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Preparing for an Era of Global Economic Transition: Building Real Asset Exposure with Timberland and Infrastructure

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Introduction

Rapid technological advancement is driving a period of major economic transformation, and transitions like this are often where real assets earn their place in a portfolio. This paper discusses two real asset classes that, at first glance, look like opposites: timberland and infrastructure. The question we hear most often from investors is a practical one: when does it make sense to hold one, the other, or both in pursuit of long-term goals?

To answer it, we begin with the macro forces shaping each asset class. Infrastructure is being reshaped by three: (a) the revolution in digital technology and artificial intelligence (AI); (b) the voracious demand for energy needed to support it; and (c) the growing reliance on private capital to fund what public markets and government budgets cannot. Timberland answers to a different set of forces: (a) the widening of optionality for timberland investments; (b) growing constraints on the supply of investable timberland; and (c) diminishing timber supplies set against steady global demand for wood products. These forces will shape both sectors over the coming decade. We then turn to what they mean for investors, and to how the distinct features of timberland and infrastructure can be drawn on together to build a real assets portfolio better matched to an investor's goals for return, risk, and impact.

Macro trends affecting the infrastructure space

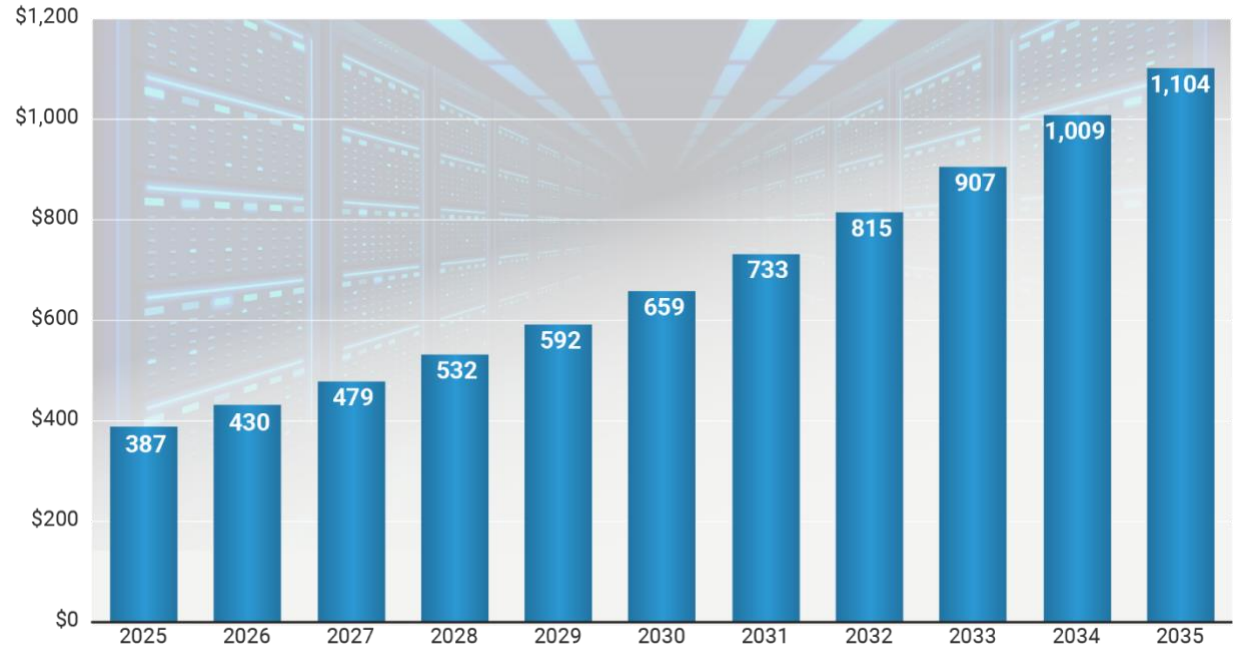
Infrastructure has broadened considerably since it emerged as an asset class in the 1990s. Early investors were offered toll roads, airports, bridges, water systems, and pipelines. Today, transformational technology and a generational shift in the economy have pulled infrastructure capital into territory that would have been unrecognizable then.

Macro trend 1: AI-led digital transformation is driving data center demand

The first is the digital revolution. Society's appetite for data of every kind is growing quickly. Peter Smith, reporter for Aigazine, reports that Blackstone's research expects the world to be creating and using

approximately 400 zettabytes (trillions of gigabytes) of data by 2028, nearly double the 2025 figure.[1] Driving that growth is the rapid adoption of cloud computing, machine learning, and AI. Creating, storing, and processing all of it depends on infrastructure, and data centers are the linchpin of this transformation. Within a decade, that market could grow three-fold into a trillion-dollar one (Figure 1). The capital required is difficult to overstate: McKinsey estimates that US$7 trillion will need to be spent on data center development through 2030 to keep pace with global demand for computing power.[2]

Figure 1.
Data Center Market Size Forecast, As Measured by Revenue (USD Billion)



Source: Precedence Research (https://www.precedenceresearch.com/data-center-market)

The build-out reaches well beyond data centers. It also calls for satellites, cell towers, advanced semiconductors, and communication fiber.

