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Timberland

Investment Case

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Opportunity

Introduction

This paper looks at what timberland investment is, how it can enhance portfolio returns whilst providing diversification, and whether pension scheme trustees should consider such an investment.

Timberland investments comprise a diverse range of assets from softwood forests in the southeastern United States to eucalyptus plantations in Brazil and South Africa.

Timberland funds buy and manage forestland with the aim to maximise harvest yields that are then sold to the construction and paper/soft goods industries. At the end of the fund's life the land is sold.

The asset class has historically produced a steady stream of returns with low correlation to traditional asset classes.

In this paper we present the background to timberland, the potential benefits and risks involved, as well as how pension schemes can incorporate timberland into their portfolios.

Origins of the Market

- Timberland was historically owned by integrated forest product companies such as the international paper conglomerates in the US. Changes to taxes and pressure from shareholders to increase efficiency effectively forced these companies to sell their timberland and focus on their core operation of producing paper and paper related products.
- This led to a significant increase in the size of investable assets.
  - For first movers in the investment industry, this presented an attractive opportunity to purchase assets at below their fair value.
- Between 2005 and 2009, an additional $15bn[d] of assets were sold in the market. Timberland Investment Management Organisations ("TIMOs") acquired most of these assets.

Current Opportunity

- While the investable universe remains small relative to traditional asset classes, the opportunity in timberland is supported by several supply and demand factors:
  - Expectations are that the housing market in the US is in the early stages of recovery. As a major consumer of timberland products, the recovery could lead to an increase in demand which would put upward pressure on timber prices. Forecasts predict that housing starts in the US will increase from c.800k p.a. in 2012 to c.1.7m p.a. in 2017[a]. This is important since a large portion of timber assets are located in the US;
  - Expected increases in demand for timber from Europe and emerging market economies such as China (predicted increase in imports of c.50% between 2010 and 2015[b]) arising from population growth, housing market recoveries, and increased use of timber as a factor in the production process;
  - Reduced supply from Canada, a major timber exporter, due to the Mountain Pine Beetle epidemic which is expected to decrease Canadian timber supply by c.20%[c] p.a. over the next five years;
  - The three "bios" of the timber world (bio-fuel, bio-energy and bio-materials) are poised to become larger sources of demand for timber.
- It is important to note that certain trends, such as digitalisation, has decreased the demand for paper and, hence, some timber assets. However, we expect the demand for houses and the bio sources mentioned previously to provide support for timber demand.

Source: (a) U.S. Census Bureau, CVA, RISI, FEA, Consensus Economics, NAHB, NAR
(b) International Wood Markets Group
(c) The Campbell Group, Overview Q1 2013
(d) R&A Investment Forestry, US Timberland Post Recession

Timberland Investments at a Glance

Timberland investments comprise a diverse range of assets from managed forests in developed countries to plantations in emerging nations. The asset class has historically produced a steady stream of returns with low correlation to traditional asset classes.

- Premiums above inflation of c.4-6% p.a.
- Historically low correlation to traditional asset classes and positive correlation to inflation
- Lower volatility than other illiquid assets such as balanced property
- Higher certainty of return and lower likelihood of downside volatility than traditional assets due to unique nature of the investment due to the biological growth factor (discussed on following page).

CHARACTERISTICS OF A POTENTIAL TIMBERLAND INVESTMENT	
RETURN EXPECTATIONS	▪ Inflation + 4-6% p.a. ▪ Net IRR of 8-10% p.a.
REGIONAL EXPOSURE	▪ Mostly in the US, Australia and South America, some EM exposure (highly fund-specific)
LIQUIDITY	▪ Private equity structure with low liquidity
FEES	▪ 75-150 bps base fees, 20% performance fees
INVESTMENT PERIOD	▪ Typically 10 – 15 years
MINIMUM INVESTMENT	▪ Highly fund specific; typically £5m for pooled and £50m for segregated
BENCHMARK	▪ NCREIF Timberland Index

