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Chair: Mr. Joël Lightbound



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• (1105)

[*Translation*]

The Chair (Mr. Joël Lightbound (Louis-Hébert, Lib.)): I call this meeting to order.

I'd like to wish everyone a good Monday morning.

Welcome to meeting No. 45 of the House of Commons Standing Committee on Industry and Technology.

Pursuant to Standing Order 108(2) and the motion adopted by the committee on Monday, September 26, 2022, the committee is meeting to study the current state of blockchain technology in Canada.

Today's meeting is taking place in a hybrid format, pursuant to the House Order of Thursday, June 23, 2022.

[*English*]

With us today, we have as witnesses, from Chainsafe Systems Incorporated, Aidan Hyman, chief operating officer, by video conference.

It's nice to see you, Mr. Hyman.

We have, from Ether Capital, Brian Mosoff, chief executive officer and president of Canadian Web3 Council. We have, from Wealthsimple, Evan Thomas, head of legal at Wealthsimple Crypto. Finally, from WonderFi Technologies Incorporated, we have Adam Garetson, general counsel and chief legal officer.

Welcome to all of you. Thanks for taking the time to address this committee. We're looking forward to hearing your five-minute testimonies, followed by a discussion with MPs.

Without further ado, we'll start with Mr. Hyman from Chainsafe.

The floor is yours.

Mr. Aidan Hyman (Chief Executive Officer, Chainsafe Systems Inc.): Thank you very much, everyone. It's an honour to be here today and to be able to speak to you all about blockchain technology here in Canada.

Good afternoon. My name is Aidan. I am one of the co-founders and the CEO at ChainSafe Systems. ChainSafe was founded here in Toronto to provide open-source developer tools that accelerate web3 adoption. We have become one of the world's top blockchain research and development firms and now have over 120 team members across the world.

To understand the full potential of blockchain in the context of the Canadian economy, let's start from the beginning and talk about

Ethereum, the second-largest blockchain. Ethereum is a favourite of developers because of its potential applications, the smart contracts that automatically execute when conditions are met.

Toronto is one of the major homes of the Ethereum project, with almost half of the Ethereum co-founders being Canadian, mostly notably Vitalik Buterin, the leading founder of Ethereum. We've seen many great Canadian companies and projects being sprung out of the vision and idea that is web3. There have been some amazing conferences in Canada that bring people here from all over the world to learn, connect and collaborate on the technology that is changing the world.

Ethereum has also experienced tremendous growth, with the 2021 report by Electric Capital verifying that there are over 18,000 full-time developers dedicated to blockchain tech, with over 34,000 new contributors in the same time.

You may or may not have heard about FTX and what has happened in the last few weeks. Understandably, there is a lot of talk about crypto and regulation, talk that has been happening for a while, but it has been heightened because of this incident, with many taking a negative stance about crypto and blockchain technology altogether.

This is a pretty harmful stance to take, because frauds have been around since the beginning of time. It is also critical to separate the technology from bad actors. Fraud is illegal no matter how it happens or what technology is used to commit it.

Second, it is also important to understand the difference between cryptocurrencies and blockchain. Cryptocurrencies like bitcoin are digital currencies that are verified using blockchain technology to record and secure every transaction. A cryptocurrency can be used as a digital form of cash to pay for everyday items as well as larger purchases like cars and homes.

Blockchain, on the other hand, is a set of digital records that are duplicated across a network of participating computers. Blockchain technology can power new models for change, advancing humanity and helping social organizations create impact. An example of this is the World Food Programme, which deployed cutting-edge blockchain technology in a refugee camp in Jordan to allow for quick and easy transactions by Syrian refugees to purchase food and supplies. This technology can make sure that humanitarian aid is not misappropriated and that food security is improved for those in vulnerable situations.

Canada is well situated to be a leader in the blockchain space, not just because Ethereum was founded here but because we have the talent and resources to make this a reality. It may be hard to see right now, but it is definitely possible. We see this all the time. It's hard to see the full extent and use cases for technology early in its history. Some of you may have heard of Snowdevil, which was an online snowboard shop that two years later led to the birth of Shopify. The now 16-year-old company has created countless jobs for Canadians.

I mentioned Ethereum earlier, and the potential of the technology. It has the potential to create hundreds of thousands of jobs in Canada. Let's together make Canada the number one leader in blockchain.

We have emerged as a leading crypto nation based on innovation, low energy costs, high Internet speeds and favourable regulatory regimes. While it ranks third in the world behind the U.S. and the U.K. when it comes to embracing blockchain technology, Ethereum blockchain technology adoption around the world, with a wide variety of applications in finance, government, legal, health, education, space, national and multinational cryptocurrencies, energy and others, is unparalleled.

