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The value of nature in an investment portfolio

a.s.r. real assets investment partners is fundamentally positive about the prospects for natural capital investments such as agricultural and timberland investments. The agricultural sector plays a crucial role in providing food for the growing global population, and the global demand for timber will continue to rise. By investing sustainably in this asset class and focusing on long-term value preservation, investors can make a positive contribution. In this article, a.s.r. real assets investment partners delves deeper into how natural capital investments can add value to an institutional investment portfolio.

Natural capital refers to the value derived from the land, water, and biodiversity of our planet. Motivated by the sustainable opportunities and the high diversification that natural capital investments offer, this asset class is increasingly gaining attention among European pension funds and insurers. Within the category of natural capital, there are various sub-asset classes, with agriculture and timberland being the most mature.

Investments in timberland involve owning land and trees with the aim of generating income from the sale of timber, potential carbon credits, and sometimes other goods and services. Timber types can broadly be categorized as softwood and hardwood.

Softwood is fast-growing and used in the construction and the paper industry. This represents about eighty percent of total timber production.

Hardwood generally grows more slowly and is mainly used in making flooring and furniture.
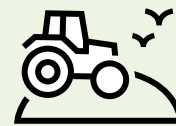
Investments in agriculture include owning land and crops with the aim of generating income from a lease agreement, the sale of crops, and any other goods and services. Crops can be divided into annual crops and permanent crops.

Annual crops such as wheat, grain, soybeans, and potatoes are sown and harvested annually. These crops have a relatively low yield and low risk.

Permanent crops such as fruit and nut trees and grapevines have a relatively long lifespan of more than 20 years. These crops have a higher yield and higher risk.

Since the Industrial Revolution, global economic growth has been based on the excessive use of natural capital. This has led to damage to our ecosystems, for example through deforestation. By investing sustainably in this asset class and focusing on long-term value preservation, investors can make positive impact.

Added value of natural capital in an investment portfolio

Natural capital can add value to a (real assets) investment portfolio in several ways.
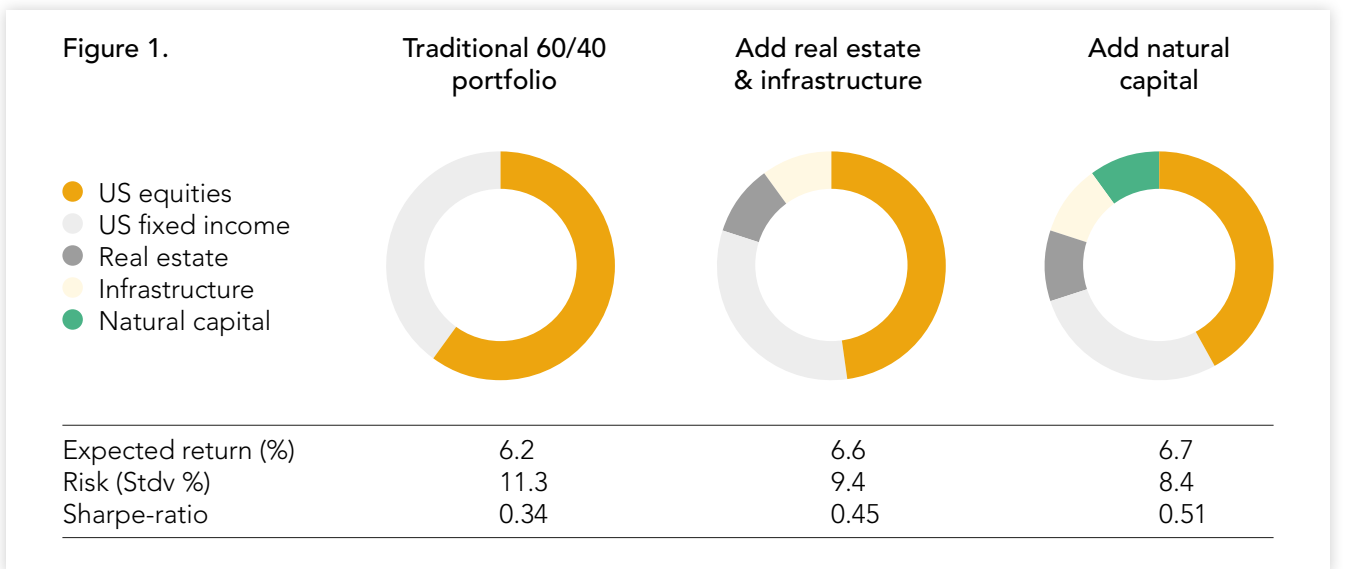
Specifically by:
1) Diversification opportunities resulting in higher Sharpe ratios;
2) strong underlying fundamental drivers leading to high expected returns;
3) contributing to sustainable goals.

