ISS ESG

Seeing past the blind spots in climate finance

Investors need to come to terms with Climate Transition, the Real "Net Zero", and Climate Accountability

WHITE PAPER SERIES
ESG THEMES & TRENDS 2021

WWW.ISS-ESG.COM

Key Takeaways

- Despite increasing global action on climate change, there are some major blind spots that investors should be paying more attention to.
- Investors are preparing for a climate change transition, but what happens if the transition fails? Planning for climate adaptation may open the way to new investment opportunities, and should at a minimum highlight the urgency of action required.
- Net Zero commitments are spreading like wildfire, but not many investors are acknowledging the reality that Net Zero targets require not just offsets, but genuine atmospheric carbon reductions.
- Investors and stakeholders alike are paying increasing attention to the connection between an organization's words and deeds when it comes to climate change. There is increasing pressure on companies that are involved in lobbying against reasonable regulation on climate change, and activists and other bodies are increasingly turning to climate litigation as a way of pressuring companies to up their game.

Table of Contents

Key Takeaways....2
Table of Contents....3
Overview....4
The first blind spot: Transition versus Adaptation....6
The second blind spot: The 'net' in Net Zero....11
The third blind spot: Climate lobbying & litigation....13
Conclusion: Blind spots into the spotlight....17

Overview

20 January 2021 marked yet another milestone in what started decades ago as a climate marathon and is increasingly turning into a sprint. President Joseph Biden announced that the United States will be "Net Zero" by 2050, drawing abreast of the EU and China's similar announcements: The world is increasingly committed to limiting global warming to not more than 1.5 degrees Celsius versus pre-industrial levels. And it finally seems to be getting serious about these targets, with the recent release of the International Energy Agency's groundbreaking Net Zero By 2050 report.

Global climate ambitions have moved off the political stage and are now having a measurable impact on the business and investment community. While there is general agreement about most of the themes and topics in the increasingly complex climate change lexicon, there remain some issues which seem to defy consensus. And yet we must come to terms with these topics if we are to act in harmony in the fight to decarbonize the global economy.

Uncertainty persists around the three critical concepts that we address in this paper: climate transitions and adaptation; the concept of true 'Net Zero'; and the willingness of companies to deal honestly in this space and be held accountable for their actions behind the scenes.

Transition, Net Zero and Accountability

If the world is to successfully transition and reduce the carbon intensity of our lifestyles, many industries and companies will have to transform, and ways of living and patterns of consumption will have to change. Such transformation will likely be as significant as the transformation that mechanization brought in the 19th century and digitalization brings as we speak. There will be new businesses starting and others fading away, there will be companies changing dramatically, there will be new economies emerging and old ones languishing, there will be jobs created and destroyed.

The world is not only committed to transition in the sense that it will be relatively less bad for the climate in the future. The transition target is increasingly an absolute one - 'Net Zero'. Countries, companies, regions and investors pledge to not only emit less greenhouse gas emissions, but to ensure that their emissions balance will go to zero over the coming decades.

The enthusiasm with which these pledges and global commitments are being adopted is also having an unexpected flow-on effect. Protecting the climate is becoming an accepted norm in itself – a legal norm or a moral one, depending on your location around our globe. As such, new climate protection norms are increasingly being enforced legally or through civil society activism.

Investors are expending a considerable amount of effort in determining what such a transition of the global economy will mean for their investment portfolio. This can take the form of complex methodology discussions regarding the calculation of Net Zero pledges or calling out companies that aren't adhering to the emerging climate norms. This momentum is helping to mask a number of blind spots, however:

- What if the world does not transition fast enough or at all? Which companies will struggle, survive or even flourish in a world that fails to mitigate climate change effects and instead has to adapt?
- Is Net Zero really just a new term for reducing emissions and transforming heavy-emitting industries, or is this a fundamentally new concept that requires more?
- If climate protection is a norm, what does the constant violation of such norms by companies and governments mean for a portfolio, and how should investors deal with market participants actively attempting to counter global climate action?

This paper seeks to address these blind spots head on, so that investors can embrace the implications of such challenging developments early on.

