



ODDO BHF AM's approach to **climate change**

DECEMBER 2017



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Foreword

Average temperatures on the planet hitting record after record since 2014, ever more severe climatic events, multiplication of chronic respiratory diseases, or irreversible impacts on biodiversity ... these are only some items on a list of worrisome developments growing longer year by year.

A letter signed by more than 15.000 scientists, while the scientific community met at COP 23, the latest United Nations Conference of the Parties (COP) held in Bonn¹, finds the world's latest responses to these environmental threats sorely wanting. An assessment that is now widely shared by policymakers, companies and the civil society, at least on the facts.

The Paris Agreement adopted in 2015 at COP 21 has been a powerful accelerator to boost awareness among the various stakeholders. To date, 169 countries have ratified this Agreement whose main objective is to contain global warming below 2°C by 2100. However, this cannot hide the scale of the challenge ahead given that CO₂ emissions rose again in 2017 after three years of stagnation².

“40% of polled companies believe climate change is affecting operational costs and future profitability”

About 40% of the companies polled say they are **concerned or very concerned about the potential impacts of climate change on their value chain**³, be it at the level of production (35%), suppliers (45%) or distribution (45%). The direct consequence is that about the same proportion believes that climate change is already affecting their operational costs and consequently their expected future profitability.

A recent study of the Carbon Disclosure Project (CDP)⁴ shows that companies are not only observing but addressing the issue head on. In fact, 98% of the companies surveyed indicate that climate change responsibilities are now placed at "board or senior management level". This is encouraging news since there can be no profound transformation without leadership. The organization also says that 68% of the companies surveyed have set climate targets for 2020 or beyond, compared to 55% in 2016. The downside is that only 14% of respondents have their objectives aligned with scientific evidence supporting the goal of the Paris Agreement of a climate pathway limiting warming below 2°C by 2100.

1 "Warning to Humanity: A Second Notice" signed by 15 000 international scientists and published the 13th of November 2017

2 Annual review led by the Global Carbon Project, November 2017

3 "2015 Corporate Adaptation Survey", published on May 2015 by 427 Climate Solutions, ND-GAIN, and BSR

4 Carbon Disclosure Project: "Tracking corporate action on climate change", published on the 23rd of October, 2017



The wheels have clearly been set into motion and significant progress has been made. Still, much remains to be done to align the objectives of the various stakeholders with a sustainable path.

The financial world has not been idle either. The financial and economic crisis unfolding from 2008 has contributed to the emergence of a broader approach to value creation. This is evidenced by the sustained trend towards the integration of Environment, Social and Governance (ESG) criteria into investment strategies. Again, the year 2015 was a key moment, sparking a surge in investment policies integrating climate issues as a source of risks or opportunities. This acceleration has been made possible by the strong commitment of international policymakers such as the G20, leading to the creation of the Task Force on Climate-Related Financial Disclosures (TCFD). In France, the Energy Transition and Green Growth Act included rules applicable to investors and corporates (Article 173). **This convergence of actions is a unique opportunity for the financial sector to play a critical role** in facing this immense challenge of the 21st century and to support the indispensable transformation towards a low carbon economy.

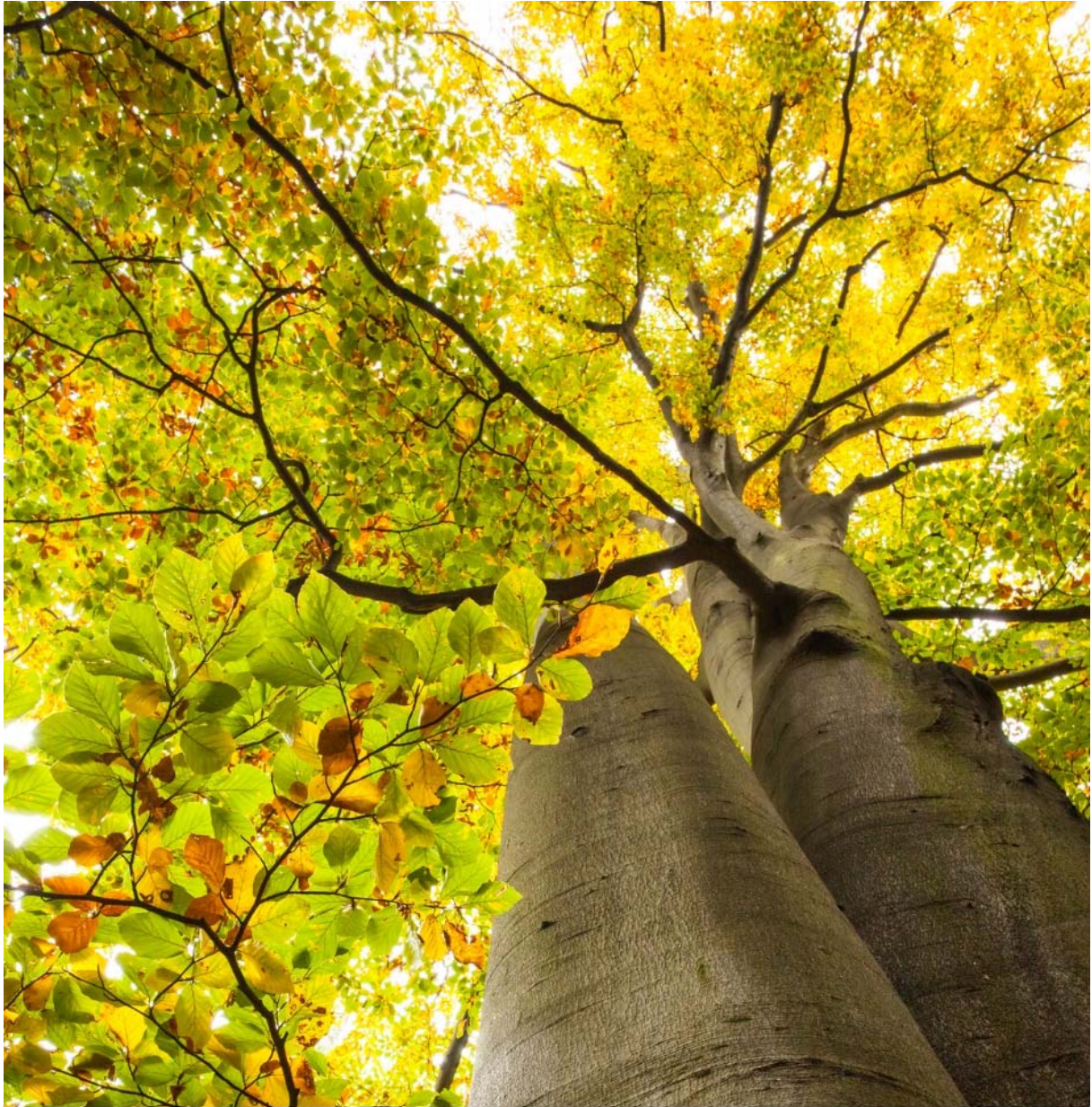
"With a qualitative analysis, we can now measure how funds contribute to the achievement of climate objectives"