1) Diversification opportunities resulting in higher Sharpe ratios
Investing in agriculture and timberland means investing in income-generating assets. Regardless of the economic climate, trees and crops continue to grow. Timberland owners have the flexibility to adjust their harvest timing based on market demand and prices. Therefore, timberland and agricultural investments have a very low correlation with other asset classes and exhibit inflation-hedging properties (Table 1).

Table 1. Return correlations	Agriculture	Timberland
US equities	-0.03	-0.10
US fixed income	-0.10	-0.36
Non-US equities	0.14	0.06
Global fixed income	-0.12	-0.26
Inflation US	0.24	0.50

Additionally, forestry and agricultural investments have historically shown very limited downside risk. The leading NCREIF Timberland Property Index has only experienced three loss years since 1991, with a maximum loss of 5.2%. The NCREIF Farmland Property Index has had no loss years since 1991. These characteristics, along with high returns, lead to higher Sharpe ratios compared to both traditional and diversified portfolios (Figure 1). Our view on the risk and return prospects for the various natural capital sectors is extensively described in our real assets houseview.

Figure 1.

Traditional 60/40 portfolio — Add real estate & infrastructure — Add natural capital

- US equities
- US fixed income
- Real estate
- Infrastructure
- Natural capital

|	Traditional 60/40 portfolio	Add real estate & infrastructure	Add natural capital
Expected return (%)	6.2	6.6	6.7
Risk (Stdv %)	11.3	9.4	8.4
Sharpe-ratio	0.34	0.45	0.51

2) Strong underlying fundamental drivers
For both timberland and agriculture, there are strong underlying fundamental drivers that propel future demand. The global population is expected to grow significantly until 2050 (figure 2). Additionally, the growing middle class in emerging markets will add more protein to their diets, increasing the demand for products such as nuts and corn. This will result in a more than 40% increase in food demand by 2040[1]. The agricultural sector plays a crucial role in providing food for the growing global population, preferably in a sustainable manner.


1   HSBC - The Future of Food

Figure 2. Expected population growth from 1950 to 2080 in billion
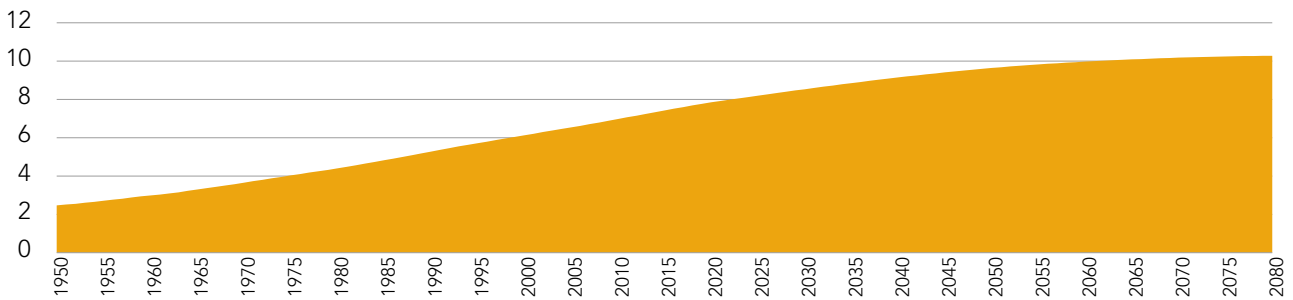
Due to the expected population growth and a rising GDP per capita, the demand for houses and thus for building materials such as wood will further increase. (figure 3). One of the main drivers behind the global demand for wood is housing construction materials. Particularly the demand from the United States, where there is a significant housing shortage, plays a crucial role. It is expected that global wood consumption will increase significantly while the number of hectares of timberland will hardly increase. Accelerated by the climate transition and technological developments, wood is also increasingly being used as a sustainable alternative to steel and concrete in larger construction projects such as apartment and office buildings. This category of wood is called 'mass timber' or 'engineered wood'.

Mass timber is the name for a category of engineered wood products such as cross-laminated timber (CLT) and glued laminated timber (glulam) that are specifically developed as sustainable alternatives to concrete and steel. It can be used as a construction material in both low-rise and high-rise buildings. Trees absorb CO_2 from the atmosphere and store it as carbon. This means that the CO_2 does not return to the atmosphere when it is used as a construction material. Wooden buildings can last for decades, and the timber can be recycled afterward, which means that the CO_2 does not contribute to climate change for a very long time. Moreover, using timber reduces the dependence on other building materials such as concrete, aluminum, and steel, which emit a lot of greenhouse gases during their production.

