Forget Naughty or Nice – Santa's Workshops are Flooding

Featuring:

Miranda Carr, *ESG Researcher, MSCI*

Bentley Kaplan:

Hello, and welcome to the weekly edition of ESG Now. We cover how the environment, our society, and corporate governance affect and are affected by our economy. I'm Bentley Kaplan, your host for this episode. And it's my first of 2022. It is good to be back behind a mic and to be honest, safely locked away from my darling children. Today, we're going to take a look at the heart of global manufacturing in China, and how rising sea levels and extreme weather are going to put a damper on the whole show. So much damping, that not even Santa delivery runs are going to be safe. And then we'll do a retrospective on last week's episode on carbon offsets. It's a topic that has so many threads to pull on that we thought was well worth a revisit. Thanks for sticking around. Let's do this.

Okay. So 2021 was a pretty wild year, right? And even for a wild year, the end was a little bit crazy. Omicron rocked up at the closing bell, scuppering a lot of holiday plans, but if my colleagues Miranda Carr and Patrick Kellerman are right, December holidays to come are going to get a lot Bleaker and not because of COVID. Miranda and Patrick put out a blog in December last year. Remember December, that's when you were buying some last-minute gifts and just trying to get through the festive season. Anyway, the blog is called, Will Rising Sea Levels Eventually Sink Christmas? It's up on MSCI's website, freely available to all in sundry. So do check it out for some original content. But I wanted to get a little bit deeper into the data it behind the blog, so I called up Miranda, who now applies her trade from our Singapore office.

Miranda Carr:

Well, I think in 2021, in Asia in particular, we saw really, really heavy floods across the region. Malaysia, Indonesia, India, Australia, several provinces in China and Bangladesh all saw some of the worst flooding that they'd seen in decades. And it really brings home to both the people living there, but also, obviously, anyone sort of operating in the region, how much the flooding risk is now becoming a major factor. And so the physical risks affecting company operations, companies supplies, and also obviously company value and then becomes a much bigger factor in calculations. And whether it's the extreme weather events that we're seeing in terms of heavy rainfalls, or as we put in the blog, the potential flooding risk on a coastal region from rising sea levels. This is going to become, we think a much more prominent risk over the next few years.

Bentley Kaplan:

So rising sea level has kind of become the shorthand for climate hazards, generally. It's got this irresistible logical pull. Anyone living along coastlines can tell you about flood risks, climate change aside. And scientists have long been working to figure out how a change in climate is going to lead to changes in weather. What climate hazards are going to emerge, where, things like rising sea levels and fluvial flooding, and how severe those impacts could be. It's complex, it's caveated, it's filled with different scenarios. And the challenge for investors is then taking that hazard data and somehow translating it into an impact for sectors or companies or diverse portfolios. And we really don't like to brag about our data or our products on the show, trust me, but we are lucky enough to have an asset location database, which has 437,000 different company locations. And to be sure, that's a lot of rows in Excel. But when you start laying out these future climate hazards over our asset location database, things really start popping because you can start to see places where severe climate hazards and key engines of the global economy collide.

Miranda Carr:

China is really the country where the problem really hits home because it's such an important manufacturing hub. The IPCC estimates that sea levels will rise by about one meter over the next 80 years under a 1.5-degree warming scenario. But there's concerns in the region that around China, this could potentially reach up to a three-meter sea-level rise, and that puts at risk some of the key manufacturing hubs. You've got the key provinces of Guangdong, Fujian, and Shanghai, and also Zhejiang. If you've got these areas being hit by coastal flooding, potentially combined with an increase in extreme weather events like typhoons, then you're talking about a significant proportion of global manufacturing, which becomes under threat from flooding. And according to our physical risk calculations, we estimated that of the manufacturing facilities in total, you could potentially see around $600 billion of value in the manufacturing sectors wiped out in Guangdong, including the key cities of Guangzhou and Shenzhen. And then about another $700 billion wiped out in Shanghai and the surrounding areas like Ningbo and Suzhou.

Bentley Kaplan:

Billion dollars here, $700 billion there. Big numbers. Numbers that come out of our climate value at risk model, which is in basic terms, a pretty careful estimate of how much future value a given company could lose through a range of climate-related changes, from policy to technology to physical climate risk. And it's this physical risk piece that was so interesting to Miranda. There's a spark that helped kick off the analysis was this idea that 75% of all of the world's toys are made in China, but not just in China, which is, of course, a huge geographically diverse area, but rather in very concentrated pockets. This idea that Santa has put all of his eggs in one basket, a lot of eggs in a small basket, that's sitting along a risky coastline. But as Miranda and Patrick looked at toy producers, they started seeing how many other sectors and industries were facing the same risk.