All of this draws heavily on capital. Infrastructure investment in North America rose 50% in 2025 from the year before, with digital infrastructure accounting for one-quarter of total deal flow.[3] Globally, Gartner estimates that direct spending on AI will total US$2.6 trillion in 2026 and reach US$3.5 trillion in 2027. We expect data centers and other digital infrastructure to keep attracting a large share of private infrastructure funds in the years ahead.[4]

1 Peter Smith, aigazine: "Global Data Growth Forecast Surges to 394 ZB." https://aigazine.com/industry/global-data-growth-forecast-surges-to-394-zb--s

2 McKinsey, *Infrastructure: Investing to Support Global Growth* (March 23, 2026)

3 Infralogic Rankings Report, 2025.

4 *Wall Street Journal*, "Crazy Rich Returns Lure Cabbies and Even Kids to Red-Hot Asian Markets" (June 18, 2026)

Macro trend 2: energy to fuel the digital transformation

Digitalization on this scale demands a matching transformation in energy. By one estimate, global electricity demand from data centers will climb from 87 gigawatts (GW) in 2025 to 263 GW by 2030, a three-fold increase.[5] The United States alone is expected to need roughly 82 GW of additional capacity.[6] AI data centers are projected to add 70 basis points to annual electricity demand over that period, and non-AI data centers another 50 basis points. Together, data center build-out accounts for 1.20% of the 2.60% annual growth in U.S. electricity demand, the fastest rate of acceleration since the 1990s (Figure 2).

Figure 2.

US Electricity Demand Annual Rate of Growth Through 2030

Sources: U.S. Energy Information Administration, Goldman Sachs Global Investment Research

Spending does not stop at power generation. Reliable delivery to data centers also requires significant investment in the supporting energy network, including transmission upgrades, natural gas pipelines, and battery storage paired with solar and wind projects.

Globally, energy and power projects could draw as much as $23 trillion in infrastructure investment through 2040, and powering the digital revolution is the leading reason.[7]

Macro trend 3: greater reliance on private capital

Demand for infrastructure is now growing faster than public markets and government budgets can meet. The global tab could exceed $100 trillion through 2040, two-fifths of it in energy and information technology[7]. Yet most governments lack the means to pay for it. Many developed economies, including the United States, the European Union, and Japan, already carry high debt and run persistent deficits, which leaves them little room to redirect spending away from social services and entitlements toward infrastructure.

[5] JPMorgan, *Communication Infrastructure Outlook* (Dec. 12, 2025)

[6] Goldman Sachs, *AI/Data Center Power Demand: The 6 Ps Driving Growth and Constraints* (Oct. 13, 2025)

[7] McKinsey, *Infrastructure: Investing to Support Global Growth* (March 23, 2026)

At the same time, public markets have narrowed. Structural forces are steering investors away from public stocks and bonds and toward private capital. Since 2000, the number of companies listed on the NYSE or NASDAQ has fallen from 7,000 to about 4,500 in 2024, a 35% drop.[8] Over the same period, the number of private-equity-backed companies in the United States has grown from 2,000 to more than 11,500, a four-fold increase.

The contrast between more private companies and fewer public ones points to a clear inference: a growing number of investors believe private markets can deliver risk-adjusted returns as good as, or better than, public ones. That shift has helped infrastructure funds raise capital at record levels. Close to US$290 billion was raised globally for closed-end infrastructure funds in 2025, a 45% increase over the previous record of $200 billion set in 2022.[9] Part of the appeal is speed and scale; private vehicles can deploy capital in ways public markets often cannot.

Macro trends affecting the timberland space

Timberland answers to a different set of macro trends. We see three, in particular, that will shape the asset class' performance for years to come.

Macro trend 1: growing optionality

Since timberland emerged as an investable asset in the 1980s, it has matured over the past four decades. In the early years, the thesis was simple: grow trees and sell timber. Today, the ways a forest can generate a return have multiplied. It is now common for part of a property's footprint to sit in the path of economic development, where land once used for commercial forestry can shift to higher-value uses such as recreation, conservation, agriculture, or commercial development (including, not surprisingly, infrastructure projects like data centers and power generation). We observe this trend with Weyerhaeuser (WY), a timber REIT that owns 10 million acres of forestland in the U.S. In 2025, Weyerhaeuser made $170 million in EBITDA (or operating income) from their higher & better use (HBU) land sales, more than double

[8] Scott Reeds, Citizens Bank. "The Public to Private Equity Pivot Continues." (Dec. 2024) https://www.citizensbank.com/corporate-finance/insights/private-equity-trends