The availability of data and the reporting framework are essential elements for taking climate issues into account in investment strategies. To move from intention to action, companies and investors are more than ever in need of a structured framework for disseminating and analyzing information on environmental issues. **ODDO BHF Asset Management is part of this search for continuous progress** and now incorporates a qualitative analysis, going beyond carbon measurement, of the contribution of its funds integrating ESG factors to the achievement of climate objectives.



Nicolas Jacob

Head of ESG Research
ODDO BHF Asset Management SAS



**From intention to action,
the climb is steep but not
(yet) insurmountable**



Has the weakness of the results seen since 2015 already compromised any chance of achieving the Paris climate goal of limiting global warming to less than 2°C above pre-industrial levels by 2100? This is certainly the fear that took hold of participants at the climate conference in Bonn last month. Still, major issues remain unresolved such as the setting of an international carbon price or massive funding for the least developed countries. At least the growing mobilization of nearly all stakeholders suggests that it is not (yet) too late.

Climate, a multi-stakeholder issue

Despite the success of the Paris Agreement, which remains a powerful trigger for the global awareness of the urgency of the climate challenge, it is clear: without profound changes in behavior, modes of production and consumption, the goal of containing global warming below 2°C by 2100 is likely to become quickly unattainable.

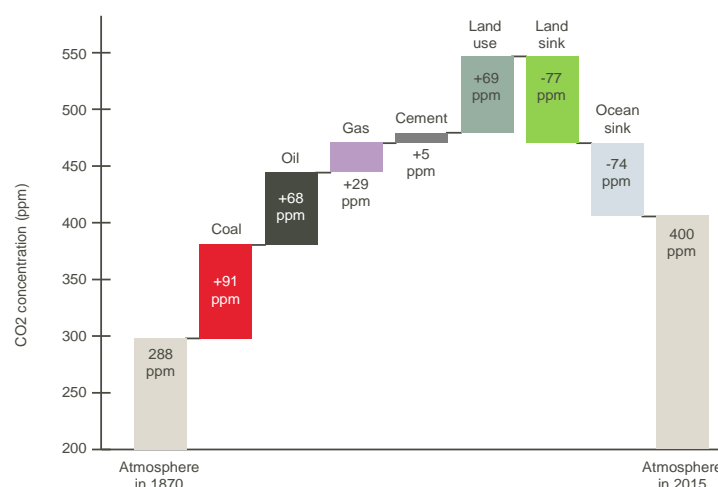
The consumable carbon budget to keep global warming below 2°C by 2100 is 2 900 gigatons of CO₂. According to the latest scientific data published by IPCC⁵, **72% of this budget has already been exhausted by 2017**. So there are only 800 gigatons of CO₂ left to be consumed by 2100. Practically, if CO₂ emissions into the atmosphere were to continue at the current clip of 37 gigatons a year, this would result in the 2°C threshold being exceeded by 2037.

“ If CO₂ emissions were to continue at the current clip the 2°C threshold will be exceeded by 2037”

Cumulative contributions to global carbon budget from 1870

The adjacent graph illustrates the main factors responsible for the steady rise in the rate of CO₂ concentration in the atmosphere since 1870.

Source: Global Carbon Project

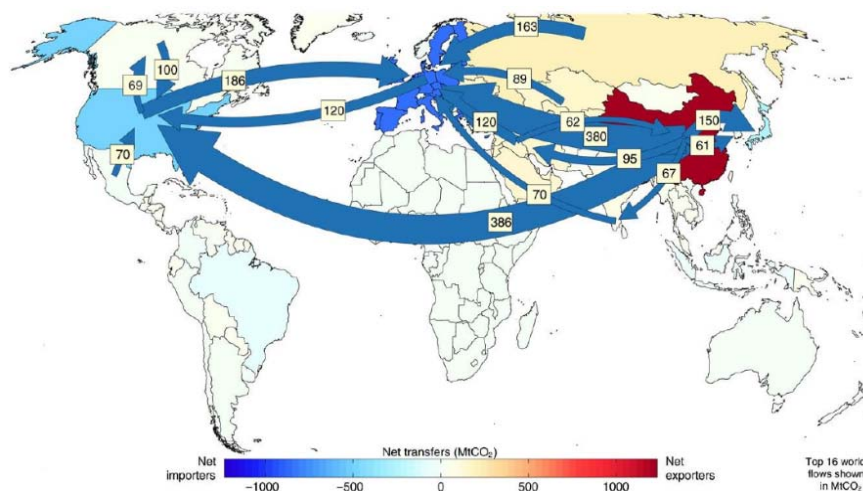


5 Intergovernmental Panel on Climate Change

This estimation for the tipping point to be reached around 2037 is also based on the fact that the natural capacity for land and ocean to absorb carbon remains unaltered despite the hazards caused by atmospheric warming (drought, fire, rising water levels).

The causes of global warming are well known with energy consumption being the main culprit. A simple reading of this observation would focus the attention only on the extractive sectors (coal, oil, gas). But a significant share of CO₂ emissions in the atmosphere also results from producing, transporting and consuming goods and services. As such, it should be kept in mind that the absolute declines in greenhouse gas emissions (GHG) observed in a number of developed countries since the establishment of proactive policies have to be put into perspective in terms of environmental responsibility. While China has become the world's leading polluter, a large part of the products manufactured there is exported to Europe and North America. Developed countries are therefore just as accountable for imported emission.

