help finance the ownership of more critical areas.

⁶ Presented by Bill Ginn, The Nature Conservancy, Maine Chapter.

TNC learned some valuable lessons from this transaction. Buying the land at wholesale for \$189/acre is a far more efficient strategy than paying high-dollar retail for just a few acres that a TIMO or forest products company might have been willing to sell to a conservation organization. In addition, TNC has recognized that not all conservation needs can be achieved through easements – purchase is a critical component towards achieving conservation mission. Finally, building public and private support for conservation is critical. There are valid concerns about communities and economies – a loss of timberland might negatively impact local timber markets which could lead to increased sales of forestland -- so conservation groups need to consider the balance between local economies and conservation.

Public/Private Partnership in Florida: St. Joe Company, TNC, and State⁷

Florida has an active land conservation program, in which the state spends about \$400 million a year on conservation, and local governments raise another \$800 million towards conservation and open space protection. The Nature Conservancy (TNC) is another key partner, having spent \$240 million in 1999 towards land protection in Florida. Federal money in Florida outside of the Everglades is virtually non-existent, however, so the state and local funding is critical towards land protection.

The St. Joe Company, based in Florida, owns a million acres of timberland. The company consists of a timberland division and a division that handles real estate transactions. The company developed a conservation lands program to handle transactions with state agencies and non-profit groups that are interested in adding land to nearby nature preserves and other conservation areas. The lands owned by the St. Joe company surround federal and state lands, and the heart of its million acres lies within a key biodiversity area of the state. In 1999, the St. Joe Company sold \$170 million worth of land in Florida for conservation in three separate transactions that totaled 65,000 acres.

St. Joe has been working with the state of Florida to transfer lands of key ecological or recreational value to the state. TNC is partnering on these deals, by optioning the properties up for sale and assigning that option to the state. The state accepts those options in about 98-99% of the cases. The St. Joe Company, in return, receives tax benefits, achieves watershed protection, and increases the value of adjoining lands. The company has benefited both by having an internal division to handle conservation lands transactions and by working with TNC.

⁷ Presented by George Wilson, St. Joe Company

STRATEGIES FOR EFFECTIVE LAND CONSERVATION OF DIVESTED INDUSTRIAL TIMBERLAND

With the large acreage of recent and anticipated industrial timberlands divested, effective tools and coordinated strategies are needed to address achieve forest conservation goals. A number of public and private financial mechanisms are currently available to facilitate the effective conservation of lands. Several new financial mechanisms are also being proposed that would provide additional strength for conservation strategies. Traditional tools available to the public have been mostly limited to acquisition or easements, both of which require financial resources that will begin to overwhelm the funding sources upon which conservation organizations have depended in the past.

A key feature to some of the evolving strategies is that they have involved partnerships. There has been increasing demand and support for a public role in forest conservation. There has also been a surge in land trusts that use private contributions and public partnerships to acquire high conservation-value lands. According to the Land Trust Alliance, there were approximately 1,213 land trusts in the U.S. in 1998, an increase of 63% since 1988. During that same decade, the number of acres protected by land trusts jumped up 135%, resulting in approximately 4.7 million acres of land being protected by 1998 (LTA 1998). Finally, philanthropic organizations have emerged as key players, enhancing the growing public funding and private investment. They can direct funds towards major purchases and easement acquisitions by non-profit organizations, as well as towards private investment strategies.

Forest Legacy

The Forest Legacy Program (FLP), administered by the State and Private Forestry Deputy Area of the Forest Service, was authorized in 1990 to protect private forests from conversion to non-forest uses. The program conserves resource values of forestland, emphasizing lands of regional and national significance. Conservation easements or fee-simple purchases are the methods used by the Forest Service, the states, and other partners in working to conserve land with willing landowners.

A key element of the program is its partnership aspect, both between public and private entities, as well as between federal and state agencies. States, land trusts, private forest owners, and communities serve as partners with the Forest Service to sustain a productive private land base. Participating states, territories, or local governments can use Forest Legacy grant funds to acquire land, or interests in land, and hold title in their name. Twenty-four states and territories are active in the Forest Legacy Program, including: California, Connecticut, Delaware, Hawaii, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, Montana, New Hampshire, New Jersey, New York, North Carolina, Puerto Rico, Rhode Island, South Carolina, Tennessee, Utah, Vermont, Virginia, Washington, and Wisconsin. A number of other states (Alabama, Alaska,

Colorado, Georgia, Iowa, Nebraska, New Mexico, and Pennsylvania) have developed assessment of need plans for approval or are considering beginning the planning process.