[9] Infrastructure Investor, *Fundraising Report FY 2025.*

the $76 million earned from their timber sales.[10] Alongside that, new markets for the ecological services forests provide have grown in both depth and breadth – these are referred to as *natural capital markets* or *ecosystem services*. Forest property's *natural capital solutions* can be monetized in a number of ways:

- **Environmental mitigation banking:** sell credits from created wetlands, streams, or species habitat to offset equivalent losses elsewhere caused by development.
- **Forest-based carbon credits:** earn certified offset credits for the carbon a forest sequesters and sell them into a voluntary or compliance carbon market.
- **Renewable energy:** host a solar farm, wind farm, or wood bioenergy facility on forestland near the power grid.
- **Conservation easements:** accept payment from a conservation organization to permanently restrict development on land with ecological, scenic, or cultural value.
- **Geologic carbon capture and storage:** use forestland above suitable geologic formations to inject liquefied carbon dioxide deep underground for permanent storage.
- **Recreational leases:** grant seasonal access for hunting, fishing, or ecotourism.

This diversity of return drivers is reshaping the value and performance of the asset class. We see it in the steady rise of U.S. timberland values even as timber markets have stayed flat or softened. Consider the two largest timberland investment regions in the country, the Pacific Northwest and the South. The average price of investment-grade timberland in the Pacific Northwest, as tracked by the NCREIF Timberland Property Index, rose 46% from $2,582 an acre in 2021 Q1 to a record $3,766 an acre by 2026 Q1, even as the price of Douglas fir, the region's bellwether species, fell 9% over the same five years (Figure 3). Timberland in the U.S. South tells a similar story: 5.5% annual appreciation over the five years ending 2026 Q1, while sawtimber prices stayed essentially flat (Figure 4). (For a perspective on timber pricing, see call-out box on the right.)