The first blind spot:
Transition versus Adaptation

Transition

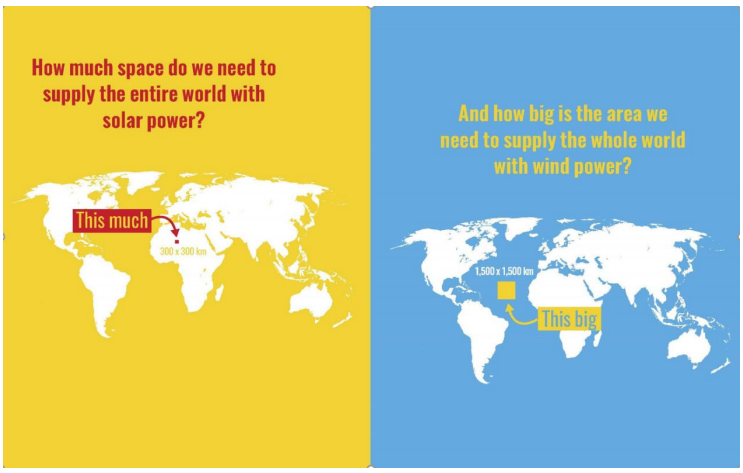
From an investor's perspective, a global economic transition to a more climate-friendly paradigm translates into two aspects - risk and opportunity:

- Investors risk being invested in losers from the transformation process. This could include companies whose business model will no longer exist in a world geared toward sub-1.5 °C heating, or those that would theoretically be able to adjust but in practical terms lack the foresight, agility or structure to do so. These are often referred to as 'transition risks' and are increasingly well understood or at a minimum discussed.
- There is an opportunity for investors who can successfully identify climate winners early on, that not only transform in line with the challenge but might even provide services and solutions to achieve sub-1.5 °C global heating targets. For instance, the International Energy Agency (IEA) estimates that there is a $5 trillion opportunity for investment in new energy sources in 2030.

The key of course is to find out who those winners and losers might be. Despite lengthy and complex methodological developments to best measure climate impact, and despite the almost 600 page long Technical Annex of the EU taxonomy that deals with climate-helping and -harming activities, the transition challenge is pretty straight forward: roughly 100 companies are responsible for 70% of global greenhouse gas emissions.

When looking at this 'Carbon Majors' list, Energy is of course the main challenge. It is the greatest source of emissions globally, and as emerging market economies develop the world will need considerably more of it. Any low-carbon transformation must start here.

While it would be theoretically possible to power the world on wind energy alone, the idea lacks practicality due to the reliability characteristics and location of this type of energy production. Using Germany as a case in point, solar and wind energy production now regularly approaches 82% of German energy consumption – just not near the consumers. This has led to counter-intuitive scenarios where Germany instead has paid neighboring country renewable energy plants not to run.



A compelling thought: The space necessary to power the entire World with solar energy is surprisingly low and could nicely fit into remote areas of the Sahara Desert where the sun is shining most of the time – or with wind power plants somewhere in the Atlantic Ocean. But how to get the energy to the consumer is the trillion+ dollar challenge.

Source: Katapult, 99 maps to save the planet, 2021

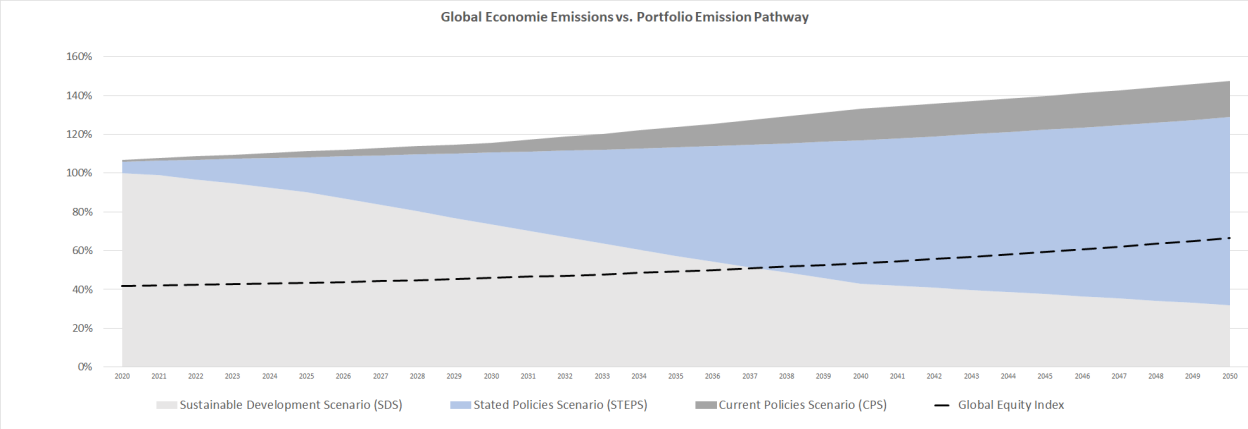
The Bill Gates, Jeff Bezos and Mark Zuckerbergs of tomorrow will be those who overcome three key roadblocks to a climate friendly future:

- Transporting energy long distances from where it is produced to where it is consumed. Offshore wind power might close the gap in energy production going forward, but consumers need that energy onshore and often thousands of miles away from where it is produced.
- Storing energy efficiently and at scale. Wind and solar energy is not necessarily produced when its needed, but when the sun shines and the wind blows. A storm at nighttime might produce a lot of energy but it needs to be saved for daytime when households, offices and factories need it the most.
- Sequestering greenhouse gases from the atmosphere. Net Zero will only be possible if we remove unavoidable carbon emissions from the air.

