

*diffusetap*  
Virtual Event Series

# Crypto Investment Automation

Guest Speakers:



Jens Joergensen  
Co-Founder  
ConsiliumB



Eric Long  
Co-Founder  
ConsiliumB

Hosts:



Kenny Estes  
CEO & Founder  
Diffuse



Ayla Kremb  
COO  
Diffuse



## DiffuseTap: Crypto Investment Automation

Last time on DiffuseTap, Jens Jorgensen and Eric Long of ConsiliumB talked about automated market makers and how they work in a decentralized exchange, the inherent risks of trading and holding crypto when just about 2% of wallets hold almost the entirety of Bitcoin, and the pros and cons of decentralized exchanges as compared to traditional exchanges.

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### Meet the Speakers



ConsiliumB Pte Ltd is building the next generation of electronic trading platforms to connect multiple global venues and manage most common financial asset classes, by leveraging the latest technologies and cloud-based platforms. ConsiliumB is an ACRA-registered entity based in Singapore.



Co-founders [Jens Jorgensen](#) and [Eric Long](#) have spent over a decade building and maintaining high-frequency/low-latency trading platforms for various world-renowned market makers and low latency arbitration firms. This has allowed ConsiliumB to compete globally in nearly all asset classes: equities cash and derivatives, fixed-income cash and derivatives, and commodities derivatives.

Website: [consiliumb.sg](http://consiliumb.sg)

### About Diffuse®

We are an alternative fund platform offering differentiated investment products. From digital assets to VC funds and beyond, we identify green field investment opportunities we feel will have market beating returns and turn them into professionally managed funds. For more information, visit [www.diffusefunds.com](http://www.diffusefunds.com).

### DiffuseTap

This networking session is part of our weekly virtual events series. Networking (you'll bump into at least a dozen high caliber fund managers) meets purposeful (you'll tap into brand-new sources of ideas) ... straight from your armchair like a boss.

If you want to spin up your own fund, get in touch with us at [contact@diffuse.vc](mailto:contact@diffuse.vc). We would love to see how we can help.



**KENNY ESTES:** Today's speakers are Jens and Eric. Eric, do you want to introduce yourself?

**ERIC LONG:** Thanks, Kenny. Good morning, good afternoon, good evening, wherever you may be. I'm Eric Long and with me today is Jens Joergensen. We're both co-founders of a company called ConsiliumB. I'm based in Singapore; Jens is in Chicago. Just a couple of things, to give you some background, we're both definitely just geeks at heart. That's really where we come from.

We love technology. And so, we have been involved in technology, I think at this point, with well over 55 years of experience, between the pair of us. We have had the opportunity in the past to ride through some of the more interesting technology waves, if you will, including dot com, high frequency trading, and now, cryptocurrency.

The thing that's been interesting for us, and that's really driven us into each of these areas, is the technology. You could make the argument that each of them was kind of a peak that pushed technology and software innovation. And not just within the fields that they were focused on, but also beyond that.

We spent a pretty good amount of time doing very low latency, high throughput systems for high frequency trading. And then, our time in that field came to an end, and we found ourselves in a position where our equity actually came to cash, which was nice, and we were able to start focusing on where some of the next opportunities for creative technology was, and where it was happening. That led us into crypto.

Jens has been involved in crypto for quite some time. I got involved a little bit later than he did, so I don't have the story that he has, like the sandwich that he bought which is now worth \$1,600. I think that we can find a number of people with those kinds of stories. But in the beginning, people were just kicking it to make sure it worked right.

Now, we find ourselves in a place where technology is once again pushing the edge and pushing the boundaries. Both of us, at the core of our beliefs, believe that the technology that is happening in this area is going to have a far reaching impact outside of just cryptocurrencies. It will be interesting to see how that develops, and we both love the fact that we have the opportunity to learn something new every day. It's really cool to be able to do that.

