

November 14, 2023

RPM Ep 35 transcript - final

Susanne Tavil: Hello. And I'm Suzanne Turvill, global head of responsible investment for Stepstone and your host for today's podcast. With me is Ryan Ramsey, a principal with our Infrastructure and Real Assets team. And Ryan is our real asset specialist with a deep experience across the natural capital sector. So perfectly positioned for our discussion today. It's always a pleasure to collaborate with Ryan on projects, and this podcast is based on a recently published white paper titled An Introduction to Carbon Credits and Offsets. And this has been a great project. So our objective today is for you, the listener, to finish this podcast and leave with a clearer understanding of the carbon market, including carbon credits and offsets. We're going to cover off everything from the jargon, the market structure concerns investment considerations, but at the end of the day, this is really a taster, and should we have sufficiently whetted your appetite, we encourage you to read the full paper, which is available on our website. So with no further ado, let's start off with a real sort of foundation question. So, Ryan, can you explain for us what actually is the carbon market and how does offsetting fit into it? Sure.

Ryan Ramsey: Thanks, Suzanne. And, you know, it's a pleasure to be talking to you today about this topic. It's something that we find really exciting. So, you know, carbon markets are effectively a market that trades in units of carbon. The measure of that is tons of CO₂ equivalent and the units that trade are effectively referred to as credits carbon credits. And so if you think about that market on the supply side, you've got abatement and which creates the credit. That in itself is a revenue opportunity for that side of, of the market, and then on the demand side, you've got emitters who are looking to take that credit and use it, use it against their emissions, which creates a cost on on the demand side. And it's that process of buying a credit, claiming the abatement and then reducing your emissions for that particular entity, it's that process that is referred to as offsetting. and as a result, credits are often called credits or offsets. And that term is used interchangeably.

ST: Excellent. All right. So with that as our basis, let's just run through some jargon because the space is absolutely chock full of it. So some rapid-fire definitions from you: Carbon Project.

RR: So Carbon project is a project which is registered with a registry. That registry really, you know, makes the rules and administers all of the credits that are, that are generated through through it. So think of it like a share registry which is managing all the share trades, this manages all the carbon trades, but it also, you know, determines all the rules as to how the credits are, you know, issued.

ST: Excellent. So and that body is that a sort of a regulated body or that sort of a just a professional practitioner body?

RR: Yeah, it depends on whether it's a an emissions trading system or the voluntary market or what we refer to as compliance versus the voluntary market. And, you know, in compliance markets, it's typically a regulator, although the regulator, the regulator can delegate that to a sort of an outsource registry. Those outsource registries which exist in voluntary markets.

ST: Becoming clearer, so what's an avoidance credit.

RR: So an avoidance credit is effectively an avoided emission. So think of a credit which is you know the abatement which has been generated through that project relates to avoiding emissions, and that distinction is relevant because we've seen the market sort of evolve into two types of credit types, the other being a removal credit. And that removal, the abatement there is actually taking CO2 out of the atmosphere, so removing it from the atmosphere, and so now we've seen the sort of the market distinguish into those two types of credits.

ST: So abatement as in reducing what could have been emitted versus removal sucking it out.

RR: Exactly.

ST: I think the bit that we, we tend to forget is just how long the carbon dioxide stands in the atmosphere or sits in the atmosphere, and the fact that we're dealing with two problems, we're trying to add less to our carbon stock, while at the same time we try to reduce our carbon stock. So, additionality because this is sort of interlinked isn't it.

RR: It is, yeah, additionality I think is probably the biggest area of debate in carbon markets. And you know, what this term means is, you know, what would have happened in the absence of a carbon credit. So, you know, for a carbon credit to be additional, the idea is that without the carbon credit revenue, it wouldn't have occurred, i.e. we are changing practices and that changing, you know, we're being rewarded for a change in practice rather than being rewarded with a carbon credit for something that would have happened irrespective of the carbon credit.

ST: Yeah, so as we can see, quite a tricky concept in terms of the would have, could have, should have. But obviously I'm sure there's there's a fair number of rules around that.

RR: There are as you say, it's...you know, it sort of leads into one of the other areas that, you know, I think is topical, which is around baselines. What would have happened in the absence of the project and that sort of your measuring stick that you are compared against. And, and so, you know, there are lots of rules around how

we're determining those baselines. Each registry has, you know, rules for individual project types. But ultimately, you know, it is an estimation. So, you know, as with any estimation, there is there is, you know, estimation error.