Adaptation

What happens, however, if these challenges never get solved? What if the world fails to transition as it loses sight of the 1.5 °C warming target? The U.S. under President Trump and Brazil under President Bolsonaro have demonstrated that it is quick and easy to leave the global agreement on limiting global warming.

What happens if the world does not transition quickly and strongly enough? After all, the likelihood of missing the Paris targets is much higher than hitting them.

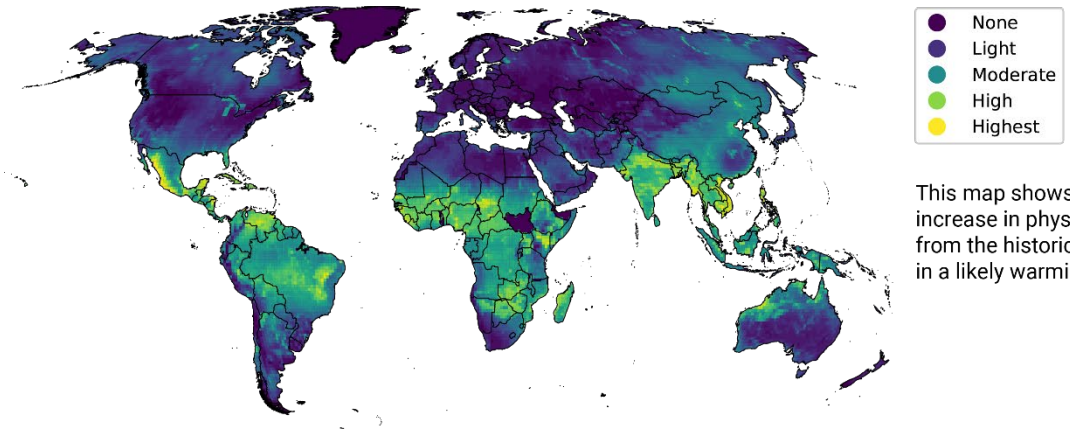


Source: ISS Transition Scenario Analysis

When plotting the emissions of a global equity index against a carbon budget, it becomes clear. Without major transition, the global economy will overshoot its Paris aligned carbon budget by 2037 - and that already takes into account robust corporate transition commitments. Further, the Current (CPS) and Stated Policies (STEPS) on Climate Change are by no means enough to align with the Paris required emission reductions of a Sustainable Development Scenario (SDS).

The world might not align in its policies, the necessary technologies might not see the needed breakthrough, and we might not be able or willing to counter our societal consumption patterns. In these scenarios, we will have to live with the physical effects of climate change.

Floods, droughts, cyclones, wildfires – these results of an ever-warming globe will hit mankind in an accelerated and increasingly extreme way. This is, of course, of concern for investors as such physical effects can hit assets and their ability to operate and generate returns. These so-called physical risks are also well understood by an ever-growing number of investors and can impact company valuations.



This map shows the estimated increase in physical risk exposure from the historical period to 2050 in a likely warming scenario.