Canada has fallen behind other jurisdictions like the U.S. and Europe when it comes to digital asset policies, but it's really important to think about meaningful regulation that creates regulatory clarity and clear standards so that businesses can flourish in Canada. It is an opportunity of a generation to have access to a new net industry, and we can have it right here in Canada.

This is the future. Let's build it together.

Thank you very much for listening to my testimony today. I very much look forward to hearing any questions that might come up.

Thank you.

The Chair: Thank you very much.

We'll now move to Mr. Mosoff, from Ether Capital.

Mr. Brian Mosoff (Chief Executive Officer, President of Canadian Web3 Council, Ether Capital): Thank you, and hello, everyone.

My name is Brian Mosoff. I am the CEO of Ether Capital, a Toronto-based, publicly listed company focused on Ethereum infrastructure and its ecosystem.

I am also the president of the Canadian Web3 Council, which is an education group that's here to service folks like yourselves on

understanding the technology, its potential for Canada and thoughtful regulation.

I have also been an adviser to the Ontario Securities Commission and IIROC. I have helped Purpose Investments, which is an entity related to Ether Capital. I put together the world's first Bitcoin and Ethereum ETFs.

I would say that we've done some things very well as a country. We've led. Other countries did not come first to the ETF market. We did that in Canada. In terms of structured products, we've done incredibly well.

I've been around the industry for about a decade now. I've watched it grow from a small asset, which was basically just Bitcoin back in 2012 or 2013 when I first started following the space. The entire industry was worth just a few hundred million dollars. At the time, that seemed quite large, but by today's standards, the tokens themselves—there are hundreds or thousands of tokens or cryptocurrencies—based on the price—which fluctuates, of course—have near a trillion dollars of total market cap.

The industry has grown into hundreds of businesses and new verticals. We're no longer talking about an industry that's just a few players and a few hundred million dollars; we're talking about some of the world's leading venture capital firms allocating billions of dollars over the coming years—and over the previous number of years—into this industry.

I think many technologists—people like myself—view this as the future, as society moves from a world based on assets in specific jurisdictions to a more Internet-friendly, global population. You have communication tools like Twitter that are disrupting local media. Now we have digital currencies that are perhaps challenging central banking policy.

The assets are volatile—there's no question. I'm not saying that today people will replace the way they pay their rent with something like bitcoin or ether, but I think there's a societal shift, as we move to a more digital economy, to embrace these technologies. I think it's important that Canada recognizes this as an opportunity. There's no question that it's going to be volatile. It's going to be a scary time, as the world we know today will not look the same in 10 years.

One thing I think a fair bit about is that cryptocurrencies get tangled up with blockchain and things that are making the headlines, or about the volatility price of these assets. When I think about the future of Canada's economy, I imagine how our dollars are going to move to something more digital, whether we call that a central bank digital currency or a stablecoin, which is regulated in a certain way. I think that we can't and shouldn't design that technology or those dollars—and it would be dangerous to imagine building them—without recognizing that a global financial system is being created here in an alternate universe. That is happening largely around these digital currencies.

The opportunity to program the money and to have developers build more transparent tools and ways of trading or interacting with these assets outside of siloed, black-box institutions is very important. I think it's actually an opportunity for Canada to get this right, to ensure that we remain relevant and that people still have a desire for our currencies. That's something I'm very passionate about.

What is at the heart of Bitcoin? What is the heart of Ethereum? Why are we so excited about this? Why do you have a number of members in the industry on this call right now?

It's that we see that these assets are more than just a single token with a price. I think of specifically Ethereum as a global settlement layer for all sorts of activities.

In the early days, perhaps it was just people trading or moving ether back and forth between accounts. Over time, we've seen verticals emerge that have grown into their own industries. They may have started in a petri dish and were worth just a small amount of dollars, but we ended up with NFTs, which is the ability to have a piece of art tokenized on a blockchain, whether it's a digitally native piece of art or someone trying to take a painting to tokenize that asset to be swapped or fractionalized.

We have the metaverse. We also have something called stablecoins, which are tokenized dollars. Most that exist in this industry are tokenized U.S. dollars. It used to be only a few billion dollars, and now we have hundreds of billions of dollars moving around these ecosystems.

• (1110)

I think about Ethereum as this global settlement layer for all sorts of activities, all sorts of assets. With some of them, over time we're going to have the spectrum of things that may not make sense to us today or to many in this room. It's hard to imagine maybe why an NFT or a digital piece of art holds value, or why the metaverse is something exciting, but then you have something like stablecoins and businesses like Visa coming along and saying that maybe this is a better form of settlement between their data centres, so we will have this spectrum of activities taking place and being cleared on this single layer, which is Ethereum. It could be something that's not Ethereum, but today it does seem that Ethereum is what is emerging to be the leading platform.