Flows from location of generation of emissions to location of consumption of goods and services



Source: Global Carbon Project

Faced with this complexity, the commitment of all stakeholders (states, local communities, cities, companies, civil society) seems essential. Based on the work of the IPCC and more specifically on the Fifth Assessment Report published in 2014, the World Resource Institute (WRI) expects that **the voluntary contributions of the signatory states of the Paris Agreement will lead us on a pathway between + 2.7°C and + 3.7°C at 2100**. So even if intentions are headed in the right direction (inaction would lead to temperatures rising probably by more than + 5°C), the probability of achieving the 2°C objective is rather low.

The scientific conclusions on the causes of global warming are now almost undisputed so it is appropriate to rely on this knowledge to move towards the 2°C goal. The world of finance, like all stakeholders, must also integrate these scientific findings into its products and services.



In this matter, asset managers must play a role in engaging companies and states to be more transparent about their exposure to climate risks. The same goes for the recognition of climate-related economic risks. **Transparency in these issues should allow for a better capital allocation that is compatible with a transition to a low-carbon economy.** Supporting the energy transition will also help mitigate more violent shocks from the potential loss of value of assets affected by climate change.

Since 2015, many initiatives have emerged to facilitate this transition: the Energy Transition and Green Growth Act in France (including Article 173 applicable to financial and non-financial companies), the working group on climate reporting launched by the G20 (TCFD⁶), the committee of experts mandated by the European Commission (HLEG⁷), the "Science Based Targets" initiative, notably by the CDP and the United Nations, not forgetting several coalitions of cities (C40⁸), companies (RE100⁹ led by The Climate Group), and investors (IIGCC¹⁰) wishing to act collectively to achieve climate objectives.

The "Science Based Target" approach: aligning investment objectives with scientific knowledge

The Science Based Targets initiative (iSBT) is worth being highlighted. Led by the CDP¹¹, the United Nations, the WRI and the WWF, the initiative aims **to encourage companies to define climate objectives in line with scientific recommendations**, in particular with the most optimistic scenario of the IPCC (scenario RCP 2.6) to contain warming below 2°C by 2100.

Its success requires the commitment of all stakeholders. For instance, the finance sector must contribute actively by making investment decisions which are enlightened by scientific knowledge on climate change.

6 Task Force on Climate-Related Financial Disclosure

7 High Level Expert Group on Sustainable Finance

8 C40 is a network of the world's megacities committed to addressing climate change (<http://www.c40.org>)

9 RE100 is a collaborative and global initiative uniting more than 100 influential companies committed to 100% renewable electricity (<http://there100.org>)

10 Investor Group on Climate Change

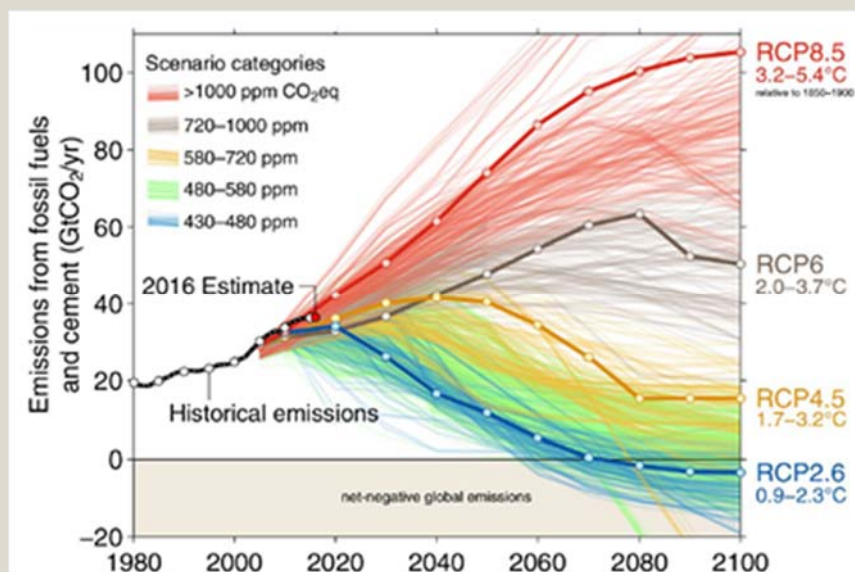
11 ODDO BHF Group is a CDP signatory since 2006



Climate Change – scenarios and pathways

In 2014, the International Panel on Climate Change (IPCC) published its Fifth Assessment Report (AR5). One of its objectives was to inform governments on the possible pathway of greenhouse gas concentrations in the atmosphere by 2100 depending on different scenarios of adaptation to climate change. Scientists have worked on about 1 200 different adaptation scenarios, integrating multiple hypotheses (technological developments, behavioral changes, carbon cycles) and interactions within ecosystems (agriculture, energy, land use). This led to the development of four reference pathways called RCPs (Representative Concentration Pathway). Only one would limit the rise in global average temperature to below +2°C with a satisfactory degree of certainty - the RCP 2.6 scenario. This scenario implies massive reductions in GHG emissions by 2050 (from 40% to 70% compared to 2010 levels) and carbon neutrality in the second half of the century.

Observed emissions and emissions scenarios



Source: IPCC

Main characteristics of the four Representative Concentration Pathway trajectories

RCP scenarios	CO ₂ eq Concentrations in 2100 (ppm CO ₂ eq)	Change in CO ₂ emissions in 2100 compared to 2010 (%)	Temperature change relative to 1850-1900
RCP 2.6	(430-480)	-118 to -78	0.9° to 2.3°
RCP 4.5	(580-650)	-134 to -50	1.7° to 3.2°
RCP 6.0	(720-1000)	-7 to 72	2.0° to 3.7°
RCP 8.5	> 1000	74 to 178	3.2° to 5.4°

