Active is:

Anticipating the change

Humans are consuming ever more than our planet is able to regenerate. What does it mean for investors?

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Key Takeaways

- Human consumption is now estimated to be the equivalent to 1.7 times of what the Earth can naturally restore in a year and set to reach 2 times of Earth's capacity by 2050.
- To bring the size of the ecological Earth overshoot back to a sustainable level, we must rethink our lifestyles and economy.
- The expected change will have long-term and far-reaching consequences across geographies and industries.
- Active investment management is key to anticipate different scenarios and help prepare investors' portfolios for the arising risks and opportunities.

Deciphering the numbers and the implications of 1.7x earth overshoot

The Global Footprint Network annually computes an estimate of the worldwide aggregated ecological footprint. It shows the environmental impact that all the products and services the global population consumes, exceeds the regenerative strength of the Earth's ecology. In particular, relating to carbon, croplands, fishing lands, forest and grazing lands. To be precise, as of 2018, we use 1.7 Earths per annum. [1]

Earth Overshoot = Ecological Footprint / Biocapacity

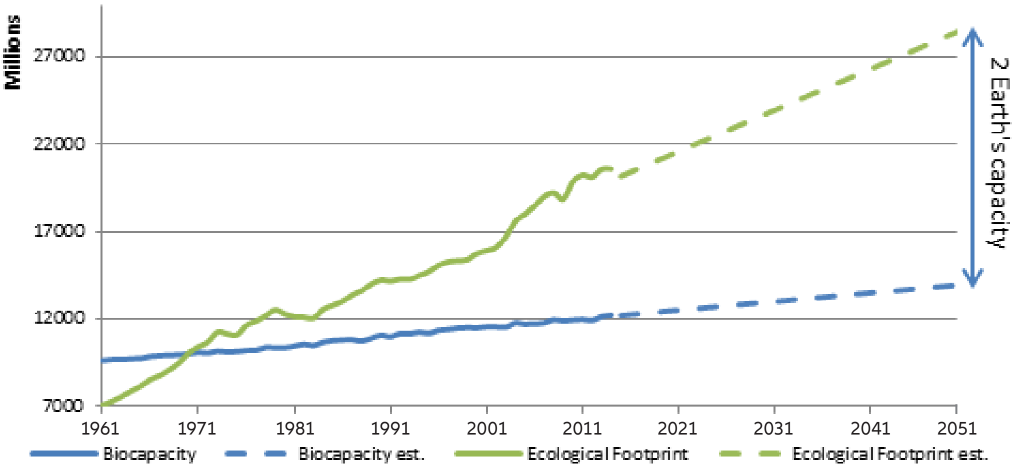
Because the Earth's biocapacity is naturally limited and we cannot make more of it, the only way to bring back an equilibrium is by reducing our Ecological Footprint. Humans have first exceeded biocapacity in 1970. Since then the annual ecological deficit spending has steadily increased. If history is anything to go by, we know how overspending could end up. The trend is highly alarming.

The overall historical trend of ecological biocapacity and ecological footprint

Ecological Deficit = Ecological Biocapacity (blue) – Ecological Footprint (Green)

Global Footprint Network, http://data.footprintnetwork.org/#/ (02.08.2018).
Forecasts and estimates have certain inherent limitations, and are not intended to be relied upon as advice or interpreted as a recommendation.

Chart 1: Development of overconsumption gap estimated to 2050
Total Ecological Biocapacity and Footprint, Gha



How may the future numbers look like?

The chart above extrapolates on how the overconsumption gap is set to widen even further from today's levels. If everything continues as of now, **by 2050**, total humankind's **consumption will overshoot double** the amount of Earth biocapacity. This outlook draws serious concerns on the long-term sustainability of global economic growth, the ecological balance and thus on global society which we know as of today.

There are **fundamental trends** that will put ever more pressure on the ecological and economical imbalance.

Global population growth is set to take off in the years to come and to levels unprecedented before. United Nations estimates there to be about 10 billion of human population by 2050, compared to the 7.5 right now.[2] More people means more consumption, which means higher ecological footprint.

More emerging markets are adopting Western (over)consumption patterns. For example, Asia and especially, Africa are expected to show accelerated economic growth over the next decades [2]. Rising wealth will imply higher demand for goods and services, such as, mobility, furniture and housing but also changing nutrition trends, like more consumption of meat. On top of this comes **increasing urbanisation** with its own negative effects on the environment. All of this will result in a more extensive use of natural resources, more carbon emissions and more waste, if consumer behavior will remain as it is today.