I think this is really exciting. There's no question that the recent news around FTX is unfortunate for retail investors, for companies or businesses or pension funds that had invested in that leading platform. This was a platform that existed outside of Canada, outside of the U.S., although there technically was a U.S. registration.

As Mr. Hyman was saying, we need to recognize or separate that fraud is fraud, and that's different from the industry, and that in a way there is no regulation that will pass such that if someone on the inside of the C suite level wants to be nefarious and go out of their way to hide certain activities, we can prevent that.

We're here today to lend our time, as much of it as needed, whether it's today or people reaching out to us via email, to help educate, to help figure out what the opportunities are for Canada and how we move this industry forward, and to recognize that despite the price of today, the industry is not going to go away, and we need to be thoughtful about policy and how to move this forward so we are well positioned over the next five years or decade to play a meaningful role in this technology.

Thank you.

• (1115)

The Chair: Thank you very much.

We will move to Mr. Thomas from Wealthsimple.

Mr. Evan Thomas (Head of Legal, Wealthsimple Crypto, Wealthsimple): Thank you.

Good morning. My name is Evan Thomas. I am the head of legal for Wealthsimple's crypto trading platform. I thank the committee for inviting me today. I hope today to help the committee better understand the Canadian crypto trading industry.

Wealthsimple is a Canadian financial services company. We offer various financial tools, including managed investing and do-it-yourself stock trading, in addition to crypto trading. We serve over three million Canadians across all of our products. We employ over a thousand people. We have a head office in Toronto, but being remote first, we have employees across all 10 provinces.

We have over 30 employees who work exclusively on crypto trading, but many, many other employees support our crypto trading platform among our various other products. To offer crypto trading, we have mobile and web applications that make it simple for Canadians to buy, sell, stake, deposit and withdraw crypto assets that exist in different blockchains. Our clients can keep their crypto with us. We hold it on their behalf like a traditional investment, or they can withdraw it to a blockchain wallet under their control.

Regarding our crypto clients, 77% are under the age of 40. However, I emphasize that these are not young people betting their life savings on crypto. The average crypto account value on our platform is about \$1,600. Three-quarters of our clients have invested less than \$1,000 in crypto. You see, most crypto clients see crypto as part of their overall investment portfolio. Four out of five also have accounts with us for do-it-yourself stock trading or managed investing.

I highlight, however, that we view blockchain and Web3 as more than simply investment opportunities. We believe strongly that they will have expanding applications. Our goal is to make this exciting technology more accessible to Canadians.

Regarding the broader Canadian crypto trading industry, a recent Ontario Securities Commission survey found that 12% of adult Canadians currently own crypto assets. That is about 3.75 million Canadians. A recent Bank of Canada paper has very similar numbers. It found that the number of Canadian bitcoin owners nearly tripled between 2020 and 2021.

On the platform side—that is, the platforms that buy and sell crypto—there are about 11 Canadian-based crypto trading platforms, including ours. Most serve Canadians primarily, if not exclusively. There are also some companies that buy and sell crypto but don't hold it for clients. An example would be operators of bitcoin teller machines. There are also foreign platforms that serve many countries, including Canada. At least 15 of those platforms are in the Canadian market. In fact, three out of the four trading platforms most used by Canadians are headquartered outside of Canada.

Canada is a global leader in the regulation of crypto trading platforms like ours. Platforms that hold crypto for clients must register with Canadian securities regulators and comply with specific requirements. For example, we must keep at least 80% of our clients' crypto assets with regulated and insured crypto custodians. We do ongoing due diligence on every crypto asset that we list. We create and update risk disclosures for every asset. We hold our clients' crypto assets in trust. We do not lend out or use our clients' property, ever. We are also registered with FINTRAC, Canada's financial intelligence agency, and we have built a robust anti-money-laundering and sanctions compliance program.

This regulatory framework evolved primarily in response to the 2019 failure of a Canadian crypto exchange called QuadrigaCX. As a result, Canada is further ahead than most jurisdictions when it comes to the regulation of crypto trading.

That brings me to the failures of FTX and other crypto businesses that my colleagues have mentioned.

In each case, there were failures of governance, compliance, risk management and, in some cases, failures of ethics and honesty. These risk and failures, I emphasize, are organizational, not technological; that is, these businesses fail because of how they run their businesses, not because of blockchain or crypto.