Sources: IPCC, ODDO BHF Asset Management

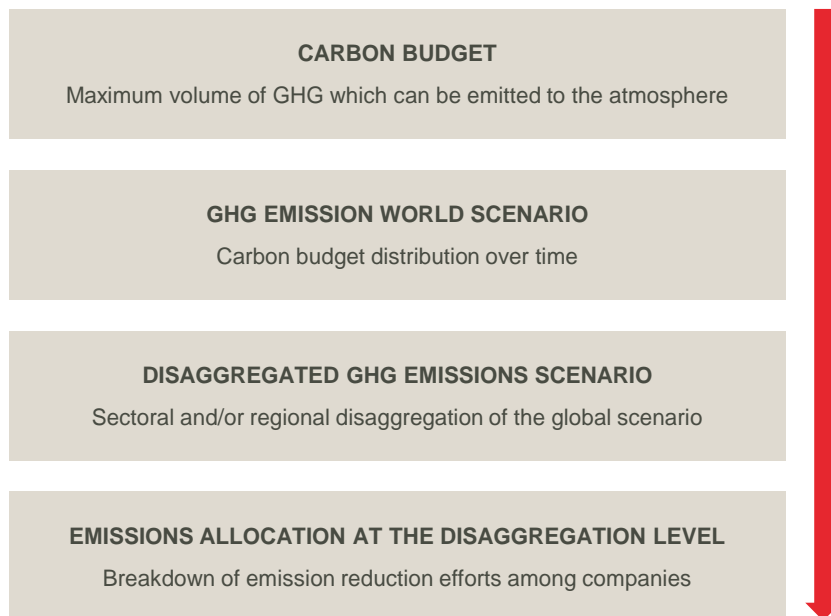


These figures, based on scientific analyses, are obviously alarming as the most recent trend sees GHG emissions rise by +2% in 2017 compared to 2016. If we want to maintain a slim chance of limiting global warming and its potential economic consequences, the “Science Based Target” approach is indispensable.



The strong point of iSBT's proposed methodology is to offer companies the opportunity to set GHG emission reduction targets which are consistent with their industry and geographical exposure. The starting point is the distribution over time of the global carbon budget suitable to achieve the 2°C scenario (around 800 gigatons between 2017 and 2100). To assign a carbon target to each economic actor, the breakdown of the global budget has to reflect sectoral and geographical exposure of the company.

General process for determining carbon objectives aligned with scientific knowledge



Source: Science Based Target initiative

Companies have thus reliable information on their consumable carbon budget and **can therefore incorporate it into their strategic thinking and capital allocation decisions in the medium term.**

“Reliable information on carbon budgets helps companies and investors with capital allocation decisions ”

To date, the CDP has identified 321 companies that have committed to defining targets aligned with a 2°C trajectory, with 82 already having their targets approved (including 46 European companies).

In fact, investors are dependent on a company’s commitment to publish its objectives if they want to analyse an issuer’s environmental approach. Greater awareness and more in-depth information should **help engage in a constructive and meaningful dialogue with companies** whereas currently they only publish information without any medium-term science-based climate objectives.



An expert view on climate risks: interview with SCOR

Between the scientific contributions and the implementation of a climate strategy by the investors, we considered it useful to hear an expert's view on climate risks. This is why we have turned to a reinsurer, part of whose business is precisely to cover those risks. Reinsurers have a deep historical knowledge of climate phenomena and the ability to translate the potential consequences of these events into economic and financial terms.

We warmly thank the underwriting teams covering "natural disaster risks" and "major industrial risks" at SCOR, the world's 4th largest reinsurer, for providing us with precise and valuable answers, offering us profound insights into the climate theme.

ODDO BHF AM: As a provider of large-risk / industrial-risk coverage to companies, how do you define climate risk?

SCOR: In our context, climate risk refers to the change in frequency and / or severity of weather events beyond the variation we observe from historical patterns. In the context of (re)insurance, climate risk is often defined in terms of change in physical risk which includes impacts on property, agriculture and public health. This comprises effects that are both direct (e.g. increased precipitation) and indirect (e.g. changes in the geographic distribution of disease caused by changes in temperature). In addition to the primary physical risk, a number of secondary risks also come into play such as liability, business interruption and adaptation. Liability risks may arise in the future for industries that have contributed to the emission of greenhouse gases and where damages (e.g. flooding) could be attributed to such emissions. Business interruption risks exist for companies that may be exposed to changes in the frequency and severity of disasters. For example, increases in the magnitude and duration of droughts could impact agricultural operations. Adaptation risks may result for companies failing to adapt to the changing risk environment. For example, companies may become less competitive

(resulting in clients deciding against them) if they do not switch to new clean technologies or invest in carbon heavy industries.

ODDO BHF AM: What type(s) of differentiation(s) do you operate? Sectoral, extent of coverage, severity, frequency, duration of coverage?

SCOR: We provide both life and P&C (re)insurance solutions. In addition, SCOR Global Investments provides asset management services for third-party institutional investors. SCOR's P&C portfolio is globally diverse and is exposed to property catastrophe risk, including hurricanes, typhoons, extra tropical cyclones, severe convective storms, earthquakes, droughts and wildfires. The impact of climate change on the frequency and severity of weather perils is likely to vary regionally and by peril. This is an area of active research as these impacts are not yet well understood. Relative to other risk carriers with national or regional concentrations, SCOR's globally diversified portfolio with exposure to all catastrophe risks helps mitigate the expected increased volatility in losses due to climate change.

ODDO BHF AM: Is the impact of climate risks in terms of risk pricing increasing, regardless of the capacities available on the market?



SCOR: The insurance industry is already seeing the impact of climate change on risk pricing. Catastrophe models used by SCOR to price insurance risks account for climate risk both implicitly (e.g. as changing patterns in claims are the basis for calibrating models) and explicitly (e.g. using present-day sea level rise estimates to price coastal flood risk rather than long-term averages). Looking forward, the impact of climate change on risk pricing is likely to vary geographically. In some parts of the world, climate change will increase the demand for coverage, resulting in new opportunities for (re)insurers. This will be driven by increased risk awareness among corporates and retail customers, leading to a change in buying patterns and helping to close the protection gap. For example, most recently US hurricane Harvey brought unprecedented levels of precipitation, which may be linked to climate change. There is an opportunity for insurers to close the protection gap through increased awareness of this risk since only around 10% of flood damage from hurricanes was insured. In other parts of the world, particularly nations that are disaster prone, the cost of insuring weather risk may become increasingly unaffordable. Finding ways to address this problem was on the agenda of the COP climate talks which took place last month. Finally, while climate change is expected to result in an overall increase in extreme weather globally, the impact will vary geographically and by peril. This means that the impact on risk pricing will also vary.

