Forum per la
Finanza Sostenibile

"Net-zero": how to achieve it?

Introduction: what is net-zero and why it is important

"Net-zero" means an **overall balance between human-induced greenhouse gas (GHG) emissions produced and GHG emissions taken out of the atmosphere**. In practice, it requires the reduction of Earth-warming emissions as mush as possible, and absorbing or compensating the unavoidable emissions.

According to the IPCC 2018 Special Report, achieving net-zero by 2050 is necessary to limit global warming to well below 2° Celsius (C), possibly 1.5°C, compared to pre-industrial levels by the end of the century: this is crucial to avoid catastrophic consequences produced by climate change on human activities[1].

As carbon emissions are deeply entrenched in the economic system and in many aspects of human activities, **behemoth efforts are required from a wide range of stakeholders**, from countries to corporates as well as from local communities to individuals. In view of the crucial appointment of **COP26** in Glasgow next November, the awareness of the public opinion and the activism of public authorities, companies and investors are increasing. A significant and always increasing number of countries, local entities (e.g. regions and municipalities), companies, and investors **make public pledges** to reach the goal by mid-century, often rallying around joint initiatives as the **UN Race to Zero campaign**. A recent report by the research initiatives Energy & Climate Intelligence Unit (ECIU) and Oxford Net Zero found that countries with net-zero targets together represent 61% of global emissions, 68% of global GDP (in Purchase Power Parity terms) and 56% of the global population. Among the 2,000 largest public companies, at least one-fifth (21%) have set net-zero commitments, representing annual sales of nearly $14 trillion.

Investors can play a crucial role in view of **providing financing** to **low-carbon solutions** and to support the **transition plans** of the companies in high-emitting sectors. Integrating net-zero considerations into investment policies is also crucial to **mitigate climate-related physical and transition risks** as well as to **identify new investment opportunities** in companies that are fit to prosper in a new low-carbon economy.

The importance of triggering a debate about the challenges of net-zero

The issue is now about "how we get there". If we scratch the surface and try to elaborate a granular analysis about the concrete implementation of investments strategies that are

[1] The IPCC Special Report refers specifically to CO_2 emissions. Besides this, a rapid decline in other non-CO_2 GHG emissions, like methane, is also necessary. In model pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO_2 emissions decline by about 45% from 2010 levels by 2030, reaching net zero around 2050. Non-CO_2 emissions are projected to reach net zero around 2070.

needed to produce significant impacts on the real economy, we realize that net-zero is a very challenging mission at various levels. **Many questions are still open**: identifying the sources of emissions across portfolios, setting credible targets, embarking on coherent decarbonization paths, and reporting progress against them.

While public pledges and the frequent launch of international initiatives within the financial community are crucially important to keep the spotlight on the urgency of net-zero actions, what is also needed is to draw a realistic picture of the technical challenges ahead of financial market participants. **Pooling and sharing questions, criticalities and best practices is the most effective way to overcome obstacles**.

As such, this paper is aimed at:

1. defining positive impacts and shortcomings of the strategies that are currently implemented within the context of net-zero actions;
2. dissecting the challenges that institutional investors currently face when dealing with target-setting;
3. highlighting the role of policymakers, companies, and financial market participants vis-à-vis these challenges.

A round-up of net-zero strategies: strengths and shortcomings

Current global warming is at 1.1°C above pre-industrial levels. By 2100 the global average temperature will rise by 2.9°C, based on current policies. The question is how financial market participants can contribute to bridge the gap between the current trajectory and a 1.5°C objective scenario.

Robust net-zero investment strategies should pursue some key objectives. **At a portfolio level**, these include: reduce carbon footprint, mitigate climate-related risks, and ensure diversification. In order to be effective, net-zero investment strategies must also provide evidence of their **impacts on the real economy** by accelerating climate transition in the wider economy, and financing climate solutions opportunities: **a net-zero portfolio should lead to a net-zero world**.

Many methodologies are currently in use and each one carries its strengths and shortcomings.