Top-down investment risk

What does this all mean for investors? Ecological overshoot should be analysed from an investment risk and opportunity perspective. In the recent years, the World Economic Forum Global Risk Survey has been dominated by climate change.[3] The **Earth Overshoot framework offers additional dimensions to perceive long-term ESG investment risks quantifiably**. Climate change and ecological deficit spending, of course, are deeply connected. Not only are they considered to be man-made, they also amplify each other negatively.[4] Investor alertness on climate change as investment risk is rising and comparatively on higher levels.

Generally, global ecological risks should be considered a non-linear investment risk. **While the graph understates the future in a linear development of earth overshoot, it is more likely that any additional stress on the ecological system creates exponential effects triggered by certain tipping-points along the path.** Top-down, investors should aim to analyse what this means for long-term capital market assumptions and portfolio scenario planning, also considering unexpected extreme events due to butterfly effects.

Bottom-up investment risk

From a bottom-up investment perspective, it is key to analyse which regions, industry sectors and corporates are particularly vulnerable to climate and ecological transition risk. And which opportunities arise on the horizon.

For example, agricultural and tourism sectors could be particularly exposed. On a country level, these sectors can constitute up to 10% of GDP if you take the example of Greece.[5]

On the other hand, consumer staples, utilities and energy will be particularly impacted by possible new environmental and energy regulations. Physical climate change and ecological risk will affect the overall supply risk and are likely to increase commodity, food and water prices dramatically.

Investment opportunities

On the other hand, new types of services and products with reduced ecological footprint or offsetting footprint will likely be in demand. This creates potential **investment opportunities** into sectors and corporates, which contribute to themes such as **smart cities, shared and circular economy, energy transition, but also waste reduction and smart materials.**

Certain types of products like aluminium cans, sanitary and plastic based products can take up to hundreds of years to environmentally degrade. This will need to change.

One-off environmentally harmful products like plastic straws and cutlery are a dying breed of products that will need to be replaced through smarter materials and packaging.

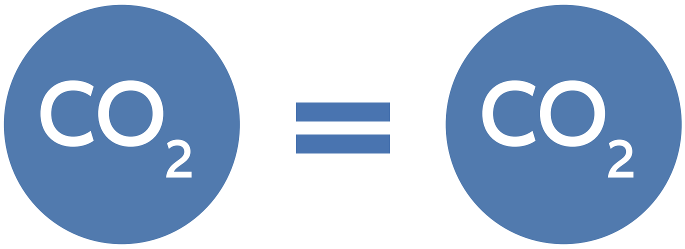
Integrated ESG, SRI and Impact Investing

How do our investment solutions address the potential risks and opportunities arising from ecological deficit spending and climate change?

In our mainstream investment strategies we analyse material risks and opportunities that arise from Environmental, Social and Corporate Governance (ESG). Following an **Integrated ESG** approach we consider trade-offs in these risk/return factors including climate and ecology in our security selection process, and actively engage with issuers in order to help them better mitigate ESG risks.

In our **Socially Responsible Strategies (SRI)** the quality assessment of ESG practices determines the portfolio construction putting a clear focus on "best-in-class" issuers that we think are best positioned to deliver sustainable financial returns.

Our **Impact Strategies** invest in projects or securities that are geared to intentional, forward-looking and measurable positive environmental and/or social impact helping investors to build or complement their lifestyle objectives into their overarching investment objectives.[6,7]



~1.5kg of CO_2 avoided per EUR 1 invested[6]

~1.5kg of CO_2 avoided per 1 plastic bag saved[7]

Active stewardship is a key component of all our investment strategies helping corporates to develop a more sustainable business strategy adopting more ESG conscious business practices. Amongst others, engagement with corporate management can help mitigate ESG risks such as climate and ecological transition risk if we consider them material for the specific business's future success.

1. Global Footprint Network, http://data.footprintnetwork.org/#/ (02.08.2018)
2. World Population Prospects: The 2017 Revision. New York: United Nations
3. WEF, The Global Risks Report, 13th edition (2018)
4. J. Cook, et al, "Consensus on consensus", (13.04.2016)
5. World Bank Data, https://data.worldbank.org/ (03.08.2018)
6. Mobilizing capital towards green finance, Allianz Green Bond, July 2018
7. Life Cycle Assessment, UK Environment Agency (2011)