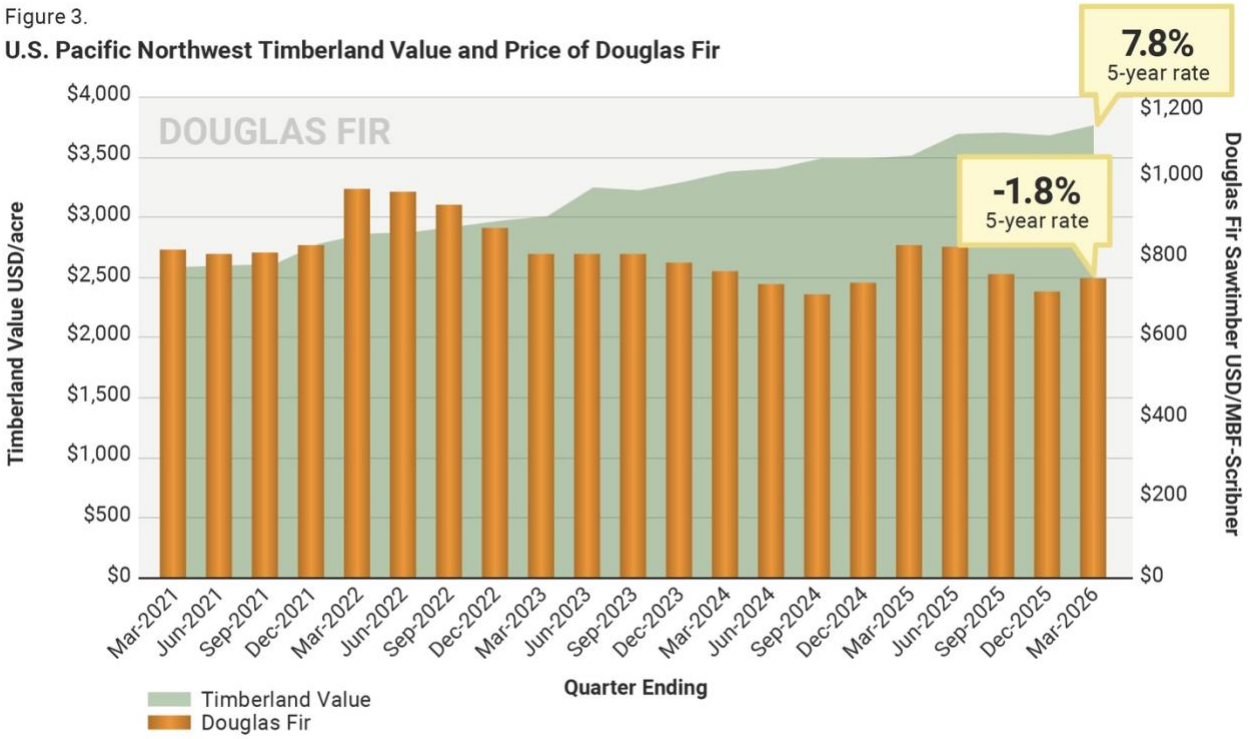
Perspective on Timber Price Trends

The flat pricing observed in the past five years should not be interpreted as the norm. Timber markets are cyclical, and market movements can take several years to reflect shifts. In the case of the U.S. South, average pine sawtimber prices as tracked by Timber Mart-South rose from $12.21 a ton in 1977 Q1 to $20.52 in 1979 Q4, a 21% annual rate of increase over a 2¾ year period. That was followed by a -4% rate of decline through 1987 Q1. Markets then rebounded with a 10.8% rate of gain over the next 11 years through 1998 Q1. The last downward cycle was between 1998q1 and 2012 Q2 when prices fell at a rate of -4.9%. Whether it is up, down or flat, timber markets are always in constant transition that can take several years to play out.

[10] Weyerhaeuser, *Investor Presentation* (June 2026)

Figure 3.

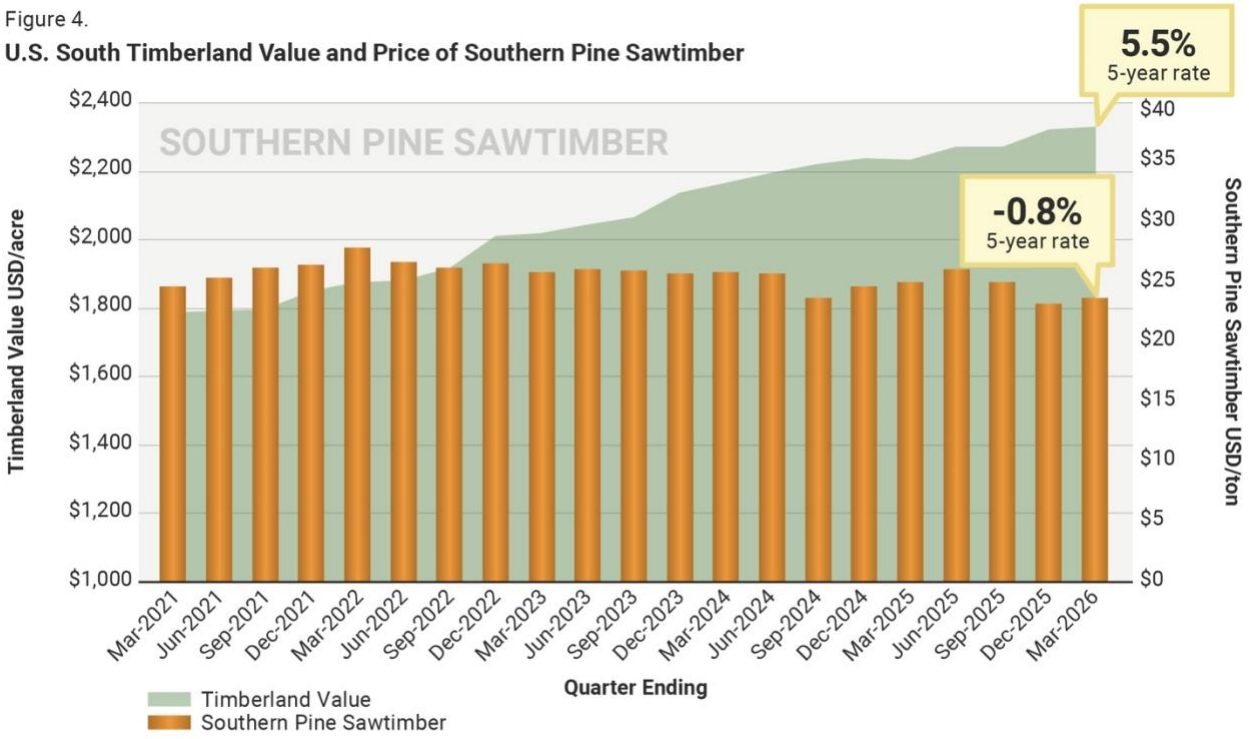
U.S. Pacific Northwest Timberland Value and Price of Douglas Fir



Sources: National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Property Index for timberland prices, Fastmarkets RISI World Timber Price Quarterly for Douglas fir price.

Figure 4.

U.S. South Timberland Value and Price of Southern Pine Sawtimber



Sources: National Council of Real Estate Investment Fiduciaries (NCREIF) Timberland Property Index for timberland prices, Fastmarkets RISI World Timber Price Quarterly for Southern Yellow Pine price.

