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Markets in Transition | Episode 6

Sid Jha, Founder & CEO, Arbol

This week on *Markets in Transition*, we welcome Sid Jha, Founder & CEO of Arbol, back into the SmarterMarkets™ studio. David Greely sits down with Sid to discuss some of the ways we can improve our insurance markets to meet the needs created by increasing climate risk as we experience what could be a historically devastating hurricane season in the United States.

Sid Jha (00s):

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Announcer (19s):

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 02s):

Welcome back to Markets in Transition on SmarterMarkets. I'm Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Sid Jha, Founder and CEO of Arbol. We will be discussing some of the ways we can improve our insurance markets to meet the needs created by increasing climate risk as we experience what could be an historically devastating hurricane season in the United States. Hello, Sid. Welcome back to SmarterMarkets.

Sid Jha (01m 29s):

Hey Dave, how's it going?

David Greely (01m 31s):

Glad you could be with us. Really glad you could hop back on to talk with us because we are experiencing what could be an historically devastating hurricane season in the United States. For our listeners, we are recording this episode on Wednesday, October 9th with a category 4 hurricane Milton expected to make landfall on Florida's Gulf Coast later tonight. Even as many are still struggling to recover from the effects of Hurricane Helene and we are becoming all too accustomed to experiencing these once in 100 year storms and floods, and it seems like it's year after year and that tells you that the risks have changed and we are seeing the impact of these higher risks impacting the insurance markets with more and more homeowners experiencing a sharp rise in their insurance premiums and many properties becoming effectively uninsurable and I wanted to ask you, Sid, from your vantage point, how big of an impact are these rising climate related risks putting on conventional insurance providers and markets?

Sid Jha (02m 33s):

Yeah, great question Dave, and certainly very front and center. As the storm approaches Florida for the insurance industry, these storms are starting to have a major effect on the financial viability. It's in many ways, the previous mindsets, the previous way the industry was operating is increasingly not tenable and there is a number of issues here. I think there is a, in some levels there is a change in the climate volatility that's happening, especially as ocean waters have tended to be warmer in most years than in maybe 20, 30 years ago. So that does lead to more stores forming. Very large reason that often doesn't get as much focus in the media, if you will, is the fact that the populations and the property values in these areas have risen exponentially over the past 20 years. If you look at where the storm is heading, you know, Tampa, Sarasota, these places have seen very large population booms.

Sid Jha (03m 37s):

There is a lot more property value at risk here. When you think about, you know, the dollar amount that is exposed now, it's both, yes, more stronger storms happening, storms that intensify quicker and for the insurance industry, the exposure continues to increase because the reinsurance industry, which is the ultimate capital provider, has been stepping back in providing risk capital or raising prices in most years, especially for the layers of more frequent storms. The layers that get hit again and again, we are talking about a mega storm here, but this season you have had Francine out in Louisiana, you have had Helene, and even though on their own they were not as, they didn't hit the damage amounts as much in the Florida region, Helene obviously had a much bigger impact when it comes to the coastal areas. These storms weren't as impactful, but what they do is they continue to chip away at the capital that is provided.

Sid Jha (04m 42s):

You still have losses that curate during the season and so a lot of the reinsurance industry has especially pulled back from these smaller but more frequent storms. The secondary perils as they're called hail tornadoes, it's like a death by a thousand cuts. So when you come out of a season, the damage to the balance sheet, so to speak, is far greater that would appear from even the large storms and so as the reinsurers have pulled back, the insurers are more and more exposed and that's been leading to tremendous stress in the system and leading many of the people back from areas they are previously covered.

David Greely (05m 20s):

And is that the main response that the industry's had right now that pulling back from coverage or raising premiums. Is there anything else they've been able to do in this circumstance?

Sid Jha (05m 31s):

You know, these are regulated markets, so there's not a tremendous amount of leeway when it comes to pricing. You know, some states like Florida, like Louisiana have been more proactive in allow rates to rise because frankly that's been necessary given the risks going up. In a large part, the lever that most of these guys have to pull is to say, okay, we are just going to have to pull back from covering certain areas. You know, I don't think any of these guys make that decision lightly, but at some point the price you can charge is just not match on the risks you are taking and this is especially true in coastal areas where storm surges and many other issues are starting to become bigger problem that in the past.

David Greely (06m 15s):

And you have worked with conventional insurance providers in Florida where you provided them with a parametric reinsurance product tailored to the hurricane risks there. I was curious, could you walk us through what you did there kind of the case study?