The regulations that we have in Canada are very rightly directed at preventing these organizational risks and failures. While there is a strong regulatory foundation in Canada, it is a work in progress. For example, as of today, no foreign platform has registered under the Canadian securities regulatory framework. Meanwhile, nine out of 11 Canadian platforms have. This highlights the need for clear and consistently applied regulations for crypto trading platforms that serve Canadians, whether based inside or outside of Canada. This requires effective coordination between agencies and federal and provincial governments.

There are many areas where Parliament can play a role with respect to payment, asset custody, insurance, taxation and even bankruptcy loss.

• (1120)

Wealthsimple and I are grateful for the opportunity to assist the committee today. I am now available to answer your questions.

Thank you.

The Chair: Thank you very much, Mr. Thomas.

Finally, we'll move to Mr. Garetson from WonderFi Technologies. The floor is yours.

Mr. Adam Garetson (General Counsel and Chief Legal Officer, WonderFi Technologies Inc.): Thank you, and good morning.

I'd like to thank the committee for undertaking this study as well as for inviting me to comment in the context.

My name is Adam Garetson, and I am general counsel and chief legal officer of WonderFi Technologies Inc., a publicly traded TSX-listed company. We employ over 85 people in Canada. We have over a quarter of a billion dollars in client digital assets under management, and over \$6.5 billion have traded in digital assets over our platform to date.

WonderFi primarily allows our users to participate in the buying and selling of digital assets that are based on blockchain technology. WonderFi owns and operates two crypto asset trading platforms, or CTPs, that are registered with the Canadian Securities Administrators, mainly Bitbuy Technologies Inc. and Coinberry Limited.

As a little bit more about me, I have previously served as director and senior counsel at RBC Capital Markets, where my focus was on investment banking and global market trading. I also practised securities law in the Toronto offices of Blake, Cassels & Graydon for a number of years prior to that. I have previously served as a committee member of the Canadian Bankers Association securities legislation specialist group.

I am very honoured and happy to be here speaking to you all today.

In my view, it is highly unlikely that digitization is slowing down or going away in the future. I strongly believe that digital assets are here to stay and will, over time, replace a wide variety of traditional assets. Related thereto, blockchain technology will replace legacy infrastructure.

I've often heard blockchain characterized as “a solution looking for a problem”. The technology certainly has a wide range of potential use cases and has found applicability and significant adoption in the financial services sector, where WonderFi and some of the other panellists here today participate. I see blockchain as the infrastructure technology that has the potential to underlie a number of different use cases, including virtual currencies and other digital assets, the most prominent of which is bitcoin.

Regulation, to me, drives investor confidence. It backstops the development of a reliable infrastructure, and here in Canada, as you've heard already, we have the opportunity to be, and continue to be, a global leader if we get the regulation right. We've seen this initially through the adoption of regulation over crypto assets by the Ontario Securities Commission and the other provincial securities commissions with respect to digital assets. That's helped provide stability to the Canadian cryptocurrency trading sector through a recent period of heightened market volatility in the space.

In short, we need a made-in-Canada solution for digital asset market infrastructure, and our company is diligently working on it. Related to that, industry partnership with legislators to ensure the establishment of coherent regulation for blockchain technology is paramount, primarily in ensuring user adoption of compliant and regulated products, which is, in my view, the best way to combat bad actors in the space. Effectively, that means we incentivize the use of compliant products through assurances provided by regulation.

While my focus on blockchain is in the context of financial services, in my view it's important to take a broader long-term view of the technology itself, as opposed to any one sector or asset. Overly burdensome approaches to regulation run a significant risk of stifling Canadian innovation, such as by lumping low-risk applications of the technology in with more high-risk speculative activity or inadvertently providing monopolies on the development to more traditional players that can afford costs associated with adhering to undue burdens.

Inconsistent application of regulation can also be potentially problematic. Some existing laws may apply already and can be layered onto blockchain-related activity, whereas in other places there may be legislative gaps.

We should also look to what other regulators are doing around the world to achieve a measure of consistency. With respect to blockchain technology and digital assets layered on top of that, I would encourage the committee to take an approach to regulation that leverages existing laws and provides modification to existing rules where necessary, and not attempt to legislate via one fell swoop. That approach, in my view, is cumbersome and frankly unfit to keep pace with a more rapid evolution of the space and the technology.

- (1125)

Paired with regulation of the industry comes a requisite for enforcement, primarily against non-compliant actors. That would be particularly those who operate on an offshore and unregulated basis. I'd also like to advocate dedicated financial and human resources for enforcement in this space, including at the level of provincial securities regulators.