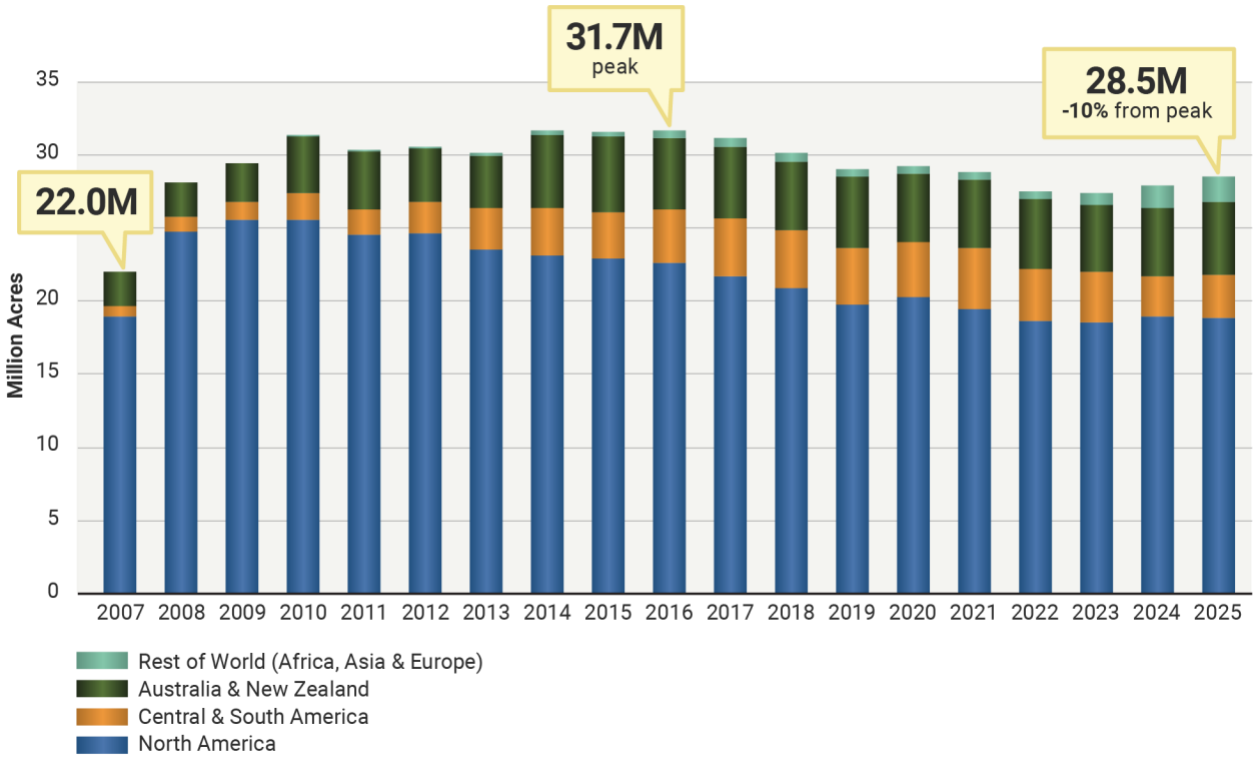
These gains are not easily explained by a shift in discount rates. Interest rates have been rising since the COVID pandemic of 2020, not falling. The more likely explanation is that timberland is drawing on new sources of income beyond simply growing and harvesting trees.

Macro trend 2: a limited universe of investable timberland

A second trend worth investors' attention is that the investable universe of private timberland has likely plateaued. There may be notable exceptions ahead, but the net area of professionally managed timberland in private hands looks set to stay largely flat. That marks a clear break from the asset class' early decades. Throughout the 1990s and 2000s, institutional investors acquired timberland rapidly, buying from forest products companies that were divesting their forestland and from governments privatizing public forests. Both of those sources have now largely run their course.

Figure 5 shows the total area of timberland held for investment, compiled from Timberlink's surveys of timberland managers. The data indicate that investable timberland grew rapidly through 2010 and then held largely flat, even as its regional composition shifted. Because the figures come from a survey, they may understate the true area of investor-owned timberland; the trend, however, is clear. North America has been in gradual decline since peaking in 2010. Invested timberland in Central and South America reached a high of 4.1 million acres in 2021 and has fallen since. Expanding investment elsewhere, in Asia and Europe, has offset some of the reductions across the Americas.

Figure 5.
Area of Forestland Invested Through a Timberland Manager, Separated by Region



