



α.s.r. real assets investment partners

The impact of climate change on the real assets model portfolio

Due to climate change, the likelihood of severe weather and natural disasters is increasing. Historical risk-return data only partially reflect climate risks. Therefore, it is essential to integrate climate risks into expected and required return models. This article provides insight into how a.s.r. real assets investment partners incorporate climate risks into its house view.

Investing in real assets (infrastructure, natural capital, and real estate) means investing for the long term (more than ten years). Much can and will happen over such a period, including geopolitical and economic developments, the energy transition, and demographic shifts. It is therefore crucial to take a proactive and fundamental view of global developments to ensure portfolios remain future-proof and risks manageable.

When constructing a model portfolio for real assets, it is valuable to consider two perspectives:

- **Fundamental:** Based on long-term trends, assess whether markets are fundamentally attractive for investment. Megatrends, such as demographic shifts and climate change, increasingly influence the risk-return profile of real asset sectors globally and regionally.
- **Valuation:** Assess the attractiveness of markets in the short and medium term by comparing expected returns with the minimum required return. This provides insight into the extent to which investors are compensated for the risks taken and whether it is attractive to enter the market at a given time.

Climate risks, resulting from increasing climate change, are not yet fully priced into the real assets market. Historical risk-return data only partially reflect climate risks. Therefore, it is essential to explicitly integrate climate change into models for expected and required returns. In this way, (future) climate change is structurally included in the assessment of the risk-return profile of investments in real assets.

Explanation of climate risks

Physical climate risks relate to direct damage caused by climate change, such as flooding or extreme heat. Transition risks, on the other hand, arise from the societal and economic changes associated with the transition to a low-carbon economy. Both mitigation measures (aimed at limiting climate change) and adaptation measures (aimed at adjusting to its consequences) are intended to reduce or manage these risks.



Expected returns decrease when integrating climate change

The valuation of real asset markets, both including and excluding the integration of climate change in returns, is shown in the following figure.

Vision on valuations of real assets including and excluding (ex) integration of climate change

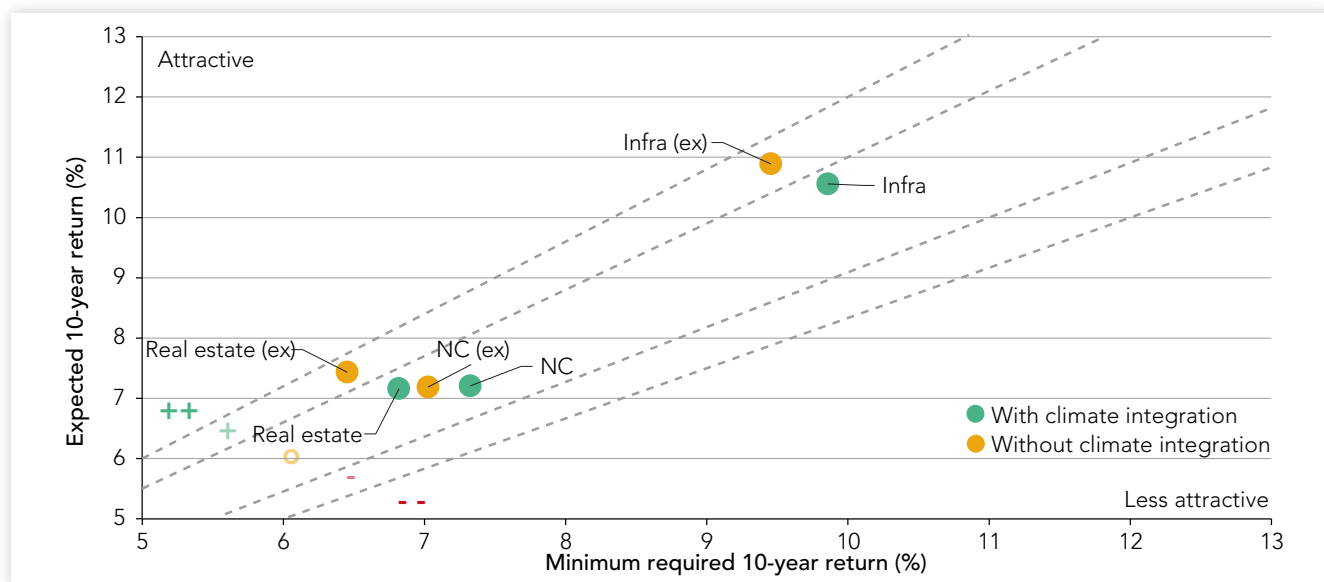


Figure 1. Source: Houseview a.s.r. real assets investment partners

As figure 1 shows, expected returns decrease after integrating climate change. This is because investments are needed at the asset level to reduce greenhouse gas emissions, for example, due to regulatory pressure, or to make assets climate-resilient. These adjustments require capital and reduce returns but are essential for making assets future-proof. At the same time, the minimum required return increases when accounting for climate risks and the potential damage that may result. Figure 1 shows that the attractiveness of real estate and infrastructure is overestimated when climate change is not considered. By integrating climate, natural capital emerges relatively more favourably compared to real estate and infrastructure. Based on this, and other relevant aspects such as good diversification opportunities and attractive risk-adjusted returns, a slight overweight to natural capital may be considered.