I thank you for your time today. I'm happy to expand on these and other topics through questions.

[*Translation*]

The Chair: Thank you very much, Mr. Garetson.

Without further ado, we will now begin the round of questions.

Mr. Perkins, you have the floor for six minutes.

[*English*]

Mr. Rick Perkins (South Shore—St. Margarets, CPC): Thank you, Mr. Chair.

Thank you, witnesses, for appearing today on this very important topic.

Mr. Garetson and for everyone else, in the Dark Ages in the nineties, I spent some time on Bay Street in a highly regulated financial services industry, both in the regulated banking business and also in the asset-based finance industry. We've had, and some of the witnesses here today have mentioned this, people with ethical challenges since the beginning of time looking to make a buck and take advantage of the people whom Barnum singled out in his famous saying. We had Enron, a publicly traded company. People chose to commit fraud quarter after quarter in that company. Obviously, everybody is familiar with Bre-X and the Ponzi schemes of Mr. Madoff and many others, so this is nothing new. What we have is a new platform that people are coping with, and we're in the early stages of regulation.

Maybe I'll start with Mr. Garetson.

Can you tell me exactly the state of the current regulation? You're referring to the fact, as some of the other witnesses have, that some are publicly traded, and obviously there are securities laws for the publicly traded companies, but some, I believe, like Wealthsimple, are privately held by primarily an institutional or a majority shareholder, which I think is Power Financial. Can you tell me how the Canadian system is set up currently to regulate crypto bitcoin tokens and that new industry?

Mr. Adam Garetson: Yes. I'm happy to respond to that.

To start, off the bat, as you had mentioned, WonderFi Technologies is a public company, so we are subject to the same laws, rules and requirements of any other traditional publicly traded TSX-listed company, including displaying audited financial statements quarterly and annually, etc. We have continuous disclosure obligations as a company.

More specifically, with respect to the crypto and digital assets base, as I was saying in my opening remarks, WonderFi owns and operates two crypto asset trading platforms.

That is a term of art at this point. What that effectively means is that our company owns and operates two restricted dealers as defined under traditional securities laws set out by the securities administrators across the country. Those entities need to be registered across the country in every jurisdiction in which we choose to operate. We're primarily governed by legislation set out in securities laws, including National Instrument 31-103.

What does that really mean? It means we need to be registered with FINTRAC as a money services business. We need to maintain bonding insurance requirements that are set out by statute. We need to maintain working capital requirements. We need to have a chief compliance officer and an ultimate designate person who are registered with the securities commission as well. We are not allowed to act on a discretionary basis on behalf of clients. We are not allowed to have margin or loans or leverage in our system. We have to set out a number of different policies and procedures with respect to our operating companies, including as it relates to conflict of interest. We have to do KYC and AML for our users. We have to establish that opening an account for our users to trade is appropriate for them. Again, appropriateness is a term of art. We also have to do trade-by-trade suitability.

Essentially, we have thresholds determining which clients can trade, based on their level of vulnerability. We have to know our client. We have to know our product. Those standards have to be applied across our companies at various levels by persons who are individually registered with the securities administrators.

To wrap that all up, when you think of the traditional categories of traditional securities players, a restricted dealer is one of those categories, and we need to fit into that traditional box with some modifications for crypto assets specifically.

• (1130)

Mr. Rick Perkins: Thank you.

Traditional lending institutions have to comply with Basel III and all the banking regulations around that internationally in terms of the capital that they have to keep on their balance sheet and what they're allowed to lend.

When an exchange receives payment for the purchase of a token, are there any restrictions or requirements on how much of that cash should be kept within an exchange's balance sheet and on what it is or is not allowed to do with the remaining money?

Mr. Adam Garetson: Definitely.

As I was saying slightly earlier, we are not allowed to offer margin or lending, and as an extension, we are not permitted to participate in fractional reserve banking from the traditional perspective. We hold all client assets one-to-one, and we put out proof-of-reserve audits to show our users where the assets actually are.

Related to that under the modified crypto rules that layer onto the more traditional securities requirements, we are required to hold 80% of client assets in what's referred to as "cold storage". This is industry term of art. Essentially, a great way to think about it, from my perspective, is that a traditional commodity like gold will sit in a vault somewhere, and when gold is traded, it doesn't move in and

out of the vault. You're trading contracts for the actual ownership, but in reality, it stays in storage.

What does that mean for the crypto industry? Well, the security regulators require platforms like ours to hold 80%-plus of our client assets in the vault, in cold storage, at all times, and only take them out if we're going to be moving them around. In practice, what that means for trading platforms like ours is that 95%-plus of our assets typically remain in cold storage, with only a small portion of that—3% to 5%—coming out to do daily transactions.