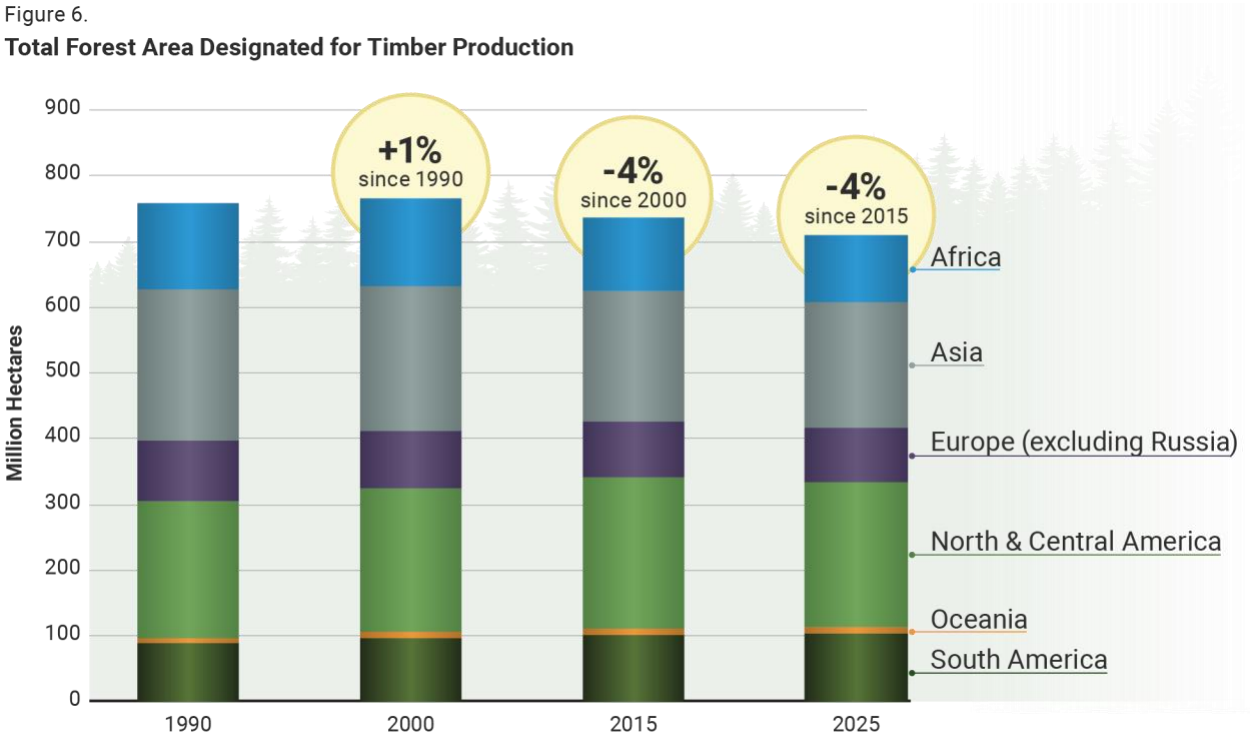
Source: TimberLink

Several forces help explain the plateau. The first is rising competition for productive land. Ground that grows a tree plantation well, as in New Zealand, Australia, and Brazil, often grows pasture or row crops just as well, so forestry must compete with cattle, corn, and soybeans for the same acres. The second is parcelization. When a large forest property is sold in smaller pieces, as commonly happens in the United States, those parcels are often no longer managed by professional timberland investors and fall out of the investable universe. The third is country-level risk. In many emerging and developing markets, political, legal, and regulatory uncertainty runs too high for a foreign investor to commit to a multi-decade forestry holding. Russia holds the world's largest forest resource, for instance, yet is considered too risky for foreign ownership, as is much of Africa and Asia.

Macro trend 3: global limits to timber harvests

The final trend timberland investors should recognize is a declining supply of timber. This owes less to any loss of forest cover than to forests transitioning away from commercial timber production. According to the United Nations Food and Agriculture Organization, the total forest area managed primarily for timber has declined 7% over the past 25 years (Figure 6). Much of that shift tracks rising prosperity, as more countries reach, or approach, upper-income status. Since the Global Financial Crisis, global gross domestic product (GDP) has grown 60% between 2010 and 2025, while world population rose 18%, from 7.0 billion to 8.2 billion. Average per capita GDP has therefore improved 35% over the past 15 years.

