

EQUITY

PODCAST: Technology and Finance: A Future with Blockchain Technology and Cryptocurrencies

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In our latest [“Talking Markets” podcast](#), we hear from industry experts about the possible impact on the financial industry of advancements in blockchain technology and the rapidly evolving crypto ecosystem. Austin Trombley, data scientist with Franklin Templeton Fixed Income Group, thinks the disruption could happen without many consumers even noticing it. He’s joined by Rosario Ingargiola, the founder and CEO of OTCXN—an institutional-grade digital asset trading network, and Lauren Abendschein, institutional sales manager at digital currency exchange Coinbase. Leading the discussion on cryptocurrencies and blockchain technology is Franklin Templeton’s Anthony Hardy.

Here are some highlights from the podcast:

- Austin Trombley: I think we are going to see a lot of nascent bespoke assets that can trade and be in your wallet. And unbeknownst to us, blockchain will be powering the technology.
- Anthony Hardy: We see a trend toward institutionalisation of crypto. A lot of big organisations have figured it out and a lot of other big organisations are trying to figure it out. I would expect that to continue over the next few years.
- Lauren Abendschein: Colleges and universities are investing in and offering a record number of classes in blockchain and cryptocurrency. We’ve also seen a proliferation of different types of strategies and approaches to valuing these assets.
- Rosario Ingargiola: I think up until recently one of the biggest barriers to institutional adoption [for crypto assets] was probably actually the dearth of custodianship for these digital assets. From our point of view, the custody problem has more or less been solved, but the real problem now is really the trading counterparty and settlement problem.

The full transcript of the podcast follows.

Host/Richard Banks: Hello and welcome to Talking Markets with Franklin Templeton: exclusive and unique insights from Franklin Templeton.

I’m your host, Richard Banks.

Ahead on this episode: potential progress in the adoption of cryptocurrencies. Rosario Ingargiola is the founder and CEO of OTCXN—an institutional-grade digital asset trading network. Why he says holding assets is improving but other big challenges remain. Why Lauren Abendschein, institutional sales manager at digital currency exchange Coinbase, welcomes big investment names into the crypto space.

How Austin Trombley, data scientist with Franklin Templeton Fixed Income Group, thinks it could happen without many consumers even noticing it.

Leading the discussion on cryptocurrencies and blockchain technology is Franklin Templeton's Anthony Hardy. Anthony, take it away.

Anthony Hardy: Thank you very much. What we want to discuss today is how this technology could impact the financial system going forward. We're really trying to cut through this noise and talk about the innovations that are extremely exciting that are happening in the ecosystem, and really kind of understand, over the past two years. What's changed; what milestones have happened? I thought maybe I'll kick it off with Lauren, if you just want to kind of walk us through where we've been the last two years in the crypto world.

Lauren Abendschein: Sure, yeah, I'll touch on a couple of things here. Obviously, we had an extraordinary run-up which, you know, was part-and-parcel with US\$5.5 billion dollars in ICOs [Initial Coin Offering] raised in 2017. So you saw this proliferation of crypto projects and an awareness of crypto not just being Bitcoin, but being something way beyond that in 2017. Also, a move towards institutionalisation with the launch of futures contracts. So that really heralded along with that run-up in prices this idea of institutional investors coming in and the mainstreaming of crypto. And then we saw a dramatic cut in price and what that really spurred in 2018 is this sort of year of the builder. It's one of the big themes that we've seen. You see colleges/universities investing and offering a record number of classes in blockchain and cryptocurrency—this sort of knowledge gain. We've seen a proliferation of different types of strategies and approaches to valuing these assets.

But also this notion of putting in place the building blocks to make crypto assets more viable. The first Web 3 browsers launched, and you can think of that as sort of what it meant for Netscape to launch in 1997, right? It's a new way to be able to browse and engage with crypto assets. You also saw regulators globally start to take a harder look at how to regulate exchanges, how to regulate crypto assets and fit them into new frameworks. Culminating in today, we're looking back on 20,000 crypto projects that have sprouted up left and right, as well as stable coins and the entrance of a number of institutions that I think have really laid the groundwork for a very interesting 2019.

Anthony Hardy: One of the unique things about this market is usually you see institutional investors kind of get the first access to the new asset classes. It's been the complete opposite in crypto, where retail investors were actually the first ones to adopt this and now it's been the institutional investors that have been trying to catch up. So, we just want to talk about historically, what have been the barriers so far to institutional adoption? Rosario, just your thoughts. What have been some of the barriers and then what's changing?

