

# Measuring Climate Change: Why Can't We Just Turn Down the Sun?

*Featuring:*

**Professor Robert Eccles** of The University of Oxford

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**Arne Philipp Klug**, Vice President, MSCI Research

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**Adam Bass** ([00:03](#)):

This is MSCI Perspectives, your source for insights for global investors and access to research and expertise from across the investment industry. I'm your host Adam Bass, and today is February 4th 2021. In today's episode, accounting for the risks and opportunities around climate change has become one of the most prominent issues for investors. Some say it's about time, others wonder what all the fuss is about. Regardless of where you fall on that spectrum as an investor though, it is safe to say that climate change much like Glenn Close in Fatal Attraction won't be ignored.

**Adam Bass** ([00:42](#)):

Now this isn't the first or the last time we'll talk about climate change on this program, especially as we all head down the road toward the 26th Annual United Nations Climate Change Conference this November, better known as COP26. This year's gathering occurs even as investors are working through the outcome of what was known as COP21, the Paris Agreement. With its goal of limiting global warming to no more than two degrees Celsius above pre-industrial levels. You may have heard mention of it once or twice since then. Many large investors have committed to the so-called greening of their portfolios to align them with the Paris Agreement, along with many other companies that make up these portfolios. But to hit the two degree target by the end of this century.

**Linda-Eling Lee** ([01:31](#)):

Every company would have to reduce its total carbon intensity by an average of at least 8% every single year from now on until 2050.

**Adam Bass** ([01:43](#)):

That's Linda-Eling Lee, Head of the ESG Research at MSCI.

**Linda-Eling Lee** ([01:47](#)):

Based on our analysis, we're only showing that about 3% of these companies have managed to reduce their carbon emissions at this rate in the last five years. So this is one of these cases where we hope that past performance, at least on carbon emissions reduction is not really an indication of future performance.

**Adam Bass** ([02:04](#)):

The issue here is that investors looking to align with Paris may find they face an ever shrinking investment pond from which to fish.

**Linda-Eling Lee** ([02:13](#)):

Let's say an investor that has a diversified equity portfolio, which tracks the MSCI ACWI IMI Index that's almost 9,000 companies today. And they want this portfolio of companies to be aligned with what countries agree to in the Paris Agreement of keeping the earth to no more than a two degree warming. By 2030, only about 40% of the public equity investment universe that we looked at would actually meet the emissions profile that are aligned to this two degree warming path.

**Adam Bass** ([02:43](#)):

It's just not practical for large investors to maintain their large allocations, to what would be a smaller and smaller set of companies. This is because of concentration risk, basically diversification's evil twin. Confining the holdings to such a small set of companies would simply do little to address the societal and system-wide challenges that would still exist in the world. The world in which these companies and investors have to operate. But it's not all bad news. While regulation is not always a word investors want to hear, governments and

agencies in many parts of the world have stepped up requirements for companies in terms of actions they're taking and what specifically they need to report. This is true for investment firms as well. Now, greater transparency means more data. And as the saying goes.

**Thomas Verbraken** ([03:35](#)):

"Do you know what gets measured gets managed."

**Adam Bass** ([03:40](#)):

That's.

**Thomas Verbraken** ([03:40](#)):

I'm Thomas Verbraken and I'm based in the Budapest office for MSCI. And my focus over the past years has been a lot on stress testing. And actually climate stress testing is now has recently become also part of that effort.

**Adam Bass** ([03:55](#)):

Thomas and many others have known that regulation is part of what's pushing investors forward in terms of assessing climate risk. But what are these regulations we're talking about? One of them is the Task Force on Climate-Related Financial Disclosures or TCFD.

**Thomas Verbraken** ([04:13](#)):

In 2017, they published the recommendations and they received strong support. It started mainly in Europe, the Banque de France, Bank of England and the Dutch National Bank. They took a leadership role and they proposed to integrate TCFD inspired disclosure guidelines in their supervisory role. And then that basically was the basis of the network for greening the financial system. Which has now more than 80 member institutions and I think one of the most interesting recent joiners is the U.S. Fed which joined in December 2020.