So that's who we are. ConsiliumB was founded to give us an opportunity to create technology in this space, and part of our platform right now is in the cryptocurrency trading space.

**KENNY:** That's great. Jens, do you have anything you would like to add to that?

**JENS JOERGENSEN:** Yeah. It sounds so unusual today, but when we were getting started, one thing we realized was that, surprisingly, a lot of the people who were actually involved in this space were not from traditional financial backgrounds. Eric and I were people who worked primarily in the technology side. So we understood, on a very intimate level, how equities, futures, and options trading worked.



But when we looked at the cryptocurrency world, we found that almost the opposite was true. In fact, when we first got started, we went around and spoke to people at different exchanges. And the overwhelming thing I found is that most of the people who we'd encountered were coming from areas like social media. It was strange and very surprising to me.

I think a lot of the people in the beginning were the crypto true believers, or if you want, financial anarchists, which Eric and I are not. I'm a firm believer in the structure of capital markets and the way things work and the need for things like rules. I'm definitely a believer in that.

I went to Singapore in July 2008 and lived there for 12 years. The original Satoshi paper was published in August 2008, so I saw it come out. I wasn't a true believer, but people kept asking me about it because I would talk about it and was interested. But I kept saying one of two things was going to happen: this will die on its own, or governments will kill it.

I would have said that in the beginning, that those were the two biggest risks. But at this point, I don't think that it's going to die on its own, and I don't think that a single government could kill it. However, I do think that there remains a potential risk. But anyway, that's enough introduction.

**KENNY:** No, that's great. And just for context, this is very much an “All in the Family” episode of DiffuseTap. I've known and worked with Jens and Eric for almost two decades, because I was in the same high frequency trading firm. And Ayla lives with them in Singapore, in the same network. So we all kind of know each other pretty well. But on that note, Ayla, do you want to take over with the questions?

**AYLA KREMB:** Yeah, happy to. And don't forget to ask questions in the chat as well. We kind of covered the first one, how you got into crypto. So now, what are the commonalities and the differences between conventional finance and crypto? Just so people can orient themselves on what is the same, and what is different in this new ecosystem.

**JENS:** The interesting thing to me is, from a very technical point of view, there are two basic aspects. If you look at the way the markets actually trade in electronically traded markets, which has been Eric's and my bread and butter for years, they're fundamentally the same. You have price-time priority order books, and people are just in there trading with one another.

If you're used to stocks, it's not quite like stocks because cryptocurrencies trade in pairs. You can trade Bitcoin for US dollar, and you can trade Bitcoin for everything else. However, you may not be able to trade Ripple for Stellar. If you want to go between the two, then you may need to take an intermediate hop.

And people may ask, why Bitcoin? It's a question I'm always asking myself because it is very much behind other currencies in terms of technology. But because of its position, it's like the reserve currency of the cryptocurrency world. But the way it operates looks the same to us, in terms of how electronically traded markets work.



One other fundamental difference between trading crypto and traditional stocks is that traditionally, we have settlement, which, when we started out, was whatever went on from this many days to this many days, with different expectations around that.

In the Bitcoin world, or in the cryptocurrency world, everything is trading on a cash basis. If you're an institution, obviously you need to be able to sell short. With a firm like [Getco](#), you need to be able to be long or short at any given time. All we needed to know is if a name was an easy borrow or not. If it's an easy borrow, then you can just short it. And as long as you're flat at the end of the day, it doesn't matter.

Theoretically, that doesn't work in cryptocurrency. You have to have that coin first. So if you want to short, you actually do have to borrow it from someone who really has it. Now, having said that, we don't have the same kind of regulation.

You can borrow on an exchange. It's expensive compared to equities, but when you're borrowing it, on some level, the exchange could just be quoted as saying, "well, sure, I'll let you borrow Bitcoin. I don't really have it, but I'm sure I can get it if I need to."

So does that really happen or not? I think this is actually an open question. And when we get to later and talk about some of the risks involved, these are the sorts of questions that I certainly ponder sometimes. Eric, did you want to add anything to that?