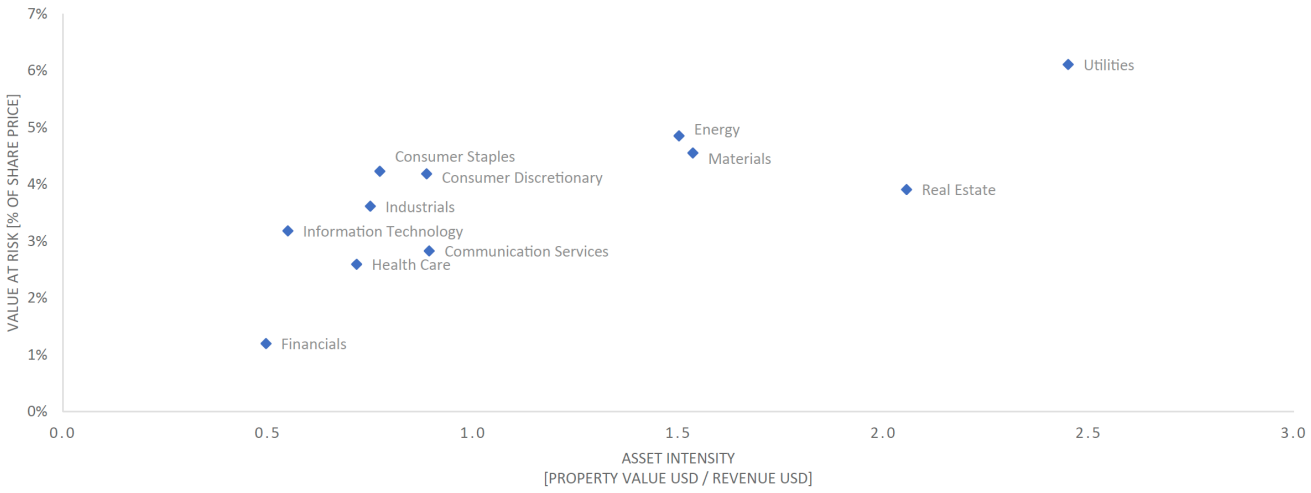
Source: ISS Physical Risk Scenario Analysis.

Less transition means more requirement for adaptation to physical climate damage, and vice versa. To deal with these tradeoffs, investors start using scenario analysis. This type of analysis can come in many shapes and sizes and can deal with carbon target alignment, physical impact, risk preparedness or a range of other aspects of different alternative futures. The latest scenario thinking grapples with the dichotomy of:

- transition scenarios on the one hand (for example, is my portfolio prepared for a 1.5 degree, 4 degree or 6 degree scenario and how does it contribute to each of those?); and
- physical risk scenarios on the other hand (what does 1.5 degree, 4 degree or 6 degree warming mean in terms of valuation impact by natural extremes and catastrophes?).

While investors will go to great lengths to mitigate climate change by reducing emissions and identifying providers of climate solutions, they typically don't fully embrace the implications of an adaptation reality: if the world can't stop global warming, it needs to adapt to the effects.

The following graph illustrates the tendency for asset intense sectors i.e., those with a high ratio of owned assets value to revenue, to be more exposed to physical risks.



Source: ISS ESG Physical Risk analysis

Physical risk analysis captures part of this: which asset in a portfolio will get hit harder than others? But the much more important and arguably much bigger aspect of adaptation is generally not considered: where should I put my money to invest into adaptation and potentially make money out of this? After all, from where we stand, it is much more likely that adaptation will be required than for transition via mitigation efforts to succeed.

What does adaptation investment look like?

Adaptation investments could take the form of land investment into permafrost areas that will allow for agriculture in later decades when the soil becomes farmable and leading wineries might be found in Norway rather than in Spain. It can include investments into flood risk control; introduction of new crop varieties; investment in more efficient irrigation and resource-saving technologies; adoption of sustainable forest management; investment in early warning and information sharing systems; soil and water conservation; livelihood diversification; and, of course, insurance.

There might even be trade-offs. From a transition point of view, cement companies are not great investments due to their greenhouse gas intense business model. From an adaptation point of view, however, they might be quite attractive as rising sea levels will

require a strengthening of harbors and dikes, which should result in enormous demand for concrete.

Currently, such climate adaptation investments are still quite niche. After all, the world is committed to climate change transition and betting on the failure of mitigation efforts might be seen as somewhat heretical. This view may change with the increasing use of scenario analysis, however, as the short-sightedness of overly dogmatic views become apparent. The adaptation report of the Intergovernmental Panel on Climate Change (IPCC), expected to come out in October 2021, might serve as a catalyst to shine some light on this blind spot.

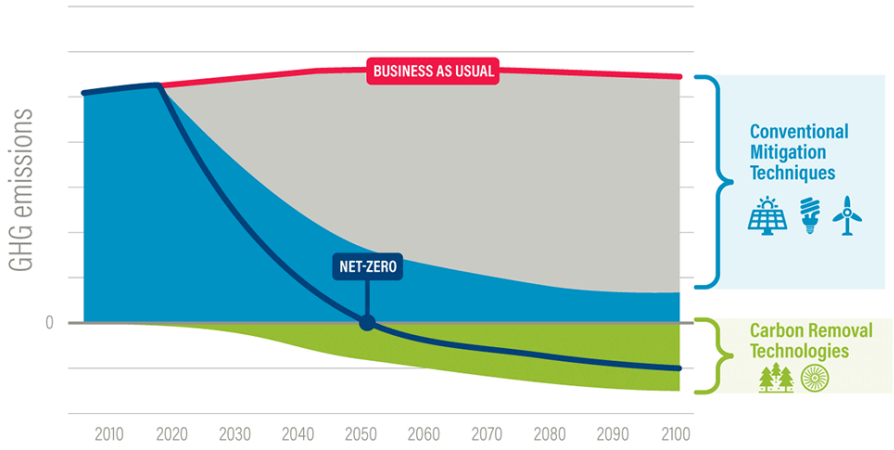
The second blind spot:
The 'net' in Net Zero