ODDO BHF AM: What impact on the management of your liabilities? Reduced risks taken on certain sectors, certain zones?

SCOR: The impact of climate change is a key topic for the SCOR Research & Development

team, ensuring that climate change risk is incorporated in our modelling. SCOR will continue to target a well-diversified portfolio of risks, covering weather-related risks from across the globe and we will continue to develop (re)insurance solutions to help our clients mitigate the impacts of climate change risk. In addition, SCOR will look for new opportunities to develop climate-related products (e.g. parametric solutions) to help close the protection gap. We also need to be aware of the risk that certain perils in certain areas become too expensive to (re)insure due to climate change. In this case, SCOR may look for more efficient means of providing risk transfer solutions – for example, partnering with national governmental agencies to develop disaster resilience solutions to mitigate impact of these perils. Lastly, SCOR is developing scoring grids to evaluate client ESG practices. While underwriting decisions are based on many factors, positive green initiatives will be rewarded in the decision-making process.

ODDO BHF AM: Post COP 21, many international initiatives have been launched in a bid to set up climate risk reporting standards for companies. Given your level of expertise and knowledge of these risks, aren't you naturally well positioned to offer tailor-made solutions to your corporate clients to enable them to meet these future reporting requirements?

SCOR: There are many aspects to climate risk reporting post COP21, one of which relates to the change in weather-related hazards. Yes, SCOR will continue to partner with clients to help understand their exposure to current and future weather-related climate risks. This can help meet reporting requirements, but more importantly, help clients see the impact of decisions such as

where to construct or which industries to develop or scale down.

ODDO BHF AM: Following this line of reasoning, would it be correct to assume that the pricing of insurance coverage and its climate component in particular can give a company a fair estimate of its exposure (in the monetary sense, provisions for risks)?

SCOR: Yes, our goal is to incorporate climate change risk into pricing and capital setting so that our risk decisions reflect the impact of climate change. The SCOR Natural Catastrophe R&D team is undertaking active research in this area to incorporate the latest scientific findings on climate

risk into our core modelling activities. One challenge we face is that there is no clarity on the exact impacts of climate change over the coming years and decades. For example, while we know that in a warmer world we are likely to see an increase in the number of extreme precipitation events, the IPCC climate models do not yet fully agree on the geographic distribution of this change in risk. What regional impacts of climate change will have is hence uncertain. In the absence of scientific consensus, our goal is to reveal the uncertainties to our stakeholders, both internally and externally.



ODDO BHF AM - measuring the "climate alignment" of portfolios

ODDO BHF Group has been a signatory of the Carbon Disclosure Project (CDP) since 2006 and of the United Nations Global Compact since 2015. Climate issues have concerned the group for several years.

As part of the implementation of Article 173 of the Energy Transition and Green Growth Act, **and more specifically the integration of climate change risks** into investment decisions, ODDO BHF Asset Management has built its environmental strategy around three axes:

- Quantitative measurement of carbon intensity of its main equity funds
- Inclusion of environmental themes in its shareholder dialogue policy with companies
- Qualitative measurement of its investment strategies' contribution to the transition towards a low carbon economy

A pragmatic and dynamic approach

By enshrining into law the requirement to publish a carbon indicator, France has undoubtedly pointed out the way and set new standards for investors' consideration of climate issues. However, the so-called "carbon footprint" quantitative measure remains largely imperfect. There is a variety of calculation methods (footprint vs. intensity). Not all data are easily available (published vs. estimated) and most often they are limited to direct and indirect emissions in the production phase (scopes 1 and 2 of carbon emissions)¹².

ODDO BHF Asset Management has opted to work on the carbon intensity of its portfolios, i.e. CO₂ emissions relative to turnover (while the carbon footprint brings CO₂ emissions to market capitalization). This is an indicator less volatile and more reflective of the effectiveness of corporate actions.

But carbon intensity – like the carbon footprint – remains a static measure reflecting a past situation: it doesn't tell us if a company's investment strategy aims to foster environmental opportunities or how high its operational exposure to climate risks is.

“ With our qualitative ESG analysis we measure the contribution of each company to the transition towards a low carbon economy ”

For our ESG analysis we prefer a dynamic and forward-looking approach. **So we have developed a specific indicator to measure the contribution of each company to the transition towards a low carbon economy.**

¹² Scope 1 = direct emissions of GHG ; Scope 2 = indirect emissions of GHG (energy use for production) ; Scope 3 = other indirect emissions of GHG not linked to the production phase (sourcing, transport, final use)



This ETA indicator (Energy Transition Analysis) is composed of two aspects:

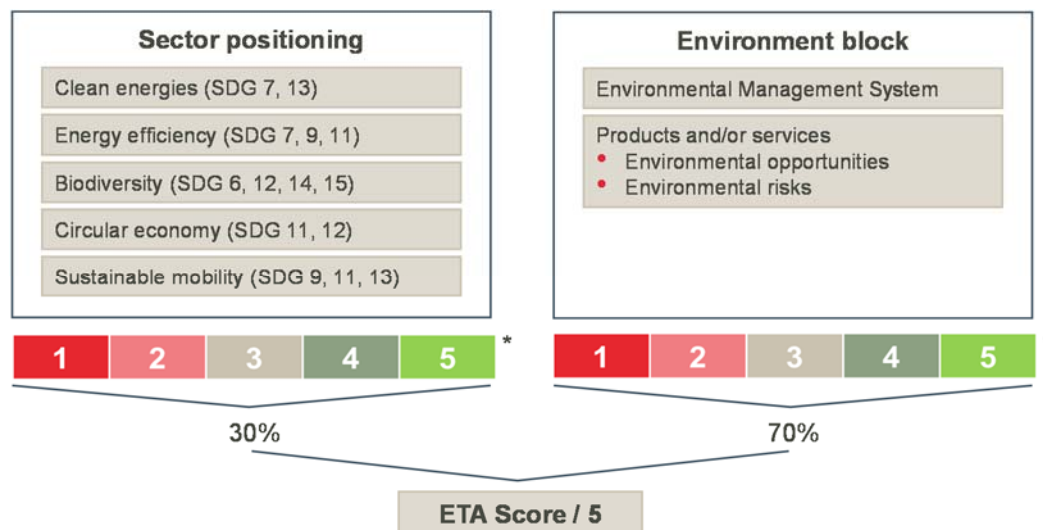
- The positioning of the sector in which the company operates accounting for 30% and
- The score of the company specific environment block assigned by our ESG model, accounting 70%.

