Are Carbon Markets Useful?

Featuring:
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Mike Disabato:

What's up, everyone, and welcome to the weekly edition of ESG Now where we cover how the environment, our society, and corporate governance affects and are affected by our economy. I'm your host, Mike Disabato, and this week, we just have one story for you. It's about the all important carbon markets. We're going to talk about what they are, how widespread they are, and if they are actually effective. Thanks as always for joining us. Stay tuned.

Mike Disabato:

The lowering of greenhouse gas emissions while continuing to grow as an industrialized society is one of the world's most wildly discussed and controversial issues. We more or less need industry to grow, and industry works in a capitalist system via profit. Currently, more growth means more absolute emissions. So what if you could pay a company to stop polluting? That's the idea behind what is called the carbon markets. Carbon markets in the broadest sense turn the power to pollute into a credit that can be bought or sold. They've been around in various forms since the 1990s, and debates on their efficacy have raged ever since.

Mike Disabato:

Today, we are going to explore the carbon markets because in 2022 and beyond, they are likely to be a major part of our world's efforts to reduce emissions as seen in Glasgow during COP26 as an agreement was reached that more or less encouraged the use of them. Before we get into how the carbon markets are currently being used as part of companies' climate pledges, let's actually define what they are because like with all things market-dominated, it's overly complicated with words like carbon offsets, carbon allowances, certified emissions reductions, joint implementation. It's just exhausting. So to help me here, I called up my colleague, Maxi Heidenblut, who's been researching the carbon markets for us so she could explain the fundamentals of the system.

Maximiliane Heidenblut:

There are two kinds of markets. First, you have the so-called compliance markets, and on the other hand, you have voluntary markets. Starting with compliance markets, you have something called emission trading scheme markets, in short, ETS, just to add another acronym to the ESG space, and those ETS markets are government-administered.

Mike Disabato:

At the moment. There are 31 of them. They're in the UK, the EU, China. They're in the US. They cover the markets in Tokyo, South Korea, New Zealand. They are in development in Indonesia, Vietnam, Columbia, and the Ukraine, and they cover about one-third of the global population. They are one of our most important ideas to combat carbon emissions.

Maximiliane Heidenblut:

Now, how an ETS works is basically this region, let's use the European Union as an example, they have set emission reduction targets themselves. In order to get there, they are basically providing or allocating so-called carbon allowances to companies in certain industries within their region. A carbon allowance is basically a permit to emit 1 tonne of CO2 equivalence.

Mike Disabato:

So let's say I'm a cement producer somewhere in EU, and I'm part of the EU's Emission Trading System, ETS. That allowance is given to me as an allotment of CO2 emissions, and that's what's called the carbon allowance, the allotment of tonnes of CO2 that you can emit. Each year, I get these allowances either for free or through government-led auctions. Each year, my cement company has to provide regulators with the facility's annual emissions and the carbon allowances I have for those emissions. Please ignore any thoughts you may have at the moment about how easy it is to actually regulate this.

Maximiliane Heidenblut:

Now, if I'm below the allocation, I can use those extra carbon allowances, and turn to the market to the ETS, and actually sell them, and make some extra money. If I'm above my allocation, I will have to buy additional carbon allowances in order to make up for the difference. So that will cost me. So the entire idea is to incentivize companies that are part, that are covered by this ETS market to think about decarbonization strategies and make them pay for more emissions basically.

Maximiliane Heidenblut:

What is really important to note about these ETS markets is that they are reducing the amount of carbon allowances year by year that they're putting out there. So that's, again, an incentive for companies because there are going to be less allowances. So that means you can... as an entire region, you can emit less. So the incentive is to decarbonize and also to increase the price to basically make it more painful for companies to emit.

Mike Disabato:

That pain is administered via a carbon price, a carbon tax basically. The setting of which, as you can imagine, is vital. If it's too high, companies will be taxed into bankruptcy and there could be a general revolt either by them or by their customers if they pass the price increases down to them. If it's too low, companies will just emit more than their allowances allow and pay the fine rather than buying more permits since it will just cost less to emit than have to buy more allowances. Let's take the EU ETS system for a moment because it's the most advanced, and it's the oldest, and it covers around 11,000 power plants, factories, and airlines. Currently, companies operating in the EU face a fine of the equivalent of 115 US dollars per access tonne. That's "tonne" with two Ns and an E, not "ton" with the American NS.