**ERIC:** I think that was pretty thorough. I love it.

**KENNY:** Those are good questions. On the margin, in particular, because of the cash basis, people don't realize how much more expensive it is if you're trading a lot of volume, and how much more difficult cash management is without having a clear, T+1 type solution. It's a pretty big deal.

But that said, Eric, maybe I'll go to you on this one. With traditional finance, you have exchanges, you have clears, you have all those things. The new wave is decentralized exchanges and automatic market makers, who are trying to take the place of high frequency trader market makers. Can you talk a little bit about what some of these new solutions look like? And then maybe you could touch on the pros and cons of those solutions versus the traditional financial system?

**ERIC:** Sure. Jens did touch on them to some degree, but to add to that, I think with traditional assets, you have considerably more structure for one thing than you do in the cryptocurrency world. Even in the cryptocurrency world, you have a gradient of extremes. But in the traditional world, like you said, Kenny, you're typically facing something like a T+3 settlement.

I had the good fortune (let's put quotation marks on either side of that) of actually developing a self-clearing system once and I can tell you that dealing with the US equities post trade is antiquated and quite nightmarish. It still leverages technology, but I'm going to put that in air quotes as well. The technology is probably older than all of us combined.



In cryptocurrency, you can do off exchange trades. I can transfer money directly to you, Kenny, or to Jens, and I don't have to go through a bank necessarily, where I have to depend upon their systems to perform that settlement. Even in DeFi, I can transfer one stable coin into another if I wanted to. So, from a settlement standpoint, transactions are occurring at a much lower frequency.

Anyway, it's interesting that you bring that up, Kenny. DeFi is very hot right now, as well as leveraging the smart contracts on the big ones like Ethereum, and shortly behind, on the Binance chain. Those are helping to actually drive some of the pricing that you see in Ethereum. The simple fact is that for those transactions to occur, the network has to operate. People are actually being paid to make those transactions occur.

**KENNY: One thing that we have to talk about is, how does a decentralized exchange work? Or more specifically, how does an automatic market maker work?**

**JENS:** I think it's super fascinating. The canonical definition of what a DEX looks like, a decentralized exchange, would be a smart contract, where it's initially set up, and you would have a currency pair, just like you normally would, like Wrapped-Bitcoin to Ether. It's launched with an initial ratio or Constant Product that is enforced such that  $\text{quantity}(\text{coin-A}) * \text{quantity}(\text{coin-B}) = K$  where K is chosen such that there is an equivalent value of A and B when the pair is launched. It's equalized to whatever the current value is.

And then, for you to do a trade, you essentially are making a smart contract call where you send in one of the assets, and you get out some of the other assets. That's where things start to get interesting, where you have bifurcation where newer DEXs like Curve are evolving this idea. The earliest kind, this Constant Product, is the way Uniswap works.

And so, you have this nonlinear effect, where at the price implied at the current DEX quantities, you can trade an infinitesimally small amount at the same price you might see on Binance. And then, as you increase the size of that, it goes up.

The interesting thing to me is one, that it isn't efficient at all. Having a price-time order book that's managed by somebody that's competent, gives you the ability to clear thousands and thousands of trades per second. When you would do a trade with an automated market maker or AMM smart contract, that trade that you're doing actually has to go on the blockchain. So if it's on Ethereum, blocks are printed every 15 seconds, or the algorithm converges to have them print every 15 seconds.

It's not instantaneous, and you're going to have to pay Ethereum to do that transaction. So again, just like I think in the early days of crypto where I kept telling people that this crypto thing is never going to work out because what I'm looking at doesn't make sense, I'm saying the same thing now about DEXs. But nevertheless, it is a huge phenomenon. And the volumes of transactions that we're seeing in DEXs in some cases, are dwarfing the volumes happening on "real" exchanges.



