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Carbon Frontiers 2024 | Episode 8

Sid Jha, Founder & CEO, Arbol

We continue our Carbon Frontiers 2024 series this week with Sid Jha, Founder & CEO of Arbol. SmarterMarkets™ host David Greely sits down with Sid to discuss his work building parametric insurance markets to help manage the risks created by a changing climate.

Sid Jha (00s):

There is a reason why you have hundreds of billions of damages from climate lately and over, say, the majority is not covered by insurance. And that reason stems from that lack of scale, from the delays, disputes fraud from all sorts of issues that come from relying on subjective loss assessment. And if you take a step back and think about what parametric insurance does, is it really equalizes the balance of power between an insured and an insurer. Now it's an objective trigger.

Announcer (28s):

Welcome to SmarterMarkets, a weekly podcast featuring the icons and entrepreneurs of technology, commodities, and finance ranting on the inadequacies of our systems and riffing on ideas for how to solve them. Together we examine the questions: are we facing a crisis of information or a crisis of trust, and will building Smarter Markets be the antidote?

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David Greely (01m 08s):

Welcome back to Carbon Frontiers 2024 on Smarter Markets. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Sid Jha, Founder and CEO of Arbol. We will be discussing his work building parametric insurance markets to help manage the risks created by a changing climate. Hello, Sid. Welcome to SmarterMarkets.

Sid Jha (01m 30s):

Thank You for having me here, Dave. It's a pleasure.

David Greely (01m 32s):

Well, thanks for joining us today. I have been looking forward to the conversation. I know that at Arbol you are working on helping people better understand and manage the risk they face from weathering climate change. And you know, as we got started, I was curious because I noticed that earlier in your career you worked in both interest rates and commodities markets and I find to get an interesting progression, and I was curious, what got you interested in these problems you know, was it your work in agricultural or commodities markets?

Sid Jha (02m 01s):

Yeah, so it honestly starts early on. I'm from India. I grew up there for part of my childhood. I'm from a very rural part there. So agriculture is very much in the lifeblood of my upbringing. I, myself was of course not involved in it, but generations of my family have been. But when I came to, you know, the US and then went into my career, as you said, across interest rates and commodities, commodities is especially focused on weather risk. A vast array of commodities, as you might guess, from everything from corn, soybeans to natural gas, to sugar, coffee, cocoa, all have extremely weather dependent supply chains, extremely weather dependent production and consumption patterns in different ways and so keeping track of weather risk was essential in quantities. At the same time, there was very poor mechanisms to transfer that risk. If the purpose of markets is to help risk transfer, right?

Sid Jha (02m 58s):

Like so a corn futures contract allows a farmer to say, hey you take the price risk, I just want to fix the price I will get after harvest, right. That's a form of risk transfer. That's an extremely important part of functioning markets. It seemed odd to me that the transfer mechanism for one of the most important risks we face every single day, and that's not just in commodities, that's in your home insurance. That's in whether you, if you run a restaurant on a seaside town, you mean the list goes on and on. You had very poor mechanisms to transfer that risk. You didn't have it as an asset class. It was a one-off transaction here, one-off transaction there very

bespoke, no real scale, but you didn't have an asset class like corn futures are an asset class. We have equities as an asset class of different sizes and gradations, whether risk or climate risk was not really a well-built asset class.

Sid Jha (03m 57s):

It had the beginnings of one in some parts like cat bonds, but it needed a lot more development, a lot more sourcing of that risk and so yeah, it was it, it was a natural progression in the sense that interest rates teaches you a lot about how financial markets work commodities teaches you a lot about how the physical world works, especially as it interacts with our daily lives and to get this weather market going, to get the weather risk, climate risk as an asset class, you need both. You need to understand the risks, physical risk facing the client, but you need to get them capital. You need to get new forms of capital to write those risks. And it needs to be more diverse than the small group of reinsurers needs to focus on it. So that's where, you know, interest rates in a broad sense, like understanding how the financial pipelines work is very important.

David Greely (04m 50s):

And I wanted to ask you, you know, in terms of how you're helping people manage those weather and climate risks, I know at Arbol you are providing, you know, what's called parametric insurance as a product to help people manage that risk. Can you explain for our audience who may not be familiar, what parametric risk insurance is and its benefits compared to other more traditional forms of insurance that they might be familiar with?