All of a sudden, Net Zero seems to be everywhere. Over 100 countries, including China, the U.S. and the EU, have pledged to become Net Zero, as have over 100 local governments, nearly 1000 cities and 2000 businesses. Net Zero is now also a trillion dollar challenge for investors. The Net Zero Asset Owner Alliance and the Net Zero Investment Framework have been launched to help investors build Net Zero portfolios.

Many pledgees are failing to fully embrace the Net Zero challenge, however, as they grapple with the sheer size of the problem. Our Net Zero future leans on emission reductions relying on non-existing policies in combination with emission removals relying on non-existent technologies.

Net Zero is a term used interchangeably with 'Paris aligned' and 'climate neutral'. It is often incorrectly described as the result of reducing human-caused (anthropogenic) greenhouse gas emissions to zero. Such a reduction to zero is, however, close to impossible in practical terms. Even if we get rid of all fossil electricity and light our home with a candle instead, we are still emitting greenhouse gases.

What Net Zero really means is captured in the 'netting' concept. Net Zero means to not emit any NET emissions anymore at a certain point in the future, in order to limit global warming to 1.5 °C versus pre-industrial levels. Yes, Net Zero requires bringing down our emissions as much as possible – much more than current policies require to date. At the same time – and largely overlooked – it also requires investing in taking the remaining greenhouse gas emissions out of the atmosphere by rapidly developing and scaling carbon-removal technologies. This part of the equation, the sequestration of greenhouse gas emissions – also known as carbon removals – sees very little investor attention.



Net Zero does not just require lowering emissions as much as possible (blue), but also removing GHG emissions from the atmosphere (green).

Source: World Resources Institute

Carbon removals can take a range of different forms. Natural removals include forestation or alternative land use; oceanic removals can include the use of macroalgae (seaweed);

technological removals have been explored for some time that involve the capture and storage of atmospheric carbon (although the latter technology is not without its critics).

The challenges are well known. We need to remove 10 gigatons of greenhouse gas emissions annually by 2050 – roughly the same as the globe's current yearly emissions. Unfortunately, none of today's known approaches are able to absorb this volume of gas. For the Net Zero plan of Shell alone, it is estimated that an afforestation the size of Brazil would be needed.

A situation like this ought to bring investors to the table. A huge challenge and no obvious solutions - shouldn't that be a great opportunity to invest in new technologies? While there are some specialist investment outfits popping up on the topic, and companies like Stripe and Microsoft are leading the way in replacing classic carbon offsetting with carbon removals, the necessary technologies remain largely overlooked by investors and are dramatically underfunded.

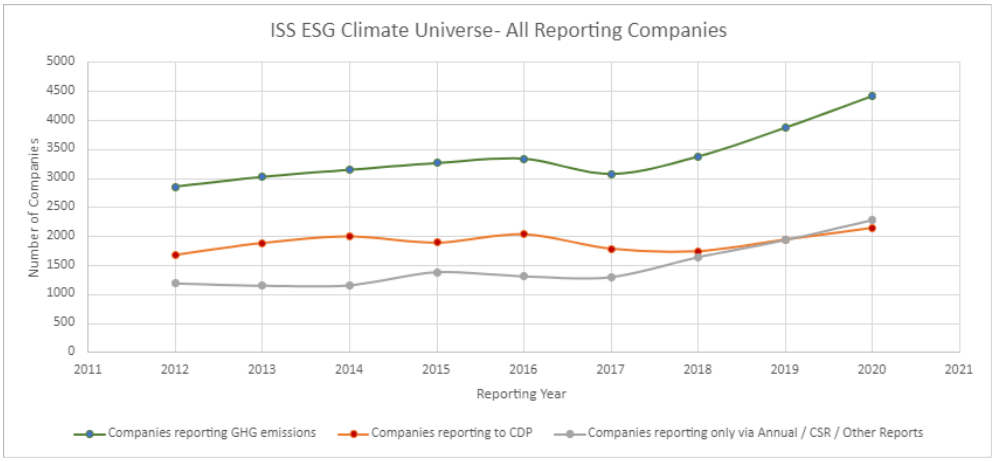
The silence from the investor community on the carbon removal side of the Net Zero equation is remarkable, despite tailwinds like the $500 million earmarked for carbon removal in the U.S. stimulus package from December 2020. Even the Net Zero Asset Owner Alliance fails to properly explore this. In its 80 page Target Setting Protocol the primary focus is on emission reductions, with a few pages on investing in green projects ("financing the transition targets") and only a vague half sentence for carbon sequestration.

