EXPERT COMMENTARY

The increasing demand for wood products drives investor interest toward the timberland investable universe, writes Nuveen's head of research and strategy Gwen Busby



An expanding timberland market brings new opportunities

Timberland earns a position in many institutional investors' portfolios because of its portfolio-level benefits – a lack of correlation with capital markets, ability to hedge inflation and steady income return. For some investors, portfolio decarbonization is an increasingly important portfolio benefit that also comes from an allocation to timberland.

The benefits timberland can bring to a portfolio depend on the scale of the allocation and investment selection. These are decisions that can only be

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made with a clear understanding of the investable universe. The expanse of the investable universe determines both the set of possible investment strategies and investment scale. As markets change for both timberland and the natural capital benefits they provide, so too does the investable universe.

According to the 2024 Nuveen Equilibrium survey, 44 percent of

global institutional investors invest or plan to invest in timberland, while 73 percent of global institutional investors consider or plan to consider environmental impact when making investment decisions.

Investment objectives will change what is included or excluded from the investable universe. In particular, management for non-timber values such as carbon and biodiversity are expanding, driven by investor demands and environmental market growth. These dynamics are affecting all parts of the

A larger timberland universe creates more opportunities

Both traditional wood products and environmental markets will likely drive future expansion of the investable universe. As populations grow and economies develop, demand for wood products - lumber, woodbased panels, mass timber and wood pulp - is expected to increase.

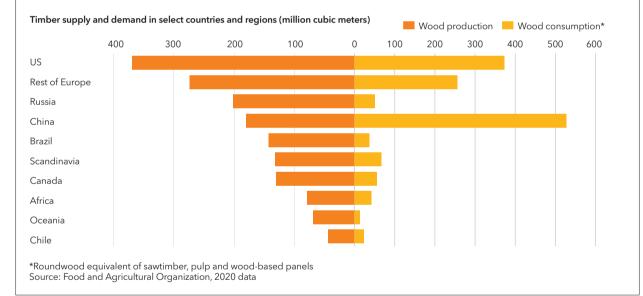
The Food and Agricultural Organization (FAO) estimates up to a 45 percent increase in primary processed wood products consumption between 2020 and 2050, requiring 2.5 billion-2.9 billion m3 of additional industrial roundwood production. Others estimate as much as a 200 percent increase in demand for wood products.

Even with the more conservative outlook of 45 percent, the FAO estimates at least 33 million hectares of additional forest – area roughly the size of Germany - would be required by 2050, if forestry continues to regrow naturally at current levels, and the productivity

of new plantations improves. Near-term opportunities for the expansion of the investable universe exist in major timber producing countries and regions, which will help to meet growing demand for traditional wood products.

Timber supply and demand imbalances by country have historically led to major trade flows in primary wood products and this trend is expected to continue.

The US and Europe stand out as among the largest producing and consuming regions. In addition to growing demand for wood products, demand for natural climate solutions - mitigating climate change through actions that better protect, manage and restore forests to reduce greenhouse gas emissions and store more carbon - is another driver expanding the investable universe. Markets for carbon credits put a price on activities that increase forest carbon stock, creating incentives for timberland investments that mitigate climate change.



investable universe, from core strategies in developed market geographies to non-traditional strategies in emerging markets.

Understanding where, and how, these dynamics of the timberland market are shifting is crucial for investors to understand what is shaping future opportunities in the asset class.

The US and beyond

Over the past decade, there is evidence

that the timberland investment universe has expanded. A comparison of industry survey results from December 2014 to December 2023 shows a nearly 20 percent increase in market value worldwide, according to TimberLink. This increase has been supported by a rise in investors domiciled outside the US, which now make up more than half of total market value.

As expected from geographies with established forest sectors such as Oceania, parts of Latin America and the US, where management tends to be centered on certified sustainable timber production, growth of the investment universe was closely linked to conditions in local timber markets.

While total market value globally was up, a comparison of 2014 and 2023 industry survey results shows that over the past decade, total reported investment area fell by 13 percent in the US and by 8 percent in Oceania. However, average per acre timberland values in the US and Oceania increased by 24 percent and 84 percent, respectively.