The Chair: Thank you very much, Mr. Garetson.

We'll now move to Mr. Dong for six minutes.

• (1135)

Mr. Han Dong (Don Valley North, Lib.): Thank you very much, Mr. Chair.

I want to thank the witnesses, as well, for coming today and giving us a very informative look at the blockchain cryptocurrency situation here in Canada.

My first couple of questions are for Mr. Hyman and Mr. Mosoff.

To your knowledge, what industry right now uses blockchain technology?

I'll start with Mr. Hyman.

Mr. Aidan Hyman: We're seeing widespread use of blockchain technology across a wide range of industries, with financial services probably being the largest retail consumer of crypto and blockchains at the moment.

However, as I mentioned previously, the World Food Programme has incorporated blockchain technology. So have many other social-good initiatives and governmental initiatives all around the world. Where we're going to see the largest adoption in the next 10 years, and what Canada needs to be prepared for, is starting to think of these Internet organizations or companies, as we refer to them today, as distributed co-owned pieces of software that live on the Internet. Therefore, the future of this space is way beyond industry effect. It's in how we view the fundamental technologies that make up the Internet.

Mr. Han Dong: Okay.

Mr. Aidan Hyman: The future of this space is really in enabling individuals to create these autonomous organizations through a series of smart contracts that enable functionality way beyond trading crypto, and that's the world we need to be prepared for, because, quite frankly, it's already here.

Mr. Han Dong: You mentioned enabling individuals to adapt to this model. What kind of regulation do you think is required from the Government of Canada to make sure...? Because we're dealing with individuals or corporations in a virtual space, trading potentially large sums of commodities in the case of food, as you just mentioned, what types of regulations do you think the government should be looking at?

Mr. Aidan Hyman: As a few of my colleagues have mentioned, we do have pretty robust regulations in place right now to ensure that for-the-use cases that are being seen day to day are above board.

Where we really need to work together is to start to define what that looks like for this next wave of applications that are going to start to take over the world. Just as when Facebook and all of these large networks launched, we have to re-evaluate how they affect society and how we need to work together to ensure that they don't negatively affect regular people.

We also need to come together to start to understand what the individual implication is and also what the corporate implication of these different things is.

We are a company registered in Canada—

Mr. Han Dong: Thank you. I want to give Mr. Mosoff a bit of time too.

Perhaps you can continue on from that point. To your knowledge, is there in Canada a structured policy framework that is looking at these regulations and at what's required in the future?

Mr. Brian Mosoff: If I can take a step back, I think it's important to recognize that a lot of the activity that has taken place so far inside of these ecosystems has largely been what I call “digitally native”, or blockchain native tech. It's kind of this self-referential loop rather than touching real-world businesses that are out in the “meatspace”, as people in tech would call it.

Where we're crossing into now is this point where companies like Visa are recognizing that tokenizing U.S. dollars perhaps is a faster form of settlement than using the SWIFT network for wires or different ways of clearing cheques. We're at this point that I mentioned before, at the spectrum of activities where you have NFTs and DeFi and on-chain trading happening over here, but now you're seeing banks and financial institutions asking if they should be tokenizing equities, bonds and securities and using this also as a form of settlement.

I don't think it's clear yet how these two worlds are going to collide, but it feels as though in the next two to three years we're going to start seeing all of this activity happening on something like Ethereum.

I also would point out that it's important...because I get this question a fair amount: What are the real-world business cases? Even though it's not quite clear exactly how the technology will be used today, I liken it to the early Internet, when people were looking at how the post office was maybe going to offer electronic mail for people to come into a local service centre and send something to someone in a different jurisdiction, and that would validate the technology of the Internet, when in fact the biggest businesses

turned out to be a library in something like Google, which didn't have that much value in terms of monetary value prior to the Internet. It was the same with Amazon, Facebook and social networking. It's really hard to imagine what the biggest businesses will be in this new world. There are probably things that are more digitally native or blockchain-native than something that we can mirror back to society today.

In terms of regulation, I think where we're at now is that we have done very well with structured products. As I mentioned, we have a few listed entities joining us today. I'm one of them. We have ETFs that we brought to market. But retail investors may want a different access point. For people who are comfortable with the technology and who want to hold the asset direct inside of a centralized entity, in a crypto trading platform or a self-hosted wallet, they are going to look for a way to purchase that asset.

I think the next thing we need to do is figure out how we give enough clarity to the local platforms—

• (1140)

Mr. Han Dong: Mr. Mosoff, I hate to cut you off. This is very interesting, but I want to ask you one other very quick question.