The Forest Legacy program completed over 207,000 acres in acquisition projects between 1993 and June 2001. This required over \$48.3 million in federal investment, but secured almost \$121 million in land value through the leveraging of non-federal contributions. Funding for fiscal year 2001 was almost \$60 million, a significant increase over past funding levels. The final FY 2002 budget has been approved by Congress, with funding for Forest Legacy at \$65 million.

Land and Water Conservation Fund

Created by Congress in 1964, the Land and Water Conservation Fund (LWCF) provides money for federal acquisition of lands for conservation and recreation. In addition, the LWCF is a source of matching grants to state and local governments for community recreation needs, facility improvements, and land acquisition. Lands are acquired from property owners through purchase at fair-market value or through donation. Landowners can also sell or donate easements on their property that restrict development while keeping the land in private ownership (Conservation Fund 2000).

On the federal side, 4.7 million acres have been acquired with LWCF funding, including most or all of the land in dozens of national parks. On the state side, every state and most counties have benefited from the Fund. LWCF state grants have supported the purchase and protection of 2.3 million acres of recreation land and development of nearly 27,000 recreational facilities in every state and territory.

LWCF has been funded from Outer-Continental Shelf (OCS) receipts (i.e., offshore oil and gas drilling) on a yearly basis. Although the program's authorized funding level was established at \$900 million, appropriations have never approached the authorized amount. Funding has fluctuated each year due to the fact that LWCF funding is subject to appropriations. While demand for LWCF funding has increased significantly since the Fund was developed, appropriations have not kept pace.

The 106th Congress considered legislation that would have revitalized LWCF's state and federal programs with guaranteed annual funding. The Conservation and Reinvestment Act (CARA), also known as HR 701, was proposed to "provide Outer Continental Shelf Impact Assistance to state and local governments, to amend the Land and Water Conservation Fund Act of 1965, the Urban Park and Recreation Recovery Act of 1978, and the Federal Aid in Wildlife Restoration Act to establish a fund to meet the outdoor conservation and recreation needs of the American people." The legislation was popular with both Republicans and Democrats in the House and Senate, but failed to gain the necessary support for passage. Instead, the 106th Congress passed legislation known as the Land Conservation, Preservation, and Infrastructure Improvement Act (LCPII) of 2000, which addressed many of the same issues but did not include a guarantee of annual

funding. The 107th Congress has again taken up CARA legislation, with its future still uncertain.

Conservation Easements

Conservation easements are voluntary restrictions on the use of land negotiated between a landowner and a private conservation organization or government agency. The goal of a conservation easement is to protect some aspect of the land identified as having significant conservation value. The landowner may qualify for tax benefits if certain requirements of the Internal Revenue Code are met. In particular, the easement must be permanent, must be donated rather than sold, and must conserve for the public benefit one or more of the foregoing characteristics of the land (Lindstrom 1999). The landowner, therefore, is compensated for his/her commitment to conservation, while the public obtains a lasting benefit for its investment (Best and Wayburn 2001). The title to the property stays with the landowner, and it can be sold or transferred like any other property, but the restrictions of the conservation easement stay with the title. Conservation easements typically restrict non-forest development, such as sub-division and residential building) and sometimes limit forest management activities that can harm the ecological values of the property. The USDA Forest Service's Forest Legacy program is an example of a public program that provides funding to states to purchase conservation easements from willing sellers (see Forest Legacy section above).

Tax-Exempt Bonds

A new capital source that has been proposed is the tax-exempt bond market. Tax-exempt revenue bonds would be issued by non-profit, 501 (c)(3) organizations to allow for the acquisition of forestland at low interest rates.