The data shows how an increasing amount of capital pushed up against a fixed land base will lift land values, which can put downward pressure on investment return unless revenue per acre increases. To maintain returns in a rising-land value environment, increases in revenue could come from improvements in productivity, increasing timber prices or the development of additional sources of revenue such as carbon credit sales.

In contrast to the US and Oceania, the survey showed that between 2014 and 2023, total reported area in Latin America increased by 8 percent. However, we believe this observed change may underestimate the growth of the plantation base over the 10-year period due to significant timberland investment by integrated pulp producers.

Despite the reported increased area, average per acre values in Latin America were up by 41 percent over the same period. As the global low-cost producers of hardwood pulp, the region will likely see opportunities for continued expansion of the eucalyptus plantation base areas, especially in marginal and degraded pasture in the region.

Geographies characterized by developing forest sectors in emerging market countries are not currently a material part of the timberland investment universe but offer opportunities for expansion. In the absence of well-developed forest sectors, the strategy set in these countries typically includes a non-timber component of return.

For example, in addition to commercial timber production, financial returns may also be supported by agricultural crops or payments for ecosystem services such as carbon sequestration and storage.

For improved forest management, agroforestry, reforestation and forest restoration projects, there is both high confidence in the scientific foundations As populations grow and economies develop, demand for wood products is expected to increase"

of, and large potential for climate benefits. Where there are opportunities to generate high-quality, durable carbon credits from these types of projects, the investable universe will expand.

Expansion of the investable timberland universe will be greatest in areas where additional carbon value exceeds any foregone timber value. Growing markets for nature restoration and biodiversity are also driving the expansion of the universe in places where there are opportunities to manage for both commercial timber and non-timber values.

Most notable are mitigation bank credit markets in the US. These markets were designed nearly three decades ago to incentivize the restoration of wetlands, streams and species habitats to balance unavoidable impacts of development. In 2021, the size of the ecological restoration market totaled about \$10 billion. A range of other markets for biodiversity are developing and may further expand the investable universe.

What does this mean for investors?

Growing demand for wood products

and the broad set of environmental benefits, like carbon sequestration and biodiversity conservation from forests, are driving forces expanding the investable universe.

Collectively, we cannot meet the needs of a growing population and address climate change and biodiversity loss without institutional investment in timberland. This means that opportunities for expansion exist across the investable universe.

Additional timber production will be required from intensively-managed plantations to meet demand for certified sustainable wood products. This means that core timberland will continue to be an important and growing part of institutional portfolios.

In mature timber markets – developed market countries where the forest sector is well established – area expansion may be limited. However, in these geographies, steady growth in market size will come from improvements in productivity, efficiency and the addition of revenue from environmental markets for carbon, ecological restoration and biodiversity conservation.

Emerging market countries with developing forest sectors, growing environmental markets for carbon, ecological restoration and biodiversity conservation will significantly expand the investable universe.

The added value created by these forces will unlock previously un-investable assets and contribute to additional timber supply to feed growing wood product markets. It is in these areas where we expect to see the greatest opportunity for expansion of the investable universe.

The evolution of timber from commodity-focused production, to certified sustainable forestry and, ultimately, to a more holistic natural capital management, reflects underlying changes in the investable universe. The institutionally investable timberland universe is changing rapidly to meet present day challenges and an increasingly diverse set of demands from investors.

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Timberland investments are illiquid and their value is dependent on many conditions beyond the control of portfolio managers. Estimates of timber yields associated with timber properties may be inaccurate, and unique varieties of plant materials are integral to the success of timber operations; such material may not always be available in sufficient quantity or quality. Governmental laws, rules and regulations may impact the ability of the timber investments to develop plantations in a profitable manner. Investments will be subject to risks generally associated with the ownership of real estate-related assets and foreign investing, including changes in economic conditions, currency values, environmental risks, the cost of and ability to obtain insurance and risks related to leasing of properties.

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