- **Intensifying investments in low-emitting companies** (e.g. media companies) and in **climate solutions** (e.g. renewable energies) can be important along the way. Nevertheless, this approach systematically **misses opportunities in** companies that are successful in decarbonization while operating in those **hard-to-abate sectors** (e.g. steel, cement and chemicals) that are crucial in view of decarbonizing the economy. In addition to this, companies in low-emitting sectors must be assessed in terms of **prospective emissions across all the value chain**, in order to take into account transition risks.
- **Offsetting** means compensating the financed GHG emissions by investing in green solutions (e.g. planting trees) that are deemed to absorb an equal amount of emissions. This strategy, however, **falls short of addressing the climate risks of high-emitting assets**. Moreover, offsetting **cannot be interpreted as a substitute for efforts towards lowering the amount of the financed emissions** within the portfolio.
- Investors might also decide to **short-sell high emitters** to rapidly reduce the carbon footprint of a portfolio with a narrower tracking error from the reference benchmark than long-term divestment strategies. Nevertheless, this approach **does not provide**

any evidence that a concrete impact is produced on the real economy, because **divested companies may collect investments somewhere else**.

- **Engagement** is one of the most effective levers that enable investors to ask for more efficient data or to encourage the adoption of improved sustainable business models by investee companies. Engagement strategies should take into account the **sector where companies operate**, as well as include **targets** against which investors can check the effectiveness of their action (e.g. deadlines and criteria). Engagement normally **displays its full potential in the long-term** and it is a time- and resource-demanding activity.
- On the other hand, **total and partial divestment** ensures a rapid reduction of GHG emissions at portfolio level and it can be a solution if and when engagement is not successful. A **phase-out of investments in some critical activities, as new fossil fuel supply projects and unabated coal plants, must be a milestone towards net-zero**, as recommended by the International Energy Agency in a report published in May 2021. Nevertheless, total divestment implies giving away the lever of engagement itself and therefore **reducing the capacity of the investor to push for transition** in high-emitting sectors.

This rapid round-up of net-zero strategies clearly demonstrates that a meaningful portfolio decarbonization can only be achieved through **increasing investments in companies that have committed to net-zero** and that are able to provide clear evidence of the robustness of their decarbonization plans.

A clear definition of net-zero and a description of the paths that lead to it would be beneficial to **increase the transparency of the market** and to reduce the risks of the so-called "net-zero washing". It would also help companies and investors navigate this complex universe of strategies.

Box

It is a common practice to measure the carbon footprint of a portfolio by subtracting from its GHG-toll the so-called "avoided" emissions, made possible by investing in green activities. Now, including **carbon avoidance in emissions reduction targets is an accounting error**: in fact, what has been already *avoided* cannot be counted as *reduced*.

Aligning investment portfolios to net-zero: challenges and possible solutions

Setting and implementing a net-zero investment strategy is a complex and long journey, which requires a thorough analysis and frequent reviews. Asset owners and asset managers usually face the following challenges:

Choosing the climate scenario

Several scenarios are available on the market. Each one is based on specific assumptions (e.g. with or without overshooting 1.5°C, considering or not considering carbon absorption, etc.), resulting in different outcomes in the target setting exercise.

Facing data gaps

Data about the carbon emissions of the investee companies are essential to measure the exposure of the portfolio to climate-related risks and impacts, and so to estimate properly a

decarbonization trajectory. Still, nowadays an **insufficient number of companies disclose properly the amount of GHG emissions they release in the atmosphere**. Furthermore, data usually come from large companies because they are more equipped to carry out reporting-related activities, and they are normally required to do so by law. This is the case in the EU, where the Non-financial Reporting Directive (NFRD) currently includes 6,000 large companies in its scope. Still, Small and Medium Enterprises (SMEs) represent 99% of all businesses in the EU and account for more than half of Europe's GDP. The new Corporate Sustainability Reporting Directive, whose proposal was published by the EU Commission on the 21st April, might expand the scope of ESG data reporting to include large companies as well as listed SMEs, totalling 49,000 companies.

As a consequence of this data gap, asset owners and asset managers largely rely on forecasts and data providers: several datasets are available on the market, each one is based on different assumptions and might lead to very different outcomes. Data issues are particularly challenging in sectors that are crucial in view of transitioning the economy, but are not based on **public markets** (e.g. real estate). Finally, there is still lot of room for improvement with regard to the quantity and the reliability of **forward-looking data** (*see also paragraph below*).

Managing Scope 3 emissions

According to the Greenhouse Gas Protocol, Scope 3 emissions are all indirect emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions. In some sectors, such as oil companies and car manufacturers, Scope 3 is the main source of GHG emissions. Therefore, for financial market participants Scope 3 emissions are crucial in view of measuring the financed emissions and setting robust net-zero targets. According to a recent report by Carbon Disclosure Project, total financed emissions from financial institutions were, on average, more than 700 times greater than their operational emissions, based on data from 84 organizations that collectively managed $27 trillions in assets.