The sectoral positioning takes into account the long-term environmental risks and opportunities based on our SDG matrix¹³ based on the “2030 United Nations Sustainable Development Goals”. Within this matrix, **we identify five environmental themes: Clean Energies, Energy Efficiency, Biodiversity, Circular Economy and Sustainable Mobility.**

The second part, the environment block of our ESG analysis model, is divided into two parts:

- The environmental management system assesses the company in terms of carbon intensity, water intensity, energy mix, waste management and certifications
- The analysis of environmental opportunities and risks related to the business activity (products and services)

General process for determining our ETA* score (from 1 worst to 5 best)



* Internal rating (*) scale from 1 (worst) to 5 (best)

Source: ODDO BHF Asset Management

To analyse environmental opportunities we focus on the products and services offered by a company. Are energy and water efficiently used? Is biodiversity protected? Do new technologies and smart buildings help to mitigate climate risks? In our risk analysis, **we differentiate between transition risks**

13 See our ESG Integration Policy at <http://am.oddobhf.com/France/EN/Pages/InformationsReglementaires.aspx>

(stricter regulation, technological breakthrough, changing consumption habits, etc.) **and physical risks** (geographical exposure to natural disasters, global warming, rising water levels, etc.).

Beyond identifying environmental impact, **the goal is also to highlight potential mid to long-term drivers of value creation or destruction for companies.** May sales or margins be impacted by climate change or new laws? How to manage coal and other hydrocarbon resources that become stranded assets if the world stops using fossil fuel?

By aggregating the ETA scores of the companies held in a portfolio (weighted by the weight of each position), we come up with an indicator of the contribution of such an investment portfolio to the transition towards a low carbon economy. **This methodology allows us to have a qualitative approach to align our portfolios with climate scenarios.**

Our analysis of environmental opportunities and/or risks related to products or services is inspired by the approach proposed by the TCFD (Task Force on Climate-Related Financial Disclosures).



A Task Force for the financial impact of climate change

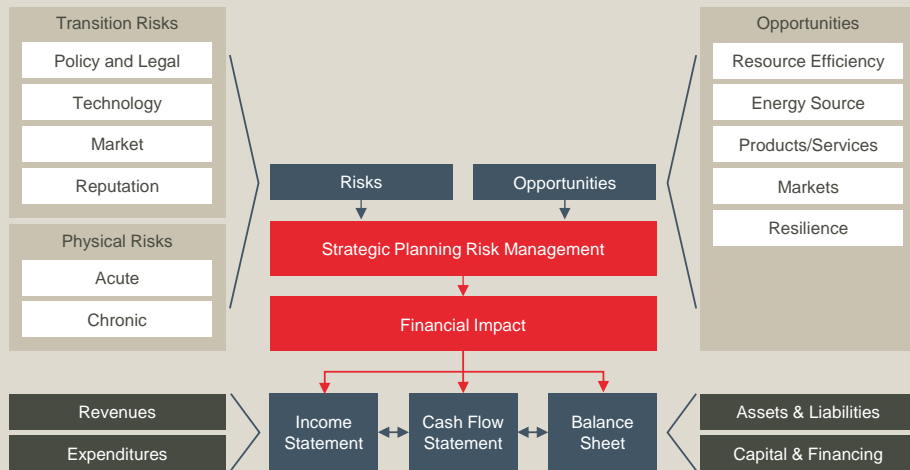
In 2015, the G20 Finance Ministers along with Central Bank Governors asked the Financial Stability Board (FSB) to review how the financial sector can take better account of climate-related issues. The FSB then established the Task Force on Climate-related Financial Disclosures (TCFD) in order to develop recommendations for more effective climate-related disclosure and to bridge the gap between the data producers (corporates) and the data users (investors).

Led by Michael Bloomberg, the TCFD is composed of 32 international members, including providers of capital, insurers, large non-financial companies, accounting and consulting firms, and credit rating agencies.

The Task Force focused on the financial impact of climate-related risks and opportunities on an organization, rather than the impact of an organization on the environment. This is the philosophy underlying the environment block of our internal ESG analysis model.



Link between climate-related risks & opportunities and financial impact



Source: TCFD

In June 2017, the TCFD released its final recommendations report which was structured around four thematic areas: Governance, Strategy, Risk Management, and Metrics and Targets. Beside the description of climate-related risks and opportunities, these thematic areas are also an important basis for our Engagement & Dialogue policy (second axis of our climate strategy): What is the role of boards and executives in assessing and managing climate-related issues? What is the potential impact of climate change on strategy and financial planning? Does the company use a 2°C scenario roadmap and has it a set-up of climate-related targets?

The TCFD hopes that these recommendations will be adopted within an expected time frame of 5 years and pushes for organizations to provide climate-related financial disclosures in their public annual filings. To date, more than 100 companies have already expressed their support for the TCFD recommendations.



75% of our funds integrating ESG factors show a climate trajectory already in line with the Paris Agreement

As of October 31, 2017, approximately € 6.2bn of assets (i.e. around 38% of assets managed in Paris by ODDO BHF Asset Management SAS) have incorporated ESG criteria into their investment process, including five open-ended funds.

“ Energy Transition Analysis (ETA): our internal score ”

In order to better understand the implementation of our qualitative indicator measuring a company's contribution to the energy transition (ETA), the table below shows a summary of the case for two companies in the portfolios: Alten and Continental.

