

SM210 | 12.28.2024**Holiday Special 2024 | Part 1**

Josh Crumb, Founder & CEO, Abaxx Technologies + Abaxx Exchange Metals Team

We close out the year with part one of our two-part Holiday Special. SmarterMarkets™ host David Greely is joined by Josh Crumb, Founder & CEO of Abaxx Technologies, along with colleagues Sacha Lifschitz, David Gornall, and Steve Lowe from the Abaxx Exchange Metals Team.

In part one this week, they begin their discussion on metals markets – battery metals and gold – and how better market infrastructure and financial technology can be brought to bear to make these markets fit for purpose for the commercial needs of today and into the future.

Josh Crumb (00s):

Having a more central logistics hub for the market to be relying on, I think helps with a lot of optimization, right? I mean, the cheapest cost for shipping of a metal is a metal that doesn't have to be shipped, or it doesn't have to be rehandled. So you know, the more information that market participants can have for various swaps or trades and transit to optimize the shipping, that obviously, you know, saves on carbon footprint, it saves on costs, that saves on time. I think having that information in the market beyond just when it hits a warehouse, but when it's actually in transit at various forms, I think it's gonna be very good information for the market.

Announcer (36s):

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?

This episode is brought to you in part by Abaxx Exchange, where trading in centrally cleared, physically deliverable LNG and Carbon futures contracts is now underway, ready for smarter markets.

David Greely (01m 19s):

Welcome to our SmarterMarkets Holiday Special 2024. I am Dave Greely, Chief Economist at Abaxx Technologies. Our guest today is Josh Crumb, founder and CEO of Abaxx Technologies. He is joined by our colleagues, Sacha Lifschitz, David Gornall, and Steve Lowe. This year we are talking metals markets, battery metals and gold. We will be discussing our smarter markets vision for the metals markets and how better market infrastructure and financial technology can be brought to bear to make these markets fit for purpose for today's commercial needs and tomorrow's. Hello Josh. Welcome back to SmarterMarkets.

Josh Crumb (01m 58s):

Hi Dave.

David Greely (01m 58s):

It's our traditional holiday sit down with you here on the podcast to discuss where we have been and where we are going in this journey to build smarter markets and this year we are talking about the markets where your career began, the metals markets and we're joined by three of our Abaxx colleagues who have, between them have spent many decades, can I say, near a century trading and working in base and precious metals markets and that of course is Sacha Lifschitz, David Gornall, and Steve Lowe. and as I said, Josh, you grew up career-wise in the metals markets and you experienced firsthand many of the real commercial problems and challenges created by not having access to the right market infrastructure by not having access to the right tools and not having the right technology. So I thought maybe you could start us off today telling us a bit about that formative experience you had in the metals markets and how it shaped your vision for Abaxx.

Josh Crumb (02m 58s):

Yeah, thanks Dave. Look, this is a very exciting time because you know, I know a lot of market participants and investors know Abaxx for liquefied natural gas and the things that we are looking to do in the global energy market and the global energy transition with environmental markets. But the first quarter of next year we are ready to start to roll out our three first metals markets and these all

three, were sort of penciled into the original Abaxx sort of vision back in 2018, 2019. You know, that being lithium nickel and gold. So we can obviously get into all of those products more with experts, you know, from trading and financial markets, you know, far beyond my own. I am happy to talk through, I am a mining engineer by background. I think in probably some of the previous episodes we talked about a little bit where I first really got to learn about market infrastructure.

Josh Crumb (03m 48s):

It really started with a big hedging program when I was part of a, a mining company in North America and we coming out of the financial crisis, we were required by our banking partners to put on a fairly substantial hedging program and what's the term in the industry? I think we got our face ripped off I think how they say it and you know, and so it obviously just being that that engineer that's always asking why you kind of have to deconstruct the whole thing to understand what led us to that point in time, what is it about the market structure, financial intermediaries, what kind of led us to that point? So I think that was always a vision and that was, it was really catalyzed me to really understand the futures and derivatives markets and risk management at a very deep level when you have, you know, that type of an experience.