**Adam Bass** ([04:50](#)):

But regulation is only part of the story.

**Thomas Verbraken** ([04:53](#)):

Because investors don't only want to meet regulatory requirements, they also want to understand the risks involved with their potential investments. And climate risk is becoming increasingly an important part of risk management in general.

**Adam Bass** ([05:08](#)):

Some regulations go even further. The EU sustainable Finance Disclosure regulation or SFDR for example, this requires investment firms to report on climate issues as well as things like how much more does a company pay it's male versus female employees. You might say as Mike DiSabato of MSCI ESG Research and host of the podcast ESG now actually did say.

**Mike DiSabato** ([05:34](#)):

Everyone is under this umbrella with the SFDR, and I think I also read with this regulation that if a financial institution doesn't adhere to the requests made by the EU and the SFDR, they have to clearly disclose to investors that they are not considering sustainability risks.

**Adam Bass** ([05:53](#)):

What does this mean in practice?

**Arne Klug** ([05:55](#)):

The big thing here is that regulation affects both companies, as well as investors and financial institutions.

**Adam Bass** ([06:02](#)):

That's the voice of Arne Klug from MSCI's ESG Research team.

**Arne Klug** ([06:06](#)):

For example let's say I'm an investor located in the EU and I want a company that owns mining assets in areas of high biodiversity loss, I have to report on such risks. Meaning I have to get

these companies to tell me if they're operating in areas of such risks and its conception, the SFDR was set by the European Union to provide greater transparency on the sustainability of financial products and to review potential greenwashing.

**Adam Bass** ([06:32](#)):

But I think there's a big problem that we're going to see here. There are large gaps between what needs to be disclosed and what is currently disclosed. Zooming on the biodiversity risks we can see in our peer set, which is the MSCI ACWI, Investable Markets Index that less than 10% of companies currently disclose any biodiversity indicators.

**Arne Klug** ([06:54](#)):

Exactly and the same applies for companies reporting on, for example, exposure to child laboratories. Really strong efforts have to be made to fill these gaps in order to comply with the SFDR. They're also, a lot of investors who have excellent disclosure practices, but at the same time, they're also many that are new to the game. The upcoming data requirements pose greater challenges for these new joiners.

**Adam Bass** ([07:17](#)):

Another aspect investors will have to sort out is the fact that complying with these new reporting requirements and even doing your best to build and maintain a greener portfolio. Well that doesn't necessarily lead to a greener world.

**Mike DiSabato** ([07:33](#)):

It's important to remember that when you as an investor exclude companies from your own portfolio, you're not counting their emissions in your own portfolio. You can think that you're not responsible for the emissions that are associated with those companies, but the emissions are actually still being put out there in the real world and they continue to warm the planet. Your portfolio may look good, but the world around it really hasn't necessarily changed.

**Adam Bass** ([07:59](#)):

Building portfolios that account for climate change, that's really what we're talking about. Just like Thomas Verbraken mentioned earlier, investors want to understand the risks involved with

potential investments and climate change is one of those risks. It breaks down to basically two types.

**Mike DiSabato** ([08:17](#)):

There is transition risk, which is basically the whole impact of the transition to a greener economy. And then there is the physical risk, which is really the impact of more extreme weather events. And which is basically the outcome of climate change itself and its impact to investments.

**Adam Bass** ([08:37](#)):

Regular listeners will recognize those risks. We've talked about them with Head of the MSCI Climate Center, Oliver Marchand, and a few times with Will Robson who leads MSCI's Real Estate Research team. You can hear those interviews if you look through their back catalog @msci.com. But I digress, we were talking about stress testing. Most people are probably more familiar with stress tests that governments have run on banks, especially in the wake of the 2008 financial crisis. Essentially it's creating different scenarios, working them through a model to see the effects as you increase one factor and dial down another. Governments when they do this are looking to assess how much these banks need to have on reserve to withstand certain shock to the system. I asked Thomas why he felt stress tests were a particularly good tool when it comes to climate change.