ST: All right. So, let's shift to two terms that we hear people use interchangeably, but they don't actually mean the same thing. So carbon neutral versus net zero.

RR: Yeah, as you say they they sound the same but they are definitely not. So carbon neutral is the process of just using offsets to and any type of offset to so that your emissions are neutral. And that differs, you know, from net zero, where your gross emissions have to be offset through subtractions or removals from the atmosphere. So, effectively what you're doing with carbon neutral you can use avoidance credits. With net zero you have to use those removal credits, so that your your net emissions are actually equal to zero. And that's sort of the gold standard for and is ultimately what we're talking about the one and a half or the two degrees in a climate scenario it's getting to net zero, so there is no increase in emissions into the atmosphere, and ideally, you know, somewhere less than that where we can start taking, you know, greenhouse gases on a net basis out of our atmosphere beyond that.

ST: So the credits that we've talked about can have sort of two origins, nature based versus technology based. Walk us through this.

RR: Yes. So start with technology based, effectively this is adopting new or alternative technologies that either that really reduce emissions, or potentially can also remove carbon from the atmosphere. So, you know, renewables is something that everyone's, you know, assume is familiar with. It's a technology-based solution where we're going from, you know, fossil fuel, based electricity generation to wind and solar, you know, combined with batteries and other forms of storage. So that's that's a technology solution. And nature based is using our natural landscapes. Think, you know, soil, forests, other vegetation, wetlands, peatlands. So changing the way we manage those, those natural capital assets to either reduce emissions that are coming from them, or actually remove carbon by sequestering carbon in those natural capital assets.

ST: Excellent. Post the Kyoto Protocol. We see these two markets the compliance or regulatory market and the voluntary market start to emerge. Talk to us a little more about these markets, but in particular, how their market structure impacts on the pricing of carbon, because at the end of the day, this is the key issue of interest for any investor.

RR: Yes. So I'll start by sort of summarizing where the two markets are at now. Compliance markets, which is effectively emissions trading systems or ETS, they cover about 17% of global greenhouse gases. So, you know, still a long way to go in terms of coverage of those of the compliance market. And so voluntary is filling in the gap between the 17% and, you know, I guess potentially up to 100%, which is where ultimately we need to get to. But, you know, if you look at then the trading volume of the relative, you know, those two different markets,

and the compliance side is about 450 times the size of the voluntary. So if you look at the two different markets compliance markets and demand is really driven by legislation, so, you know, governments will legislate specific trajectory of emissions that involves typically, you know, a cut in emissions each year. And it's that reduction that's scheduled reduction in emissions, which is driving demand for credits. You compare that to a voluntary market where it's an individual organizations voluntary target that is set based on engagement with its stakeholders. Now, those stakeholders may not see it as voluntary, they might think it's absolutely compulsory, but ultimately there's no sort of legal consequence if those targets are not achieved, but there could be very strong reputational consequences, there could be consequences in financial markets. If your shareholders are saying these are the targets that we you know, you've agreed with us, we do expect you to go and deliver them. And there's the key difference there is the registries or the methods and protocols that are used to generate credits are covered by regulator. Whereas in the voluntary market there is no regulator there. And so there are perceptions around quality of, you know, of some of those credits and then what that sort of leads to is in the voluntary market, the importance of quality becomes really important because buyers of credits want to buy credits where they don't face reputational risk. And so we're really seeing, you know, from the in the voluntary market on the demand side, much greater focus on the quality of credits that are being purchased, and, you know, I guess lastly around that out is sort of pricing. What does all of that mean? Well, I guess in compliance, we've seen generally much higher prices because the the targets that are being set to reduce emissions in those jurisdictions has been more aggressive than what's happened in voluntary. And then within the voluntary space itself, we're seeing a divergence in pricing between, you know, credits that are perceived as being of a high quality and and those who are perceived as being as a low quality.

ST: So, what we know for sure is that the demand for carbon credits is going up. As we've talked about, the supply is arguably undersized in the voluntary market and potentially even in the compliance markets. So, you know, traders would look at this and go constrains, constrain supply large demand carbon prices, surely, they've got to they've got to go go up. What is that logic sound or not?