Figure 3. Expected global timber consumption (bln m^3)[3]
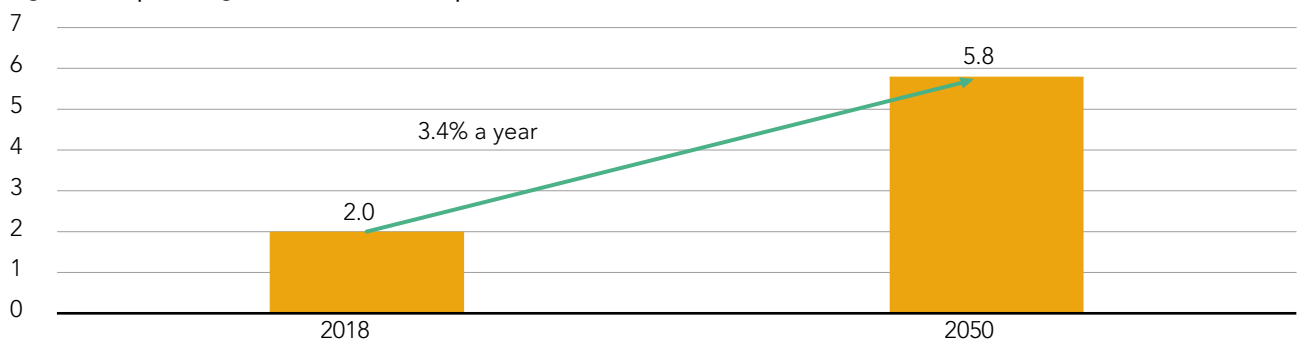
3) Contribution to sustainable goals
All the forests in the world together annually remove a net 7.6 billion tons of CO_2 from the atmosphere.[2] That is about 20 percent of the global greenhouse gas emissions in 2023. When wood is used for sustainable purposes, the captured CO_2 is stored for a long time. An investor can calculate how much CO_2 a timberland investment captures and sequesters annually. Therefore a timberland allocation within an investment portfolio can significantly reduce the total net GHG footprint.

2   https://www.nasa.gov/science-research/earth-science/nasa-satellites-help-quantify-forests-impacts-on-global-carbon-budget/
3   Bron: FAO, Gresham House, Timberland Investment Resources

Furthermore, a strong contribution can be made to other SDGs such as SDG 6 (clean water and sanitation), SDG 8 (decent work and economic growth), and SDG 15 (life on land). Sustainably managed timberland can positively contribute to local biodiversity. A relatively new source of income in forest management is the sale of CO_2 emission certificates. In this case, forests are managed to optimize the amount of CO_2 stored in the forest. As a result, less timber may be harvested, but the additional stored CO_2 can be used to generate CO_2 emission certificates to sell to companies that emit CO_2. This market is still evolving, but a.s.r. real assets investment partners expects that the price of these emission rights will continue to rise and that this will become an increasingly important source of income for the timberland sector.

More with less

The growth of the global population, the rise of a middle class in developing countries, competition from alternative uses for scarce agricultural land, and the global fight against climate change means that more food must be produced sustainably with increasingly less agricultural land. Currently, agriculture significantly contributes to the global carbon footprint.

However, institutional investors can invest sustainably in agriculture and contribute to various SDGs such as SDG 2 (zero hunger), SDG 12 (responsible consumption and production), SDG 13 (climate action) and SDG 15 (life on land). It is important to consider whether sustainable goals with measurable KPIs have been set and robust reporting is in place when making agricultural investment decisions. There are an increasing number of examples of fund managers and farmers applying various regenerative agricultural techniques that help increase productivity while simultaneously having a positive impact on biodiversity, water use, land degradation, and greenhouse gas emissions.

Examples of sustainable agricultural techniques that can lead to higher productivity:
Intercropping is a method where rows of different crops are alternated, which can lead to higher yields and healthier soil.
Cover crops are used to cover the soil and improve soil quality.
Precision irrigation is a technique to provide crops with the exact amount of water and nutrients needed to optimize growth.
Drip irrigation is a technique that helps reduce waste by dripping water and nutrients directly onto the roots of plants.
No-till farming means that the soil is disturbed as little as possible by avoiding practices like ploughing, which can lead to improved soil quality.

Conclusion

Natural capital is a mature asset class that adds value to institutional investment portfolios through low correlation with other asset classes and a strong risk-return profile. Strong fundamental drivers provide a positive outlook for agricultural and forestry investments. Furthermore, a natural capital allocation can add value to the implementation of ESG policies and impact strategies. With over 125 years of experience in investing and managing agricultural and timberland investments, a.s.r. real assets investment partners are happy to discuss how nature can add value to your investment portfolio.

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