Sid Jha (06m 30s):

So you take parametric reinsurance is a very interesting product. It's interesting. We started doing this in 2022. I started working on it in 2021, so it's been a few years now. We have been doing it for three seasons and now we are starting to see a lot more discussion in Monte Carlo reinsurance conference and many other venues, the awareness has risen considerably because of the need. So why does it work. Well, imagine you're a carrier that covers a hundred thousand homes in Florida. So each of those a hundred thousand homes becomes a point. Each of those points has certain attributes like how much that house is worth to long short value and then as a storm tracks through that, the State of Florida, each house will suffer a triggered loss, like a database loss of depending on its distance from the road track. So if you are right on the storm track and it's 150 miles an hour, it's going to have a much larger payout than if your house is, you know, 50 miles from the storm track and wind speed is 40 miles.

Sid Jha (07m 30s):

So based on those attributes which are all measurable, which are all data sets released by national government, now you can calculate the payout, the loss for each house, each point if you will, and then you add those a hundred thousand points up to get a total loss. So essentially it's a portfolio of a single point parametric cap and that's the overall picture. So what happens a few days after a storm has passed through and the track is finalized, you know, your exact payout, that's beneficial for the insurer of course because they will get a payout to replenish their balance sheet soon after a storm. While regular reinsurance will take time, claims have to settle. There is a lot of different procedures there, but it's also, and this is a point that for us was a key part of why we were so bullish and parametric, it acts as a bridge to alternative capital.

Sid Jha (08m 25s):

Reinsurers are used to capital being tied up for years because you know, there is litigation happening and claims and happening and all that and often they have a credit rating so it's not as urgent. They don't have to tie up capital in the same way. A lot of capital sits in non-credit rated turf capital entities could be hedge funds, could be many others. For those guys it doesn't make sense to invest in a security that you know, oh yeah, well, well we might get your capital back two years later. It will depend on how many adjusters there are that can fly over and then maybe some lawsuits will happen. These are not risks that these guys are used to modeling. It is not a quant, easily modifiable quantitative risk. With parametric, you act as a bridge, it looks and resembles like a traditional derivatives or options product, right?

Sid Jha (09m 15s):

You have a data point that comes out and there's a deterministic payout with regards to that. Storm passes through, there's a deterministic payout for the a hundred thousand points that gives comfort to both sides. The transparency is key and for the insurer now, they also now can tap into a pool of capital that's not their traditional reinsurance group. That's not the usual reinsurers they know and deal with every year who have been not covering those risks, who have been pulling back and are saying, sorry, we can't cover this. So now the insurer gets to have a bridge into a new world of capital who is now interested in supply capital.

David Greely (10m 01s):

And have you had one of these products tested in the field by storms at this point?

Sid Jha (10m 06s):

Yeah, so this is our third year of live products. We are I would venture to say we are by far the largest providers of parametric reinsurance for the proper insurance market. We actually paid out after Ian Hurricane Ian, three weeks after the storm to our first client. At the time we had not only repeat business, we have had more carriers joining and I'll say this season we had actually a much greater number of carriers than we even had the capital briers yet and we are working on balancing that out. It's been sort of like we go in phases. You first spend time educating the carriers, takes a little time and all of a sudden now the carriers have come to see, oh this could be very useful. Now we are in parallel educating a lot more of the capital providers and you know, there's a lot of interesting benefits here. The asymmetry is great for the capital providers too. You know, you outperform in a good year, you underperform less in a bad year and it's diversified versus stock markets, bond markets and all the regular financial. So it's both sides of the market are starting to gain steam so to speak but yeah, we have been doing this live in significant signs since 2022.

David Greely (11m 20s):

So you have got the reinsurance product and of course it's becoming more and more difficult for many homeowners to obtain insurance, particularly in coastal communities. Are you seeing coverage gaps there that you think could be addressed in a better way?

Sid Jha (11m 34s):

Yeah, the coverage gaps are growing rapidly because you know, even if insurers are not pulling out of a certain area, they are just excluding more and more damages. In many areas of Florida the insurance costs have skyrocketed sometimes more than your mortgage. In some areas you can't even get the insurance, so you can't even get the bank loan for a mortgage add in where it is available. You are often excluding very obvious things that cause damage, leaving you as a consumer wondering what are you even paying for. So absolutely that there's a huge stress in the system and you know, along to basically help close that gap, we realized that iatric reinsurance for one, if we can help reinsure better, if we can be part of the solution to bring more capital on the reinsurance side that will enable insurers to expand instead of contract. So coastal areas are going through a lot of stress, but partly it's because the reinsurance world is not able to supply enough capital and so by bringing new capital providers, by bringing new innovative financial products, we can help more insurers stay in the game.