Josh Crumb (04m 35s):

And, and I think that's in some ways where it all started coming out of kind of the last commodity cycle when I was working with, you know, you and Jeff Currie and the team at in Goldman after I left Goldman kind of after that cycle, it was thinking about how do we apply financial technology? How can we apply some of the things that are happening in all of this software innovation to maybe, you know, maybe make these markets a little better. So yeah, I mean it all kind of started with metals and, and now again, even though if you think about energy markets in a derivative and future standpoint, you know, the NYMEX purchased the COMEX and in many ways became a subsidiary of the energy markets. And the energy markets I think are sort of orders of magnitude the size and scale. But if you look at the world we're headed into, I think Jeff Curry calls it the, you know, four Ds with decarbonization, the disaggregated supply chains, data centers.

Josh Crumb (05m 26s):

I know, I think I am throwing them off. I think the, I have counted like 60s, you know, you have got de-dollarization, there is many, and I think I am forgetting two of Jeff's, but metals really play a key role in all of these. We think about the growth of a metals market, it needs risk management, it needs a forward long-term view. It's not quicker easy to build anything in the metals market from an infrastructure perspective, whether we're talking about physical infrastructure, we are talking about market infrastructure, these things take a long time. So we have to get started. That's an overview and happy to have you take it forward.

David Greely (05m 59s):

Yeah, and as you mentioned, you know, heading into 2025 you will be rolling out nickel, lithium and gold futures markets at Abaxx Exchange and that those have been on your list for a long time now, kind of going back to the beginning of your work on Abaxx and I wanted to ask you why those in particular, why were those on your list?

Josh Crumb (06m 17s):

I think it's just identifying where there is a lack of market infrastructure or a market of infrastructure that can change as the world, the world is changing. When I think about nickel and obviously, you know, Sacha and I can talk a lot about this. I mean Sacha and I have been talking about some of the problems in the nickel market for well over a decade maybe 15 years when we first met. So there has always been some challenges in the nickel market compared to say other LME markets and the way they are structured. And you have got multiple sort of supply chains relying on a nickel unit but consuming different nickel products. So nickel was always one that, that we thought there could be some more work. Lithium was key just because if you look at the dramatic growth, the requirements of the lithium industry and the fact that there really was no, and still and I would argue outside of some of the price assessments, there's really isn't a lot of market infrastructure for standardizing and risk management and lithium.

Josh Crumb (07m 10s):

So that, that was obviously a key one to go alongside. Nickel and battery metals, you know, gold, it's really, I think just the way that the market and the macro market's moving, the consumption centers are moving and some of the problems that we already had a split market between, you know, spot over the counter markets in LBMA and futures markets on COMEX and then of course, you know, some of the, the capital control issues and financial control issues in major markets like India and China. So gold has always had despite being a very, very old commodity you would think market infrastructure's pretty well developed, but I feel like there's always new cases to expand on the gold market and upgrade the gold market. That was kind of the reason for those three and of course the one other

one that Robert Friedland will always remind us of is green premiums and, and copper and other base metals that are important to the energy transition. So don't worry, Robert, those are still on our list and I think we will make some substantial progress next year as well in smart commodities and what we want to do in the other base metals. But really it was those three for those kind of three reasons that we were focused on getting up and running with our metals business.

David Greely (08m 16s):

Let's bring Sacha into the conversation. You mentioned that you have known each other for close to 15 years at this point. Maybe I will ask Sacha his perspective. Sacha, how did you and Josh first get to know each other

Sacha Lifschitz (08m 28s):

Business wise there is actually a nice story business wise and equally nice story privately. Businesswise, we got to know each other through my times when I was working Glencore in the early to mid-2000s when we were negotiating off take agreements for copper mine in Spain and we eventually negotiated the off take agreement. That's how we met and the first personal encounter then really was shortly I think after we have signed that contract when we met that one of the nice LME launches with a bit of boos and good food in one of the obvious locations in Mayfair London and we really hit it off I think if I may say from the very first moment and moment always also stayed in contact afterwards. Eventually, you know, the off take rolled out and we lost contact on the back of the business. Josh left also to pursue other careers at Goldman and wherever and then eventually we, we just never lost contact and LinkedIn and the likes make it very easy, you know, to just follow up and that's basically how we met. And then like two and a half years ago when Josh called me and said, listen, I could need some help on nickel and explain what we do, it was a an obvious move for me joining this tremendous team.

David Greely (09m 48s):

As you said Sacha though you spent a large part of your career trading nickel at Glencore and now you have really been instrumental in launching a new suite of battery metals contracts including nickel sulfate and lithium that will be rolling out in the new year. And I wanted to ask you, you know, when you take a step back, how have these metals markets been growing and evolving and changing over the course of your career?