Miranda Carr:

Looking at the sectors where you're seeing the biggest risks. You've got three different groups who are going to be affected by the rising levels of flooding risks in the region. And the first group is the ones that actually have facilities based in the provinces and in the cities. And so that'll be things like the airports, ports, railways, where you've actually got the real assets that they're managing under risk. You can also extend that obviously to the real estate and the things like the hotels and leisure market. The second group is the companies with major manufacturing presences in these regions. And these are things like the consumer electronics, the autos, electrical equipment and the communications equipment. And you've also got a high level of advanced manufacturing in this region. So it could be the high-end technology companies like Lenovo, Foxcon, who's the iPhone manufacturer, Canon or Samsung.

And we calculate that depending on the company, you've got around 10% of their enterprise value, potentially at risk from flooding in the region. But the final group is possibly the most interesting ones. It's the broadest group. And the one that's most difficult to calculate where the supply chain is very, very concentrated in these regions. You're talking about the big brand names like Amazon or Target or Puma or Gap where they have quite a concentration of their supply chain in China is in the regions around Chengxiang, in Fujian or in the Shanghai and surrounding provinces.

Bentley Kaplan:

You see, we're kind of patting ourselves on the back for knowing about directly exposed companies. But the real challenge is unweaving supply chains to figure out how something like an iPhone relies on multiple layers of suppliers, where those suppliers actually are, and what types of risks they face. And remember that COVID-19 offered little preview of how this all works because ordering something arbitrary online, like a pair of headphones or a bicycle, suddenly turned up shipping estimates of weeks, not days, whether that was because manufacturers were in lockdown or COVID cases and key suppliers had peaked, or shipping operations had to be scaled back. COVID was sudden and caught the world off guard and by comparison, climate impacts have been slow-growing, but for now, they show no signs of slowing and just the opposite. And with hindsight, the battle against climate change may actually end up being a relatively brief opening skirmish with carbon emissions and a much more prolonged and bruising campaign against long-running climate hazards, like flooding and extreme heat.

Miranda Carr:

As soon as you start bringing in the calculation of physical risks, into your potential climate change scenarios for these companies, then you're not just looking at the fossil fuel emission companies, utilities or in some of the heavy manufacturing sectors, but it's also going to potentially lead to a significant impact for companies across the entire supply chain. And that's including the retailers, the consumer services companies like the hotels, even the casinos in Macau could be badly affected by flooding risks. And that really has to be taken into account and how people think about their portfolios and the climate risks inherent in that. But also think about a lot of these different sectors where you'd conventionally think that there may not be so much impact for the companies.

Bentley Kaplan:

Now, even though physical climate risk like flooding is a certainty, it's magnitude is something that's still open to change. Efforts to decarbonize today will mitigate some of the impacts of climate change tomorrow, at least broadly, which is where our next segment comes in. Because last week, my co-host and generally great human being, Mike Disabato, put together a handy explainer of carbon offsets with a help of our colleagues, Maxi Heidenblut and Chris Coty. Carbon offsets is the basic idea that a company or an individual can cancel out or offset their greenhouse gas emissions by supporting carbon sequestration or removal projects. If you haven't had a chance to listen to the episode, do yourselves a favor and cue it up after this, in the raw audio coming up, Mike and I take a second bite of the apple to break down some of the biggest takeaways that emerged for us from last week's episode on carbon offsets and where things might be going next.

Mike Disabato:

They actually did this for the Paris Climate Change Conference. A bunch of people took flights obviously. And what they said is you can use a 50 cent to $5 per ton of carbon tax, and you can offset your flights, and that's really where I think this is going to become a years-long effort for us to try to figure out because is that enough? In my mind, it doesn't seem like that's enough. It seems like a flight needs to be offset with a bit more than $4. There are going to be companies, individuals that say here is our offsets that we used, and we're going to have to say, this is either a good thing or a bad thing, and it's going to require more sophistication. So that's really where I see thinking back on last week's episode, talking to people throughout the week, trying to figure out our strategy with this. That's where I see kind of the biggest problem and complication coming in.