**Thomas Verbraken** ([09:34](#)):

That's really not a coincidence that stress testing is used in this context. First of all, there really is a large uncertainty about the future pathways for climate change. We don't know how the climate will evolve. There is no real precedent for climate change. It's not that we can look back to historical events to learn how it will play out. We really have to do some forward looking analysis and stress testing lends itself really well to that because it allows you to look at ranges of scenarios, to understand how various potential future outcomes can impact your portfolio. And I think that's why stress testing is really a good tool to deal with this challenge.

**Adam Bass** ([10:15](#)):

Let's take a closer look, starting with transition risk?

**Thomas Verbraken** ([10:18](#)):

We looked at the companies in the MSCI Europe Index. We analyzed two climate stabilization goals, a 1.5 and a three degree temperature rise scenario.

**Adam Bass** ([10:30](#)):

The Paris agreement calls for limiting global warming to two degrees. Why not include that scenario?

**Thomas Verbraken** ([10:37](#)):

We also have two degrees scenario. It's a scenario which we could run as well, but we thought it's interesting to look at the two sides of the spectrum. But also in the Paris Agreement, they formulate the ambition to limit global warming to 1.5 degrees compared to pre-industrial levels.

**Adam Bass** ([10:58](#)):

Fair enough, Thomas. Fair enough.

**Thomas Verbraken** ([11:01](#)):

Now what we did is we use our model to assess how companies are impacted in those two scenarios. And it was no surprise that carbon intensive companies were impacted most severely. And for example, the average energy company is losing about 67% in enterprise value in a 1.5 degree scenario.

**Adam Bass** ([11:23](#)):

Enterprise value is considering a company's equity and debt components together for a comprehensive take.

**Thomas Verbraken** ([11:30](#)):

But within a sector, this is partially offset by revenue opportunities coming from low-carbon transition, more technology opportunities. And examples of those opportunities can be found in the utilities or the automobiles and components industry groups, where they can be significant. And it's basically the upside potential coming along with transition.

**Adam Bass** ([11:55](#)):

You talked about the industry groups generally, and that there's variation inside. Can you take us inside a couple of those, what does it look like within the groups?

**Thomas Verbraken** ([12:09](#)):

That's a very good point. I was discussing the 67% impact to the average energy company. That indeed hides the variability inside this industry groups. And for example, in the automobile and components industry group, there will be specific companies which can really capitalize on transition to a greener economy and they will have a lot of upside potential. But those are typically fewer companies and in general, the average company could lose more. Looking inside those industry groups and looking at individual companies can really help to understand who will be the winners and losers of a transition.

**Thomas Verbraken** ([12:51](#)):

For physical risk, we also ran two scenarios and an average scenario for physical risk and an aggressive scenario, which is a bit more pessimistic. You immediately see that for the physical risk dimension, all sectors are somewhat impacted by physical risk. And the reason is that this is mainly driven by a location. For example, if you have a company which has facilities close to coastlines, then you have more potential impact from flooding. Maybe one more point I want to add is that compared to transition risk where there's also upside potential, with physical risk it's more on the downside. There's less upside potential as more extreme weather events will unfold going forward.

**Adam Bass** ([13:33](#)):

And if I'm understanding you correctly, it sounds it's more broad-based than with transition risk. That is like you said, it's more dependent on location than which industry group we're looking at.



**Thomas Verbraken** ([13:48](#)):

Yes, that's accurate indeed location is a very important driver, but we still see some interesting results at the industry group level. For example, energy companies also lose more than other industry groups, because capital intensive industries are usually more vulnerable to extreme weather events. For example, if you have a power plant which is flooded, that's harder to deal with than when you have an office location. What's also interesting is that the second most impacted industry group is the food and staples retailing industry group, because extreme weather events could also impact them.

