



COMPANY OVERVIEW AND
INVESTMENT PERSPECTIVES



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OVERVIEW

IWC was founded in 1991 and has vast experience in advising on and managing private timberland investment programmes for institutional investors. IWC is headquartered in Copenhagen, Denmark, with additional investment offices in Singapore. As a leading gatekeeper and multi-manager in the private timberland market, we provide advice on and oversee a timberland investment portfolio exceeding USD 2.5 billion. We also represent institutional investors who actively invest in private timberland on an ongoing basis. IWC is an independent company majority owned by its employees and board members.

The following distinguishes IWC and contributes to the ability to service our clients:

INTERNATIONAL FORESTRY EXPERTISE

Many of IWC's investment professionals have forestry backgrounds.

GLOBAL EXPERIENCE

IWC manages portfolio investments across six continents and 19 countries.

INFORMATION QUALITY

IWC's timberland investment portfolio provides access to in-depth information covering 20% of the institutional timberland universe. This means excellent access to timberland market information.

INVESTMENT KNOWLEDGE

Between January 2010 and June 2012, IWC has screened over 100 timberland investment opportunities, with 40 advancing to further due diligence and 12 gaining investment approval.

EXTENSIVE NETWORK

By meeting regularly with managers and forestry professionals, IWC has developed industry-wide and in-country experience of investment regions.

RESEARCH RESOURCES

IWC dedicates substantial resources to timberland investment research, drawing on investment professionals with broad forestry investment expertise. IWC underpins the research process through its far-reaching network, access to private funds data and information compiled while monitoring existing investments.



THE MANAGING DIRECTOR'S INTRODUCTION

In a challenging investment environment marked by an unpredictable economic outlook, it is encouraging to see that institutional investors increasingly appreciate private timberland as a real asset class. IWC has provided institutional investors with services in the private timberland universe for over 20 years. Initially, this asset class was primarily targeted by U.S. institutions looking to invest in domestic timberland, but investor interest among institutions in Europe and Oceania is now growing. Timberland managers are developing their platforms to meet increasingly rigorous investor requirements. The challenges this poses can be seen, for example, in the establishment of new investment regions, the entrance of new managers on the scene, and a sharper focus on highly customised investment structures.

IWC continuously develops its platform to meet the long-term needs of institutional timberland investors desiring to allocate capital to private timberland or further develop an existing investment programme. Irrespective of the preferred geographical investment region, IWC's platform offers relevant opportunities not only for a broad range of institutional investors looking to make a single allocation to the asset class, but also for those wanting to enlarge their programmes by entering new investment regions.

In this publication IWC shares some of its experience and addresses issues that should give investors and managers in the private timberland universe food for thought. Topics covered include:

- p.9** The recent considerations, experience and expectations of an institutional investor who has developed a timberland investment programme for more than a decade
- p.12** How IWC's investment process and resources are organised to identify investment opportunities
- p.16** Observations on fast-growing plantation management, illustrated with an account from Brazil
- p.22** Private timberland trends and investment themes.

IWC realises that investor preferences and requirements differ. For this reason, IWC's platform has the flexibility to support investors through the various stages of their investment considerations.

By continually investing in people and infrastructure, IWC is well positioned to respond to a broad range of investment requirements and considerations.

Otto Reventlow
Managing Director



INTERVIEW WITH PAUL BRÜNICH-OLSEN
CEO AT LÆRERNES PENSION



THE EVOLUTION OF TIMBERLAND INVESTMENTS AND CONSIDERATIONS AT LÆRERNES PENSION

Private timberland has real asset class characteristics that are unique. Biological growth, meaning the growth in volume and value over time, and harvest flexibility make it possible to adjust harvest volume according to timber markets. Harvests can be increased in strong markets and decreased in weaker markets, while timberland investors continue to benefit from appreciation. These attributes have contributed to attractive risk-adjusted returns and provide clear portfolio benefits to institutional investors.

Some large Nordic institutions showed an early interest in timberland. Lærernes Pension, the Danish pension fund for private and public school teachers, was among the first to move into the asset class, with Dr. Paul Brünich-Olsen, CEO, spearheading the timberland investment on its behalf. This article outlines Lærernes Pension's approach to this kind of investment.