Bentley Kaplan:

The point that Chris made was really interesting. In the less good scenario you have companies sort of patching up the carbon emission pledges with these offsets that aren't a permanent low carbon solution. It's this question of how valid and how useful are these actual offsets. And of course, Maxi colored that in for us in terms of the restrictiveness of the ETS. So you've got this narrow, very small pool, and then you've got this big wild world of private offsets and those are not strongly regulated. Five, 10 years ago, there were some very big UN-based projects looking at using offsets and biodiversity together as a way for companies and big corporates to sort of offset their environmental impacts. For a number of reasons it wasn't successful. Now, there's so much push and so much interest, it may be sort of time to reboot some of those projects because there is so much more pressure on companies to do it and to do it properly.

Mike Disabato:

I think you're right. Companies and people are desperate for this thing to happen. I'll stick with aviation. I have to take a flight to go see family. I want to take a flight to have a vacation. Until there is a net-zero or the US actually has trains that I can use. I have to contend with the fact that I'm going to be putting more pollution into the air than an entire year of driving, every flight I take to go see a family member. Or if I buy a computer from Apple, from Lenovo, from Dell, I want to know that there's something going on to offset the toxic waste that's created from mining. So it's a desperate need for this to happen. It's also a hesitance for this to be so full-throated because you want to be aware of the marking that can come about and the analysis that's necessary, and yet there are these processes in our system that, like you said, need to be dealt with in order for us to feel good about the future that we're leading ourselves into.

Bentley Kaplan:

Damn straight.

Mike Disabato:

Well, let me ask you this. So what I thought was interesting is Chris was worried that investment into offsets could lessen the money that's put into actual solutions. So a company is rushing to meet its goal now, it's going to put an X amount of dollars into an offset program that could have been into innovative research or something. What do you think about that? Do you think that's an actual problem that is going to be faced?

Bentley Kaplan:

The company responsible for the emissions may not have access to the technology that is required to sort of catalyze the change. So if you're a food products company, you're selling groceries, you may not have access to technology that's going to create carbon-efficient farming. But if all the grocery companies chipped in together, then, of course, you could get that investment, but each company's answering its own net-zero challenges. There's a lot of value for companies and having good quarterly reports and including on sustainability. So saying that they on their net-zero trajectory, an asterisk at the bottom says 15, 20% of its carbon offsets, which is not in the ETS, it's not properly verified. That has value in terms of selling the company.

A rare tete-a-tete with two co-hosts. And I truly find myself split between optimism and cynicism on the topic of carbon offsets. And if you want to dig a little deeper and hear what our colleagues Maxi and Chris had to say, then swing by last week's episode. It's a topic that's unlikely to go away anytime soon. Investors in particular are going to have the unenviable task of working out the credibility of a range of offset projects. And whether the opportunity costs of supporting a worthy offset project includes slowing down the development of critical low carbon technologies. But, and I found myself saying this on a few episodes already, whether it was about fluvial flooding in Germany or hurricanes in the US Gulf Coast, however successful emission reduction efforts are, there will be no escaping physical climate change. And as you build out more of the puzzle of climate risk, so investors in companies will have a clear idea of how to respond.

For Miranda, the revelation that sectors with low emissions may face the greatest risks from climate change was a blunt way to end 2021 and that supply chain sit underneath big fat question mark that needs some coloring in. And maybe most importantly, that the question of who has been naughty or nice becomes a moot point when Santa's workshops are below the flood line.

And that is it for the week. A massive thanks to Miranda for her take on use with an ESG twist. Shout out to Patrick, Miranda's co-author. I've got a feeling he's going to be back on the show again soon. And a reminder the title of their blog Will Rising Sea Levels Eventually Sink Christmas. It's up on MSCI's website, freely available for everybody. Thanks also to Mike, a better co-host I could not ask for, but most of all, to you listening at home, in the car, or staring into the mid-distance to avoid eye contact, thanks for giving us your precious time. We really would love to hear your reactions to this episode, what you think about physical climate risk, or climate savvy investing, or carbon offsets, or if you have any wishes for future topics. Mike and I are hoping to make a little bit more time this year to turn over some topics again, and your inputs would be smashing. Any feedback can just be directed to the contact us link on our homepage on msci.com. But in the meantime, stay safe, enjoy yourselves, and wishing you an awesome 2022 ahead.

About MSCI

MSCI is a leading provider of critical decision support tools and services for the global investment community. With over 50 years of expertise in research, data and technology, we power better investment decisions by enabling clients to understand and analyze key drivers of risk and return and confidently build more effective portfolios. We create industry-leading research-enhanced solutions that clients use to gain insight into and improve transparency across the investment process. To learn more, please visit **www.msci.com**.