RR: We think so. I think most participants in the market expect prices to be higher. In fact, I think prices need to be higher if we're going to achieve, you know, a one and a half degree or even a two-degree scenario, it requires significantly higher carbon prices in the voluntary market in particular, and in a lot of compliance markets around the world. If it's going to drive the, you know, the change in behaviors or change in business models and adoption of technology that are needed to ultimately drive all of that direct abatement and meet, meet net zero. So and if you look at the, you know, the projections that various different, you know, international financial institutions have, you know, published in its, you know, you've got carbon prices of 75, 200, \$300 a tons. If you're looking out ten, 20, 30 years. They are the sort of prices that that are estimated to be required to achieve that one-and-a-half-degree scenario. We're a long way from that. You know, European markets certainly the most advanced from a as a compliance market. And, you know, prices have traded up to €100 a ton. If you reduce the amount of emissions you're allowed by, call it 5% per year, it gets harder and harder to to achieve that, and that drives up the price of of carbon in those markets. So that's the demand side, right, and you know the preference is for direct emission reduction but offset, you know, can be used in a complementary way to achieve that. And then you have supply, you know, like any market there is a marginal cost of supply, and so the the easier project or the easier abatement tasks, that can generate these credits, you know, have have been where, you know, people have started in terms of, you know, investment, it gets harder and harder from here.

And then overlaying that, you've got increasing or improving standards, which is, you know, tightening up, you know, how many credits that might be awarded, for example. And so that, you know, those two factors combine to constrain supply or at least at, you know, at a given price. Obviously, higher pricing incentivizes more supply. So, you know, putting all of that together, we do, you know, I think the general view of the market is that, you know, prices do are likely increase and over time, but you know, it's not going to be a straight line either. And we've seen that in in carbon markets to date where like sort of any market there is, there is volatility along the way.

ST: I wanted to shift gears a bit, because it would be remiss of us not to address the fact that there is a voice out there that argues that carbon credits really, in fact, are not effectively addressing climate change and they not helping to solve it, which really is sort of diametrically opposed to, to to the argument that you've just presented. So, let's just address this for our listeners.

RR: Yeah. So, I think there's an ideological view that offsets just allow emitters to continuing emitting instead of reducing their emissions, they can just buy offsets. But I don't think that is a fair characterization of what offsets are trying to do. I think there is no real credible pathway to net zero that doesn't involve offsets in some form. Net zero is net, it's not gross zero. And so, you know, most industries are going to have a residual tail of emissions which they can't get to absolute zero. So, so there's a need for those removal credits to get to net zero at the back end of the market, and then in the interim, we could just go out and implement every direct emission reduction project at any cost, and that would greatly accelerate the transition to net zero. The problem is, is that the cost of a lot of that abatement is much higher than offsets, and also much higher than we think the public can support. The transition there has to be done in a way that's sustainable, not both, not just environmentally but socially. You know, we're in an environment now where cost of living pressures, you know, are a major issue around the world. And that that sort of burn-the-house-approach would be multiply that factor, you know, many times if we were to go down that path.

ST: In the last six months where you've had the integrity really come and...the integrity of the credits, come under quite a lot of scrutiny. But talk to us about sort of, we don't need to get into to the nitty gritty on specific, but examples, but like what was the general theme and or what was going wrong that the credit integrity should have been threatened.

RR: So, the criticisms to date have been, you know, I think really around baselines and additionality and, you know, I think, you know, that that fundamentally has been the, the, the, the, the major area of concern. And there's a lot of other, you know, elements which are sort of, you know, more detailed, but ultimately, you know, what would have happened if if this project wasn't in place versus what did happen. It's the gap between those two which, you know, has come under scrutiny in particular for a couple of, you know, types of carbon projects and, you know, those baselines as a result, the way they are determined and the way that the outcomes of of measuring the difference between the two, how that's verified, you know, I think that's really the area of focus in terms of improving the way these carbon projects are working to improve both the environmental

outcomes, but also, importantly, the confidence in offsets, because that's that, I think is integral to their adoption and use and delivering on the potential that they offer us.

ST: Yeah, 100%. I mean, so so scrutiny actually ends up driving better practice in, in this nascent market.