Rosario Ingargiola: I think up until recently, one of the biggest barriers was probably actually just kind of the dearth of custodianship for these digital assets. I mean, how do you hold these things? If you're going to take client money and invest it in these assets, you sort of have to have that part right. From our point of view, the custody problem is sort of a solved problem now that you have big firms with big balance sheets and reputational risk coming in and offering those services. So, the real problem now is really the trading counterparty and settlement problem. If you think about what institutional investors want out of the space, they have a whole range of concerns. If you want to trade on exchanges today you have to put assets with these exchanges. That represents, obviously, counterparty risk to companies where there is maybe lack of regulatory clarity, there are jurisdictional issues, there are hacking issues around the assets that they hold and things like that.

The institutional clients we talked to are very concerned about having counterparty risk to the exchanges. We sort of see most of the exchanges as really kind of more like retail brokers that hold client assets and they're obviously all trying to increase the percentage of institutional flow that they get. But you know, they have issues around, for example, provability of the assets, provability of transactions. What do you give to your fund administrator, to your auditor, in order to make them comfortable to be able to certify the results that you're getting from trading these asset classes? And, we think that kind of the biggest issue is really the lack of prime brokerage¹ in the space which makes it so that you have an incredibly fragmented liquidity landscape. Those are things that are really, really important to institutional investors, as you can imagine.

Austin Trombley: The only thing I would add would be security. And what we're doing is we're building the cold storage ourselves. So, a lot of these exchanges have an appreciation for what's called a warm wallet and a cold wallet. The cold wallet being, taking your digital assets offline and not being attached to a network. I think security is something that hasn't really totally been solved by a ton of the exchanges, which is why you've seen a lot of hacks that have happened. Sometimes they're internal hacks and if you deploy the best type of security and hardware security modules that can't happen. And that part of the market has truly evolved a lot.

Anthony Hardy: So, you're seeing a lot of traditional players enter the space. I'm curious from the startup perspective, how you guys are thinking about the entrance of the traditional players into the market.

Lauren Abendschein: There's a lot of talent coming into this space and I think from our perspective—the more the merrier, right? We want to see these large institutions in the traditional space come in because we think it's a ratification; it's an indication of the value and the growth of cryptocurrencies. So that's exciting to see those developments.

Talking about this specifically from the perspective of what makes crypto custody different from traditional custody, there are a number of things. First of all, these are digital-bearer assets. Once you have them, it's like having a diamond or it's like having a bearer bond. So, threat vectors are fundamentally different than they are for traditional assets and that means that security has to be approached very differently.

It plays into some of the technological changes that need to happen and that have happened for crypto custodians, but it also plays into the people and the processes. You're leveraging some of the traditional processes, but also needing to put in place new methodologies in order to protect against these new threat vectors. That's one thing.

The second thing is the enabling of use cases for cryptocurrencies out of custody is a new challenge for crypto custodians or for custodians of these assets. Things like staking, participation in voting for these new crypto assets and things we can't even imagine yet being able to do that in a secure and a safe way is a new challenge for custodians.

The final thing is this proliferation of assets. This means that crypto custodians have to navigate a whole new landscape of regulation and being able to offer these assets globally in a compliant way. I think there are a number of fronts on which crypto custody is different from traditional custody.

Anthony Hardy: A big takeaway so far is one is this really is a trend this institutionalisation of crypto. A lot of very big organisations have figured it out and a lot of other big organisations are trying to figure it out. I would expect that to continue over the next few years. The second major trend I think is the idea of tokenisation of assets. Austin, what does that mean? What are the benefits and what are the potential implications as we think about how assets are created and then traded and owned going forward?

Austin Trombley: Sure. Let me reference a company that built a blockchain way through a node² which is their kind of own special blockchain. The backbone of that being hyper ledger and what they found is that they can reduce the costs of securitising loans by about 70-80% and all being done through blockchain. The really nice thing about how they built it is you don't really have to be an expert in blockchain to actually use it. And I think that that's how you're going to see mass adoption. I think you are going to see a lot of nascent bespoke assets that can trade and be in your wallet.

And unbeknownst to you, blockchain will be powering the technology but you will have no idea. I think you'll see it disrupt traditional banking models—make it more efficient and cheaper to do transactions, to do settlements. But it'll happen at the front end being identical to the old way, just the back end will be powered by it.

Rosario Ingargiola: Yeah, and people hear the word “token” they think of something like an Ethereum token or an ERC-20 token that sits on a public ledger. Tokenisation in the context of sort of more institutional securities at the moment there's a lot of private-enterprise permissions, implementations where it's not necessarily a public ledger and there's not necessarily, even a native token that you would think of like you know like Ether, like Bitcoin.

