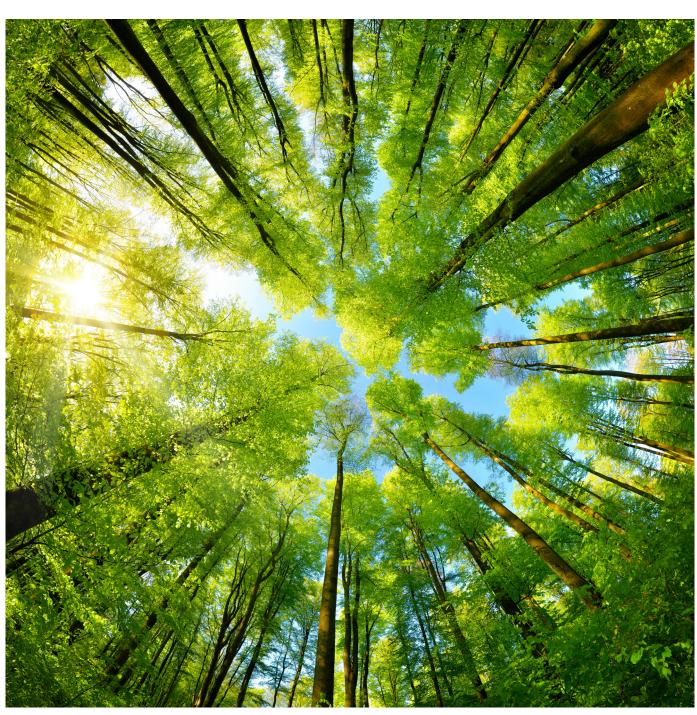
Transition towards a low carbon economy: why it is essential to manage the "carbon trajectory" of your investments



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Installed last September in Union Square, in the heart of New York, during the "Climate Week", the "Climate Clock" aims to make leaders around the world aware of the need to intensify their efforts in the fight climate change.

Taking the form of a countdown, this clock indicates the time remaining before we have completely exhausted the carbon budget that we must stay within in order not to exceed the global warming target of + 1.5 °C. Why this level and what are its impacts? What commitments do we make, as investors and as a management company?

Explanations by Géraldine Gouges, Group Head of Responsible Investment at Rothschild & Co.

+ 1.5 °C, + 2 °C, + 3 °C... Why every half-degree matters

As a starting point, the impact of human activities on global warming, calculated as the difference between current temperature levels and those of the pre-industrial era, is estimated at around 1°C.

Should greenhouse gas emissions continue at the current rate, global warming is expected to quickly reach 1.5°C between 2030 and 2050, and strict compliance with the Paris Agreement, concluded in December 2015, would already drive us towards 3°C warming at the end of the century!

However, according to the scientific community, warming of + 1.5 °C would already have a significant impact on natural and human systems (degradation of biodiversity, increase in the frequency and intensity of droughts and climatic disturbances, rise in sea level, etc.). Current studies also show that climate risks are not linear. There are biological and technical thresholds, the crossing of which could lead to disproportionate effects: these are called "tipping points". Once reached, these "tipping points" would dramatically strengthen the transformations underway, thus giving rise to new climatic realities, very likely to be irreversible.

These elements include the melting of the Greenland ice cap, which would reduce or interrupt the North Atlantic drift and the Gulf Stream current, or even the melting of the permafrost, that part of the ground which is permanently frozen in the

polar regions. This would lead, among other things, to massive emissions of methane, which has a global warming potential several times higher than that of CO_2 . A vicious circle would then set in, hence the urgency of acting today.



The consequences of global warming, already significant at \pm 1.5 °C, could therefore become catastrophic at \pm 2 °C, leading to an irreversible chain of events.

However, according to the projections presented in the report by the IPCC $^{(1)}$, keeping global warming below + 1.5 $^{\circ}$ C would have a very clear positive impact, particularly on biodiversity and the social and economic situation.

But how to reach + 1.5 degrees? The IPCC report advances various theoretical scenarios, all of which have one thing in common: massively reducing CO₂ emissions. This reduction must crucially take place in all sectors and will actually require both technical innovations and a structural change in behaviour.

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"Carbon budget" and "carbon trajectory"?

Reducing greenhouse gas emissions is the most effective way to limit the rise in global temperature. To achieve this, we must collectively preserve our "carbon budget", a concept which describes the maximum amount of CO_2 that can be emitted so that global warming does not exceed a certain level.

Consequently, the difference between the total amount of CO_2 emitted to date and the "carbon budget" makes it possible to calculate the volumes of CO_2 that can still be emitted before crossing a critical threshold.

According to the IPCC, the objective of limiting the rise in temperatures to + 1.5 °C by 2050 would impose a cumulative "carbon budget" of 420 gigatonnes of $\mathrm{CO_2}$ for the next 30 years. By comparison, current emissions are of about 40 gigatonnes per year!

