Real assets—real solutions

The world is rapidly waking up to the dangers and risks posed by climate change, and sustainable and responsible investing is fast becoming one of the most important investment criteria globally. We believe investments in real assets can be a key part of the solution to help mitigate some of the critical challenges we face: climate change, biodiversity loss, and socioeconomic inequality.

Investing in nature to address climate change

Natural climate solutions (NCS) are land management decisions that increase carbon storage or prevent greenhouse gas emissions across global forests, wetlands, grasslands, and agricultural terrain.

Trees and soils have tremendous potential to sequester carbon, as research[1] indicates that NCS "can provide over one-third of the cost-effective climate mitigation needed between now and 2030 to stabilise warming to below 2°C." Natural sinks, such as timberland and agriculture, organically capture carbon from the atmosphere at the lowest cost per tonne in comparison with other technologies addressing carbon sequestration.[2]

In forestry, various improved forest management practices, such as protecting and restoring high-conservation areas, defending watercourses, supporting native and managing invasive species, extending or limiting harvest cycles, and restricting chemical usage, maximise opportunities for carbon sequestration. In agriculture, regenerative practices such as cover cropping, reduced tillage, orchard recycling, compost deployment, integration of livestock and pollinators, sustainable water management, and integrated pest management are used.

Understanding and assessing biodiversity impact

In addition to climate change, the investment community is becoming aware of the scale of the problem of declining biodiversity and the associated investment risks. A recent study[3] of asset managers and owners across 35 countries showed that 84% of respondents were "very concerned about biodiversity loss," and the World Economic Forum's Global Risks Report 2020[4] rates biodiversity loss as the most impactful risk for the next decade. However, uncertainty exists about how to manage the risks and opportunities associated with biodiversity: The study noted that 72% of investors haven't assessed the impact of their investments on biodiversity and that "70% believe a lack of available data is a key barrier to making investments supporting biodiversity."

While specific biodiversity data is limited, there are tools at the disposal of asset managers. The financial sector excels at measuring the value of diversity, as it's a common feature within quantitative analysis, measuring volatility and credit spreads. We're learning how to combine climate data with financial modelling, so how do we combine the science of biodiversity—including measurements of mean species abundance, water quality, and soil carbon—with the financial expertise we already possess?

When it comes to biodiversity, there's a place for scientists in investing—to measure, track, monitor, and verify the impacts and dependencies of investments; we need scientific measurement of species abundance, water quality, and soil carbon so we can map and model. At Manulife Investment Management, our timber group employs wildlife biologists who prepare biodiversity indexes for the forests we manage. It's why we have wildlife and biodiversity guidelines that inform our research processes and how we build our portfolios.

A number of international initiatives are already dedicated to measuring the impact of economic activity on biodiversity and creating qualitative assessments to analyse and address this activity. The question is, how do we harness large data sets and analytical tools to invest in companies, projects, and assets that can mitigate biodiversity-related risks? How can investors actively seek to bolster the ecosystems that we all depend on?

"The World Economic Forum's Global Risks Report 2020 rates biodiversity loss as the most impactful risk for the next decade."

It's possible for companies to calculate a biodiversity footprint the same way they can calculate a carbon footprint, and there are a host of ways—qualitative and quantitative—to do this. We consider biodiversity in the lifecycle of our research, operations, and ongoing risk management where we own and operate real assets. Examples include:

- **Agriculture**—Honeybee health and pollinator habitats we manage in California comprise 16 acres of supplemental food to improve honeybee health. Large numbers of bee colonies are lost due to numerous factors; planting bee forage improves overall colony strength, as well as the productiveness of neighbouring orchards.

- **Timberland**—We have a zero-deforestation policy that ensures that the investments we make won't directly—or indirectly—contribute to deforestation. In addition, our species and communities of concern program consists of different combinations of action plans, awareness, modelling, and surveying, all under the auspices of adaptive management to develop a biodiversity index for each property. Rather than managing for each wildlife or plant species, we take a systems approach to promoting biodiversity, maintaining the habitats of various species through ecosystem management that creates and maintains a diversity of forest structure types.

Close alignment with the UN's Sustainable Development Goals

In addition to their carbon sequestration and biodiversity benefits, we believe that investments in timberland and agriculture can contribute to meeting other nonfinancial environmental, social, and governance objectives. Commercial production on sustainably managed properties aligns closely with the United Nations' Sustainable Development Goals, particularly, zero hunger, clean water, decent work and economic growth, climate action, and life on land. For example, timberland and agricultural land are generally located in rural areas, where the commercial operation of forests and farms can deliver significant economic benefits.

Institutional investors' access to capital can help accelerate the deployment of new science, technology, and management regimes that will allow for higher yields alongside more efficient use of resources. Consequently, institutional investment in timberland and agriculture properties can deliver

UN sustainable development goals	Detailed actions
2 ZERO HUNGER	Scale allows us to achieve food security in countries where we operate and beyond Deploy and promote sustainable agriculture practices Maintain and enhance agricultural productivity
6 CLEAN WATER AND SANITATION	Use water efficiently to grow healthy crops Seek out new practices to reduce water usage throughout our operations Use ground storage to capture rain and flood waters
8 DECENT WORK AND ECONOMIC GROWTH	Natural resource investments provide social benefits both locally and globally Create jobs in rural communities Promote safe and healthy working and living environments
13 CLIMATE ACTION	Create carbon sequestration opportunities Invest in renewables and energy efficiency Support scientific studies and policy analysis on global change
15 LIFE ON LAND	Protect sensitive lands and biodiversity Third-party certification of our timberlands Conservation easements

Source: United Nations Sustainable Development Goals (SDGs) as established in 2015.

competitive financial returns while simultaneously improving environmental and social conditions.