Sacha Lifschitz (10m 11s):

Look, I mean these markets, obviously everybody's who's listening to this podcast regularly and is involved in our metals and commodity markets, everybody knows how tremendously they have changed. I started my career at the beginning of 1999, so 25 years in the industry started as a small nickel trader. I don a small nickel desk at Glencore at that time when it was really all about having small off take, a bit of trading, canceling a couple of warrants, and then it quickly in the 2000s, obviously with the growth of China and this in appetite for commodities couldn't be big enough. So you grow into big own production, you start doing the big arbitrage games, intermediate flows eventually became to play a very important role specifically in the nickel market, which wasn't the case before because it's predominantly, you know, producer, consumer, business and quite integrated to the business as such.

Sacha Lifschitz (11m 08s):

At that time it really was the role of the traders, I would say playing this buyer and sell of loss resort and guaranteeing financial flows to the producers, you know, through off take agreements and this really now this role of buyer and cell of loss resort, that's something we try to create now with our new products of nickel sulfate and lithium carbonate and I am sure we are going to touch on this a bit more in detail later on, but just to stay in in this whole context and this narrative, you know, the taking advantage of information, you know, this was obviously one of the big games of the traders and that again in alas disappeared now with, with the artificial intelligence and general flow of information. Now everybody has the information at the same time. So tremendous change on the nickel sag. I think when we talk about lithium, that's something obviously we have all witnessed a bit of a later stage.

Sacha Lifschitz (12m 02s):

This really started becoming, you know, a household made with the evolvement of the battery materials and what I would see and witness here is, and that's also playing into our hands as what we are creating as Abaxx, is that it used to become obviously a producer consumer business let's say maybe 5, 10 years ago and now slowly gets into the stage where it's maturing, where traders get involved, where exchanges get exchanges like Abaxx start creating contracts that haven't existed so far. This whole role of buyer and seller of last result with the physical deliverable aspect of the product, the standardization of the products where we think actually even on lithium carbonate, we can maybe play an active role in doing that by creating our exchange contracts. So yeah, I could go on forever. Let me

stop here. It's been amazing how these markets change and evolve and it's equally satisfactory for me to play a part in this by working with this tremendous team at Abaxx.

David Greely (13m 07s):

Yeah and I wanted to have you go a little more sticking with Lithium. I think there's, one of the things that always strikes me is the difference of trading or operating in an existing market versus trying to build a new market and that transformation of getting it off the ground and I am curious like for Lithium, you know, as Josh said, like it's kind of a new market, it's been a very physical market. Like there hasn't been a lot of futurist derivatives for risk management, most of them, you know, new or cash settled. And so what are the challenges you have seen talking with traders who might be used to purely physical trading to begin that shift in mindset and operations to trade futures and what are the opportunities that futures will make available to them?

Sacha Lifschitz (13m 51s):

Yeah, look, I think on the lithium side, as I would just already said earlier, this is really a maturing market and up until really a few, I would say months ago maybe on intermediates and maybe a few years ago on spot you mean, or let's say really the base product, this is really a market which just starts evolving as becoming a mature market where trading and intermediate players start and even financial players start playing a more important role of make role in this role. Up until a few months or a few years ago, it was really just directly produced to consumer business. And I think the main challenge here is really to, to convince all participants in the market that it is not only a physical aspect but there's also a few aspect and some of the traders or some of the people who are involved in these companies obviously have a background of other commodities where they're familiar with future markets, but also some of these players they really have very limited experience, have had very limited experience with the future markets.

Sacha Lifschitz (14m 57s):

And I think the challenge here is really to explain where the similarities is and where the differences are and to really explain this what's happening when you just enter into futures position. And then at the convergence between the future and the physical side with our direct delivery mechanism, what's happening then and where the future position transfers into a physical position. So we spend a lot of time explaining that and think it's really key to make these contracts which we're developing a success by sometimes even holding the hands, you know, of some of the participants and explaining what we're doing. But the good thing is other battery materials like nickel or there's a history there of future businesses obviously through the enemy with metal, not the same underlying product. We can profit from that experience which is in the community.