Investors can aim for compatibility with current Net Zero methodologies, but the methodologies themselves don't seem to be truly compatible with Net Zero. There are, however, notable exceptions emerging, such as asset manager Aviva that has specified as part of its Net Zero strategy the financing of carbon removals.

Investors need to address the blind spot of carbon removals sooner rather than later. Net Zero can't rely on emission avoidance alone. Likewise, carbon removal can't rely just on planting trees - it requires contributions from emerging solutions such as oceanic and technology-based removals. We need every means available to achieve Zero. Otherwise, we will achieve nothing. Zero is not nothing, it's everything.

The third blind spot:
Climate lobbying & litigation

Given all the momentum on Climate Change transparency, pledges and efforts, it is quite astonishing that there are only about 4,500 companies globally that report their Scope 1 and Scope 2 greenhouse gas emissions, when this should be the very first step of any climate strategy. It highlights a common observation: to speak about climate change efforts is one thing, to actually act upon it is quite another.



Source: ISS ESG

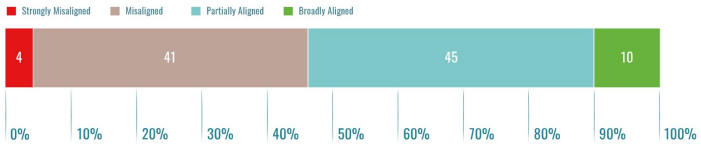
There is also another, more worrying group of companies, where their actions are speaking an entirely different language to their commitments.

Lobbying

Organizations like Influence Map track companies that, despite all their climate pledges, continue to be part of industry associations that lobby against sensible climate change regulation.

When it comes to the 167 companies focused on by of the Climate Action 100+ initiative, Influence Map finds that only 10% align their lobbying practices with the Paris Agreement, including European utilities such as Iberdrola and SSE and consumer goods companies such as Unilever and Nestlé. 90% of CA100+ companies have at least one membership of an industry association with climate lobbying practices misaligned with the Paris Agreement. 45% of these companies are misaligned due to their support for industry associations identified as anti-climate action lobbyists.

% of CA 100+ target companies and lobbying alignment with the Paris Agreement



Source: influencemap.org

Influence Map has taken issue with recent attempts by BP to lobby European regulators to include gas as a transition fuel in the new EU Taxonomy process, something that is hotly contested by some members of the EU Technical Experts Group.

The failure to match actions to words is not restricted to companies – even investors can fall prey to this vice. Over the past few years, Blackrock's chairman Larry Fink wrote to global companies insisting that Climate Change is front and center for the world's largest asset manager. At the same time, however, Blackrock was being called out by pressure groups as well as other investors for voting against shareholder resolutions that try to increase company climate transparency and action. One point of criticism regarded Blackrock's having joined Climate Action 100+, in effect asking companies to implement climate transparency and action measures, while simultaneously voting against resolutions with the same aim. As a consequence, Blackrock was facing its very own shareholder resolution to "align their votes with Larry's letter" – a resolution that was withdrawn in early 2021 when the proponents observed a meaningful change in Blackrock's practice!

When it comes to voting stocks in line with climate conviction, the ISS Climate Voting Service uses a Climate Awareness Scorecard that takes into account a company's climate transparency and performance, as well as whether a company faces allegation of anti-climate lobbying or obstruction of climate change regulation. Involvement in either activity may lead to an adverse shareholder vote recommendation at the company's annual general meeting. This topic has been important enough for companies like BHP Billiton to check their industry body memberships and review those that were associated with anti-climate lobbyism.