RR: Yeah. So I think scrutiny is good. You know, I think the other element around offsetting, which is really interesting, is it's helping us to effectively put a value on on natural assets. Now that's something that hasn't really happened in the past, one of the criticisms around loss of biodiversity and and nature ecosystems, which is a, you know, another big issue on top of carbon is the the development of carbon markets has allowed us to put a, put a value on some of the ecosystem services that these natural assets are providing. You've got biodiversity credits, you know, coming down the line as well. And I think that provides alignment and incentive to actually change the way we are managing these assets and recognizing the value that they're actually, you know, deriving for society in a, in a more sustainable way. And, you know, looking at deforestation is just one example where, you know, deforestation has been a known problem for a long period of time. And, you know, regulation, geopolitical pressure, the reality is it just it hasn't worked, it's still a big problem despite all the effort that has been put into it. And if you think about why is that? Well, most of the deforestation that occurs globally is in emerging economies where the incentive to, you know, to to leverage that resource and find a, you know, effectively lifting communities out of, out of poverty. So what putting a price on, on nature does through carbon in this circumstance is actually provides an alternative incentive. You can have the environmental outcome, but you can also have the sort of financial outcome for that community. I think that alignment of interest and, you know, and self-interest, you know, is what we think is more likely to actually solve the issue around deforestation and then simply telling, you know, these communities in, you know, low socioeconomic communities that they just can't leverage a resource when the rest of the world, you know, the developed world has, you know, over a long period of time, leverage those resources to build the successful economies and wealth that they have you know. That's that I think is a more equitable solution to that particular problem.

ST: Yeah. No, it's really quite exciting when we think about all the nature-based opportunities in the bank and the fact, as you say, that so many of the revenue lines attached to these assets have just had big zeros in them before, you know, and now be it with carbon credits, biodiversity credits going forward, we start to appropriately value these assets. So, clearly that sounds like an interesting investment opportunity for people looking for mispriced assets.

RR: Yeah. I think it absolutely is. You know, looking, you know, land-use, agriculture you know, are a, you know, material contributor to to climate change. And, and you know, depending on sort of which numbers you use, I think globally the numbers around the 13%, based on the latest figures available, but if you look at the amount of capital that is flowing into nature based versus technology based, it's a small fraction. So, you know, it is it is underfunded, and I think where that's interesting is that if you're an investor the additionality of your capital in terms of the impact it can have is much greater. And so, you know, that is, I think, a trend we're starting to see where, you know, some some of our clients, for example, have gone from focusing on on the renewable space and sort of industrial energy transition, which, you know, we've seen, you know, you know, some very large

funds raised and a lot of capital flows in that space, now starting to look at, okay, how do we leverage our capital in another area that needs a lot of investment. And that's one of the you know, the attractions of of natural capital is, you know, it's relatively underfunded, which creates opportunity.

ST: Yeah. Super exciting. So one of the the topics that I did want to address is we've talked about sort of best practice in terms of underscoring markets. Now, there is the body the science-based target initiative or SBTI, which really is regarded as the the bastion of good practice for companies that are moving their businesses to reducing emissions and setting net zero targets. How does a group like that consider offsets?

RR: So if you if you look at the SBTI framework, there's a couple of components. One is you reduce your emissions based on a scientific trajectory to get as close to net zero as is sort of technically possible, and then you use removals to go from that, that to effectively offset that, that tail of emissions which cannot be reduced to absolute zero. So that's the that's the net in the net zero component of the SBTI framework. And then in between today and that sort of residual target, the the target has to be met, as I said, through direct emission reductions, not buying offsets. But what you have to remember is that from, you know, today until that point in time, these businesses still have an emissions profile. And so offsetting to also achieve carbon neutrality is complementary to the SBTI framework. And so, you know, in those circumstances, you know, should those companies just continue to operate as is and follow that that trajectory, waiting for the technology cost to come down? Or should they contribute to climate change mitigation by buying offsets to, you know, play their part in the interim while they're waiting for, you know, the viability of those technologies to, to play out? And and that's the way we think about offsetting it's, for those companies in particular, it's contributing to mitigation rather than just waiting for technology to solve it sometime in the future.

ST: And as we've discussed, you know, it helps drive really a price discovery right on on carbon which which in turn, you know, allows the development of further applications of carbon carbon reduction technologies and products and services, so clearly all part of the the circle.

So for our listeners, there you have it, a whistle stop tour of some of the key considerations around carbon markets and credits. In our view, as you've heard, this is a topic that's only going to get bigger, and the role of carbon markets ever more important.

We know we need a price on carbon to change behaviour, and I think we're all agreed that behaviour has to change, if we're going to hold temperature rise to well below those two degrees.

So as a reminder, if you'd like to learn more, please read the full white paper that's available on the Stepstone Group website and this podcast, RPM is available wherever podcasts are available. Thank you.