Josh Crumb (15m 52s):

Just jump in for a second. I think it's also important to understand of course, that you know, lithium, you know, has really been a especially chemical market in the batteries and so forth. So when we think about commodities more broadly and particularly the metals, which in a lot of its simplest form is sort of pure elemental bars or cathodes and so forth. I think that's the other part. In fact, when we originally started Abaxx, I actually had penciled in Spojomine was really going to be the, the commodity of the supply chain. But ultimately I think that really started to change over the last year or two, particularly as lithium carbonate has moved a much, a lot more standardization and really is starting to emerge as a potential commodity. Now that said, you know, we still have price assessments that are really kind of all over the map sometimes, sometimes at the same time for what the price of carbonate is inside and outside of China and the way that these assessments always tend to play off of each other reflexively even though the markets may be very different. I think what we are so excited about is allowing this, this, this actual buyer and sell of last resort physical price to emerge. Maybe I'm cutting ahead in your questions, but I think it's important to understand that lithium has not been a commodity and certainly not like the other metal commodities and really been much more of a specialty chemical market.

David Greely (17m 04s):

That's such a great point and you also brought up what's happening in China versus outside China and I wanted to ask you Sacha, obviously there's been such a transformation in these specialty chemicals slash metals markets with the rise in the need for the components for battery metals and there's been a big shift in the underlying physical market in nickel in particular. So with Indonesia and China dominating production in a really unprecedented way. I mean if you look in the oil market, everyone talks about OPEC and OPEC 10 is, you know, maybe 10 percenters give or take of the oil market, Indonesia, China are 60, 70% of the nickel market. How is that changing the nature of the nickel trade and and how a trader operates in the nickel market

Sacha Lifschitz (17m 48s):

Look mean I think the big change in how trading worked in the nickel space that really started off in the early two thousands. You know, when China initially became a just a huge import hoovering of basically on commodities around world that doesn't only go for nickel, that obviously applies to all the other base metal and then and commodities. I think the one major shift I have witnessed and I think we have all witnessed is really, let's say that started like in 2006, 2007 when China started buying mines in Indonesia and basically became from one of the biggest consumers of nickel, one of the biggest producers of nickel obviously at that time they were opening mines and just exporting Dior to China producing nickel pig iron. But very quickly they realized that the biggest money is in the value chain and they started not only producing nickel pig iron but also up until the end product stainless steel in China.

Sacha Lifschitz (18m 46s):

So building up stainless steel factories and transferring the nick on the island. Then obviously as an, except as the electricity EV, the whole battery and EV story started to emerge. They moved even further and not only producing only nickel pig iron and stainless steel, but now producing mixed hydroxide nickel sulfate and then those products needed for the battery production and energy transition and the trend again, he also here continued where they start fully integrating the supply chain from nickel or to the end product and now being a battery. And in my view, it's not only Indonesia or China now it's basically one big region, right, Indonesia/China where you have integrated supply chains and ever-growing trade between those countries, but also production in those countries. So the dominance of Indonesia, China is obviously there and is apparent and I think the one big topic obviously when Josh and the team started thinking about what could we do in the nickel space and then also when we really sat down and developed those nickel sulfate contracts which we have developed is also realizing that there is an edge where a smaller and smaller proportion of nickel units in our industry are metals which are dominated through LME and priced through the LME.

Sacha Lifschitz (20m 08s):

So there we clearly saw an interest and the need of creating a smart market in a way of having a better benchmark product also physically deliverable and not only as a pure cash settled contract or just a futures contract. So that's really how we see this nickel market evolving and that's also the results and the result of this is products we launch in the nickel physically deliverable nickel contract.

David Greely (20m 35s):

I want to ask both you and Josh, maybe I will start with Josh. You know, when you look at the nickel sulfate and lithium contracts that are being introduced at Abaxx, they are innovative in that they are physically deliverable but without a warehouse system. And Josh, you know, kind of I'm thinking back to earlier in the conversation with some of your experiences and there have been problems in the warehousing system with the LME for quite some time and then you add on the top of that, that as you said, nickel sulfate, lithium, some of these are more specialty chemicals than classic metals. They don't necessarily sit on the shelf the way a bar of copper would. So when you think about that, maybe I will start with Josh. How do you think about moving into a set of contracts for the metals markets where you don't have a warehouse system?