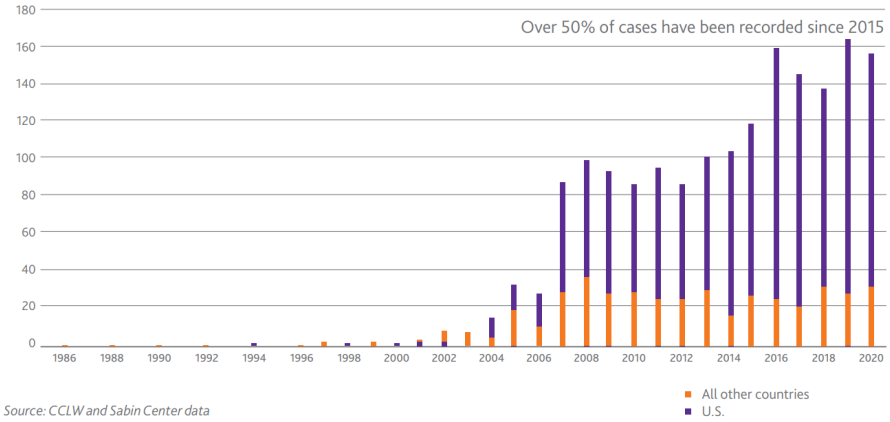
Litigation

Violations of climate norms can escalate all the way to climate litigation cases - another blind spot for many investors.

When talking about climate risks, investors typically cite transition risks – i.e. the risks that companies face by losing in a transition to a low carbon economy – and physical risks – i.e. the risks that companies face through the physical effects of climate change. When speaking to lawyers, however, a third type of risk is typically added into the mix: climate litigation risk.

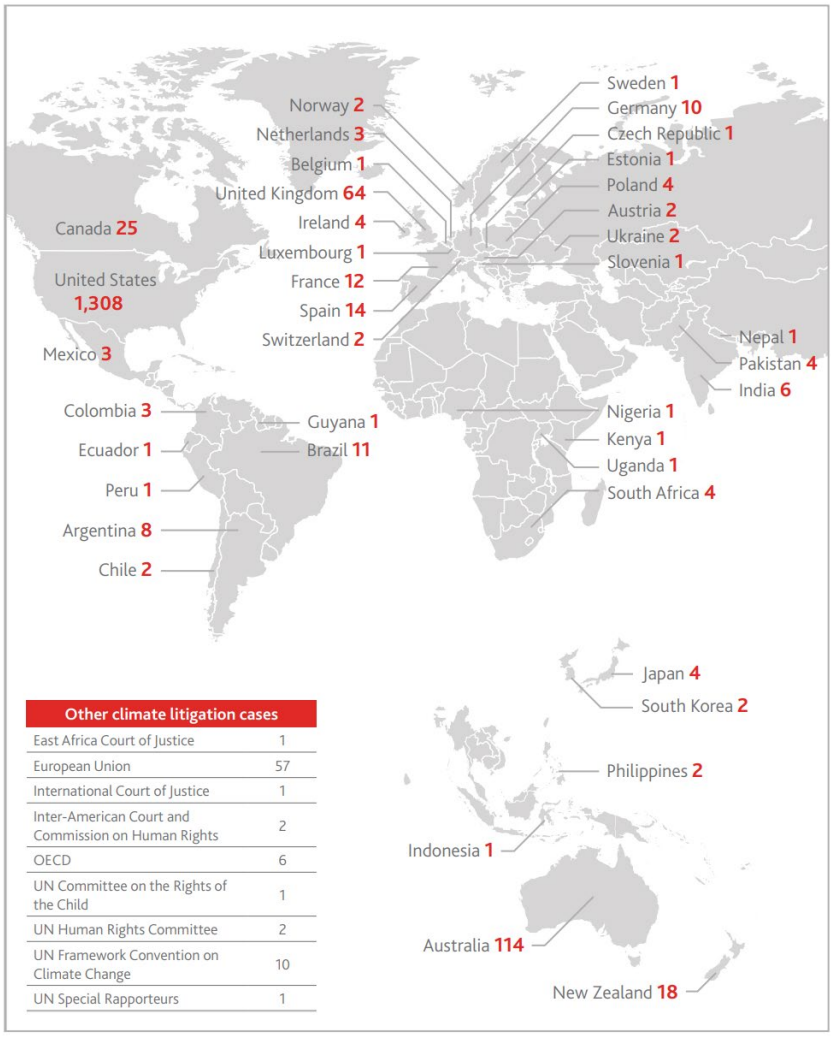
Climate litigation is not always clearly defined, and will vary widely from case to case. The most common scenario is where climate-linked financial damage can be tracked to a governmental or corporate activity, and the organization responsible for the activity is asked to pay for the loss. While these cases have historically not been overly successful, some have received considerable media attention and arguably caused quite a bit of reputational damage to the accused entity.

While some investors will consider climate litigation risk to be just a sub-topic of transition and physical risk, it is increasingly taking on a life of its own. Climate litigation is not a new phenomenon, with the first cases dating back to the late 1980s. The true catalyst, however, was the Paris Agreement that resulted in a '3rd wave' of cases, with the result that there are now approximately 160 new cases each year, totaling to date 1,727 cases where an entity was sued to cover climate-related damage of some kind.