Sid Jha (05m 15s):

So parametric insurance is a form of you could think of it as a financial product that references data as a trigger. So in more simple terms, when you have an insurance policy, and let's say your house gets flood, somebody comes to your house an adjuster and determines what the loss is. Same thing in a farm. Drought happens, insurance adjuster comes to your farm and says, hey you know, your production dropped by this much this year. That's what I assess. Parametric insurance determines that payment based on a data trigger. So in, for example, the foreign case, if we could say, if rainfall is less than a certain number of inches in the month of July I will make you a payout because that likely means drought. We can get more direct and say, hey, I'm looking at your farm, extremely granular farm area by a satellite, and I'm assessing that the crop is pretty much gone.

Sid Jha (06m 16s):

Here's a payout based on that dataset but it's really about using an objective trigger, an objective external dataset that both parties, the insured and the insurer agree on to make that payout and so, you know, and, and it doesn't have to be an insurance form, there's derivatives, there's reinsurance, they all are the same thing. Here is my data set and here's a trigger or a set of triggers. It can get very complex, it can be very simple that determines how much I will pay you out. Maybe I pay you a hundred thousand for every inch that the rainfall is less than average. Maybe I pay you a million dollars regardless of whether it's a you know, one inch below or five inches below. We can do all sorts of combinations of that and that depends on your risk profile. You know, that depends on that.

Sid Jha (07m 03s):

But that's the overarching premise and if you take a step back and think about what parametric insurance does, is it really equalizes the balance of power between an insurer and an insured. Now it's an objective trigger. Now it's a two-page contract, not a 700 page contract. Now, it makes it easy for both parties to agree on what the payout should be, rather than the traditional insurance case where the insurer has quite a bit of power to determine your loss amount. Not to mention how long it might take, especially after a big event like a hurricane or a big drought. It might take a while for a specialized adjuster to show up at your place. So that's a scale problem. And then there's the disputes that happened, litigation that can last years in many cases, COVID spawned, you know, 20,000 plus lawsuits about whether a pandemic is covered don't have these issues with parametric.

Sid Jha (07m 59s):

And on the other side, there is obviously fraud that can happen on the insured side. So there's a plethora of issues with insurance, and this is the reason why it's not just an intellectual problem. There's a reason why you have hundreds of billions of damages from climate lately and over, say majority is not covered by insurance. And that reason stems from that lack of scale, from the delays, disputes, fraud from all sorts of issues that come from relying on subjective loss assessment and it's not scalable outside the few areas that insurance has built. A hundred year old supply chain, basically.

David Greely (08m 36s):

Right and in terms of the types of events that can be covered, I think often when people think of climate risk, their mind turned to the catastrophes, hurricanes, droughts, wildfires, floods as, as you said, this is part of the types of events that you can provide insurance against but you see parametric insurance as broader than that, right?

Sid Jha (08m 59s):

Much broader, so one of the issues when we started was that there was a very limited scope for parametric in the minds of reinsurers and insurance industry when we start, right. So what would happen is that it was mostly considered a nice, almost like a corporate social responsibility product for some farmers in emerging markets and it was a very limiting use case in my mind, an important one, but actually a very limiting one where parametrics start to really shine actually are those non localized damages at times or regional damages. So what I mean by that is insurance is very focused on the local, right. So something happens to my home, a hurricane goes near my house, my roof is damaged, I call my insurance company and I need to get a payment to replace the roof. Insurance can handle that though, even that's becoming difficult, right.

Sid Jha (09m 59s):

Taking longer and longer and all sorts of social costs came in where insurance is unable to even muster a product is, and I will give you some examples here to make it a lot more concrete. Let's say you are importing semiconductor chips from Taiwan and you're in Europe and there's a drought in Taiwan and they can't produce enough. You are counting on those, what's the loss there and how do you ensure against that? How do you protect yourself. You could be in the auto supply chain auto parts supply chain business, and you're in the US and you need to import and Thailand's a big producer of these things and there was a big flood and now you can't get auto parts. Now there's a cascading effect, not just on you, but all your customers and I'm citing real examples here. These we haven't yet done, but these are problems.

Sid Jha (10m 47s):

We are kind of marching towards this whole path of clients starting to understand these bigger global risks. Climate is not a local risk, it's a global risk. But the stuff we do is, for example, let's say you are in you know, you're providing electricity or heating in Europe, and you import DFI natural gas, what price you pay for that unless you're on a fixed contract, which increasingly you're not, what price you pay for that depends on how cold it was in Asia, right? How much did they need and how much will they pull. So this kind of mindset of supply chain is not, re insurance is not designed for this. Like, you can't send a, you won't be sending an adjuster from to fly from London to Tokyo to figure out what the temperature there is. It doesn't make any sense or to figure out how much water is in Taiwanese reservoirs for DSMC to make chips, right?