Significant changes at sector level

At sector level, significant changes occur that remain invisible at the aggregate level of real assets. A striking example is the permanent crops sector in the United States, an important segment within natural capital (figure 2). This sector mainly focuses on fruit and nut cultivation. Within this sector, the relatively high valuations of American assets stand out. In California, a core region for permanent cropland, a combination of oversupply and increasing water regulation - a manifestation of climate risks - is currently putting pressure on returns. In the short term, this can even result in low or negative performance.

In the medium term, the outlook is more positive. The expectation is that the market will recover within two to four years, which may create an attractive entry point for investors with a longer horizon. A realistic assessment of climate risks is crucial here. When the impact of water regulation and climate change is completely ignored, the expected return for the coming years increases significantly by several percentage points, while the minimum required return actually decreases. This leads to a significant overestimation of the current attractiveness of this sector.

The expected return of the forestry sector is expected to rise by integrating climate change into the investment analysis. Growing demand for carbon credits provides optionality and additional returns. At the same time, this leads to a limitation of the timber supply, which also positively influences the direct return of the forestry sector.

Vision on valuations of natural capital including and excluding (ex) integration of climate change



Figure 2. Source: Houseview a.s.r. real assets investment partners.



Climate risk premium in required return

a.s.r. real assets investment partners does not only look at the absolute risk level but also at the degree of current and expected adaptation measures. Not only is the current risk value analysed, but also its development over recent years. Illustrative examples are assets in Singapore and the Netherlands. Due to their geographical location, there is a real risk of flooding. The governments of both countries are aware of this and have taken various measures to mitigate this risk. It is expected that these governments will continue to make sufficient capital available to invest in mitigating infrastructure, keeping long-term risk manageable.

Within the real estate sector, the expected return on offices is most strongly influenced by the integration of climate risks (figure 3). The office market is currently the largest sector within unlisted real estate. The current office market is characterised by a high degree of competition, and tenants increasingly demand a high level of sustainability. This leads to relatively high climate-related CapEx investments within this sector. Additionally, regulations may lead to further climate investments, such as the obligation in the Netherlands to have at least energy label C to rent out an office¹. Due to these factors, the office sector becomes less attractive from a risk-return perspective compared to other real estate segments.

Vision on valuations of real estate including and excluding (ex) integration of climate change



Figure 3. Source: Houseview a.s.r. real assets investment partners.

Within infrastructure, the transport sector stands out (figure 4). In the coming years, significant climate-related investments are needed in this sector, which has a dampening effect on expected returns. Internal research by a.s.r. real assets investment partners shows that climate risks are highest for the transport sector (along with fossil energy). When climate risks are completely ignored, the transport sector appears relatively more attractive than other infrastructure sectors.

Vision on valuations of infrastructure including and excluding (ex) integration of climate change