Source: The Geneva Association: [Climate Change Litigation – Insights into the evolving global landscape. April 2020]

Although case numbers are gradually increasing in other jurisdictions, to date the bulk (1,308 of 1,727) of climate litigation cases have been recorded in the U.S.



Source: The Geneva Association: [Climate Change Litigation – Insights into the evolving global landscape. April 2020]

To date the bulk of these cases are not directly relevant for investors, with 75% to 80% targeting governments and public bodies rather than corporations.

One of the most prominent cases in this context is the successful claim against the Kingdom of the Netherlands by a Dutch environmental group, the Urgenda Foundation. The Foundation joined with 900 Dutch citizens to sue the Dutch government, requiring it to do more to prevent global climate change. The court in the Hague ordered the Dutch state to limit GHG emissions to 25% below 1990 levels by 2020, finding the government's existing pledge to reduce emissions by 17% insufficient to meet the state's fair contribution toward the UN goal of keeping global temperature increases within two degrees Celsius of pre-industrial conditions. The court concluded that the state has a duty to undertake climate change mitigation measures due to the "severity of the consequences of climate change and the great risk of climate change occurring." Despite some appeals, the Dutch Supreme Court upheld this decision in December 2019.

The remaining 20% - 25% of cases do try to take corporations to court, however, which brings investors much more directly to the table. Like historic litigation successes around tobacco or asbestos, a successful litigation in the area of climate change could have huge negative financial impacts on a company and its valuation and rating. Not surprising, the litigation focus on corporates is increasing.

One high profile case was that of a Peruvian farmer who, backed by NGOs, took legal action against the German energy giant RWE in the context of the 2014 COP Climate Conference in Lima. The farmer's community was threatened by a lake that – with glaciers melting due to climate change – could overflow and flood the local area. In the search for responsible parties for this risk, RWE's status as a major greenhouse gas emitter came into focus. Although not conducting a business in Peru, the litigants made the case that emitting greenhouse gases in Germany and elsewhere was contributing to the melting of the Peruvian glacier. As RWE was making money by burning fossil fuels, they should therefore pay for the resulting infrastructure needed to mitigate increased flood risk from the glacier lake. The sum in question, €17,000, was ridiculously low, but it was one of many attempts to establish a relevant precedent case for action against high emitting companies.

With climate protection becoming an internationally accepted norm, violations by companies and governments alike will face increasing legal and civil society objection. Prominent litigation initiatives such as those directed at the asbestos and tobacco industries can serve as an orientation point here. Both litigation activities resulted in hundreds of billions of dollars in payments that these industries had to make available to the victims of their products. With the climate crisis being much bigger in potential health and wealth damage to the entire world population, a successful litigation precedent might create the momentum to wipe out entire sectors from a diversified investment portfolio.

Conclusion:
Blind spots into the spotlight

It is easy for investors to get lost in the Bermuda triangle between international investor climate regulation, methodology confusion and competing investor initiatives. This may come at the cost of losing sight of what really counts: preparing investments for the challenges that climate change brings and adjusting investment strategies to support real economic change that counters climate risks.

The consequences of a world shifting from mitigating climate change to adapting to it; the meaning of a true Net Zero transition; and the legal and other consequences of obstructing climate protection are just three examples of blind spots currently absent from most investor climate discussions.

Climate change won't be addressed just by investment methodology refinement, some re-weighting and a few thematic side investments. A range of honest and bold paradigm shifts in the investment industry and the real economy alike will be required in order to achieve systemic change. These paradigm shifts will act to move blind spots into the spotlight and – hopefully in time to avoid a requirement for drastic adaptations – into the investors' floodlight.

We empower investors and companies to build for long-term and sustainable growth by providing high-quality data, analytics, and insight.

ABOUT ISS ESG

ISS ESG is the responsible investment arm of Institutional Shareholder Services Inc., the world's leading provider of environmental, social, and governance solutions for asset owners, asset managers, hedge funds, and asset servicing providers. With more than 30 years of corporate governance expertise and 25 years of providing in-depth responsible investment research and analytics, ISS ESG has a unique understanding of the requirements of institutional investors. With its comprehensive offering of solutions, ISS ESG enables investors to develop and integrate responsible investing policies and practices, engage on responsible investment issues, and monitor portfolio company practices through screening solutions. It also provides climate data, analytics, and advisory services to help financial market participants understand, measure, and act on climate-related risks across all asset classes. In addition, ISS ESG delivers corporate and country ESG research and ratings enabling its clients to identify material social and environmental risks and opportunities.