Sid Jha (11m 38s):

So it does, it's not a very it doesn't make sense from a logical standpoint. Another arena where parametrics has a huge use case is the financial arena. So one is, and this is a very large and growing business for us, is that insurers themselves are struggling with climate risk and they need reinsurance. Most insurers heavily rely on reinsurance. They don't retain most of that risk. The risk that they can find reinsurance relatively easily for are remote risks, right you have one in 25, 1 in 50 year, like the Hurricane Andrew risk going through something like that where they have a lot of difficulties, more frequent risks, the one in three year storms, the tropical storms that might come one in five years because for the insurance industry, the frequency of the claim matters a lot. Every claim could mushroom all sorts of other costs, including litigation, including replacement cost inflation, lots of these issues.

Sid Jha (12m 42s):

That's not a great risk for the reinsurers, but if you can make it parametric, you can get really close to indemnity. You can use hurricane tracks, you can use very granular wind speeds and all these other things to create a product. Now you pay just based on data, you're not paying on indemnity, but you are transferring a large portion of the risk from the insurer to the insurer, or actually more likely a non-insurer, an alternative capital provider, maybe from Wall Street, maybe a pension fund, whoever it is who's looking for uncorrelated risk. So now you have increased the pool of capital that can enter into these markets and you are able to transfer risk that were not transferable and the consequence of not being able to transfer that risk is that you have insurers leaving large parts of the country okay. There is too many tropical storms in this area near the coast.

Sid Jha (13m 34s):

I can't write insurance here. There is too many wildfires. I'm abandoning this part of California. This is happening all across the board and when they are there, the cost is just rising astronomically. You know, I was just talking to somebody yesterday who were like, okay,

I have you know, it was in a beach town and they have a summer house there and it's like every year the home insurance cost just keeps going up without any losses. It's almost as, and this was a quote from them that this is almost as if they want me to not buy the coverage and it's true, it's kind of like the passive aggressive way of like reducing your footprint, but it's happening all over the country and, and in some parts of the country, your home insurance costs now exceeds the mortgage. Crazy yeah.

David Greely (14m 16s):

I think most people have really experienced that.

Sid Jha (14m 18s):

Yeah and so parametrics offer a very interesting solution where the insurers can now tap into more capital pools to transfer out risk. If the insurer can reduce their risk, they can stay in an area on the other side, a traditional policy could over time benefit from bolt-on parametrics for the consumer. You know, here's a bolt-on policy that pays you if a cat three or above hurricane gets within 10 miles of your house, okay, does it mean that there might be basis risk there But it's a way for them to get paid quickly so they can start recovering because most likely there will be some losses if something like that happens, right, creating simple policies for the consumer. So you have a lot of options to grow there. The final thing I will say about the scope of parametrics, which is very much not appreciated fully, is that the banking system and the sort of asset manager system, I consider them similar financial systems, are going to start struggling if not buckling under climate risk.

Sid Jha (15m 16s):

The central banks are already stress testing banks. That's the first step. Imagine if you are a regional bank and you get stress tested by the Fed, and now you have to go raise equity capital because you have a million farm loans that are exposed to drought risk. How do you transfer that risk out, you can't purchase drought insurers for each contract and have any hope of getting paid quickly after a drought because who's gonna adjust, you know, who's gonna do traditional adjustment, who's going to do subjective loss assessment or such a large portfolio while parametrics offers a great way to have, you know, rainfall based or drought based triggers on your bank loan portfolio and find capital market access to transfer out that risk. This is the part of parametrics that I, I don't see much discussion of yet because, you know, we have been working at it for a little while. We are starting to see that it's, it takes time to get the clients on board, but the scope of parametrics is in the trillions now. When we started in 2018, I was like, well, can you even get \$5,000 of premium done and it was a very different conversation back then, but I think things are really changing on that front.

David Greely (16m 24s):

Well, and I find these various use cases really thought provoking. I wanted to ask you a little bit more about your customers, but I'm just thinking through some of the things you have said. I found it really interesting that some of the early use cases in customers were kind of in more developing countries, agricultural areas where I imagine in traditional insurance coverage just wasn't built out. So like a way to get it to where you didn't have the, the insurance supply chains and coverage that others would have and then the reinsurance of traditional insurance industries sounds almost similar, like the reinsurance that banks could be doing with credit portfolios. I'm curious, are there, are these the main customers so far or are there other customers and are they being drawn from certain industries or geographic regions? Where are you getting them most?