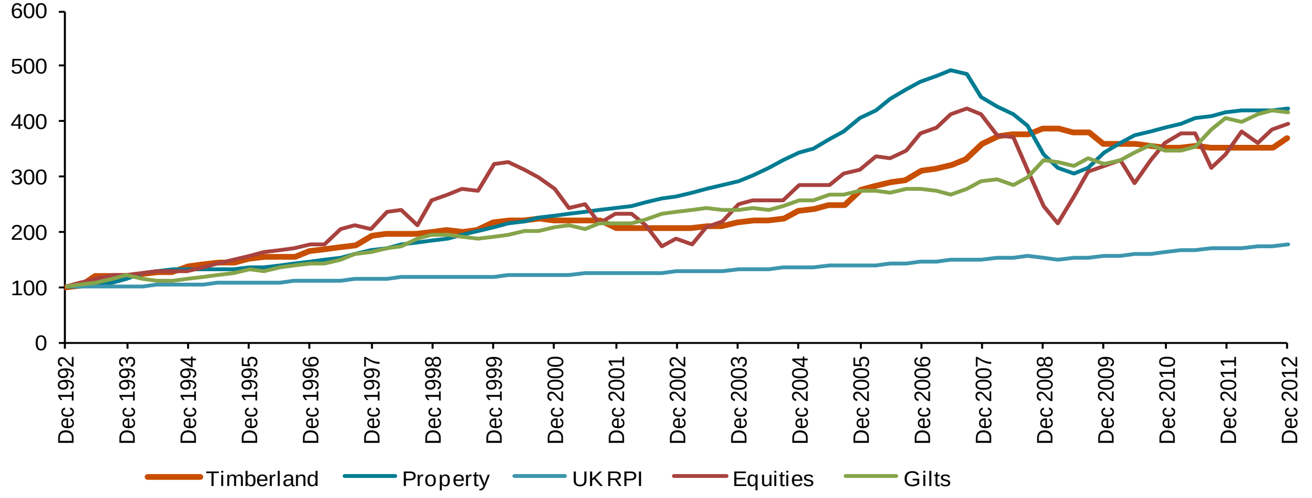
Drivers of Timber Performance

Return Drivers

- There are three fundamental drivers of timberland asset returns:
- **Biological growth:** Physical growth in terms of number and size of trees is a return driver, unique to timberland, that can potentially generate greater than 50% [a] of total returns. The predictable biological growth leads to smooth, counter-cyclical returns over time, and therefore, low volatility.
- **Timber pricing:** Timber price changes can account for up to 20-25% [a] of total return depending on the region. Recently, falling lumber prices have contributed negatively to total returns.
- **Asset management:** In addition to the above, managers can seek to add value by actively managing assets to improve harvest yields, timing harvests and disposing of land (typically up to 25% [a]):
  - *Harvest timing / yield improvement:* Since timber does not need to be harvested seasonally like most other commodities, it can be "stored on the stump", i.e. left to grow further when demand has dried up and prices are low.
  - *Exit timing* is predominately driven by the value of the land, on which the timber is grown, which increases gradually over time, although this is considered the smallest contributing factor to returns (historically 2-5% [a] of total return). The manager can boost performance by successfully timing the sale of the underlying property to maximise profit.

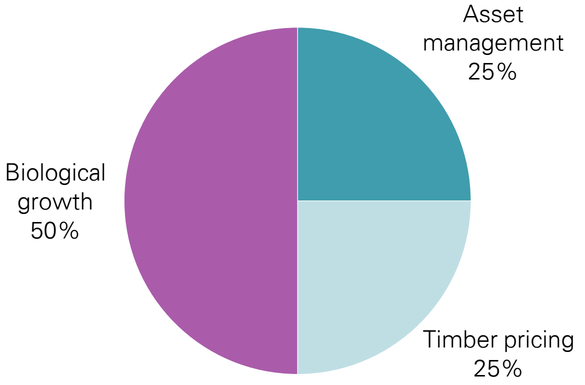
Source: (a) The Campbell Group
(b) Regions Timberland Group

Asset class performance comparison (Rebased to 31 Dec 1992)



Source: DataStream, NCREIF. Merrill Lynch, KPMG calculations. Returns shown are net of estimated fees.
Indices used: Equities – MSCI World, Gilts - Merrill Lynch Gilts All Stocks Index, Property – UK IPD, Timber – NCREIF Timberland. All indices are in local currency.