Real assets with complementary investment attributes

Real assets such as timberland and agriculture offer portfolio diversification, attractive risk/return characteristics, and a natural inflation hedge alongside their sustainability benefits. They also represent a way to benefit from increasing global consumption trends that are favourable for demand and from growing interest from investors intent on decarbonising their portfolios.

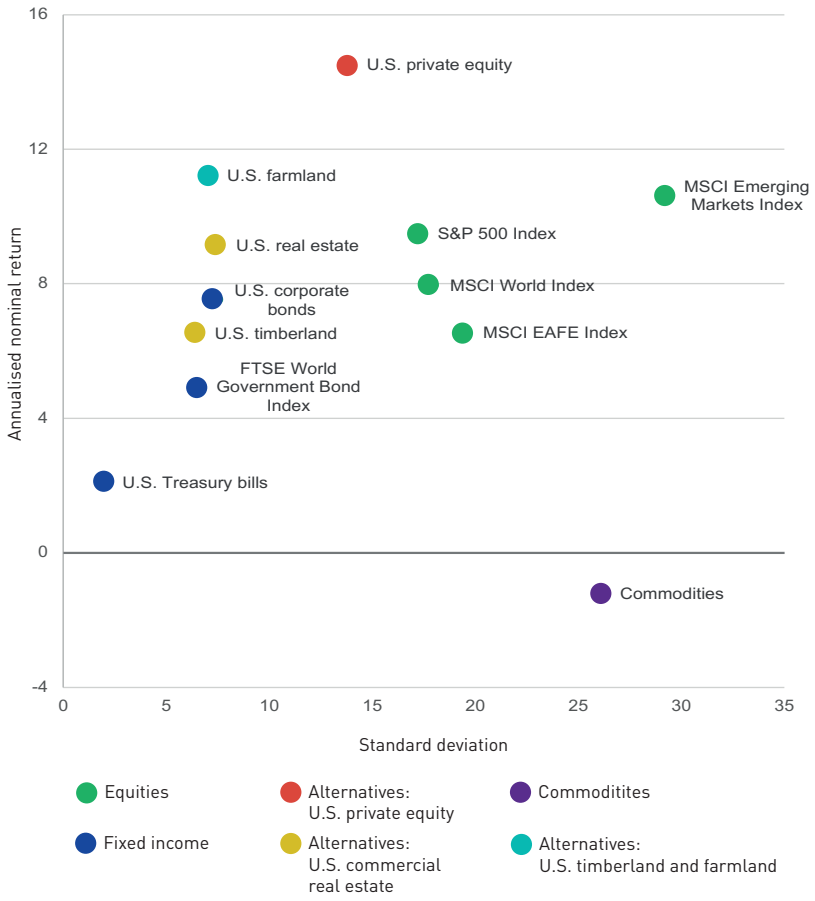
Over the past 40 years, timberland returns have been positively correlated with inflation. Our assessment of the timber market in the first half of 2021 suggests that the current rebound in inflationary pressures seen in developed economies could translate into improvements in return performance for U.S. timberland assets, and the outlook for the U.S. farm sector has improved significantly on recovering global demand combined with falling inventories.[5]

Investments in timberland and agriculture have historically demonstrated low volatility and attractive risk-adjusted returns

These asset classes aren't without risks, as we've seen with recent forest fires across the globe. It's therefore imperative that asset managers recognise the importance of sustainability in forestry and agricultural management and clearly demonstrate to investors how they're managing these risks through disciplined due diligence and credible certification.

Historical return and standard deviation

2002-2020 (%)



Sources: All Data is as of December 31, 2020. Timberland: NCREIF Timberland Index. Farmland: NCREIF Farmland Index. Commercial real estate: NCREIF Property Index. Small-cap equities: Ibbotson series IA SBBI U.S. Small Stock TR USS. Non-U.S. equities: MSCI/EAFE International Equities Index. Corporate bonds: Ibbotson series IA SBBI U.S. LT Corp TR US$. U.S. Treasury bills: Ibbotson series IA SBBI U.S. 30 Day Tbill TR US$. CPI: U.S. Bureau of Labor Statistics. U.S. private equity: Cambridge Associates Private Equity Index. U.S. forest products: S&P Composite 1500 Paper and Forest Products series, as of 12/31/20."

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For more information or to discuss the attributes of timberland and agriculture in more detail, please visit manulifeim.com/investingintimberandagriculture.

Manulife Investment Management

FOOTNOTE
1 www.wbcsd.org/Programs/Climate-and-Energy/Climate/Natural-Climate-Solutions, 2021.
2 Goldman Sachs Carbonomics Report June 2020.
3 Credit Suisse: Unearthing investor action within biodiversity finance. January 2021.
4 www.weforum.org/reports/the-global-risks-report-2020
5 Wall Street Journal January 2021.