Sid Jha (17m 15s):

Yeah, so yeah, great question. So we have, the bulk of our business is still US and Europe. Though the vertical determines where we have gotten more traction initially. So our three big arenas are agriculture, energy, and soils and agriculture is bigger in the US energy's a little bit bigger in the u in Europe, but it's a little getting more balanced, us catching up and we have a rapidly growing East Asia, Australia type presence in energy as well.

David Greely (17m 44s):

And what is the energy in Europe, what's the use case there?

Sid Jha (17m 48s):

So the use cases are primarily around a couple things. One is for a utility the biggest determinant of demand is temperature, right load, if you will. So what that means is, and we have seen horror stories of this. So what happens is in the summer, let's say temperature spike, and suddenly, you know, everyone's running their air conditioning. Now the pull on the grid is massive and now your utility has to meet a lot of these obligations but their power production is relatively inelastic, right, so you, it's a classic problem, right. You have elastic demand and inelastic supply. It's not like the utility can suddenly build a new power plant or get more coal or natural gas in or

whatever to produce it or make the sunshine anymore to get more solar. So you have inelastic supply, elastic demand that creates situation where now they have to procure power in the spot market in the li call it live market.

Sid Jha (18m 53s):

If you're not in college and you know, how do they do that? Well, they have to go and buy it. Well, the problem is that when they are going to buy it, everyone else wants the same power, right. So when you have power is one of the most volatile markets in the world, by far. I would say it's even more volatile than what even crypto markets and things like that, that people consider so volatile. Our markets are crazy, right. So you can have power prices that might normally be \$30 and they're at 3000, and now you are having to buy power at this astronomical price to meet your contract obligations and not blackout customers which is its old set of very problematic disasters, right. So you have a extreme dependence on temperature in winter, it's on the other side, spikes in coal. When Texas had that freeze event, you had multiple utilities either near or actually going bankrupt because power prices were from 30 to like 9,000.

Sid Jha (19m 54s):

So power markets are increasingly dependent on temperature. They're also, you know, increasingly affected by volatility in wind and solar and that volatility actually affects everybody from the local asset owner in renewables all the way to the grid operators, right. So if West Texas suddenly gets a ton of wind, our prices dip negative, and then suddenly the wind stops blowing and the power price can climb back up. Also, this is can all happen in a matter you know, minutes or hours. Similarly, we do you know wind speed stuff in Germany, in UK, in different areas at different scales. That's the other flexibility of parametric. I can write you coverage for a single wind farm, or I can write you coverage for an entire state where every wind farm production is scaled up to the state. So I, there's a lot of flexibility and so what that flexibility does is you have different clients who will kind of work with you.

Sid Jha (20m 53s):

So in energy it's been temperature and but then we work a lot with, increasingly with the renewables, where we see a lot of growth opportunity. Basically have two major industries, wind and solar that are growing rapidly and their outputs are very dependent on weather. It's for us a great market and you know, things like renewable energy credits, production tax credits, the production of these, how many renewable energy credits you produce is actually dependent on how steady the wind was. So if you have, and, and this happens a lot, you will have a month where wind was really, really low and it throws off all your revenue thing and that causes cascading effects because now it raises your cost, cost of capital as well. You were counting on that revenue, you have borrowings. So there's a whole ecosystem here that we are working on in agriculture. It's been mostly the processors, right.

Sid Jha (21m 45s):

So we are working with and it's all different sizes, but you might have somebody who processes cotton to create yard gin. If there is no cotton in your local area, that's going to be a serious problem for you. But you're not gonna get the federal crop insurance subsidy when that crop fails, right. That's for the farmer. So you are left in the large, so you have extreme supply chain risk to crop output. Similarly, if you are a seed fertilizer producer or you are on the processing warehousing, basically you have all these supply chains that depend on, hey, did the crop actually happen, right. So what we found was, and going back to the emerging markets agriculture case, even from a personal standpoint, I feel like that needs to grow significantly but it's a huge challenge because who's gonna pay for it, It's a tough thing. How do you figure out who is going to pay. Because the premiums that a farmer can afford versus the premiums that are fair economically unfortunately still have a large gap in a lot of emerging markets. We will get there and we have some small programs through blending it with lending and some other aspects, like I lend you some money and part of the, the loan interest rate is a premium, but it's tough to scale these programs.

David Greely (22m 57s):

And I wanted to ask you a little bit about how do people get a sense of, you know, what's the fair value of the insurance versus, you know, what's the premium being priced in for the risk and I am curious, you know, how do you and your customers come to understand and price the risks posed by climate you know, not to get too quanty, but how do you quantify the range or likelihood of possible outcomes, particularly in a world where the climate's changing and historical statistics might not be representative of outcomes in the future?