David Greely (12m 47s):

And I know the last time we talked you had talked about there being a strong role directly to consumer in a way, in more developing countries where you don't have a robust system of carriers and claims adjusters and everything else. Given the rise in climate risk, are you seeing any appetite for kind of direct to the ultimate consumer use of parametric in places like the US?

Sid Jha (13m 11s):

Yeah, great question. So we have been doing, we have a parametric specialist, so we have been doing parametric for a long time and our primary markets prior to property and insurance was agriculture. Agriculture is the closest to retail or, or farmers, but it's not quite

the same degree of retail. I think that parametric will have a big place in closing the exclusion. So imagine if your roof is excluded from your home insurance vaults, you could get paid based on how close a storm got to your house. The difference I would say is that it will take a little longer in the consumer side because basis risk is a big problem when you start to get extremely granular in a single location. When we talked about parametric reinsurance, while you have a hundred thousand points, you know the difference between the actual loss and what the data triggers estimate as your loss is actually can be reduced.

Sid Jha (14m 05s):

But if you have a house and you are basing it on storm tracks that update every few hours and we can see this tiny changes in the track have a massive impact on wind speed that will affect your house. Now you could end up in a situation where you are dissatisfied with the result you had damage, but the data said while we were kind of not quite there yet, I think that we are headed that way. We still need to do work on our part as an industry, as the insurance companies to make sure that the results suit the customer to, for us this is a big opportunity to expand the tam, the total or so market of the space. One way that I think how this will evolve is, and this is something we are working with internally, is as we get better at utilizing satellite data to understand damage through AI, you could end up with a much better parametric experience where instead of just a weather data, you are actually facing the payment on a satellite assessment of the property and it doesn't have to be, you know, we, I don't think also one needs to be inflexible. It doesn't have to be a hundred percent parametric, it could be 95% parametric and there will be corner cases where you know, there's just like, okay, well we can't tell, or the customer really doesn't think you are being accurate and there could be a human being needed, but it would certainly significantly reduce the cost of delivering a policy with significantly increase coverage and it would significantly increase efficiency and delivery of the closing the coverage gap.

David Greely (15m 47s):

And until the technology gets implemented at that level, it is a really interesting idea that at the reinsurance level you get that diversification over the homes that are being covered so that you got lucky the storm missed your house but hit somebody two blocks away, the payment on the individual houses might not be what people wanted, but for somebody who's insuring all of them at the reinsurance level, it washes.

Sid Jha (16m 12s):

So we see parametric reinsurance as an indirect way to at least help close that gap to help the communities because yes, it's not at the consumer level, but it's allowing your insurer to be a lot more sound financially, which will allow them to continue writing policies and maybe even grow and we are doing that by the way, as we use biometric reinsurance more and more or sold it, we said, well why don't we also hook, get into the carrier space. It will have access to our financial products, but we can also bring efficiencies on many of the other issues and maybe let's do our part in closing that coverage gap. Let's try to expand into an area where everyone else is basically running away from. So you know, we acquired Centauri Insurance in Florida does in Louisiana, Texas, and in seven other states and our goal is to reverse that type.

David Greely (17m 04s):

And you mentioned like with the coverage gaps of wind damage can be different from flood damage and one is covered and the other's not often in the US flood insurance is kind of the purview of government programs. Are you thinking about other types of coverage like flood seems a fair amount about more wind?

Sid Jha (17m 23s):

Wind is part of the standard whole policy? I think there is a big opportunity in flood. We are certainly looking at it closely, but we haven't made any moves yet till we fully understand the risk reward balance here. There's distortions in the market due to the government pricing being inadequate, if you will, on what the risks are. The other interesting thing with flood is that as the spatial risks also vary hugely a small percent of the insured losses, a small percent of the houses eat up most of the insured losses. Like it's a very lopsided market from that standpoint and you know, on the modeling side you need extremely granular understanding of what's happening. I mean we saw this in North Carolina where also can get extremely unusual flood risk happening because of changes in the frequency of storms, changes in frequency of precipitation and many other issues.

David Greely (18m 20s):

And it's fascinating because you need such a, as you said, granular understanding of the terrain of, you know, being able to monitor what actually happened of the dynamics of these storm systems and flooding patterns and as you kind of reach this parametric insurance to these new pools of capital, how many of them are looking to kind of see this as a way to make alpha of a way to kind of

put understanding of how the weather price is being risked in various locations from more of say like a hedge fund perspective, how big an appetite is there from that side?