Primary drivers of Timberland investment returns



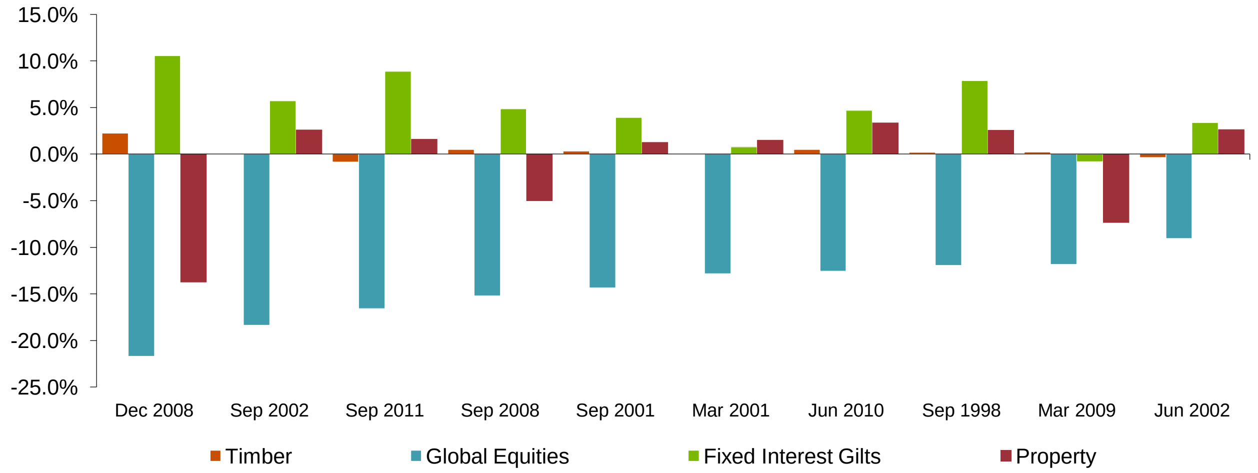
Source: KPMG

Risk Characteristics of Timber Investments

Diversification Benefits

- The unique biological growth factor is a major contributor to the diversification benefits that timber investments provide to portfolios with traditional asset classes.
  - Ignoring the natural risks that could detrimentally impede forest growth (disease, insects) the lifecycle of a tree is relatively predictable. The fact that this growth is independent of economic conditions provides an element of diversification.
- These benefits can be seen in the chart below which shows asset class returns for the 10 worst equity performance quarters since Dec 1992.
  - When equity performed poorly, timber returns were broadly positive while other assets occasionally performed negatively, i.e. more aligned with equity market returns.
  - The lower correlation to equity performance for illiquid investments (e.g. timberland), for which market data is not readily available, is not entirely unexpected.
- Timber has historically performed well in high inflationary environments as the demand for lumber (e.g. for housing) and paper products increases during economic expansion.
- We believe, therefore, that the introduction of timberland investments to a portfolio consisting predominately of traditional asset classes, such as bonds and equities can increase the efficiency of a portfolio, enabling pension schemes to achieve higher returns and/or take less risk.

Returns of asset classes during worst quarters for equity performance



Source: DataStream, NCREIF. Merrill Lynch, KPMG calculations. Returns are net of fees.
Indices: Equities – MSCI World, Gilts - Merrill Lynch Gilts All Stocks Index, Property – UK IPD, Timber – NCREIF Timberland. All indices are in local currency.