We did a study on quantum technology. Some would argue that it will be commercialized within five to 10 years. What kind of impact will it have on cryptocurrency or on blockchain technology if it does in fact arrive?

Mr. Brian Mosoff: I will give a short answer and then ask Mr. Hyman to chime in.

As far as I know, if quantum is able to break blockchain technology, it would force the space to move to new algorithms that would be quantum-resistant. Some of that research has already begun. More worrisome would be that the entire Internet security would be broken today. Every banking system, every access layer and set of controls for pretty much every system that the government has and that users have would also be broken.

It's a scary world to imagine, but it's something that is important to consider.

Mr. Hyman, I don't know if you want to add anything to that.

Mr. Han Dong: What should legislators do?

Mr. Aidan Hyman: Maybe I can jump in here. I can share an article that we just released on post-quantum consensus mechanisms, which really are kind of the place of fear within the blockchain stack, and how we as a community aimed to solve these problems and have already solved these problems.

I would venture to say that this isn't really an issue in that it's already solved. I will make sure my team shares with your office the article in which we talk about how we achieved what we call post-quantum cryptographic guarantees.

Mr. Han Dong: Thank you, Chair.

The Chair: Thank you very much.

Mr. Hyman, if you could please send that to the clerk of the committee, I think members would be interested in learning more about this.

[*Translation*]

I'm now giving the floor to Mr. Trudel for six minutes.

Mr. Denis Trudel (Longueuil—Saint-Hubert, BQ): Thank you, Mr. Chair.

Thank you to all the witnesses. What I've heard this morning is very interesting. There are still many points that remain unclear, and so we're going to try to shed a little light on them.

Mr. Mosoff, you've often said in the media that the cryptocurrency industry is not a wild west that could be tamed without appropriate regulation. You believe that the industry and the organizations that regulate this new financial system need to work together. There's some cleaning up to do here.

Can you specify what in particular is needed to modernize this industry's regulatory framework?

[*English*]

Mr. Brian Mosoff: Thank you for the question.

I think many joining us today would talk about us having a fragmented securities regulatory environment. I think it's important to understand that retail investors—and I'm going to talk about them specifically for a moment—don't think of things as commodities or securities. They don't bucket the world that way. We might in this room, and lawyers may, and accountants may, but retail investors are seeking an access point to purchase an asset or participate in an activity that they think may be very important and perhaps bring a financial gain. They don't think about what platforms are regulated. Perhaps there will be more of a light shone on that now, in a post-FTX world.

Generally, what this means is that if a local platform is not able to compete with one in a foreign jurisdiction that has less oversight and can offer more products and services that are keeping up with industry trends, that retail investor will seek out the foreign platform regardless of whether there's a local registration or not.

Something that I'm very passionate about would be to figure out a way to allow the local businesses that are trying to be compliant, that want to be registered and that are trying to keep up with the industry to offer those same products and services. If we can build a framework that allows them to keep pace, I think we won't have retail-investor assets moving into foreign jurisdictions.

That, I think, is the biggest help that we need from government. It's to have a national framework, a national strategy on how we see this technology playing out at a retail-asset exposure level, and also how, as a technology, it's going to touch society.

I'd ask Mr. Thomas if he has anything else he'd like to add to that.

• (1145)

Mr. Evan Thomas: Thank you.

There's one thing I would add that is specifically within what the federal government can do to protect Canadians in this area. As Mr. Garetson and I mentioned, crypto trading platforms like ours must keep our clients' crypto assets with custodians. These custodians are themselves regulated, and they are trust companies or banks. They have to have sufficient capital and they have to have procedures for keeping crypto assets secure.

In Canada, regulation of those sorts of entities would fall under OSFI or provincial trust regulators. At present, there's actually only one custodian in all of Canada that meets the requirements under Canadian securities laws, and then there are other custodians that have the technology but do not yet have the regulatory piece. That is, they're not trust companies or banks.

One opportunity at the federal level is for greater openness to developing the crypto asset custody market within Canada. It's a matter that would be overseen by OSFI at the federal level. Actually, last week OSFI did announce that it plans to study this area in the coming years.

Related to that would also be the area of insurance platforms like ourselves, which are required to have insurance for crypto assets. There's increasingly a demand for insurance for crypto asset businesses. Again, to my knowledge, there are no other Canadian insurance companies that will underwrite insurance in this area, but there is a significant demand, both within Canada and globally, for this type of insurance coverage. Again, both custody and insurance are important elements of protecting Canadian investors.

[*Translation*]

Mr. Denis Trudel: Thank you, gentlemen.