However, **there are not enough Scope 3 emissions data available** and those available are **not so reliable** yet. The fact that financial market participants miss too much Scope 3 data is **not a sufficient reason to rely just on Scope 1 and 2**, because in some sectors this approach might result in a distorted picture of the position of the company in the decarbonization trajectory of the reference industry.

One of the possible solutions consists in **engaging with companies** to try and increase the quantity, quality and comparability of reliable data. Meanwhile, investors should also use the available tools and methodologies to **make assumptions and estimates for filling data gaps**. In fact, it is better to be approximately right than to be precisely wrong.

Managing portfolio constraints

One of the major challenges for investors consists in **pursuing net-zero strategies while dealing with portfolio constraints**. According to McKinsey, within the next 30 years the EU will need €28 trillion investments in a number of key sectors (e.g. power, transportation, buildings, industry, agriculture and infrastructure). However, at the moment nearly half of these investments would not have positive investment cases.

Furthermore, at a company level in many sectors the measures that are currently available to reduce carbon emissions are not considered worthwhile in the short term: in many organizations, the implications of the carbon-abatement curve are so intimidating that projects to cut emissions are frozen or delayed.

Still, studies about the potential costs of advancing policy responses to limit global warming in different time horizons show that **the later a policy is implemented the higher the cost**. As

such, a **shift in the way risks are assessed and integrated into business models and investment policies would be beneficial** in view of building the case for net-zero for companies and financial market participants.

In addition to this**, public policy actions such as carbon pricing**, are crucially important to allow institutional investors accept lower returns while financing the transition plans of the companies.

Maintaining an appropriate risk-return profile and diversification at a portfolio level represents a major concern for asset owners, as fiduciary duty requires them to act in the best interests of their clients. **Asset managers need to bring returns** because otherwise institutional and retail investors are not going to buy their funds: if the preferences shift towards products offered by asset managers that have less ambitious climate investment concerns, companies will have reduced access to transition finance. Thus, **asset owners can play a crucial role** in view of speeding up the shift of financial markets toward net-zero by **demanding to their asset managers to adhere to specific carbon reduction trajectories**.

To overcome the issues related to portfolio constraints, **strategic public investments and supportive economic policies are needed in order to create new markets and shift incentives towards new net-zero** investment opportunities. It is also important to set a **policy and regulatory environment that forces companies to align** with a decarbonization trajectory that is consistent with carbon neutrality. Some useful policy actions could be: **direct public financings** (which leads to commercial de-risking and brings in long-term investors, e.g. through blended finance) and **pricing measures**, such as carbon prices or cap-and-trade systems.

A round-up of net-zero tools: the importance of choosing the right mix

Net-zero strategies should be based on a clear path of actions, including: 1) **calculating financed** emissions across the portfolio, which means measuring the impact on climate change of the activities enabled by investments, lending and underwriting activities, with details about absolute emissions and emissions intensity (i.e. emissions relating to revenues); 2) **setting targets** at **portfolio** level, with specific characteristics for each **sector** and **asset class**; 3) establishing **long-term and intermediate targets** that are consistent with net-zero while also achievable; 4) **reporting** on progress on a regular basis (e.g. year on year).

These actions require a complex set of analysis and choices. Financial market participants might find beneficial to follow some methodological approaches in selecting sustainable and responsible investment (SRI) strategies, metrics and target-setting tools.

Nowadays **the net-zero toolset is well equipped and diversified and the market is evolving dynamically**. Financial market participants can choose between different methodologies and metrics to get an acceptable picture of their portfolio exposure to warming emissions, as well as to work out solutions to neutralize them by 2050. There is no silver bullet: **each company should choose and mix existing methodologies that fit its own specific needs**, while also **contributing to developing new tools** and metrics.