Sid Jha (18m 58s):

I think it's starting, if we are in the very early innings of it, I think some forward looking kind of more, yeah, more forward looking funds have already started to make moves here. It will become one of the biggest sources of alpha around, especially as traditional financial markets get more and more correlated with each other and alpha is becoming very difficult in traditional markets. Unlike a lot of other parametric shops, a lot of our focus was the capital markets. There is the product aspect of parametric and that is a strong case for parametric. If you just come at it from the product standpoint, well the consumer has a product or it could be a business, could be a regular consumer. Well does that price actually work for the capital provider. If it doesn't, then you don't have an actual product and I think that gets missed a lot when we sort of encounter a lot of the insure tanks, right?

Sid Jha (19m 51s):

Like you are not just selling a product like an app, you are selling a risk product and the risk pricing is very, very sensitive to your assumptions, to your analytics, to the capital providers. Every capital provider also has different risk reward balance they are trying to meet and so, you know, it's not just about getting one or two or three reinsurers on board and we are done. It's about getting a whole spectrum of capital from really risk to really safe to appeal to different kinds of people in the market. Like for example, if you are trying to sell insurance or reinsurance on something like Cat 5 storm mode, that is a rare event, maybe getting a little less rare, but still very rare there's a different kind of capital provider who's comfortable with that risk. Whereas if you go and say, oh, I want to sell risk on a hailstorm or something that happened once every four or five years, once every 10 years, that's a very different kind of risk.

Sid Jha (20m 50s):

It's more frequent payouts. It may not be catastrophic, but it's a very frequent payout. Different capital providers focus on different parts of that frequency versus severity trade off. And if you go to a Wall Street entity and say, hey, you want to sell Cat 5 insurance, you will get like one penny on the dollar and it will be you know, you will make out most of the time. And it's like that's not a risk that anyone in that world likes, but in the reinsure world, there's a different accounting risk mindset and that risk they write day after day and they do in large size. So everybody in the markets capacity is not equal. Capital is not equal. Every capital dollar has a different risk reward, you know, metric that they are trying to target. That's how the, the approach we take big attraction is the fact that these are diversified from financial markets.

Sid Jha (21m 42s):

These are extremely uncorrelated and you know, part of our mission was to also grow the non-Cat side because if you're just doing cat like hurricane risk, well it gets super concentrated in the Gulf. How can we bring temperature, how can we bring rainfall, how can we bring wind speed for wind farms? How can we bring snowfall for ski resorts and all these different kinds of risks and now we finally start to get a real portfolio that's uncorrelated, not just, oh, I'm just gonna, my entire season's gonna depend on what happens in the gulf.

David Greely (22m 15s):

Yeah, and I wanted to dig in a little bit more. You brought up the notion of the bit of the capital constraint from the reinsurance side that these markets are facing and of course an important concept in insurance is fair value with fair value reflecting the insurance premium level at which all the money collected in premiums would just cover all the payouts expected to be made on claims over time and when I hear kind of there is not enough capital, you tend to think, okay, there's probably a risk premium building up in some of these as well where it's probably costing north of fair value. And that's always difficult to assess because fair value's in the eye of the beholder. But was curious, to what extent do you think a lot of these rising premiums reflect kind of a rising fair value of insurance in these vulnerable areas? How much do you think room there is by getting more capital in to make it a little bit more affordable?

Sid Jha (23m 10s):

Fair value has certainly risen, but a bunch of the premium rise is also due to, you know, there were states for example where litigation costs were excessive, still law changes were needed to make, bring those efficiencies where you have inefficiencies in the system that does add to the premium. So some of it is that when it comes to the pure fair value discussion, yes, it's in the eye of the beholder, but it also is a very big function of things like diversification, right. Is the risk you are covering spread out over a large enough area or do you have adverse selection where if you have only entities that are buying it because they are at risk, then obviously that premium will go even higher. More capital does help because like I was saying earlier, it's not a uniform stack either, right. You might be able to actually find enough reinsurance capital most years for the, what is called the super high layer stuff, right?