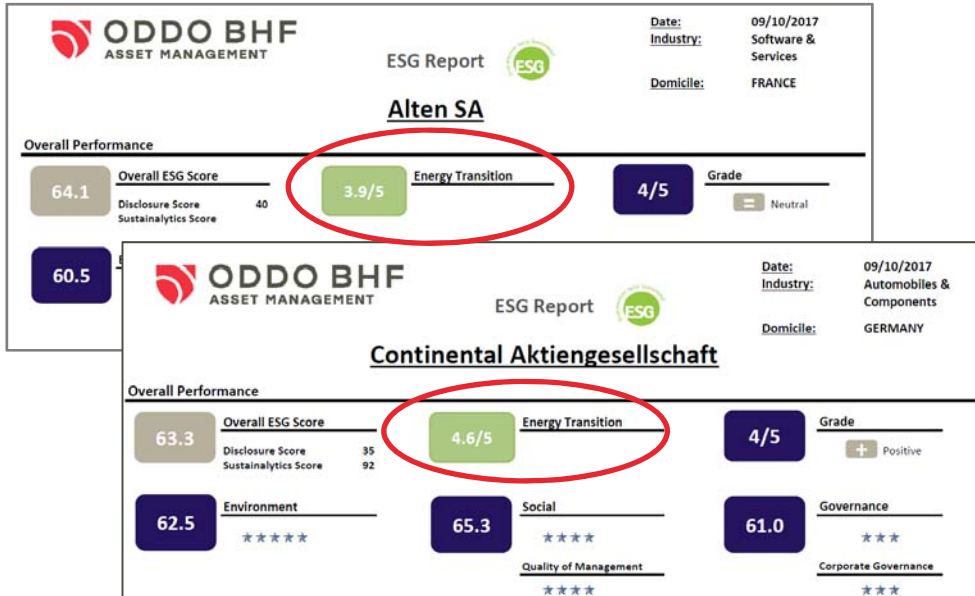
Summarised example of 2 companies' contribution to the energy transition

		ALTEN	CONTINENTAL
Sector positioning (1)	Opportunities	Energy Efficiency (SDG 7, 9, 11) Sustainable Mobility (SDG 9, 11, 13)	Energy Efficiency (SDG 7, 9, 11) Sustainable Mobility (SDG 9, 11, 13)
	Risks	-	-
Environmental block (2)	Environment Management System	ISO 14001 certification	ISO 14001 certification (90% of sites)
		100% Renewable sourcing for 80% of its consumptions (since 2016) CDP rating at 100B (among the Climate Disclosure Leadership Index)	Reduction targets on CO2, water, and waste by 2020 Life Cycle Analysis of products
	Env. Opportunities	R&D programmes and cooperations to develop eco-friendly solutions: <ul style="list-style-type: none"> • autonomous vehicles • smart buildings • wind power engineering 	Sales of products to reduce CO2 emissions represent 1/3rd of total revenues, including: <ul style="list-style-type: none"> • 23% green tires • 54% powertrain components • 2% lightweight components
	Env. Risks	Energy consumption related to datacenters	Regulation: evolution of environmental norms for automotives Technology: shift to electrical vehicles Consumer behavior: car as a service (impact on volume?)
ETA score	(1) x 30%	3.5 x 30% = 1.05	3.5 x 30% = 1.05
	(2) x 70%	4 x 70% = 2.80	5 x 70% = 3.50
	Total	3,85	4,55

Source: ODDO BHF Asset Management



Extract from our proprietary ESG factsheets



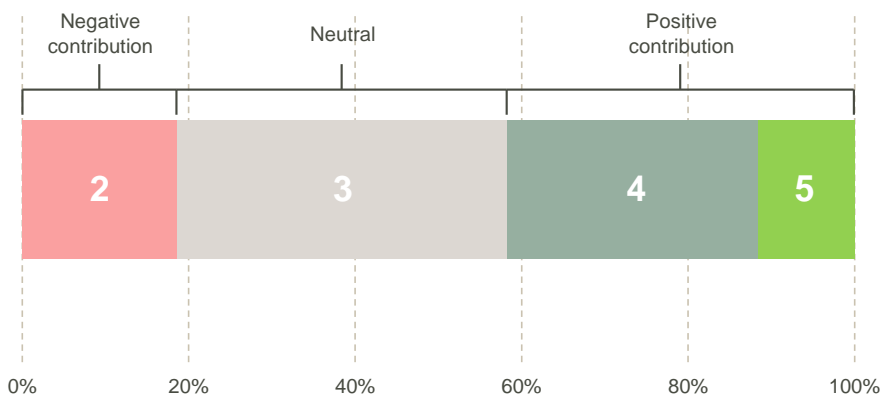
Source: ODDO BHF Asset Management

“A tool for better long-term capital allocation ”

At the level of a portfolio, we can therefore qualify the allocation of the assets according to their positive, neutral, or negative contribution to energy transition.

As an example at the end of October 2017, one of our largest mutual funds incorporating ESG criteria shows the following split: 41% of the assets contributing positively to the transition to a low carbon economy, 39.6% with a neutral contribution, and 18.6% contributing negatively.

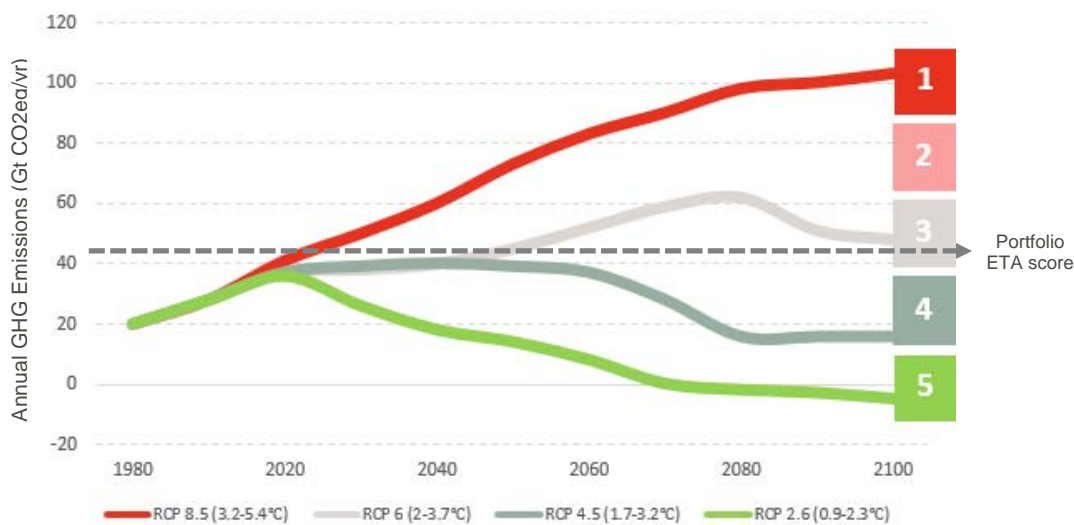
Portfolio structure by weighted ETA score