US Forest Capital, LP, a forestland advisory and investment services company, has developed a program titled "Community Forestry Bonds." This tool is designed to conserve working forests while respecting landowner property rights and communities' economic well-being. The *low-cost* bonds would be *revenue* bonds, backed by the revenue stream generated by the *low-impact* management of the land. The land would be owned by the private, non-profit organization.

Current language in the Internal Revenue Code (IRC) allows for the issuance of tax-exempt bonds on behalf of non-profit corporations, such as hospitals and higher education facilities. Current IRC language does not allow for the issuance of bonds by forestry-based non-profit organizations, so a change in the tax code would be necessary. Legislation has been introduced in Congress that would authorize the issuance of Community Forestry Bonds.

CONCLUSIONS AND RECOMMENDATIONS

The major trends driving the divestiture of corporate timberlands by integrated forest product companies in the United States are likely to continue for the foreseeable future.

The continuing consolidation in the US forest products industry will result in industrial timberlands that are not strategically important to the new corporate entities. These timberlands will be divested, particularly in instances where the new corporate entity is under pressure to liquidate assets to reduce debt associated with mergers and acquisitions, or where their location makes them suitable for development.

Those integrated forest products companies interested in acquiring timberlands will do so not in the US but offshore, particularly in Latin America, where lower land costs, higher growth rates, and less stringent environmental regulations result in higher rates of return. The overall effect is a shifting of capital investment in timberland out of the United States, resulting in significant divestitures of domestic timberlands.

Advances in forest technology, particularly those involving genetic engineering for increased growth rates and certain materials characteristics, will lead companies to continue concentrating investments in high-quality timberland that is best suited to intensive management of transgenic clonal varieties and other narrowly adapted tree types. Investments in less productive timberlands will decline, and much of it will be divested as scarce capital is redeployed from land to research and development.

Unless there are significant changes in corporate income tax laws, the rate of return on a given acre of US timberland will always be lower for an integrated forest products company than for a timberland investment management organization (TIMO). Rates of return for the former will continue to fall below corporate hurdle rates for investments, leading to the divestiture of timberlands, particularly if the company's converting facilities are reasonably assured of being able to purchase wood on the open market at costs lower than those associated with timberland ownership.

The amount of forestland on the market offers unprecedented opportunities for public or nonprofit acquisition of forestlands of exceptional ecological or recreational value. But this is true only if these organizations can muster the financial resources and support to take advantage of such opportunities as soon as they arise.

The sheer volume and number of timberland divestitures threatens to overwhelm the current capacity of public and nonprofit organizations to finance purchases of these lands. Conservation organizations and public agencies have struggled to raise the money necessary for several of the recent transactions, which have been in the range of 2,500 acres to 300,000 acres. A few divestitures of a combined 10-12 million acres of

industrial timberland in a matter of a few years is likely, and may dwarf the financing sources available to meet the challenges. Conservation strategies to date have been mostly opportunistic and non-strategic, with organizations and agencies scrambling to respond to timberland divestitures as they arise with no apparent sense of priorities.

Given that land conservation organizations will not be able to acquire every acre of timberland that is divested, states and conservation organizations need to develop priorities to determine which pieces of land should be targeted for acquisition or easement. Otherwise, funds simply will not be there when they are truly needed. The Forest Legacy program provides states with the structure for states to set these priorities.

The task of setting priorities for acquisition is made extremely difficult, however, by the unpredictability of what land will be offered for sale and when. A corporation's intent to sell a large area of timberland is typically held in close confidence until the decision is actually made. Corporations are usually interested in completing a transaction much quicker than conservation organizations or agencies can respond with the necessary funds. Furthermore, if an interested land conservation organization has just taken on a major challenge to purchase a tract of moderate conservation value when another tract of truly outstanding conservation value comes on the market, the land conservation organization is further overwhelmed and the outcome is less than optimal for use of scarce conservation dollars.

The availability of short-term financing that allows nonprofit organizations to purchase these lands, and then resell them with a conservation easement in place, alleviates this problem to some degree. Depending on geographic location, however, the development rights often represent the major share of the land's value. This means that proceeds from the resale of lands encumbered by conservation easements may be too little to make the transaction feasible.

The increasing importance of TIMOs and institutional timberland investors may offer new opportunities to address these kinds of challenges.