Other estimates show that, if no action is taken to limit our ${\rm CO_2}$ emissions, we could exceed 60 gigatonnes per year (or more than

1700 gigatonnes of ${\rm CO_2}$ by 2050, cumulatively), which would cause a temperature rise of around + 5 $^{\circ}{\rm C!}$

In this context, it is essential to be able to manage the "carbon budget", but also to gain a perspective over a timeframe of 10, 20, 30 years or more, in order to fully understand the consequences for the environment and the humanity.

This is called the "carbon trajectory".

What role can companies play?

For businesses, the stakes are twofold. They are societal, with a common objective of steering the rise in global temperature, but also economic, with the need to maintain and develop activity, to adapt, to innovate, to transform. All sectors are concerned but first and foremost, of course, the largest emitters of CO₂.

Companies can achieve this if they are innovative and agree to change not only their economic models (by working on all their value chains) but also their energy mix and their modes of production. They can even decide to follow a carbon trajectory, meeting the ambitious objective of + 1.5 °C, or even have their greenhouse gas emissions reduction targets assessed and approved by independent organisations, such as the Science Based Targets Initiative⁽²⁾. Investors also have a key role to play in actively supporting this transformation.

The commitments of our 4Change funds expanded across all our funds

Since 2015, Rothschild & Co Asset Management Europe has been both calculating carbon intensity and analysing the profile and "carbon trajectory" of the main contributors to ${\rm CO_2}$ emissions in a large majority of its portfolios.

For several years now, we have been building tailor-made "climate" solutions for some of our institutional clients, such as, for instance, steering the carbon intensity of an investment mandate below a Dynamic average. We regularly share with our customers our studies on energy transition challenges and on the emissions outlooks for certain sectors.

We took another step forward in 2019, by creating a range of funds implementing a proactive management of carbon intensity. We have therefore launched the R-co 4Change Climate Equity Europe and R-co 4Change Climate Credit Euro funds, with the aim of making carbon trajectory a stock

⁽¹⁾ Intergovernmental Panel on Climate Change, a group of independent international experts working under the auspices of the World Meteorological Organization, and the United Nations Environment Program.

⁽²⁾ The Science Based Target initiative (SBTi) is an international initiative bringing together several NGOs that act in favour of the climate. The SBTi supports companies in setting targets for reducing their greenhouse gas emissions, through developing of clear methodologies and auditing the targets set. To date, 1,040 companies have set targets in line with the recommendations of the SBTi and 498 have targets approved by the SBTi.





selection tool. In 2019, these two funds achieved the SRI label, created and supported by the French Ministry of Finance and awarded to responsible and sustainable investment products.

They are managed with a view to steering the "carbon intensity trajectory" of the portfolios, with each company monitoring their direct greenhouse gas emissions ("scope 1", grouping together the emissions directly linked to the manufacture of the product), and their indirect emissions ("scope 2", linked to the energy consumption necessary for production).

Our management teams wish to go even further and are currently working to take into account "scope 3" emissions, corresponding to the entire product life cycle (for example, emissions linked to supply, transport, use, end of product life or recycling, etc.).

To this end, we use all the tools at our disposal to make the 4Change Climate funds as complete as possible: companies' CO2 emissions data, their emissions trajectory projections, the IPCC trajectory objectives, qualitative indicators of transition processes initiated within companies, open-source data such as that of the Transition

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Pathway Initiative⁽³⁾, and the Science Based Target Initiative on the Climate trajectory of societies.

Our engagement policy has also been strengthened by our contribution to the Climate 100+ initiative, and the development of engagement questionnaires focused on the challenges of the transition.

Finally, we have established a partnership with the NGO Up2Green Reforestation, to which we redistribute part of the management costs of the "Climate" funds to contribute, through concrete micro-actions, to conserving biodiversity and developing natural carbon sinks.

⁽³⁾ The Transition Pathway Initiative (TPI) is a global initiative launched in 2017, led by asset owners, and supported by asset managers. In october 2020, 87 international investors supported TPI, representing USD +22,500Bn in assets under management and/or consulting. Intended for investors and open access, the TPI provides independent research to assess the alignment of international companies from polluting sectors with the objectives of the Paris Agreement.

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As the specialised asset management division of the Rothschild & Co group, we offer personalised asset management services to a broad client base of institutional investors, financial intermediaries and distributors. Our development is focused on a range of open-ended funds, marketed under four strong brands: Conviction, Valor, Thematic and 4Change, and leveraging our long-term expertise in active management with conviction as well as in delegated management. Based in Paris and established in 10 European countries, we manage more than 21 billion euros and employ nearly 170 people. More information at: www.am.eu.rothschildandco.com

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