On the advice of IWC, Lærernes Pension initiated its timberland programme in 1999, investing in the southern US and Oceania. Today, 6% of the pension fund assets, or roughly half a billion USD, is invested in timberland, distributed between 19 private timberland fund investments.

Timberland was one of the first alternative asset classes in which Lærernes Pension invested. A low correlation with other investment instruments and attractive long-term return prospects are two key appeals of this asset class. Looking back over 13 years of investing in private timberland, Paul Brünich-Olsen feels that the asset class has delivered as a portfolio stabiliser, offering steady returns in light of the economic environment. Although not a major requirement, the timberland portfolio has also continually increased its cash distribution as it matures. Quick to point out the illiquidity of the asset class, Lærernes Pension realises the value of adding tim-

berland to its portfolio through reductions in its Value at Risk (VAR).

Through certification schemes, timberland offers the potential for third-party verification of sustainable management. However, Lærernes Pension did not consider the 'green' investment factor a prime driver when deciding to make a timberland allocation. Paul Brünich-Olsen emphasises that timberland investment is strictly business, and the case for investment must stand on the characteristics of the asset class alone.

In terms of implementing the timberland programme, Paul Brünich-Olsen stresses that without IWC, Lærernes Pension would not have invested in timberland. Although a reasonably large investor, the pension fund could not have replicated in-house the breadth and depth of global timberland investment expertise that IWC has established.

Portfolio diversification has been central to IWC's approach to Lærernes Pension's timberland investments. Its portfolio is diversified across five continents, spanning various forestry regimes, species and political investment environments. Paul Brüniche-Olsen recognises the diversification benefits, as evidenced through the stronger performance of investment funds focused outside the US, which compensates for the recent weaker performance seen in some of the US investments.

In answer to how investors should implement timberland investment programmes, Paul Brüniche-Olsen says the size and resources of the investor and the target allocation to timberland are key. For a smaller investor, a multi-manager product is the desired route, because it provides some early diversification and stability from the outset, while enabling the investor to learn more about the asset class.


A larger investor should start in 'core' markets such as the southern US or Oceania. Furthermore, as in other private asset classes, timberland has a J curve, which makes access to good investment opportunities and a reasonable capital deployment pace important. Paul Brüniche-Olsen believes that Lærernes Pension has benefitted substantially from IWC's access to investment opportunities that have facilitated the fund's ability to deploy capital.

Paul Brüniche-Olsen makes another important point that, as in other asset classes, timberland encompasses investments with different risk and return profiles. For instance, a 'core' type of asset is an investment in an established pine plantation in Oceania, while an investment in a teak greenfield plantation establishment in South-East Asia is more opportunistic. When it comes to the risk of investing in timberland specifically outside

the US, Paul Brüniche-Olsen says one should bear in mind that the US also has country risk. This type of risk can be further mitigated by diversification and careful due diligence of investment managers and regions. Due diligence is a particular area where Lærernes Pension feels that IWC's input adds extra comfort to the investment decision-making process.

Comparing private timberland with other alternative asset classes, Paul Brüniche-Olsen explains that some competition for capital exists with, for instance, private equity. Allocations to timberland are favoured because of their diversification characteristics. The fee structure in private timberland is also lower than seen in private equity.

Today, Lærernes Pension has a sizeable timberland programme with a mature portfolio. Like some other large, long-term investors in the asset class, the

pension fund is now seeking to further refine its portfolio by complementing it with co-investment opportunities and opportunistically exploring secondary investment opportunities. As for the development in the timberland asset class, Paul Brüniche-Olsen believes that the asset class is gaining scope for more standardisation as it matures. IWC's proactive call for regular third-party appraisals of assets and reporting transparency has to some extent enabled the industry to mature and improved reporting. He also expects to see more investment opportunities in the biomass field and believes that as investors grow more comfortable with less developed markets in other asset classes, interest in new timberland markets will increase. Lærernes Pension expects to continue investing in private timberland and can envision timberland's comprising a significantly larger portion of the overall portfolio over the coming years. 