Sid Jha (23m 29s):

Always a challenge and this is where having background in trading helps because that's the case in almost every market. It's funny, I get asked like, oh my you know, climate's getting more volatile. How do you handle that and it's like, well I also traded oil futures during the Arab Spring you know, I traded wheat when, you know, southern Russia was on fire basically and it was a mega drought and I mean,

the list goes on and on. So once you get used to markets, you basically have a hurricane all the time. Somewhere something is going on and I used to trade across the whole complex. So somewhere something was going wrong almost all the time and past patterns I would argue that when you write risk on climate, yes, past patterns don't lend themselves to the future, but that problem is actually significantly worse in financial markets.

Sid Jha (24m 27s):

So you start to learn to build the quantitative tools, how to understand what the uncertainty bands are and this is another kind of misconception that comes up is like, I am not trying to predict the weather. That's a fool's errand, right. We are riding risk like three months out, six months out. Like, okay, you want coverage for next winter being warm. I don't have any sense for whether it will be warm or cold beyond maybe one or 2% Chads. How do I address that. Well, yes, I could do some understanding of the trends and what might be happening and a big part of the work is putting the uncertainty band around it, right. The distribution, so okay, maybe my distribution says that it's a slightly higher chance that 50% are being warmer. We have been seeing that in recent years. Of course it doesn't take a rocket scientist, but we can get a lot more precise there through the use of climate science.

Sid Jha (25m 22s):

And you know, actually a lot of AI now AI is great for that accident because physics breaks down, but AI is great at incorporating humongous amounts of information and if you can infuse it with an understanding of the system, right it goes wrong when it's just garbage in, garbage out because you just threw a bunch of numbers at it and thought you'll get results. So having understanding of climate science helps for it to infer patterns, but you might infer a pattern that, okay, it's probably a 51% chance now. That's almost a step one. The bigger issue here, or the bigger defense you have is diversification. So I know that I am going to be wrong at least 49% of the time in my example here. In fact, I'm probably gonna be wrong, possibly more than that just because it's climate is so random. So what I could do is make sure that being wrong doesn't take me down.

Sid Jha (26m 16s):

So limit concentration, raise prices dynamically and that's a big part of our automated what we call our AI underwriter is how do we raise prices if it gets concentrated. If, you know, 49 people ask me for drought coverage in Texas, what do we charge the 50th guy you can do it qualitatively, but a lot more precise, you know, quantitatively by understanding how it's affecting not just the average of your distribution, but all the pieces of your distribution, thinking of a distribution in, in its entirety and you know, that's sort of how we try to manage climate risk is really just sourcing different types and they are all very varied and they all don't go in the direction of climate change, right. Going back to my earlier example when it gets super cold, utilities have demand stress that's not in the direction of climate change, but it is a big loss.

Sid Jha (27m 13s):

They will suffer if it is a very cold event. So maybe that's a type of risk that I like because I can also source warm risk pretty easily. So trying to balance distribution and thinking of distribution as this very fluid dynamic concept than how it is thought of in a more standardized insurance format, which is, okay, here is the brokers I talk to, here is my channel, and that's the distribution I am getting. For us, distribution is more like, where's the next source of diversification is it farmers in Poland? Is it solar panel in Brazil? Where am I looking for the new type of climate risk to source and it's great if they become regular clients, but we want these regular sources of diversified climate exposure.

David Greely (28m 02s):

Yeah and I wanted to ask you, is diversification is so important to deal with that risk and there's ways you can source that and then what remains, as you said, the risk needs to be transferred and I was curious, like there's a good understanding I think now of why customers would want to be able to lay the risk off. Who are you finding who has an appetite to take the other side of the trade to kind of provide that insurance Yeah. That your customers are looking for?

Sid Jha (28m 29s):

Yeah, so this was the other part of the puzzle, right. What has helped us scale. When we were starting out, there was a number of other startups who were attempting similar things in different ways and what a lot of them were doing, we are following that insurance model. So we have, we are going to be the best in hurricanes, we are going to gonna be the best in earthquakes, whatever, it's one product and we are going to have a reinsurer backing us. One of the big ones, most likely and when I looked at the way, and we actually used that in our first year, it was like we had a little agricultural platform and we would shop it around to the best price we could get for

our customers and so what we actually found was that, well, the customer expresses interest. One deal is too small for these guys, so we would have to wait till we aggregated.