Such organizations often have sufficient capital at hand to respond quickly to new offerings of timberland on the market. Through their investments in these lands, they can play a "stop-gap role" in conserving divested industrial timberlands, often maintaining them in original form as large, contiguous tracts. This can provide time for public and nonprofit land conservation organizations to muster the financial resources to then acquire portions of those lands that are of the highest conservation value.

The downside to this scenario is if a conservation organization or agency purchases land from a TIMO after the initial sale, there are increased costs to the TIMO that get passed along in the secondary sale. The conservation organizations are therefore paying "retail" value for that land, which may represent a significant increase over the initial per acre sale price.

It is also important to keep in mind that the primary objective of the TIMOs is to maximize return for their investors. To the extent that management of the forestlands during the TIMOs' ownership is consistent with conservation purposes, all can work out well in the end. But if the highest and best use of these lands is development, or even intensive forest management that is not consistent with protecting biological diversity and other ecological values, then much of the conservation value of the tract may be lost.

One solution to this problem would be for a TIMO and a land conservation organization to respond simultaneously to the new offer of a tract of industrial timberland. Quite often, there are areas within a tract that are relatively unproductive for timber purposes, such as wetlands or steep uplands, that are of much higher value for conservation. From an investment perspective, a TIMO will have little to gain from owning such areas. If a land conservation organization is in a position to partner with the TIMO on a joint offer for the tract, the lands of high conservation value can often be obtained by the conservation organization at a very reasonable price, and the TIMO does not have to purchase areas of the tract in which they have no material interest.

Ultimately, the land conservation organizations and government agencies will need significantly greater financial resources if they are going to address even the highest conservation priorities arising from the growing number of industrial timberland divestitures.

At best, working with the TIMOs can only buy time, preventing these lands from immediately being acquired by entities interested primarily in uses that would result in fragmentation or conversion to non-forest land uses.

Support is needed for the kind of reinforcements to the Land and Water Conservation Fund and to Forest Legacy that were considered in the Conservation and Restoration Act (CARA) of the 106th Congress, which would have offered guarantees of funding. In addition, the 2002 Farm Bill, currently being considered by Congress, presents a valuable vehicle to address the chronic under-funding of public programs that are designed to meet the needs of private forestlands.

Private investment also provides attractive sources of funding, and should be encouraged and supported through public policies. Furthermore, policies that would facilitate public/private partnerships would enhance conservation efforts, as these partnerships help leverage dollars and generate political and public support.

Whatever opinions might exist regarding the forest management practices that have prevailed on industrial timberlands, these lands have provided enormously important public benefits. These generally large, contiguous tracts of forest have provided wildlife habitat, protected watersheds, and offered opportunities for recreation. These benefits have greatly supplemented – and mitigated the pressure on – public forestlands around the country. The globalization of the forestry sector has brought new pressures on the forest products industry in the United States, and the trend towards large-scale divestiture

of these lands will continue. If the public values these lands have provided historically are to be maintained, then public funding and support is critically needed to conserve these lands and ensure their current and future stewardship.

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Appendix A

**Industrial Timberland Divestitures and Investments:
Opportunities and Challenges in Forestland Conservation
May 22, 2000
Resources and Conservation Center, Washington, DC**

AGENDA

Welcome and Introduction

Al Sample and Nadine Block, *Pinchot Institute*

Industrial Timberland Divestitures: Exploration of factors influencing divestitures and analysis of future trends

Bruce Kirk, *BK Associates*

Timberland Investment Management Organizations (TIMOs): Perspectives on decision-making, forest management, and implications of ownership

Mason Browne, *UBS Brinson*

Charley Tarver, *Forest Investment Associates*

Chip Collins, *The Forestland Group*

Clark Binkley, *Hancock Timber Resource Group*

Land Transaction Case Studies: Opportunities and challenges in forestland conservation

- 1) The Nature Conservancy (TNC) purchase of International Paper land in Maine

Bill Ginn, *The Nature Conservancy (Maine chapter)*

- 2) Partnership purchase of Champion lands in NY

Chip Collins, *The Forestland Group*

- 3) Acquisition of Plum Creek lands in Montana by the Trust for Public Lands

Lesley Kane-Szynal, *Trust for Public Land*

- 4) The St. Joe Company's conservation partnerships in Florida

George Wilson, *The St. Joe Company*

Facilitated Discussion: Strategies for public agencies, non-profit organizations, and timberland investors to coordinate more effectively in land conservation and forest stewardship