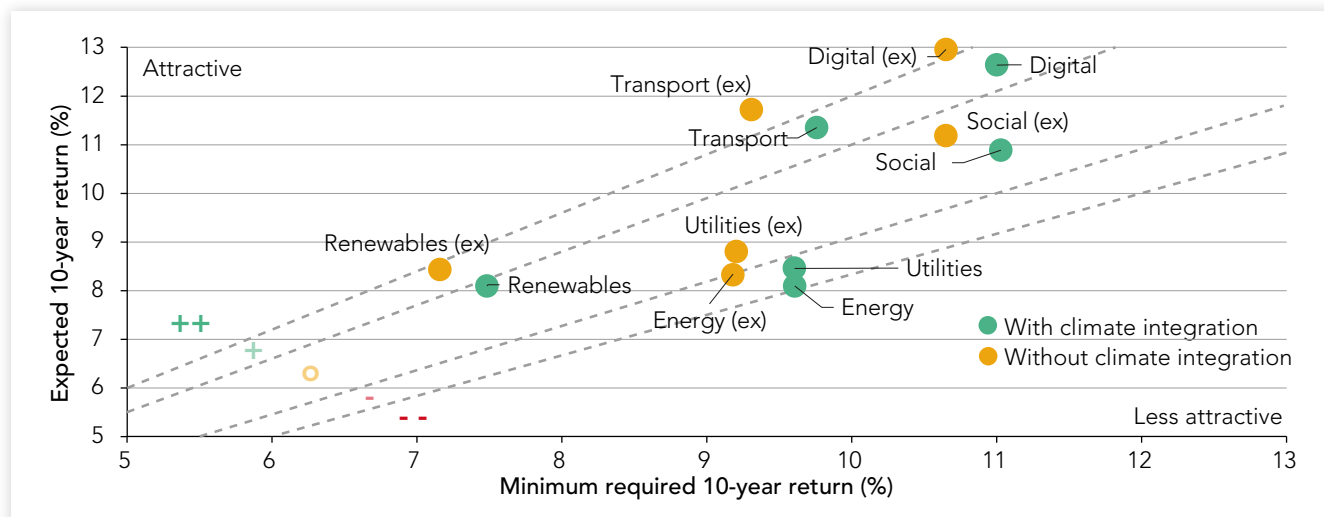


Figure 4. Source: Houseview a.s.r. real assets investment partners.

These examples highlight the importance of detailed sector analyses within real assets and the explicit inclusion of the effects of climate change in investment analyses.

1 <https://www.rvo.nl/onderwerpen/wetten-en-regels-gebouwen/energielabel-c-kantoren>

Model portfolio of α.s.r. real assets investment partners

Based on various analyses and other considerations, including the climate analysis described in this article, α.s.r. real assets investment partners maintains a model portfolio of real assets with an overweight position for natural capital at the expense of real estate (figure 5). Within a real assets portfolio, natural capital offers an attractive risk-return profile, additional stability, and diversification opportunities. Infrastructure is positioned neutrally.

Model portfolio real assets

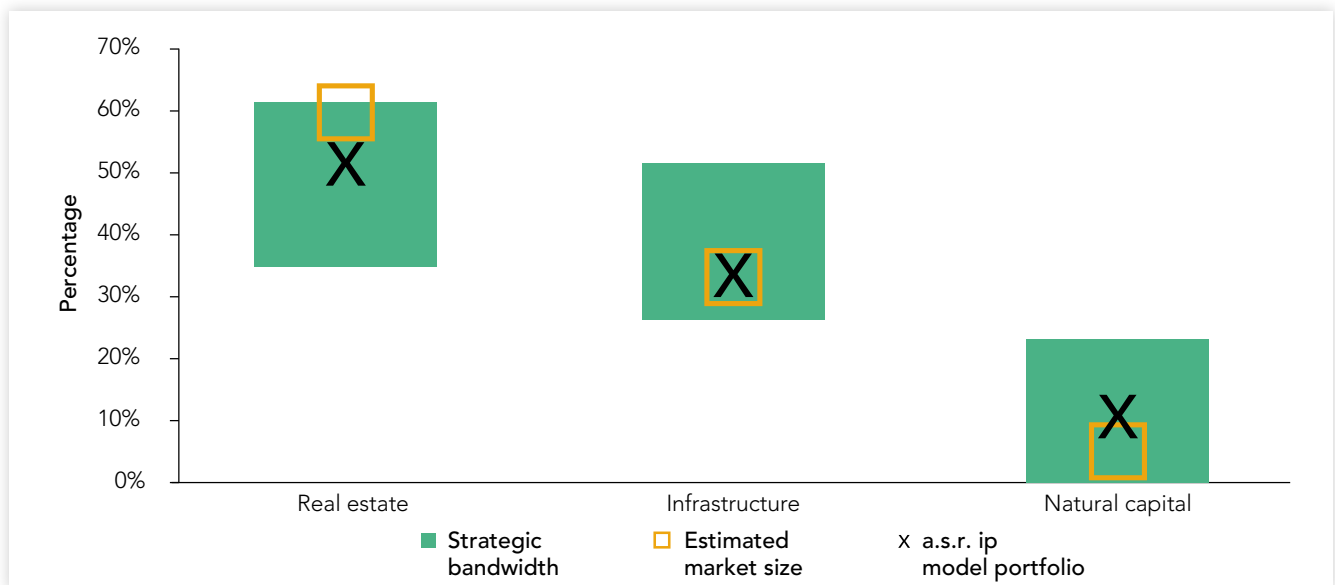


Figure 5. Source: Houseview α.s.r. real assets investment partners.

Summary:

- Climate risks are not yet fully priced into the real assets market.
- By integrating climate into expected and required return models, the impact of climate change is embedded in the investment process.
- Integrating climate change into the analysis of real assets increases the attractiveness of natural capital compared to real estate and infrastructure.
- Detailed sector analyses within real assets are important for making the right investment decisions.
- In the model portfolio for real assets, α.s.r. real assets investment partners maintains a strategic overweight for natural capital at the expense of real estate. Infrastructure is positioned neutrally.



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