With our solution we can tokenize basically any asset, whether that be a loan or a fixed income security. What we're using it for today is to tokenize fiat assets, so meaning dollars and sterling and euros that are sitting at custodians as well as actually even the crypto assets themselves, so even the Bitcoin and even the Ethereum. And one of the advantages of doing that is you're able to sort of then create like a layer 2 network that sits above those public ledgers.

If you do research around any of these crypto currencies, one of the biggest problems with any of them is that the public ledger system itself has scaling issues or transaction throughput issues. So when you re-tokenize even digital assets, you can then architect a system. If you're an institutional investor, the reason this is super important is because if you're institutional and you're going to invest in building up a desk to invest in these assets, you have to understand how the market is going to get from where it's at today where an OTC [over the counter] block trade can take a day to settle, and you have maybe ten minutes before you anybody's willing to transact with you on coin that you just received because of the slowness of those public ledgers, right?

If you're to invest in building up a desk, you've got to figure out a way to be able to invest at scale. So, a layer 2 network is really quite important because it gives you the ability to basically transact without all of those delays across the crypto assets an unlimited size and scale. And I would argue you need that, even in a world where equities and fixed income and all these assets are being issued natively digital on a blockchain, which is definitely coming in the future.

Anthony Hardy: You know we're big believers that the democratisation of alternative investing is going to be a major trend and it will be enabled and accelerated by distributed ledger technology. So just to give you an example, I saw a headline that John McAfee is going to put a Picasso on a blockchain. When you do that, rather than having one person own a US\$100 million painting, you can chop it up into chunks and you can sell that. So each of us can own a US\$1,000 share of that Picasso painting. When you think about real estate, fine wine, art—all these different asset classes that are just difficult to package in a cost-effective and efficient manner. It's just not possible using today's financial infrastructure. But to Rosario's point, if we look out over the next decade as this adoption of this technology continues, I think it will open up just a ton of opportunities for a lot of institutions in the financial ecosystem.

One of the big issues with this space everyone talks about is regulation and is this real. In the early days, it got a lot of bad press. I think a lot of that's getting cleaned up as people understand the technology more and see companies who are actually, going above and beyond in terms of reaching out to regulators to make this technology be compliant with how they're thinking. Since you have so much experience working with regulators in this space, what are the current views, what are the current concerns?

Austin Trombley: I would say like five, six years ago when ICOs started, everybody started participating because everybody thought there was regulatory arbitrage. I think today everybody is now smart enough and the SEC [Securities and Exchange Commission] has been active enough in the space that we can all agree that there's no regulatory arbitrage anymore. It's going to be the same registered securities. It's just going to be wrapped in blockchain instead of having to go get listed on the NYSE [New York Stock Exchange.] You can get listed on other exchanges that are not the traditional ones. I think you're going to see that evolve. I think you're going to see people that don't follow the securities laws that don't have legal counsel that give them the right advice—those bad actors will go away.

Rosario Ingargiola: As we get more clarity, that's obviously good for everybody in the ecosystem. I think you've got to have top lawyers that are putting their name on all the advice they're giving you of course, and in general it's good for them and it's good for the whole ecosystem. I think all the bad actors are kind of falling by the wayside at this point. Things are looking better.

Host/Richard Banks: That's all we've got time for on Talking Markets for this episode. Thanks to all our contributors. If you've enjoyed their conversations and would like to hear more, please check out our archive of previous episodes and subscribe on iTunes, Google Play, or just about any other major podcast provider. So, until next time when we uncover more insights from our on-the-ground investment professionals, goodbye!

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All investments involve risk, including possible loss of principal. The value of investments can go down as well as up, and investors may not get back the full amount invested. Buying and using blockchain-enabled digital currency carries risks, including the loss of principal. Speculative trading in bitcoins and other forms of cryptocurrencies, many of which have exhibited extreme price volatility, carries significant risk. Among other risks, interactions with companies claiming to offer cryptocurrency payment platforms or other cryptocurrency-related products and services may expose users to fraud. Blockchain technology is a new and relatively untested technology and may never be implemented to a scale that provides identifiable benefits. Investing in cryptocurrencies and ICOs is highly speculative and an investor can lose the entire amount of their investment. If a cryptocurrency is deemed a security, it may be deemed to violate federal securities laws. There may be a limited or no secondary market for cryptocurrencies. Stock prices fluctuate, sometimes rapidly and dramatically, due to factors affecting individual companies, particular industries or sectors, or general market conditions. The technology industry can be significantly affected by obsolescence of existing technology, short product cycles, falling prices and profits, competition from new market entrants as well as general economic conditions. The technology sector has historically been volatile due to the rapid pace of product change and development within the sector.

[1.](#) Prime brokerage refers to a special group of services that many brokerages offer clients with more complex financial needs.

[2.](#) Nodes are the individual parts of the larger data structure that is a blockchain.