Peter Stein, *Lyme Timber Company*

Ted Beauvais, *USDA Forest Service*

Phil Bryce, *New Hampshire Division of Forests and Lands*

Russ Shay, *Land Trust Alliance*

Jane Difley, *Society for the Protection of New Hampshire Forests*

Tom Tuchmann, *US Forest Capital*

Summary/Wrap up

Al Sample and Nadine Block

Appendix B

Symposium Speakers

Ted Beauvais

Program Leader, USDA Forest Service, Cooperative Forestry

From 1992 to the present, Ted Beauvais has worked as a program leader within the Cooperative Forestry staff at the USDA Forest Service's national office with responsibility for the Forest Legacy Program, other landowner assistance programs, forest taxation, agroforestry, and watershed management. He has been with the Forest Service since 1978.

Clark Binkley

Chief Investment Officer, Hancock Timber Resource Group

Clark Binkley leads the Hancock Timber Resource Group's research, client account management, and business development efforts. In this role, he is responsible for all decisions surrounding investor portfolio strategies. Immediately prior to joining HTRG, Binkley was Dean of the Faculty of Forestry at the University of British Columbia. He has served on the boards of directors of several publicly traded forest products companies and private timberland ventures and has consulted to numerous forest products companies, governmental agencies and private conservation groups. He has written more than 100 books and articles on forest economics, and is known worldwide for his research on timberland investments.

Mason Browne

Director, Timber Investments, UBS Brinson

Mason Browne is responsible for U.S. investment performance at UBS Brinson. In this capacity, he works with U.S. fund managers, forestry professionals and the research and analysis group to maximize investment performance of existing investment funds. He also develops and implements regional timberland acquisition strategies. Prior to joining the firm, Browne was Vice President of acquisitions for Timberland Growth Corporation and assisted in their efforts to form a timber REIT. Prior to this, he was Chief Forester and Manager of Stewardship for the Hancock Timber Resource Group, with responsibilities for management of 2.5 million acres throughout the U.S. and Canada. He has over 22 years of acquisition, management, disposition, stewardship and communication experience.

Phil Bryce

Director, New Hampshire Division of Forests and Lands

Phil Bryce currently serves as state forester for the state of New Hampshire. Prior to state government, Bryce spent 18 years working in New Hampshire in the forest products industry. Most recently he was responsible for timber harvesting and forest management activities on 95,000 acres of forestland associated with the James River/Crown Vantage pulp and paper mills in Berlin, NH as chief forester. In addition, he negotiated land sales and conservation easements with state and federal agencies to create the Umbagog Lake National Wildlife Refuge.

Chip Collins**Managing Director, The Forestland Group, LLC**

Chip Collins is one of several founders of The Forestland Group, LLC, where he currently serves on the management and investment committees and directs business development activities. He is a former Vice President of Winslow Management Company, a Boston based investment management firm. From 1986-1992, Collins served as the first Executive Director of the National Fish and Wildlife Foundation, where he oversaw investments in more than 1.5 million acres of land conservation and restoration projects.

Jane Difley**President/Forester, Society for the Protection of New Hampshire Forests**

Jane Difley was named President/Forester of the Society for the Protection of New Hampshire Forests in 1996. She is the fourth President/Forester to lead the Society since it was founded in 1901. Prior to coming to the Society, she was the Executive Director of the Vermont Natural Resources Council, and spent 10 years working with the American Forest Foundation where she was named Vice President of Forestry Programs and National Director of the American Tree Farm system. During that time, Difley was elected President of the Society of American Foresters; she was the first woman to be elected to this post in the organization's history.

Bill Ginn**The Nature Conservancy**

Bill Ginn has a joint appointment to the Nature Conservancy working both for the Asia Pacific Region and the Eastern Region of the US on Forestry issues. Since joining the conservancy five years ago he has spearheaded TNC's work in Tropical Forests in Papua New Guinea. Since last year he has also been responsible for the Northern Forest Conservation Program covering NY, VT, NH and ME.