TIMBERLAND IS STRICTLY BUSINESS

LÆRERNES PENSION

ESTABLISHED AS A LIFE
INSURANCE COMPANY IN 1993

130,000 MEMBERS (PUBLIC AND
PRIVATE SCHOOL TEACHERS)

ASSETS UNDER MANAGEMENT
(END 2011): DKK 47 BILLION

YEARLY CONTRIBUTIONS (2011):
DKK 4 BILLION

DEFINED CONTRIBUTION,
ONE FUND, NO INDIVIDUAL
INVESTMENT DECISIONS



IWC INVESTMENT PROCESS AND RESEARCH RESOURCES



This article explains how the IWC investment process works. The due diligence team is responsible for coordinating the sourcing as well as the manager and investment selection process, from initially screening potential investment opportunities through performing further due diligence of those investments deemed attractive to making the final investment recommendation to IWC's investment committee.

Finding attractive investments requires thorough understanding of clients investment objectives. To ensure that IWC has a full understanding of developments in the market place, the company engages in ongoing dialogue with clients and maintains frequent contact with investment managers.

By actively advising on timberland investments over a long period of time, IWC has developed strong sourcing capabilities. The company benefits from strong relationships with established managers and is also approached by professionals seeking to establish first-time funds or promote specific investment opportunities. IWC screens some 40 investment opportunities annually. The due diligence team uses proprietary questionnaires and checklists and other procedures to ensure a structured and methodical review process. Furthermore, IWC logs key information about each investment opportunity and investment manager into its proprietary database. This not only guarantees a streamlined due diligence process, but also allows IWC to compare assumptions, terms, etc. across opportunities. In order to assess the attractiveness of an investment opportunity, IWC has a formalised rating system of scoring all relevant factors.

A due diligence manager and at least one investment forester are assigned to each due diligence process. This team meets with the investment manager to discuss the strategy, team composition, terms, etc., as well as participates in due diligence tours to assess forest assets, infrastructure and processing facilities and to get a first-hand impression of the local management team and their thoughts on implementing the investment strategy.




SINCE 2010, IWC HAS SCREENED MORE THAN 100 TIMBERLAND INVESTMENT OPPORTUNITIES, WITH 40 ADVANCING TO FURTHER DUE DILIGENCE AND 12 GAINING INVESTMENT APPROVAL



IWC's investment foresters focus on specific timberland regions such as South America, Oceania, US and Europe. This enables investment foresters to gain a comprehensive understanding of the key market drivers for each region. They develop their expertise by discussing investment opportunities, participating in due diligence tours, continually monitoring assets and performing extensive annual reviews of appraisals. The review of financial reports from existing investments, participation in property visits, due diligence tours and market research preparation also boost regional and in-country understanding. The goal of the appraisal review is to determine whether a specific investment is over- or undervalued. If an appraisal is found to be based on assumptions substantially more optimistic than other appraisals in the same region, the extent to which the manager believes that value can be realised will be considered.

IWC has an investment committee consisting of three senior IWC investment professionals to whom all investment opportunities are presented. The investment committee challenges the investment propositions, thus giving the due diligence team valuable feedback from key investment professionals. IWC's participation in timberland and forest product events, fund advisory boards and due diligence tours provides the firm with an excellent network of institutional timberland investors. Such network enables IWC to discuss trends, investment views and more specific investment considerations on an informal basis.

The investment process enables IWC to meet a wide variety of investment requirements on behalf of its clients. 



BRAZIL

STATE-OF-THE-ART PLANTATION MANAGEMENT

Many timberland investors over time have undoubtedly pondered Mark Twain's legendary quote: 'Buy land, they're not making it anymore'. Timberland investment professionals often discuss whether to apply real land appreciation in return calculations or simply consider it a potential upside. A more tangible return driver to assess is the income potential from using a given piece of land over time. Optimising the economic output from a biological asset requires skilled managers and investment professionals with profound experience in biological assets and the associated risks and opportunities present in a given time and market.

IWC FORESTERS STUDY BEST-PRACTICE PLANTATION MANAGEMENT IN BRAZIL

IWC's timberland knowledge draws on broad exposure to global timberland investment opportunities. IWC has obtained this exposure both from overseeing and investing in funds through timberland investment managers and from the company's experience gained through managing direct investments in established and emerging timberland markets. IWC's investment professionals travel the world over to assess timberland investment opportunities and develop existing timberland investments on behalf of IWC clients.