Josh Crumb (21m 22s):

It's something we have debated a lot internally and with clients and actually remember at Goldman we, we wrote a long report on the, on the warehousing system many years ago. Does it really drive the price? What are the differentials from a global warehousing system to actual spot premiums? Look, I mean I think there is a couple things that have changed with these products specifically. We have to remember there is not a super long shelf life, right and so it's not as conducive to stacking a warehouse as, you know, long shelf life cathode or anode or something like that, right? So right now I think that's the first part is you really have to think about direct delivery type markets. Now it's not that these things won't store in some sort of container or port or something. And so I would say the other part that I think is very different than when complex warranting systems were built many, many decades ago is just the flow of information, right?

Josh Crumb (22m 14s):

I mean having that warranting system was really an information system as much as anything else back when we were moving data around by fax machines and so forth, right So the fact that real time information, whether it's a branded warehouse part of a, an integrity system like LME or LBMA or COMEX or if it's any other warehouse, just data and standards just moved so much faster than they used to. So I don't think we necessarily have to have the same structure of warehousing systems that were built in a very different information age. So I think those are really the two pieces where we don't think we have to do things always the same way. I think Tom

McMahon, you know, in one of the episodes told a story where in some of the original oil contracts all they knew was the warehousing system from metals and grains.

Josh Crumb (23m 00s):

And so they were trying to do, you know barrels in a warehouse as the storage system for contracts for oil. So again, these markets evolve really because of information systems but also just the dynamic need for the market. So look, I mean I think there's still a lot to be said about warehousing closer to demand centers or closer to supply centers depending on if you've got long complex supply chains because commodities obviously, and particularly some of the metals products are expensive relative to their value to ship around the world a lot, you know, so you don't want to be always re-handling them, but we do think there's room for a new model beyond just the traditional warehouse warranting systems for metals, particularly if they don't have a long shelf life like some of the battery metals.

David Greely (23m 46s):

Let me stick with you for a second, Josh, because also in 2024, Abaxx has been doing an increasing amount of work in partnering with MineHub and we had Andrea Aranguren on the podcast a little bit earlier in the year. And when you bring up kind of the evolving information systems in the metals markets, how that can change the way they trade, how do you think about the partnership with MineHub?

Josh Crumb (24m 08s):

Two things, right? I think just one and just optimization, you know, having a more central logistics hub for the market to be, you know, relying on, I think helps with a lot of optimization, right? I mean the cheapest cost for shipping of a metal is a metal that doesn't have to be shipped or it doesn't have to be re-handle. So you know, the more information that market participants can have for various swaps or trades and transit to optimize the shipping, that obviously, you know, saves on carbon footprint, it saves on costs, that saves on time. I think having that information in the market beyond just when it hits a warehouse, but when it's actually in transit at various forms, I think it's gonna be very good information for the market and looks, it's just like any other market. As information systems advance, you're gonna see more and more complexity of the trade.

Josh Crumb (24m 54s):

That's always been the case. That's one part of it. I would say the second part that's very interesting for us is of course, you know, the, what we talked about a lot, a lot about last year's, you know, sort of Christmas episode and around smart commodities being able to have in some ways de commoditized commodities by having a lot more origin information in the commodity. And so this is of course a system for tracking and tracing that eventually combined with some of the Abaxx technologies can help solve some of those problems of keeping origin material data all the way through a supply chain, but at the same time, not disadvantaging any one participant, you know, whether it's the middle or the beginning of sharing too much data, right? Persistent data, but data on a need to know basis. That's still the long term vision for smart commodities and, and where we see the world headed in commodities to add more, you know, whether it's the environmental footprint or some of the issues that are now determining that they're driving a lot of geopolitics, think more information and supply chains and more real time information and supply chains rather than just passing on lots of spreadsheets and emails are, are a little bit better than fax machines, but they're not to the, to the real time data analysis that the rest of the world is moving.

Josh Crumb (26m 06s):

So MineHub was definitely a first step in doing that. So again, we don't have to be so reliant on a single warehousing system.

David Greely (26m 13s):

And let me come back to you Sacha, because with contracts that are physically deliverable but without a warehouse system that's new in the metal side. So I was hoping you might take a few minutes and walk through, how does that work and how big a change do you think that is for metals traders?