Lesley Kane-Szynal**Vice President, Federal Affairs, Trust for Public Land**

Lesley Kane-Szynal joined the Trust for Public Land (TPL) seven years ago and is responsible for managing its Federal Affairs office in Washington, DC. In addition to managing a portfolio of land conservation projects each year, Kane-Szynal was instrumental in developing new funding sources through EPA and has worked on increasing funding for the Land and Water Conservation Fund (LWCF). Prior to coming to TPL, she served as Senior Legislative Assistant for Senator Warren Rudman (R-NH), handling environmental and appropriations issues. Before her work in Congress, Kane-Szynal worked for Oppenheimer and Co. Inc. in its Corporate Bond and Public Finance Department.

Bruce Kirk**Managing Director, BK Associates**

Bruce Kirk is an independent investment consultant based in Salem, CT. He has almost forty years of experience as an Investment Analyst, as well as an Investment Banker, with

several Wall Street firms including Swiss Bank Corp., S. G. Warburg & Co., Goldman Sachs & Co. and Wertheim & Co. His experience has been focused almost entirely on the Forest Products industry both in North America and internationally.

Russ Shay

Director of Public Policy, Land Trust Alliance

Russell Shay is the director of public policy for the Land Trust Alliance. Prior to coming to LTA in 1998, he was an independent lobbyist and consultant for conservation organizations including the Appalachian Mountain Club and the Greater Yellowstone Coalition. From 1993-1997 he was senior policy advisor to The Nature Conservancy, working with Congress to secure funding for conservation projects and building partnerships between TNC and federal agencies. He served as senior legislative aide to Senator Timothy Wirth (D-CO) and as professional staff to the House Merchant Marine and Fisheries Committee and the House Committee on Interior and Insular Affairs.

Peter Stein

General Partner, The Lyme Timber Company

Peter Stein is a General Partner at The Lyme Timber Company in Lyme, New Hampshire, and is responsible for the development and structuring of large-scale timberland purchases and limited development projects in cooperation with regional and national land conservation organizations. He also advises on conservation projects with foundations, and family and corporate landowners. Prior to joining the Company in 1990, Stein was Senior Vice-President of the Trust for Public Land, where he directed their conservation real estate acquisition activities in the Northeast and Midwest.

Charley Tarver

President, Chair of Investment and Management Committees, Forest Investment Associates

Charley Tarver pioneered the timberland investment business for tax-exempt institutions, beginning with the development of the country's first pooled timberland investment fund while employed at a major Atlanta bank. He has been in the timberland investment business since 1979 and has acquired and managed many thousands of acres of timberland during this period. Charley is a registered forester with experience in banking and finance. He has authored forestry investment and appraisal articles which have appeared in Pension World, The Southern Banker, The Association of Consulting Foresters Journal and The Journal of Review Appraisers.

Tom Tuchmann

Principle & Director of Resource Management & Environmental Affairs, U S Forest Capital, LP

Tom Tuchmann is a Principle and Director of Resource Management & Environmental Affairs with U S Forest Capital, LP, a financial and advisory services company specializing in natural resource sectors. In this role, Tuchmann is charged with business development, advisory services and advancing the company's transaction based business with a specialization on forest management, environmental compliance, and government relations. Tuchmann was formerly the Western Director and Special Assistant to the

Secretary of Agriculture; prior to that, he served as the Director of the U.S. Office of Forestry and Economic Development. Tuchmann has also served as lead staff for the Senate Agriculture Committee where numerous statutes -- regarding Northern Forest Lands, state and private forestry and annual appropriations -- that he conceived and drafted were signed into law.

George Willson

Vice President, Conservation Lands Program, The St. Joe Company

In his current position with the St. Joe Company, George Willson directs conservation land sales, environmental permitting issues, and mitigation efforts on the company's one million-acre land base. Prior to this, he spent 15 years as the Land Acquisition Director at the Florida Chapter of the Nature Conservancy, and eight years with the Florida Department of Environmental Protection. Willson has also served as a consultant to landowners in Florida and Georgia on conservation opportunities for family and corporate lands.

Appendix C

Symposium Participants

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