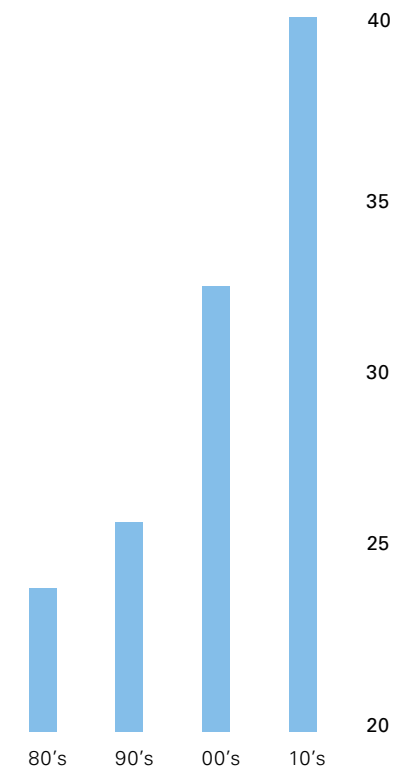
In March 2012 IWC investment professionals convened in Brazil for a management tour of eucalyptus plantations, visiting the forest operations of leading pulp and paper producers and a large scale charcoal and steel producer. The purpose was to improve understanding of the state-of-the-art establishment and management of plantations in the world's most progressive plantation development region, Brazil.

INTENSIVE CLONAL BREED- ING PROGRAMMES IMPROVE YIELDS AND FIBRE QUALITY

Driven by the multi-billion dollar pulp and paper industries' initiative to take advantage of favourable growth conditions; in recent years large-scale eucalyptus plantations have been established in Brazil, a country that has evolved into the epicentre of best-practice plantation management and yield improvements. The intensive clonal breeding programmes have brought impressive improvements in mean annual growth rates of Brazilian plantation eucalyptus, rising from an average among ABRAF¹ members of 24m³/ha/year in the 1980s to 40m³/ha/year in 2011.

The most advanced clonal breeding programmes are focused on developing faster-growing clones that can tolerate pests, drought and frost and have high cellulose fibre quality and low lignin content for the pulp industry. The water balance and climatic conditions vary among the plantation regions in Brazil, for which reason the focus of clonal breeding programmes differs in order to develop clones optimally adapted to the specific site.

¹ Brazilian Association of Forest Plantation Owners



EUCALYPTUS PRODUCTIVITY IMPROVEMENTS IN BRAZIL

Development in Mean Annual Increment ($m^3/ha/year$) of eucalyptus plantations in Brazil based on ABRAF member reports, which cover more than 50% of the total eucalyptus area in Brazil².

² ABRAF Yearbook 2012, BRACELPA, 03/2012

CONTINUED YIELD IMPROVEMENTS GOING FORWARD

In some regions of Brazil, under optimal planting conditions well-adapted clones can produce as much as 65–70 m³/ha/year in a seven-year rotation, even without the use of genetically modified (GM) clonal material. By comparison, this annual increment corresponds to 10–15 times the annual growth of European birch, which many Scandinavian hardwood pulp mills rely on.

SUPERIOR CLONES REDUCE ROTATION LENGTH IN EUCALYPTUS PLANTATIONS

A remarkable result of the intensive clonal breeding programmes is the shorter rotation length for eucalyptus plantations in Brazil. The speed at which new superior clones are made available in commercial quantities has made it economically viable to replant more frequently compared to the 18–25-year rotations that were common practice just a few decades ago. Today, most plantation owners have reduced rotation length to about seven years. Longer rotations, however, still apply to plantations focused on producing saw logs, where larger dimensions are preferred.

It became evident from IWC's meeting with a Brazilian biotech company that the yield potential is far from fully explored. GM clones could be ready for commercial use in three to five years and produce as much as 100 m³/ha/year under optimal planting conditions. Furthermore, the GM technique allows the technical and chemical fibre properties to be altered. A current example of this is the emerging bioenergy sector in north-east Brazil, which focuses on wood pellet exports to Europe. Special GM bioenergy clones with high lignin content are being developed, which in turn increases the calorific value of the pellets and thus reduces the logistic cost per GJ transported across the Atlantic Ocean.