Figure 6.
Total Forest Area Designated for Timber Production



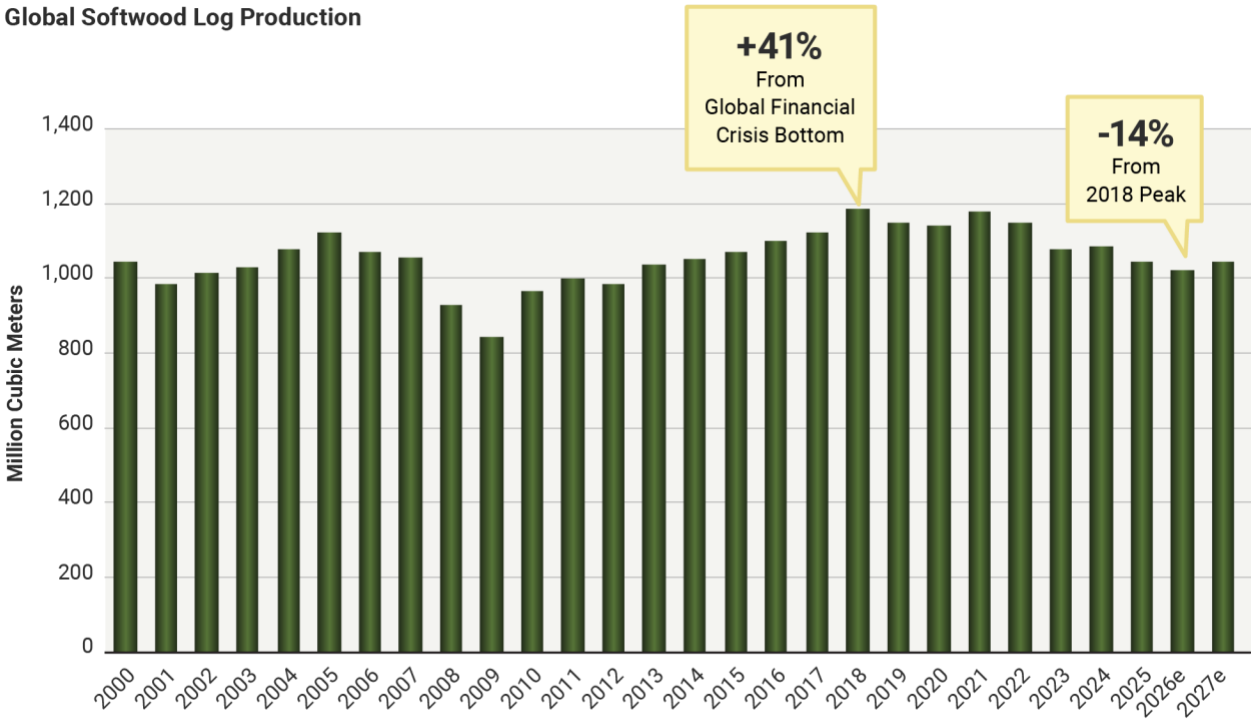
Source: United Nations Food and Agriculture Organization *Global Forest Resources Assessment 2025.*

As incomes rise, so does the impulse to protect natural resources. Regulation and social pressure against timber harvesting tend to increase, and more forests are set aside for conservation, leaving less in active production. Even the productive forest that remains is often regulated in ways that constrain harvest rates. Two examples convey the growing pressure on private forestry that limits timber supply:

- **Oregon Private Forest Accord (2021):** this agreement between conservation groups and private forestland owners restricts harvesting on steep slopes and widens the protected buffers around fish-bearing streams, among other provisions.
- **European Union Land Use, Land-Use Change and Forestry (LULUCF) Regulation (2018, amended 2023):** this regulation steers land-use change toward the EU's climate goals and can limit timber harvests where needed to reduce carbon emissions.

For decades, timberland owners enjoyed rising productivity from improved silviculture and better tree genetics. Those gains, though, have been largely offset by the cumulative shift of land away from forestry and by rising regulation. After peaking near 1.2 billion cubic meters in 2018, global annual production of softwood logs gave back a decade of gains and fell to 1.0 billion cubic meters, the same level as the early 2000s (Figure 7). (Softwoods come from coniferous trees and supply the structural lumber and panels used in construction.) We expect these trends to persist and timber supply to remain constrained.

Figure 7.
Global Softwood Log Production



Source: Forest Economic Advisors Wood Markets Monthly (April 2026)

What these trends mean for a real assets investor

Several conclusions follow for investors.

Potential for diversification

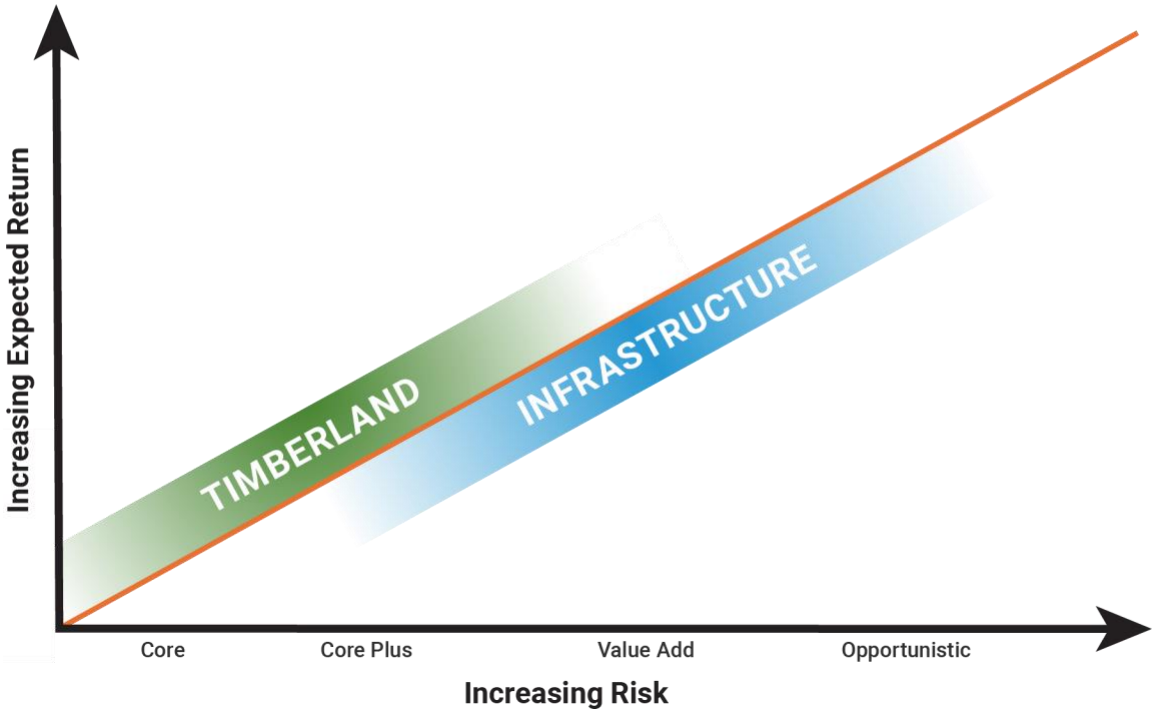
Infrastructure and timberland are driven by very different market and economic forces, which is precisely what lets them complement each other in a portfolio. Because the trends they each face have so little in common, one can act as a diversifier against the other.