Mike Disabato:

Now, compare that to the benchmark price for carbon allowances in the EU, which hit a record hive of around $80 US in December. It's just better to buy that $80 permit than pay $115 in fines, but the problem is the EU is just one market system. Its neighbors have a very different and less restrictive environmental carbon emission system even if they have one. They might not. This global patchwork of carbon markets creates a major problem for company workers and governments because it creates something called carbon leakage, where companies leave environmentally stringent regions for less environmentally stringent regions.

Mike Disabato:

The EU is trying to address this by proposing a border tax that says if you produce outside the EU carbon market, you have to pay a tax that equalizes the price of the same goods made in the EU. So they're trying to just make it so it doesn't matter if you produce here or there, if you want to sell in the EU, you're going to pay this amount, but it's really on governments to ensure this sort of leakage doesn't happen. For compliance markets, the government needs to make the market set the rules and regulate it so it is effective. There's another form of carbon markets that was created in conjunction with compliance markets, and this is much less regulated, and it's all over the place, the voluntary carbon markets. You may have already heard of the voluntary carbon markets because they are much more controversial than compliance markets, and they have one massive marketing difference. They use carbon offsets, which are different than the carbon allowances set up in a compliance-based system.

Maximiliane Heidenblut:

Now, the big difference between allowances and offsets is that offsets are project-backed. That means, just to give you an example, there's a project developer who is building a reforestation project. So they're planting trees in order to basically remove carbon from the atmosphere by planting a tree. It's sequestering carbon from the atmosphere, and based on that project, they're basically getting an independent certifier, and they're adhering to a standard. Then, they're issuing so-called carbon offsets that organizations can buy voluntarily, and it would be organizations of industries that are not regulated by the ETS market. So let's think about technology companies or financial services companies that tend to have lower emissions than a steel manufacturer, for instance.

Mike Disabato:

All right. So those non-regulated companies go to one of these independent market providers, and they say, "Okay. I have this carbon reduction plan that I put out into the world, and I want to ensure that I meet it, and I'm going to use carbon offices to do that." The company can then choose two different types of carbon offset projects. There's avoidance projects or there's neutralization projects. Avoidance projects are the things that you often see Apple and Google do. They fund a renewable energy program or a giant project, and they then either use that to directly provide energy to the company or they offset the company's carbon emissions.

Mike Disabato:

Then, there are these neutralization projects, those that actually sequester carbon using either technology like carbon capture and storage that literally sucks carbon from the atmosphere, or the much more controversial natural sequestration projects, where a company says, "We planted X number of trees or saved X acres of land from deforestation, and thus, we reduced our emissions by X tonnes."

Mike Disabato:

As Maxi told me, these voluntary markets are at the moment around 5% of the compliant controlled markets that have a market size of around $250 billion US, but understanding voluntary markets are vital for investors and companies. For one, an offset program can actually be used in a compliance carbon market in the form of a certified emissions reduction or CER project in lieu of purchasing more allowances. It's also where a lot of emphasis was put during COP26 for the private sector.

Mike Disabato:

Lastly, carbon offset projects are really good marketing techniques. Think about all the companies you've heard that talk about planting trees if you purchase their products. Is that useful? Does that abate carbon? It's something that we need to figure out. So let's first understand how many companies are already using carbon offsets in their carbon reduction plans. To answer that, I called up my colleague, Chris Cote, who covers the energy industry for us and has been researching carbon markets for some time.

Chris Cote:

Looking at the data we collect, we see there's more than 400 companies in our coverage that are using offsets currently and a much smaller number investing in carbon removal technology. So, of those 400 companies, the top five sectors are utilities, industrials, consumer discretionary, tech, and financials companies. A really diverse set of sectors.

Mike Disabato:

Okay. 400. To put that into context, we cover in this major index called the MSCI ACWI index. We cover around 1,300 companies that have set net zero targets. So out of those, about a third of those companies use offsets, and a much smaller amount use carbon removal tech. That is a sizeable amount of the pledges that rely on these sorts of projects. If I were to make a prediction for 2022, a personal trend as it were, I bet that number is going to rise, especially because companies are going to start to make more ambitious carbon reduction plans. Investors are going to have to pay attention to how those reduction plans look to utilize offsets because not all offsets are equal.

Mike Disabato:

Also, offsets cost money. Sometimes a lot of money. If a company spends a couple million on an offset project, we have to understand if it just made a lazy move instead of actually decarbonizing its operations or if the project was worthwhile. So we're going to have to pay attention to that much more in 2022 than we have ever before. To do that, we will have to understand what tools are available, sector by sector, for a company to decarbonize. Let's look at utilities first. If a utility uses a lot of carbon offsets, what does that mean?