Sacha Lifschitz (26m 29s):

It is a changing concept, but also at the same time it's a concept that's familiar to physical trading companies or to producers and consumers alike. We do need to do a bit of work on getting the people to rethink the concept and it's actually been fun, you know, we have been creating these contracts over the last, and in the case of Nikola over the last a bit more than two years, leaving a bit more than one year and as from the very beginning we had this idea about delivering, having a DAP contracted deliver place instead of

delivering the material in the warehouse in the form of warrants like most of the people are familiar with in the metals industry because that's what the Andy applies and the funny thing really is people always ask us what's delivery term and we still get the same questions today because somewhere in their minds people think when they think about having futures and the delivery mechanism of futures for them, the concept says there needs to be a warehouse somewhere.

Sacha Lifschitz (27m 27s):

And that's exactly what we want to change and I think the, the big, big benefit from it is really it's making the whole delivery mechanism a lot easier for everybody involved. And when you think about a producer who sells their product, or if you think about a trading company who picks up the deal somewhere and delivers it to auto base or to the consumer, all they do is set putting together the set of documents including a title document like a BL and all the certificates, everything is exactly the same as if somebody would have a physical sale and purchase of commodities. The only thing is that it doesn't have to go into a warehouse, it doesn't need to go on warrant and then people have to cancel warrants and people have problems with queues and waiting until they can get delivered. So all the pitfalls we have with an LME system.

Sacha Lifschitz (28m 21s):

So we are avoiding all that, but just matching buyers and sellers at the destination. In this case of our Singapore contract, obviously Singapore in lithium we are gonna launch same time Rotterdam with Baltimore and Singapore. They are going to trade three different contracts that you know exactly where you get your material. In the case of nickel sulfate, we launch with Singapore and we're gonna hopefully extend that product range quickly to Rotterdam and Baltimore too. So the big difference here is also, you know, where you get your word actually you don't get your warrant, but you know where you get your material. That's really another huge advantage of knowing exactly where you have to deliver your material and where you pick up your material. So in my view, it's a bit of a change in mindset and people have to just walk through that process once, but then everybody will understand that it's actually a lot closer to how physical metal is traded and bought and sold between a producer and the consumer than anything else. So once you walk people through that concept, everybody says, okay, you know what? Now I get it.

David Greely (29m 29s):

I want to make sure that we are able to talk about the third metal on the list, which is gold. But you know now Josh, that you've kind of are in the process of crossing off the first two items on your list, nickel and lithium with the launch of the battery metals contracts. As we roll into the new year, I wanted to ask you what's next on your list on that side, what are the next steps you have in mind for further development of these battery metals markets and the wider base metals markets?

Josh Crumb (29m 56s):

Well again, I think it comes back to starting with wears there a real need, right and first couple had very specific needs in the market and I would say when we think about some of the other base metals, I think the contracts that exist are very liquid. I think there is pretty good coverage of something say like copper between COMEX LME and the Shanghai Futures Exchange. So I don't think the core of the contract is necessarily of a copper cathode is exactly what the market's needing. But that said, I think it's, again, it's things like origin material and green premium. It's things like potential nearly more crude or post refine products. Maybe they won't gather the same type of liquidity as the elemental contract, but certainly is there a need for price discovery beyond just various survey indexes for things like we're thinking about things like scrap or concentrate or other parts of the supply chain.

Josh Crumb (30m 51s):

Now again, this isn't simple, this, there is a lot more complexity than an elemental market, but it doesn't mean that we shouldn't be always challenging to find parts of, of enough buyers and enough sellers to really find true price discovery within some sort of common terms of trade. There is aspects beyond the cathode that we are looking at, and of course we're looking at like origin material type premiums and the data that's gonna be required for those types of markets beyond just the supply and demand. How do you gather the data and create enough data to create those types of pricings?

David Greely (31m 26s):

I want to make sure we get to the third item on the list, which is gold. So let's talk there. Josh, I recall if I recall correctly, your first deep dive into the frontiers of financial technology that would become central to Abaxx was in the gold market. And I was wondering if you could tell us a little bit about that experience and how it influenced your thinking on the role of financial technology in these markets?

Josh Crumb (31m 49s):

Sure, absolutely. So this is the point in the podcast where I tell my origin story of first reading the Satoshi White paper, which is very common in most crypto podcasts. And of course, you know, we're not a crypto company, but I think I jumped right away to this concept of sort of triple entry accounting and how triple enter accounting of a decentralized ledger and more importantly a decentralized data store where data could be persistent and unchangeable and how that would help something like an inventory system that the whole market is sharing. Obviously I am not the first person I know lots of people jump to that conclusion to start, you know, we very quickly thought, well, well gold, gold is going to be the one that makes the most sense because of its being so globally common in the vaulting systems. So, you know, very quickly, me and some of my original business partners wrote our first patents on Blockchain and gold and I think 2013 were beyond a decade beyond.