There are two considerations investors might bear in mind when assessing metrics and target-setting approaches:

1. Firstly, **science-based methodologies are essential**.
2. Secondly, **data and metrics should be forward-looking**. For example, they could take into consideration whether corporate investments (CapEx) are aligned to the decarbonization targets. **Carbon footprint relies on past emissions** (i.e. the

emissions that have been disclosed by investee companies in the latest report, with a specific reference period in the past), thus it does not give any insight about the transition efforts of the company, neither about its position in the trajectory of the reference industry, nor about its impact on the overall economy. As recommended by WWF, **carbon footprint and absolute emissions shouldn't be the sole metrics to measure and disclose climate alignment.**

A sound net-zero investment strategy should require the following metrics:

- **Absolute CO_2-equivalent emission reduction targets**
- **Temperature alignment scoring**, implying a comparison between the climate trajectory of a portfolio and the temperature benchmark (e.g. 1.5°C). As these data are forward-looking and therefore highly uncertain, financial institutions should be transparent about the assumptions that were used when assessing a temperature alignment score.
- **Activity-based targets**
  For instance, the **EU taxonomy** could be taken as a **reference**: this means providing details about the incremental proportion of the portfolio that must align with the technical screening criteria for substantial contribution (SC) and do-no-significant-harm (DNSH) within given time frames[2].
  Some methodologies, most notably the Paris Agreement Capital Transition Assessment (**PACTA**), assess a financial institution's exposure to high-carbon sectors in terms of economic activity and compare this to the required economic outputs under a Paris-aligned scenario.

Conclusions: who can do what

The magnitude and importance of the challenge require huge efforts from a wide range of stakeholders: **collaboration and coordination between different actors that push in the same direction is necessary to achieve net-zero by 2050**. In particular:

- **Policymakers** are crucial to create a regulatory and policy environment that supports net-zero – also by **enshrining clear definitions of net-zero and price signals into law**, as suggested recently by Eurosif – as well as to **implement strategic investments** aiming at attracting private investors and mitigating risks in high-emitting sectors.
- **Companies** are crucial to **set-forth measurable and ambitious decarbonization pathways** and to appropriately **report about their GHG emissions** and the progress achieved, especially to bridge the gap with regard to forward-looking and Scope 3 information.
- **Financial market participants** are crucial to embark on ambitious, transparent and result oriented engagement actions with companies and policymakers. **Asset owners should push asset managers** in the direction of aligning their portfolios to net-zero trajectories. **Asset managers should do their best** to integrate net-zero into their strategies even if the current environment is not perfectly fit for the purpose yet.

On top of that, it is important that companies and investors **make the best of all data, metrics, target-setting tools and scenarios that are currently on the table**.

Even if the perfect tools or the best policies are yet to come, **the best moment to start acting is now**.

[2] The delegated acts for climate mitigation and adaptation currently cover the activities of 40% of EU-based companies in sectors that are responsible for 80% of EU direct GHG emissions: retaining portfolio exposure to these sectors, in companies that comply with SC and DNSH criteria, would ensure a meaningful contribution to the transition.

References

https://www.ipcc.ch/sr15/

https://unfccc.int/climate-action/race-to-zero-campaign

https://eciu.net/analysis/reports/2021/taking-stock-assessment-net-zero-targets

https://climateactiontracker.org/

https://www.bloombergquint.com/politics/mark-carney-s-brookfield-net-zero-claim-confounds-climate-experts

https://www.responsible-investor.com/articles/investors-should-short-big-emitters-to-achieve-net-zero-targets-paper-suggests

https://www.iea.org/reports/net-zero-by-2050

https://wwfeu.awsassets.panda.org/downloads/requirements_for_climate_disclosure___wwf_briefing__nov_2020_.pdf

https://media.mimesi.com/cacheServer/servlet/CropServer?date=20210527&idArticle=544692469&idFolder=14104&idChapter=37679&authCookie=-1616081450&trc=pDelivery-t20210527-a544692469-h37679-c3969-d11866-f14104-n212

https://media.mimesi.com/cacheServer/servlet/CropServer?date=20210527&idArticle=544692469&idFolder=14104&idChapter=37679&authCookie=-1616081450&trc=pDelivery-t20210527-a544692469-h37679-c3969-d11866-f14104-n212

https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/eu-taxonomy-sustainable-activities_en

https://ec.europa.eu/info/business-economy-euro/company-reporting-and-auditing/company-reporting/corporate-sustainability-reporting_en

https://www.mckinsey.com/business-functions/operations/our-insights/net-zero-or-bust-beating-the-abatement-cost-curve-for-growth

https://www.mckinsey.com/business-functions/sustainability/our-insights/how-the-european-union-could-achieve-net-zero-emissions-at-net-zero-cost

https://www.eurosif.org/letter-to-the-commission-on-the-new-eu-sustainable-finance-strategy/