Today, the FSC³ does not allow the use of GM material, a fact that currently prevents many large-scale industries from using transgenic clones. IWC will continue to monitor the FSC's position on the matter and its impact on how industry players weigh their FSC participation against the potential economic gains from using GM material in the future.



PUTTING KNOW-HOW TO WORK

IWC believes staying on top of best-management practices is a vital endeavour, its being crucial to deliver informed investment decisions and advice to investors. IWC's understanding of eucalyptus plantation management will bolster its due diligence process as well as provide a benchmark for evaluating investment opportunities. This expertise will also facilitate the transfer of best practice in the management of IWC's direct investments, focusing on large-scale plantation establishment in frontier markets such as Panama, Mozambique, Uganda, and Cambodia.

Logs and fibre, derived from plantation timberland, will increasingly satisfy demand from the forest product industry. In addition to South America, a rising number of plantations will be established in emerging timberland investment regions characterised by favourable growth conditions, lower land prices and operating costs, such as Central America, Asia and Africa. Assessing investment opportunities and managers' operating capabilities will require a solid understanding of the development in plantation management of key species.

³ Forest Stewardship Council (FSC) is an international not for-profit, multi-stakeholder organisation established in 1993 to promote responsible management of the world's forests.



TIMBERLAND INVESTMENT OUTLOOK

The private timberland investment universe has evolved substantially since the early 1980s. During the decade, the private timberland asset class increasingly attracted institutional investors because of its diversification and real asset characteristics. From the early 1990s, timberland investment management organisations (TIMOs) acquired timberland assets divested by vertically integrated forest product companies in the US. The TIMOs represented institutional capital, entrusted with managing timberland investments on behalf of institutional investors. Investments outside the US also took off early during that decade. The early 2000s saw continued institutional interest in timberland investments, and some investors broadened their investment scope to include investments also outside the US. As early as 1998, IWC advised a European institution on making its first commitment to a private timberland fund aimed at South America.

IWC is seeing rising investor interest in allocating to private timberland, also as part of natural resource or real asset allocations. The US remains a prominent part of the investment radar screen, although the appetite for and comfort with non-US timberland investments is growing.

INVESTMENT UNIVERSE TRENDS

This article outlines some key trends that IWC is seeing in the timberland investment universe and discusses some of the investment themes expected to emerge over the next few years.

In a low-yielding and volatile economic environment with an uncertain outlook, timberland is becoming increasingly validated as a compelling diversifier with proven real asset characteristics. This draws new investors into the asset class. IWC is also seeing investors with an existing allocation to the asset class expend resources on endeavours to assess how to further develop their private timberland investment programmes.

Investors want the real asset characteristics of private timberland, which means being exposed to the actual timberland or source of biological growth. Downstream exposure to the forest-product value chain is generally considered an unviable option due to its more volatile operating characteristics. Investors naturally find the ability to document that investments are managed sustainably of key importance. The ability to access timberland through cost- and tax-efficient investment structures also figures in

early considerations. Investors new to the asset class usually access it through a manager or a multi-manager route. More experienced investors or investors set to make larger allocations are increasingly looking to complement fund investments with co-investments, club deals and more direct investment structures such as separate accounts. This helps make timberland exposure more direct and gives better control over the pace of capital deployment.

The evolution of the timberland investment universe offers ample opportunities for both new and established investors to obtain preferred access routes to private timberland. In IWC's experience, multi-regional timberland portfolios enhance end-market access by broadening the local sources of demand for forest products. Investors can also benefit from improved access to developing timberland markets. In the following section, IWC outlines some broader and longer-term investment trends.

INVESTMENT TRENDS

The US will continue to be a key market for investors that establish timberland programmes. Depending on target allocation and the risk-adjusted return targets, an allocation to the US may for some investors be sufficient to gain the relevant exposure.

The slower transaction environment in the US, could enable investors acting as liquidity providers to access attractively priced timberland assets, thus facilitating capital deployment and mitigating the blind pool risk. Care should be taken to avoid highly competitive auctions fuelled by significant levels of raised, but as-yet-uninvested capital.