Sid Jha (29m 20s):

And so then we had to almost start to understand how these guys are pricing, what margins are they baking in. We can all agree on historical numbers, but you know, their margins buried a lot more. What we found was the pricing was erratic, very difficult to rely on and sometimes the capacity would just vanish because we had a loss in this completely unrelated division but now we are like pulling back on rainfall risk because I don't know, it's a black ball. I had no idea. So we couldn't, we knew, we realized we couldn't build a business like that and the key was, and you know, it all now sounds like, well this was also like all known day one, I had no idea what I was doing for a large part of the big Eagle sales horrible, right, so it was like these ideas took time to call us and it was very important to have the very experienced team.

Sid Jha (30m 11s):

I have around much greater experience than myself but the key insight that really cracked open, the thing was that parametric products are great for the consumer, but they're actually fantastic for capital alternative capital reinsurers. We would take time to convince these guys are very slow. They, they, they, they take their time and they, they have reasons for that. There is also very many regulatory issues and many other things. Wall Street capital, alternative capital, I would just call it alternative, just it's a plethora of different kinds of funds and others who participate in financial markets. These guys are much more nimble. They are used to moving fast when they see the opportunity but you have to frame the opportunity in a different way than you can with the mature and so being able to speak that language was important but what was equally important was the fact that parametric products settle very similarly to products they are familiar with, right. You are used to trading corn futures, you are used to trading equities. There's a price it settles on that, you know, your profit and loss at a certain point very quickly.

David Greely (31m 18s):

Yeah. In certain respects, parametric insurance sounds similar to weather derivatives in Wall Street speak, I guess.

Sid Jha (31m 26s):

We are risk equivalent, right. So if I tell you that I will pay you a \$100,000 for every degree, that the average temperature in July is less than less than average, that could be a weather derivative or it could be an insurance contract. There are legal and tax and many other reasons why you would have one or the other. It's why we do all these different forms, derivatives, insurance, reinsurance. You can take all those risks, right. What's reinsurance. It's just doing the same thing, but on a larger portfolio because an insurer has collected a bunch of these risks, but the risk might be the same if you look at the underlying risk, it's equivalent of whether derivative or parametric insurance, whatever. So if you are an entity that's used to transacting in features and options markets, all this resembles that almost exactly. I just have changed the underlying from yeah, corn price to rainfall or temperature, right?

Sid Jha (32m 19s):

So as long as you can get comfortable with the dataset and how it might behave, you have a bridge now to a whole world of capital that others who have a more insurance background may not have access to. Being an outsider was helpful here because to say I knew nothing of insurance was an understatement when I started, I had literally had no, never worked in insurance, I had no idea what insurance beyond the, the, the Investopedia o definition was, you know, what, how that industry worked at all. So when you can understand that, then you start to see, okay, this is the bridge, but then what's the hook. Why this versus the markets they doing the other side of what you realize being at hedge funds and trade houses and all the other things is it's so hard to find uncorrelated markets, so hard to find uncorrelated ideas.

Sid Jha (33m 06s):

Lately you look at the top few equity hedge funds, the large ones, some of most of them are the same 10 stocks that we all know. If you just bought Apple or Nvidia and you run an equity hedge fund, are you really adding value? I mean, I could just buy those directly or you might have a little extra value based on your research and all this stuff, but I am also paying Exor fees to access these markets. You know I'm paying 2% of management fee, I'm paying 20% of profits, or I can just go and Schwab and buy it for almost free. So the question is how do you add value when you are a trading entity or when you're a fund managing entity. Well, you got to find new markets that are uncorrelated. You go to find new avenues to source alpha. And this is true alpha because you know, the temperature in London or rainfall in West Texas does not care whether, you know, the Fed is hiking or lowering interest rates or whether there's geopolitical trouble going on in Eastern Europe.

Sid Jha (34m 07s):

It's just a very different asset class. And especially because we were focusing on seasonal transactions. You're not locking up money for years and years, five months, one month. Sometimes you just know what your profit is and you move on, you could cycle that capital again. So it became a product that is highly suitable for alternative capital. Not all types are, you know, the more remote your risk gets, the more tail it should get. It's less suitable because you know, then a lot of these guys don't have credit rating. They have to put a full collateral, your risk is a hundred dollars. You got to put up the a hundred dollars fully and lock it up because that's how the other side will trust you. Well then if you're making \$2 in premium, that's terrible because you could have just put that in a treasury bond and gotten more with taking no risk. So there's nuances to this, it's not as straightforward, but there are parts of this parametric insurance world that were very, very underserved undercapitalized, and opening that door to Wall Street was very, very important.