**Adam Bass** ([14:26](#)):

The food and staples industry, that is a somewhat surprising one.

**Mike DiSabato** ([14:32](#)):

I think the food industry is the best thing to highlight because they are in this tricky situation where they're highly dependent on biodiversity.

**Adam Bass** ([14:40](#)):

That's Mike DiSabato again, and here's Arne's response.

**Arne Klug** ([14:44](#)):

Having a healthy ecosystem is essential for mankind. It provides crop pollination, fresh water, oxygen, healthy soil. It controls diseases such as COVID-19 and regulates our climates. In fact, every time to talk about climate change and the Paris Agreement, we also need to talk about biodiversity. Some industries have an outsize impact on biodiversity. If you think of mining or the energy sector in some industries heavily depend on natural capital for the inputs and operations, and some do both. The food industry is a good example for this one. So food producers are dependent on healthy soil, crop diversity, pollinators, fresh water and climate stability. At the same time, agriculture contributes to 80% of deforestation globally. And for investors it makes sense to focus especially on such industries when integrating biodiversity aspects into their investment decisions.

**Adam Bass** ([15:40](#)):

Whether it's regulations, the recognition that climate change is the existential threat to the world. The fact that investors have a role to play or all of the above, getting this right is going to mean agreeing not only on the problem, but on a set of tools that help us get to the solution. Again, regulations get as part of the way, but what investors really need are agreed-upon standards of what exactly we're measuring, how we're measuring it. And then this way they can compare apples to apples and make more informed investment decisions. The good news is we're getting there.

**Mike DiSabato** ([16:16](#)):

And a couple of years ago, if you told me that the IFRS foundation trustees, we're going to do a consultation to establish a sustainability standards board. To be honest, I thought I was probably having a flashback. I've been tilling in these fields for many years, it's been a little bit like Donkey Hodie.

**Adam Bass** ([16:33](#)):

Playing the part of Donkey Hodie tonight is Robert Eccles, Professor at the University of Oxford. Robert published his performance measurement manifesto on this subject 30 years ago. But for inspiration about change in the industry, he looks back more a century.

**Robert Eccles** ([16:51](#)):

If we go back in history to the 1920s, we didn't have standards for financial accounting and financial reporting. In the U.S., there was a gazillion little accounting firms. They all had their own accounting standards, auditing standards, companies didn't have to report. SEC comes along and says, "Well, that's not working out very well. So we're going to have standards. We can't do that. It's art and science, blah, blah, blah. Companies, we can't report competitive advantage." Well, now we got there. We argue about it. It's contentious process. People make adjustments. Are they really reporting on this? But at least we've got a starting point.

**Robert Eccles** ([17:26](#)):

We have not had that starting point when it comes to a company's sustainability performance. Now 30 years after I started banging my head against this wall, we've now come to the point in the business community, the IBCF, I think that's important in investment community in the regulatory community that we need to have standards for sustainability reporting debate

about what that term means. Just like we have for financial reporting. That is a sea change. It's an enormous sea change and as we discussed, then should we have an [SSB 00:18:00]? Should it be done this way? It shouldn't be done that way? Let's not lose sight of the fact that there's a major change that's happened that the world has recognized the need for standards, mandated reporting requirements. Lets get down to the hard and messy work of creating those standards.

**Adam Bass** ([18:19](#)):

That's all for today. Our thanks to Linda, Thomas, Mike, Arne, and Robert. And of course, to all of you for listening. For more details on climate and ESG Trends for 2021, you can catch a replay of the MSCI 2021 ESG Trends webinar, or read Thomas' Stress Test blog both on [msci.com](#). Next up on perspectives, we ask what asset owners, some of the world's largest investors are focused on? Where do they see opportunity? Where do they see risk? And how are they managing day-to-day? Until then, I'm your host Adam Bass, and this is MSCI Perspective. Stay safe, everyone.

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