Risk Considerations

Investors should consider the following risks associated with timber assets prior to investment:

- **Economic risks** as supply-demand for timber impacts performance and cyclical/seasonal fluctuations of market prices.
- The risks inherent with investments that utilise **leverage** cannot be ignored. Not all managers aim to boost performance by borrowing, however it is not an uncommon practice.
  - Investors should consider what implications the use of borrowing has on the risk/return characteristics of their investment.
- **Currency risk** is an important factor to consider for UK pension schemes as the reporting currency for timberland funds is unlikely to be in Pound Sterling.
  - Investors can choose to leave this risk un-hedged or manage this risk exposure via a currency hedge.
- **Physical risks** such as forest fires, weather, infestations and diseases affecting growth / number of trees.
  - Insurance can be purchased to protect against catastrophic losses due to the above scenarios, however the cost/benefit is regionally dependent and managers use discretion on whether to purchase insurance.
  - Managers can reduce the impact of these physical risks by diversifying their portfolios across regions and tree species.
- **Illiquidity** due to long lock-up periods means that timber may be unsuitable for pension schemes with significant short-term cashflow requirements or investment horizons shorter than 10 years.
- **Environmental restrictions** such as easements (agreements with government agencies and NGOs to leave particular portions of a forest untouched) and harvesting restrictions could reduce supply and hinder investment performance.

Implementation Considerations

TIMOs

- **Timber Investment Management Organisations** ("TIMO") invest in forestland on behalf of large institutional clients such as pension schemes, insurance companies and university endowments.
- TIMOs:
  - Are the main buyers of timberland and are significant owners of US forestland;
  - Aim to identify attractively valued timber properties
  - for acquisition, taking into account client requirements;
  - Are responsible for portfolio diversification, including geographic and species selection;
  - Seek to increase returns by maximising harvest yields from the underlying timberland assets
- With regards to the **presently available universe of managers** suitable for institutional clients, there are at least eight large managers with assets under management of over £1bn and long track records of stable performance (20 years and greater).

Allocating to Timber

- US institutional investors, mainly endowments and pension funds, have been investing in timberland for a few decades. In the UK there is significantly less experience with the asset class and thus pension schemes investing in timberland would be at the forefront.
- For trustees considering an allocation to timberland investments, we recommend the following factors be considered:
  - **Cashflow and liquidity requirements:** Typical lock-in periods are between 10 – 15 years with possible clauses which extend the period by up to 3 years.
  - **Minimum mandate size:** This is highly fund specific, but minimum investments are typically £5m. Thus, timber investments are more appropriate for schemes with total assets of £100m or greater.

    Note, however, that some managers have minimum mandate sizes of £1m, which could enable smaller pension schemes to allocate to timber as well.
  - **Fees:** Typical fund charges comprise the following:
    - *Annual advisory fee* : 75 to 150 basis points (can be as low as 50 bps for larger and segregated mandates);
    - *Property management costs:* c.40 basis points, passed through to investors;
    - *Performance fees:* Typically 20% with a 7-8% preferred return provision.

Implementation Routes

- Timberland can be accessed via closed and open-end vehicles as well as a few listed vehicles. Our preference is for closed-end vehicles.
  - **Commingled closed-end funds:** These funds typically require minimum investments of £5m and have long-term lock-ups. These types of funds are suitable for most small and medium sized schemes (assets >£100m);
  - **Segregated mandates:** Mandate sizes are typically required to be £50m or more, depending on which fund is selected. Thus, schemes with over £500m of assets could consider allocating on a segregated basis.

KPMG View

The expected recovery of the US housing market could make it a favourable time for pension funds that can afford some illiquidity within their portfolios to take advantage of opportunities available in the timberland market.

Due to the unique nature of timberland returns, investments in this asset class also have low correlations with traditional asset classes and have historically performed well during inflationary environments. This can help improve a scheme's portfolio risk/return profile.

There are, however, specific risks associated with timberland investments - such as physical risks, environmental restrictions and the fact that it is a relatively new asset class for UK pension schemes – that need to be considered before investing.

Schemes considering making an allocation to timberland investments should consider committing 3 -10% of total scheme assets to a reputable manager with a long track record of steady performance and assets under management growth.

KPMG can assist with the selection of timber managers.

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