David Greely (35m 11s):

Yeah, it, so like very important bridge. I want to come back to the piece you brought up about data, but I wanted to switch gears for a second because I wanted to ask you about another use case. You know, we have been talking a lot about customers looking to protect themselves from weather and climate risk, and then of course you have got lots of people out there working with carbon reduction or removal projects to try to lessen the climate risk that, that we'll face in the future and I'm curious, you know, what sort of uses do you see from carbon reduction in removal projects for this type of insurance. I know you mentioned potential use in solar or wind installations. I imagine there's uses for, you know, if you're trying to preserve forest or grow forest, you know, prevention from wildfires. But I'm curious, how much appetite are you seeing from that industry?

Sid Jha (36m 04s):

It's a focus for us. We have built a lot of analytics around it and as you mentioned, the two arenas where I especially see use cases in renewable energy credits where their production itself is dependent on these variables. So you could imagine packaging a wreck with this insurance and now the value has gone up because the buyer now gets a better line of sight into how many wrecks they can procure, right. So there is a benefit there. Forestry is very important. We have a lot of internal analytics on understanding deforestation and basically by a mix of satellite and AI methods getting to see very granular levels of deforestation. Is that ready for prime time on an insurance level. I think it's getting closer. I think the clients are starting to realize there's a need for it. You've had obviously major problems like micro, I think one of Microsoft's force burnt down and there's a lot of risk there on the carbon credit side if that happens on these nature-based assets.

Sid Jha (37m 05s):

So, and because a lot of these nature-based assets are in very remote areas, could be the Amazon, could be West Africa, wherever you have actually a lot of scope for parametric to grow. I think what how we approach all these problems is before we even get to an insurance product, we have to ask how good's the data, right and how good is our forecasting model. So now we are able to build 20 plus years of history on a forest based on a stitching of different satellite info and we can measure like biomass, which is essentially the weight of forest, right and you could imagine a parametric product that is struck on that we have the tools ready for it. Now it's a matter of lining up buyers and capacity and the buyer side is where I think education is still is being worked on but it's been interesting to see major insurance brokers be very interested in this and we're been having discussions on this one.

David Greely (38m 02s):

Yeah, it seems like this is such a highly customizable type of insurance product and one of the limiting factors really seems to be the data. I was just curious, how do you go about getting the amount and the right type of data that you need. Is that a big challenge?

Sid Jha (38m 19s):

It is because there's no one set of data, right. So it's different satellites covering different parts of the earth. There is also different types of and I am just going to go into the forestry for a second to show you the level of complexity that comes about. So you have optical bands which are basically kind of like, you know, your iPhone camera, but in space there is different resolutions that might cover different parts of the planet and in history, you have radar satellites that can pierce through clouds and they basically shoot a microwave beam and see how the bounce back looks like, which can tell you, okay, what's the state of the forest in a different way. It's especially necessary if you are in the tropics where cloud cover is a major problem and it's not as easy on the optical side within radar, actually there is many kinds of bands there are because the radio frequency bands, depending on their wavelength, they're good for different applications.

Sid Jha (39m 16s):

So certain bands are good to understand leaf canopy, others can pierce through leaf canopy and understand the lower surfaces of a forest. So now you have hundreds of different bands you're considering because even in the optical it's not that simple. It's, you can break that down into anywhere from infrared almost up to ultraviolet, right? Different colorations, like this goes on and on. All these satellites have different paths. So your part of the forest may have a pass through going from radar at one point, but then optical and a different point at all has to be merged and blended and so luckily there is people far more talented at this than I would ever be to kind of handle this aspect and then once you have all of this nicely organized, that's when almost the real work starts, which is, okay, how do we build some sort of AI model to understand this, understand what's going on in the forest based on realized data that we might have from different aspects, that it's, it's a challenging problem and to get the thing right and you may not get it right for every part, every type of forest, you probably won't, you might be getting it very accurate for a certain type of forest, but other types of forests might be really difficult. So there, there's a lot of these challenges, but once you can kind of sift through them and say, okay, I can at least start to build a nice history of forest health, now you can begin to even think about how you underwrite a product like this and how you determine payouts.