Chris Cote:

So if you're a gas utility, you could buy offsets today to reduce your net emissions footprint on paper, and they may be doing this to comply with regulations as well, but these emissions probably aren't truly hard to abate from a systemic perspective. They just need to do them to keep their business going, right? They need to keep these emissions going because they are part and parcel of combusting gas for electricity.

Chris Cote:

However, in many cases, the services that the company provides, electricity generation or even home heating, could be provided technically and with caveats around timelines and resource availability by a combination of wind, solar, batteries, or other zero carbon technologies. This doesn't mean it can happen overnight, but it does mean as a company looks forward, they have decisions to make about how deeply they are willing to decarbonize and how much they're going to change their business practices to do so.

Mike Disabato:

Okay. So if a utility uses too many carbon offsets to address its emissions, you might see it as a risky character. It's a lackluster company. However, the picture changes when you look at aviation.

Chris Cote:

You can't take a truly net-zero flight today, right, or a zero-emissions flight today. So as an airlines company, you face a couple options. First, you could just wait and let someone else figure it out, right? There's no standard or regulation that's driving you to decarbonize today, most likely, and so you let another company do the R&D, and you pay for it down the road. Another option is you invest in research and development yourself, either in-house or indirectly, and then you're working on potential solutions. Maybe advanced biofuels. Maybe hydrogen. Maybe there's some breakthrough in electricity that lets you carry a heavy battery on board. In any event, despite some recent successes and very interesting successes in those markets, they're not commercially viable today. They're not widely available. They're not right around the corner either.

Mike Disabato:

Thus, we will probably see more offsets used for airline companies. It's a simple equation Chris is proffering here. Can a company change its business practice with cost-effective technology? Yes. Then, offsets might be assigned that the company isn't pursuing the new. If not, then offsets might be of use. Let's say my prediction that is actually a prediction a lot of people have comes true in 2022 and demand in the voluntary offset market rises exponentially. What's the best case and worst case scenario of a 2022 offset world? I asked Chris.

Chris Cote:

Yeah. So the best case scenario is that investors and companies figure out a way to do both, right? They buy offsets today, which if they are stopping deforestation from happening in a critical area or investing in bringing about carbon removal solutions, like direct air capture and improving the use cases for carbon capture and storage, then that's good on the one hand, and you're also de-risking the technology and helping scale it so that you can actually deeply and permanently decarbonize down the road. That's the ideal scenario. Both things can happen, and we end up mitigating and offsetting emissions appropriately in the meantime, and finding real solutions in the long run, and hopefully not too long run.

Chris Cote:

A less good scenario would mean a flood of investments into cheap, low-quality offsets today that would really let companies announce that they've reached net zero or are on track for net zero without actually doing the hard work of reducing their emissions. Meanwhile, this would also delay investments into technologies, like the direct air capture or others that actually help decarbonize permanently. So the steel and cement sectors, heavy-duty transport, aviation shipping, long-haul trucking, these are the areas and sectors where solutions likely can be found and where the work needs to be done.

Mike Disabato:

There's an awkwardness in all this because the Science Based Targets initiative, a major standard setting body for carbon reduction plans, said for a corporate target to be considered net zero, they cannot use carbon offsets. If the company is using carbon removal technology to literally remove carbon from the atmosphere and store it for a thousand years, it can account for more than 5% to 10% of the total emissions reductions that the company has proposed. In effect, we are seeing a fragmentation happening in the market. The UN is saying, "Well, we need carbon offset," while bodies like the SBTI are saying, "Sure. You could use them, but don't try to convince us that their use negates necessary carbon reductions."

Mike Disabato:

Okay. So what is my point with all of this? What's the ESG take here? The ESG take is that voluntary carbon markets are here to stay. Governments are chaos right now, and regulatory bodies are going to look for any help they can get in setting carbon plans that are actually useful, and they likely see the help in the form of carbon offsets and voluntary carbon markets in general as a good thing. So they're going to embrace them. So like all things environment and economic, we as an industry will likely have to start to better flush out what carbon offset projects are worthwhile and what projects are stardust.

Mike Disabato:

That's it for the week. I want to thank Maxi and Chris for talking to me about the news with an ESG twist, and I want to thank you so much for listening. I really appreciate it. Don't forget to rate and review us. That helps us get higher up in the podcast lists that are so important. If you like what you heard, don't forget to subscribe. You can hear me every week. It's enjoyable. We've got all this new content coming out. Bentley is going to join me next week, and we're going to do a diagnostic of this episode. It's going to be fun. So don't forget to subscribe. Thanks as always, and talk to you next week.

Mike Disabato:

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