Divergence across the risk-and-return spectrum

The digitalization of the global economy is opening a wealth of new infrastructure opportunities. These are not the low-risk assets of the past: the toll roads, seaports, and sewage treatment plants; they are higher-risk investments in AI data centers and the energy projects built to power them. As a result, infrastructure's opportunity set has drifted away from the Core and Core Plus categories toward Value-Add, and even Opportunistic (Figure 8).

Figure 8.

Qualitative Assessment of Where Timberland and Infrastructure Investments Commonly Fall Along the Risk-and-Return Categories



Timberland sits at the other end of that movement. The investable land base is limited, and timber production is increasingly constrained. In a world of growing population and rising incomes, demand for wood could outpace the forests' capacity to supply it, and competition for a finite resource lowers the asset class' risk premium. At the same time, the growing optionality of timberland gives a forest several pathways to generate income and return, which further dampens the volatility of those returns. Together, these forces keep many timberland investments in the Core and Core Plus categories.

Watch for overexposure in infrastructure

The AI build-out is pulling private capital into semiconductors, telecommunications, data centers, and the energy systems that power them, and it is claiming a disproportionate share of infrastructure allocations. That concentration overlaps with public markets, where a large share of equity value already sits in information technology (IT). The Magnificent Seven, namely Alphabet, Amazon, Apple, Microsoft, Meta, Nvidia, and Tesla, account for roughly 20% of global equity market capitalization, with others such as Qualcomm, Oracle, TSMC, and ASML close behind. With so much public and private capital tied to IT and the AI build-out, an investor's overall portfolio can become overexposed to a single theme without anyone intending it.

Natural resources such as timberland can serve as counterweight, tempering some of that overexposure to the AI transformation.

Conclusions and recommendations

For all their differences, timberland and infrastructure share something fundamental. Infrastructure, by definition, is physical assets that provide essential services to society and allow economies to function. Seen that way, timberland is *nature's infrastructure*. Forests deliver services society depends on and the economy is built on: lumber, paper, utility poles, railroad ties, packaging, and tissue, along with carbon sequestration, clean air and water, recreation, and much more.

Whether human-built or natural, both asset classes offer inflation hedging, sustainable cash yield, and capital preservation. For an investor, the question is not which one belongs in a real assets or alternatives portfolio; it is how the two work together. Because timberland and infrastructure answer to different macro trends and serve different end-use markets, the correlation between their returns is low. Holding them together can reduce a portfolio's overall risk.

Investments in both asset classes can be found across the full risk-and-return spectrum, but timberland has concentrated mainly in the Core and Core Plus categories, while infrastructure has grown more risk-forward, for the macro reasons set out above. Investors should keep that distinction in view when sizing allocations to timberland and infrastructure against their portfolio's target risk tolerance.

We close on manager selection. Whether an investor chooses infrastructure, timberland, or both, leaning on economic and market tailwinds to reach a target return may not be enough. Both fields have grown more diverse and more complex, and that is where sector-specific expertise earns its keep, by generating *alpha*: returns differentiated from the sector baseline, or *beta*. In infrastructure, that expertise might lie in data centers, cellular communication, co-located power generation, or microchip fabrication. In timberland, an investor may choose a manager for a proven record in negotiating a pipeline right-of-way, crafting conservation easements, developing wetland mitigation banks, or positioning forestland for solar development. As allocations move up the spectrum from Core to Core Plus to Value-Add, the barriers to entry rise, and so does the premium on manager skill.

For questions and additional information, contact:

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