The failed management investment schemes (MIS) in **Australia** demonstrate how unsuited the timberland asset class usually is for highly levered and tax-driven investment structures. Over the next few years, attractively priced investment opportunities should appear in the market, generated by motivated sellers and driven by deleveraging and the restrictions of failed MIS schemes, state and corporate divestments.

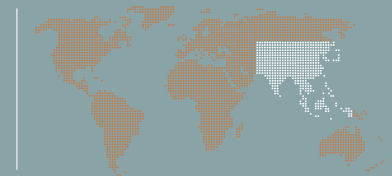
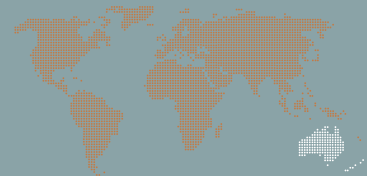
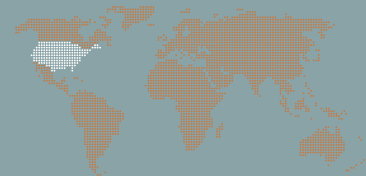
In **South America**, the expansion of pulp capacity and charcoal production will provide growing incentives to establish new plantations. Plantations dedicated to biomass production will add to the set of opportunities. Southern Brazil is now a well-established and more mature timberland region; a fact evidenced by recent years' development in return prospects. From a timberland investment perspective, the northern parts of Brazil and less mature South American countries are in various stages of the development as seen in southern parts of Brazil. Attractive biological growth and lower land prices characterise these regions, which to various extents are also poised to benefit from an incremental increase in industry capacity. Investors will increasingly consider whether these compelling characteristics compensate for a less developed infrastructure, less visibility on industry demand and, occasionally, additional country risk.



IWC HAS OFFICES IN
EUROPE AND ASIA

South-East Asia, with its proximity to key demand in China and India, benefits from lower labour costs and promising growth rates. Combined with capital scarcity and attractive land prices, this should offer opportunities to develop timberland assets that satisfy expanding industry demand.

Eastern Europe and Africa are less mature timberland investment regions. Fragmented ownership and potentially undervalued resources coupled with a scarcity of well-developed forestry managers are characteristic for both regions. Both regions could be of interest in the long run and require a high level of understanding as regards the capabilities of managers targeting these regions.





INVESTMENT SELECTION CONSIDERATIONS


Investor considerations, including timberland investment experience, resources and risk-adjusted return profiles, impact which investment themes and regions investors prioritise. Whichever timberland investment region is chosen, IWC believes that timberland markets remain characterised by fragmentation and widely fluctuating levels of available information. Investment manager capabilities and

resources vary, and the structured selection of managers and investments can substantially improve the risk-adjusted return from timberland investments. In addition to traditional and important manager selection criteria, the following factors can also be applied and cover some important investment and operating decisions relevant when timberland investment managers and operators are assessed.

- Securing a competitive acquisition price is vital to 'lock in' an attractive return potential. Investors need to ensure that managers possess a demonstrated edge and clear thinking in relation to sourcing and acquiring assets.
- Ongoing asset management and actively striving to improve the net cash flow during the holding period can significantly contribute to the ongoing returns and improve the overall attractiveness of the assets. It is important to assess a manager's ability to improve cash flow by improving volume, securing above average forest product prices and optimising operating costs, among other things.
- Securing successful divestment depends on market timing and on the successful development and positioning of the asset during the holding period. The ability to develop assets, including certification, local infrastructure improvements and the creation of institutional scale, can all contribute to successful divestments.

Over the last five years, both established North American TIMOs and, increasingly also, new managers based in their target investment regions have presented a growing number of non-US investment opportunities. Despite a slowdown in capital raising, IWC is seeing the appetite for non-US investment opportunities climb incrementally. IWC believes non-US strategies merit consideration, for example, because they enhance end-market access and can capitalise on the local demand for forest products.

It needs to be considered whether non-US timberland strategies should be accessed through locally based managers or managers with a broader footprint. Investors will also have to assess how to gain access to suitable investment structures.

Although resources, experience and risk-adjusted return requirements influence choices, due diligence and monitoring will become more complex. Combining preferred access to private timberland investment opportunities and information with a structured investment process, IWC is well equipped to implement and develop private timberland investment programmes ranging from core investments in proven regions to more opportunistic investments in frontier regions. 





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