Source: ODDO BHF Asset Management

As a result, the aggregate ETA score of the fund stands at 3.2 / 5.0. This result allows us to qualitatively position the portfolio relative to the different climate scenarios of the IPCC by 2100. In this case, **the fund is aligned with a median scenario leading to a global warming of 2°C to 3.7°C (IPCC scenario RCP 6), and therefore on a trajectory already in line with the Paris Agreement (COP 21 in 2015).**

Alignment to IPCC climate scenarios



Source: ODDO BHF Asset Management

In a nutshell: ODDO BHF AM's approach to analysing climate change risks in portfolios

- We quantitatively measure the carbon intensity of our main equity funds
- We include environmental themes in our dialogue with companies as shareholding investors
- We position the portfolios integrating ESG criteria against the science-based climate scenarios to highlight their contribution to the transition towards a low carbon economy
- Around 38% of assets managed by ODDO BHF Asset Management SAS have incorporated ESG criteria into their investment process, 75% of these funds show a climate trajectory already in line with the Paris Agreement



Conclusion

Climate reporting is becoming an essential part of an ESG integration investment strategy. Beyond the regulatory imperative (Article 173 in France), **the reporting helps to make management teams aware of the financial risks of climate change.**

It also encourages them to allocate more investment flows toward the sectors and companies that contribute positively to the transition to a low-carbon economy. The climate imperative encourages innovation and is therefore an important source of growth in line with the five environmental themes we have identified: clean energy, energy efficiency, biodiversity, the circular economy and sustainable mobility.

There is therefore no opposition between a capital allocation favorable to the energy transition and financial performance objectives. Last but not least, this continuous improvement approach in terms of climate reporting should also encourage us **to go further in the dialogue with companies, in particular those most exposed to climate risks** (energy, raw materials, capital goods, automotive, food & beverages, utilities, transport).

Glossary

C40: the C40 is a network of the world's megacities committed to addressing climate change and representing around 650 million people and 25% of the global GDP.

CDP: The Carbon Disclosure Project is an international organization who created a system that has resulted in unparalleled engagement on environmental issues between investors (representing more than \$ 800bn), companies (more than 5 600), cities (533), states and regions (71) worldwide. CDP's data enables the network to link environmental integrity, fiduciary duty and public interest to make better-informed decisions on climate action.

Climate reporting: The signing of the Paris Agreement in 2015 (COP 21) has led to an unprecedented mobilization of different stakeholders - states, companies, investors etc. -, encouraging them to consider climate change in decisions to allocate capital in the medium and long term. To increase transparency between companies and investors in order to reduce risks and / or seize opportunities related to the consequences of climate change, a structured reporting framework that is compatible with a long term horizon has quickly proved to be a necessity.

COP: In 1992, at the Earth Summit in Rio de Janeiro, the United Nations adopted a framework for action to fight global warming: the United Nations Framework Convention on Climate Change. This convention brings together almost all the countries of the world which are qualified as "Parties". Their representatives have been meeting once a year since 1995 at the Conferences of the Parties (COP).

ESG: "Environment, Social, Governance", these criteria are used to evaluate the strengths or weaknesses of an investment in relation with environmental, social and governance matters. ESG terminology was developed and promulgated by the United Nations Principles for Responsible Investing (UNPRI).

HLEG: the High-Level Expert Group on sustainable finance, launched in December 2016 by the European Commission with the objective to provide recommendations for a comprehensive EU strategy on sustainable finance as part of the Capital Markets Union.

IIGCC: the Investor Group on Climate Change is a forum for investors to collaborate on climate change and to mobilise capital for the low carbon future.



IPCC: The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for the assessment of climate change. It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988 to provide the world with a clear scientific view on the current state of knowledge in climate change and its potential environmental and socio-economic impacts. Currently 195 countries are members of the IPCC.

RCP: Representative Concentration Pathway (RCPs) are four greenhouse gas concentration trajectories adopted by the IPCC for its Fifth Assessment Report (AR5) in 2014. The pathways are used for climate modeling and research. They describe four possible climate futures, all of which are considered possible depending on how much greenhouse gases are emitted in the years to come.

RE100: collaborative and global initiative uniting more than 100 influential companies committed to 100% renewable electricity.

SDGs: The Sustainable Development Goals are a collection of 17 interrelated global goals set out by the United Nations. The SDGs cover a broad range of social development issues, such as poverty, hunger, health, education, climate change, gender equality, water, sanitation, energy, environment and social justice. On 25 September 2015, the 193 countries of the United Nations General Assembly adopted the 2030 Development Agenda titled "Transforming our world: the 2030 Agenda for Sustainable Development".

TCFD: the Task Force on Climate-related Financial Disclosure was launched in 2015 by the G20 to review how the financial sector can take better into account climate-related issues.

WRI: Founded in 1982, the World Resource Institute is a global research organization who works around six critical goals that the world must achieve in order to secure a sustainable future: climate, energy, food, forests, water and sustainable cities.

References

- “Global Carbon Project 2017” by Corinne Le Quéré (lead author), 13 November 2017
- “2015 Corporate Adaptation Survey” by 427 Climate Solutions, ND-GAIN and BSR, May 2015
- “Tracking corporate action on climate change” by CDP, 23 October 2017
- “Global Carbon Project 2016” by Corinne Le Quéré (lead author), 14 November 2016
- “Climate Change 2014 – Mitigation of climate change”, Working Group III Contribution to the Fifth Assessment Report of the IPCC, published in 2014
- “Practical guide to define carbon objectives aligned with scientific knowledge”, Science Based Target initiative, April 2017
- “The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities”, TCFD, 14 December 2016
- “TCFD – Overview of Recommendations”, June 2017

Company profile

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