Josh Crumb (32m 43s):

And that said, there is still not a lot of that technology being used in the real wholesale B2B commercial markets for metals. I mean, sure there's a little bit stuff happening, you know, trading in defi and you know, and so-called stable coins backed by gold, but, but not really in a globally trusted system and there has been many attempts to, to do that. So that's really where it all started. I would also add that some of our former colleagues at Goldman, you know, even after I had left, you know, kind of called me back in, I remember there was a period like almost every few weeks I was sitting in Jeff Currie's office talking about Bitcoin right and all of the comparisons between Bitcoin and gold and I even, you know, had the opportunity to go out and meet George Soros legendary currency trader talking about Bitcoin and Bitcoin versus gold.

Josh Crumb (33m 30s):

So definitely a lot of time in those discussions, but I think, you know, with gold, what a lot of people miss, I mean we get a lot of information around the financial use case of gold, but I think we forget the fundamentals of why gold has that use case in finance to begin with, right? This wasn't, you know, we just had this collective belief in gold as money with every commodity. It starts with really four key first principles to the commodity. It's the marginal cost of production, it's the marginal utility and its consumption. It's the cost of storage or the carry of the metal and then the cost of transport or, or you know, where that, where the supply demand is. Those are the four fundamentals of a commodity sort of everywhere and always. And if we look at something like the gold market, it didn't become money because people liked it in jewelry didn't become money just because it was shiny and all this, but it had those commodity properties that it's got a very high marginal cost of production, you know, pretty much the highest of any commodity because of its relative scarcity.

Josh Crumb (34m 31s):

So it takes a lot of energy to extract. So it's always gonna have a first principle marginal cost based on a very, very high energy cost. Until we solve free energy, you are just never gonna change that. That cost structure is there, but the marginal utility is not just keeping gold in a vault in the financial system, the marginal utility is jewelry and not just because it's shiny. I also started a, you know, technology jewelry company in the past co-founded, and you put a 24 carat pure gold bracelet next to anything in 18 or 14 carats. It's a dramatically different product. So you can't just fake gold. Gold and jewelry is one of a kind and there's a couple properties beyond its shine. It's also very easy to scrap and recycle, which means there's a trade-in cost that's very low. And so it really is a perfect metal.

Josh Crumb (35m 22s):

And then also if you think about why are people giving gifting and using jewelry, there's a lot of things, right? There is identity signaling in wealth aspiration, there's a gift of, you know, remembering a loved one or a memory and that plays into gold's property of never oxidizing or changing or corroding, right? So ultimately, why am I going on about jewelry? There is always a next billion people of aspirational wealth that their first step in wealth is generally jewelry that's not confined to any one culture, one continent. So it becomes very good warehouse material as money because there's always a marginal utility and a marginal demand of a next billion people demanding the commodity. Obviously there's gonna be periods where financial flows overwhelm the jewelry market always, right? Whether it's the supply or the demand side overwhelms it. We have periods of high financial demand and you know, jewelry gets crowded out.

Josh Crumb (36m 12s):

You build up a lot more financial inventory and there may be periods where real interest rates go a certain way and you get a lot of destocking of financial like in the late nineties. So of course the stocking and destocking of financial inventory can change the market. But the fundamental long-term market and the store of value comes from the marginal cost of production being extremely high and always having a marginal demand and utility in the jewelry market. And then a very low cost of storage, which makes it good money

because you don't have a lot of decay or a lot of carry on the inventory. So anyways, I went through that whole thing because I think there's a lot of bad information in the gold market and you always have to come back to those first principles to understand what does the market actually need.

David Greely (36m 55s):

We hope you enjoyed the first half of our special holiday conversation with Josh Crumb, founder and CEO of Abaxx Technologies and our colleagues, Sacha Lifschitz, David Gornall and Steve Lowe. We will continue the conversation next week in part two of our Holiday Special 2024. We hope you will join us.

Announcer (37m 15s):

This episode was brought to you in part by Abaxx Exchange, where trading in centrally cleared, physically deliverable LNG and Carbon futures contracts is now underway. Ready for smarter markets. Contact us at onboarding@abaxx.exchange.

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.