Sid Jha (24m 08s):

Like the rare storms, the big hurricane and some other zones, the big earthquake or whatever, these kinds of things have a very different pool of capital that does come in year after year. Some years will be more expensive than others, but those are there. It's that you need new types of capital to attach to lower layers and to different kinds of risks and to the new kinds of risks that are building up like secondary perils, hail, tornadoes, severe storms, many of which have become a bigger problem because again, larger populations are living in vulnerable areas, get away from just the coastal side. There's parts of Texas and Oklahoma and all the way up to Nebraska and stuff where populations have gone up significantly and now there's a far more exposure to hail on rooftops than there used to be. The reinsurers might say, well I don't feel like covering this, I don't understand this risk, I don't really like it or whatever, it's too frequent.

Sid Jha (25m 02s):

I don't like frequent payouts because that gets penalized on my credit rating. My credit rating agencies and regulators see risk in a different way than maybe for a Wall Street entity. But there, if you imagine if there's a sufficient price for that and new capital comes in, they would be willing to take that risk because for them it's okay who cares how frequent it is. I am getting positive net return. As you build a larger set of capital on it, then that does bring the risk premium down for a lot of these very difficult risks to manage currently because it is so heterogeneous, the risk pool is not uniform and so where your gaps are growing, if you can bring capital there, that greatly increases your viability rather than saying, okay, we are just a more reinsurance capital route. Yes, that would help, but it's really about getting capital into the layers of risk that you are currently not able to still.

David Greely (26m 01s):

I want to thank you for coming in with us, Sid, and walking us through our list. I still have one more question for you, so don't go anywhere. Clearly our hearts and thoughts go out to people that are in the path of the most recent storm and have been hurt when Hurricane Helene and hopefully the money will be there from the insurance providers to help them rebuild their lives. But I wanted to ask you before you go, as we think about the changes and transitions, that increasing climate risk and increasing exposure to climate risk because where of where we have chosen to build and the value of the properties we place there, when we think about what that places on the insurance industry and the markets, where do you think we are in this process of changing to meet this new reality? Is this just the beginning of the types of changes that we're gonna need to make and how do we need to change our thinking about insurance to adjust to the changing reality that we are in?

Sid Jha (26m 56s):

That's a very interesting and very multidimensional questions. I think there is a number of different issues that we need to face and starting out. Yes you know, for us, we have employees and customers in the path of what is Milton killing prior and you know, we are watching it with extreme suspense and worry, and I hope everybody will be okay there. It's crazy how much exposure there is in terms of just lives and houses and people's livelihoods, and so we have to be cognizant of that when we also formulate policy. A lot of these issues that you brought up right now in the last question, it's difficult for the private sector alone to tackle this for the insurance industry. This is a question a problem that will need government policymaking. It will need, you know, the banking sector, it will need a bunch of these guys to come together and think about how do we do a better job on pricing a fair risk premium?

Sid Jha (27m 59s):

Because a lot of this comes down to like, it's really nice to live in front of the water and it's something that I would love to do, but if it becomes way too costly because of the climate risk, then we have to sort of think about does it make sense now to do that or maybe there is a way for communities to be on the coast and there should be, but maybe we need to incentivize better building materials. We need to incentivize people to upgrade instead of putting all the burden on the consumer to prepare for disaster. There is many other very interesting discussions that I've at the fortunate position to sit in on these where there's a issue of a mismatch between a 30 year mortgage that you get right for a house, but the insurance is renewed only year to year. That's a big mismatch because if you lose that insurance now the bank is also exposed and will may even say, sorry, we can't keep this mortgage going, but now you are completely exposed and you made a decision to buy a home and now the rug is being pulled under.

Sid Jha (29m 02s):

This is where, you know, the government needs to also step in and say maybe there needs to be some degree of risk share across a much wider area. Maybe there needs to be a long-term price on insurance as well as a short-term price. All our prices are annual, and this was a big topic of discussion in at a very interesting event on this, but it's how do you get a better price for insurance over a longer horizon? Because we make our decisions not year to year we make our decisions over 10, 20, 30 year period when we buy a house in the

mortgage market. If you think about it, how was that gap closed? Well, the government has Freddie Mac, Fannie Mae, and started to issue bonds, mortgage bonds, mortgage backed bonds that are 30 years in duration. They are guaranteed by the government. And I'm not saying that a government guarantee is needed here, but there needs to be some confluence of government, banking, insurance and the communities to come together and figure out what's the right way to get the financial support and then the right incentives to either build less in certain areas or build better materials in other areas which may be unaffordable and it needs funding for innovation or better materials that can handle bigger storms.

Sid Jha (30m 19s):

That's probably a very unsatisfactory answer in terms of actual content, but it is unfortunately a very difficult problem for a single industry to tackle.

David Greely (30m 29s):

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 Markets in Transition. We hope you will join us.

Announcer (30m 42s):

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