**AYLA:** That leads us to an interesting point, which is about risks and opportunities. We've heard of hacks, and whale pools, and all that. Could you dig into some of the technical risks that have been exploited by individuals, and how you could stay away from them, if at all possible? Or are we all just in the wild west?

**JENS:** First of all, whales are a moving target. I tried to look up the recent number on how many wallets there are, but one aspect of blockchain is that all wallets are essentially public. I can have one wallet, or I could have 1000 wallets. And unless you're really, really good and run your own nodes, and are able and understand a lot of the technical details, you would be hard pressed to necessarily take all my wallets and figure out that they all belong to me. If you put in enough effort, I'm sure you can do it. But for your average joe, that's not true.

Anyway, the estimate is that 2% of the wallets out there are accounting for 95% of a coin. I forget if that was just for Bitcoin, or it also included Ethereum and the other ones, but that is a lot. And as we've seen with the GameStop phenomenon, people could attest that if you get enough people with enough representation of the float that's out there, they can move that price where they want to.

And of course, every time something happens that people like or don't like, it's often attributed to the whales going in there and pushing it around. But how much of that is true or is not true? Someone mentioned that a lot of those are exchange wallets, and yeah, I do think that a lot of those are. And the exchanges aren't shy about letting people know what their wallets are, or at least the more legitimate ones.

A lot of times, in fact, every time there's a big transaction, people freak out. When you see these massive moves in Bitcoin, people are like "oh my god, somebody just moved millions of dollars into Coinbase." The market does tend to move when those things happen.

To talk about the opportunities, if you really want to be an informed speculator, one of the things you might do is run a node, or at least scrape the blockchain explorers to see when big transactions happen. In terms of hacks, there are hacks all the time, and it certainly makes for entertaining reading. I don't know if you guys were familiar with the news about QuadrigaCX, where one of the founders of the exchange, quote unquote, died, and they were speculating as to whether or not he's dead. They somehow got a death certificate signed off by a doctor in the middle of the night. It was shady. For all we know, this guy ran off with a couple hundred million Canadian crypto investors coins. I don't think people can really be sure, one way or the other.

One other thing that I would like to emphasize is that I think a lot of the public (and public reporting) is missing the fact that some of those things aren't just hacking. People often attribute a lot of those things as hacks. But to me, a hack is when somebody installs malware on my computer, gets my password, goes in, and steals my funds. That is what a real hack is.

If somebody who understands how to read Solidity code for an Ethereum smart contract goes in and figures out that the guy who wrote it didn't account for the fact that this could happen, is that a hack? Well, I don't think it's a hack. If you look for analogues in the financial world, some people would call that financial engineering. I mean, there's not necessarily a huge gap between what these things are.



But whether it's criminal or not, I think at the end of the day, if you are an investor, the important thing to know is that these things can and will happen. They're going to continue to happen in the foreseeable future. People are able to use flash loans to get large amounts of coins to manipulate the market one way, and if they can see that there's a slippage, where they can get in and do a reverse trade and capture value out of that, they're going to do it. This is going to be the wild west for a while.

Now that you know these risks exist, what can you do about it? Well, unless you're somebody who can read and understand smart contract code, you as an individual cannot do much. If you go to DeFi sites, if you go to Harvest or a similar site, they'll often have auditors who will come in and read your smart contract code and give you a sign off. But this is not like how the top five accounting firms are doing it.

This is still the wild west. And so, I guess from my point of view, it doesn't mean that you shouldn't do it. I do it. I have a significant portion of my personal assets in cryptocurrencies. But as with anything else, you should understand the risks.





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Corporate Director, CME Group

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CEO & Founder, LionShare Media

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**Raj Mukherjee J.D.**  
VP/Global Head of Tax, Binance.US

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Raj explained the complexities of the US crypto tax landscape, how he built a dynamic tax information system for Coinbase and Binance from scratch, and how investors can profit from crypto without getting caught in a taxation mess. [Read on](#)

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