David Greely (40m 46s):

Well first of all, I want to thank you for coming in today and sharing everything you are doing in parametric insurance and helping us understand how these markets work a little bit better. Before I let you go though, you know, I want to come back to something you mentioned about new markets and scaling and you know, the need to kind of have client education being, being a piece of that and you began your career, you know, as we noted earlier in interest rate markets by some of the most liquid markets in the world and over time you have been progressively moving to newer and less liquid markets and I am curious as someone who has spent their career managing risk and thinking about risk, maybe you could share what have you learned about managing risk in these newer and less liquid markets that you think others need to better understand and to understand better if we're gonna make these markets work?

Sid Jha (41m 38s):

Great question liquid markets teach you a lot about being precise, detailed, thorough in a way that I think, I think there is a certain comfort in liquid markets that, okay, I will if I was wrong at least I can get out you know, doesn't mean you want to be wrong, doesn't mean you want to be imprecise and there is a richness to those markets because you have a lot of data in liquid markets you often don't have any real transaction data. You only have ancillary data sets that you can use to build a picture. So you get very good at taking sparse amounts of information and kind of building a picture of what price might do or what, where this market might go, which in a liquid markets are very different thing you have actually there. It's noise filtering. That's a big part of the work.

Sid Jha (42m 27s):

Like, I mean, when your interest rates, I mean you are getting bombarded by research and Bloomberg and CNBC and all day people are expressing their opinions about it. Nobody's expressing an opinion about, you know, hurricane reinsurance, lower loss cover in general, right. So it's a very different thing here. You're scrounging for information and building a picture of it. So it's, that adjustment is very important is how to deal with sparse information and, and then really focusing on, the best you can do is here's my band of outcomes and here is their probabilities. You cannot get much better than that. You're just going to have to work with that and so the corollary to this is that in an illiquid market, you really, really need diversification to, you know, be able to handle the ups and downs that will come from the fact that you are stuck with this position.

Sid Jha (43m 18s):

You are not getting out till bridge, right. You, you just, you wrote this contract, it's with you. So make sure that that contract is not the only thing you've written. Make sure you find something unrelated or opposing or whatever you can. So origination in an illiquid market, origination is game. Do you have a moat in distribution. Are you seeing stuff that others are not seeing. Can you build new lines of distribution and this is where insurance is very challenging because insurance industry is very old school, very well laid out paths of distribution and so going around that is very, very tough. But that's what's needed to grow these markets.

David Greely (43m 58s):

Well thank you for that and before you go, I just wanted to say congratulations. I understand you just completed another financing round at Arbol and I was wondering if you just kind of close out our conversation by telling us what you're working on next. What's next for Arbol?

Sid Jha (44m 14s):

For sure. So yeah, we just announced our \$60 million series B round. We have two new investors joined as co-leads Giant VC Adel, who have been great partners for us for a while, and Opera Tech Ventures, which is the other co-lead and we are looking forward to working with these investors on our existing ones to grow bigger in arenas like property insurance arenas where we feel climate risk is really starting to have a major effect on the consumer and bringing all our tools to bear, whether it is advanced analytics, advanced understanding of localized climate effects to parametric reinsurance, and many of these other products we've been working on for a while. Bringing all of that together into the new phase of arable while continuing to obviously organically grow our agriculture and energy businesses where we feel we have just scratched the surface and there is a lot more to go there.

David Greely (45m 16s): Thanks again to Sid Jha, Founder and CEO of Arbol. We hope you enjoyed the episode. We will be back next week with another episode of Carbon Frontiers 2024. We hope you will join us.

Announcer (45m 28s): This episode is presented by Base Carbon, a financier of projects involved primarily in the global voluntary carbon markets. Base Carbon endeavors to be the preferred carbon project partner in providing capital and management resources to carbon removal and abatement projects globally, and where appropriate, will utilize technologies within the evolving environmental industries to enhance efficiencies, commercial credibility, and trading transparency. For more information, visit basecarbon.com. Base Carbon: sensible carbon investing.

Announcer (46m 08s): That concludes this week's episode of SmarterMarkets by Abaxx. For episode transcripts and additional episode information, including research, editorial and video content, please visit smartermarkets.media. Please help more people discover the podcast by leaving a review on Apple Podcast, Spotify, YouTube, or your favorite podcast platform. SmarterMarkets is presented for informational and entertainment purposes only. The information presented on SmarterMarkets should not be construed as investment advice. Always consult a licensed investment professional before making investment decisions. The views and opinions expressed on SmarterMarkets are those of the participants and do not necessarily reflect those of the show's hosts or producer. SmarterMarkets, its hosts, guests, employees, and producer, Abaxx Technologies, shall not be held liable for losses resulting from investment decisions based on informational viewpoints presented on SmarterMarkets. Thank you for listening and please join us again next week.