You said earlier that cryptocurrency was beginning to make headway in other countries. What do other countries do in terms of regulation? You mentioned the United States and Great Britain, which are currently two of the countries where a lot is happening in this area.

Is regulation more advanced in these countries? Can Canada learn from their experience and from the way they regulate the market?

[*English*]

Mr. Evan Thomas: If the question is directed to me, I can add a couple of comments.

The United States in some respects is more developed, and in some respects less developed. The United States does not have a consistent national framework for the regulation of crypto trading platforms of the kind we have in Canada. At the same time, for example, the State of New York has a regulatory framework for crypto businesses and crypto custodians, and the largest custodians in the world are predominantly located in New York. The experience of New York may be instructive to the committee in terms of considering different modes of regulation, particularly with respect to crypto-asset custody.

In Europe, the EU recently introduced a framework for regulation called MiCA, but it is yet to be implemented. The United Kingdom has been doing, I would say, more forward-looking work and has not yet introduced legislation, to my knowledge.

Again, Canada is ahead in many respects. There are opportunities to learn. New York and the EU might be instructive models for the committee's consideration.

[Translation]

Mr. Denis Trudel: Thank you.

How much time do I have left, Mr. Chair?

The Chair: You have just 12 seconds left.

Mr. Denis Trudel: All right. Thank you very much.

The Chair: Thank you, Mr. Trudel.

Mr. Masse has the floor now for six minutes.

[English]

Mr. Brian Masse (Windsor West, NDP): Thank you, Mr. Chair.

Thank you to our witnesses for being here.

I have a general question to start off. I come from a manufacturing base, where we make things that are tangible and real. In terms of cryptocurrency and trading, aside from being a speculative asset, what practical things does it actually create for the economy, or is it entirely based on the shifting of the numbers?

• (1150)

Mr. Aidan Hyman: I'm happy to address that.

One of the things I mentioned during my speech was that the World Food Programme is leveraging blockchain technology to ensure that people are fed and that the misappropriation of funds cannot happen. This is a prime example of how blockchain technology can be used for a lot more than just shifting numbers. Yes, things are sent to a place, but then to utilize that technology when you are going to a food haul or something of that nature, there's a physical link there beyond just accounting in the back end.

Where we see an incredible shift in how we view Internet products and how blockchain will influence those is really in the data that underpins all of these massively popular social networks. It's a reimagining of how these new applications can be reformed. Owning your own data is going to be crucial to seeing how we can grow beyond the Facebooks and the Instagrams of today.

It's incredibly important to look at this technology as the spine or the plumbing that will inevitably lead to a more user-owned Inter-

net. Is that very obvious right now? Unless you're inside of it, it might be hard, but hopefully, after today, you'll all be on board with that vision of what we can do here in Canada for Web3.

Mr. Brian Masse: I appreciate that.

What I'm concerned about is what is the 3% to 5% that's out there? You mentioned having to keep 80% to 95% in cold storage, so what is the other money doing? Where is it moving around and how is it physically affecting the economy? You did mention the food aid, but the currency didn't create that in terms of the product; it was shifted around.

What are the other percentages doing physically in the economy right now? Is it basically another version of the stock market at the end of the day, in the way that some critics would argue that the stock market is quite similar to a casino? It moves numbers around and so forth, but it actually doesn't produce anything.

What is the 3% to 5% that's out there on a daily basis that affects people's lives?

Mr. Adam Garetson: Maybe I can jump in. I think this entails some of my previous comments.

A good way to consider it conceptually is to think about the underlying blockchain technology and then use cases that can be built on top of it. For traditional industry, you may want to use blockchain to replace your additional system of books and records, for example. It's safer, it's more secure and you can replace traditional infrastructure with blockchain.

One of the use cases that gets built on top of blockchain that primarily impacts the financial services sector is rapid movement of funds and currency. You can do things like instantaneous settlement between counterparties and not have to have money sitting overnight in a financial services system. Therefore, you reduce the risk of counterparty credit failures, failed trades and money movements and things like that.

Another use case that's been built on top is essentially equivalent to an exchange, a marketplace or a stock market for the trading of digital assets. One of the comments I was making a bit earlier is to consider the technology along that particular spectrum and to identify areas for regulation that are responsive to the risk profiles.

Private companies using private blockchains that only people in the company can access to store their books and records and share them with the auditors probably don't need a ton of regulatory oversight. You probably don't care what system of records companies are using today anyway.

On the marketplace side, the jurisdiction has primarily fallen to the Ontario and Canadian securities regulators to apply more traditional securities laws on top, again with some additional gap legislation for those types of products.

In the middle, you have a bit of a spectrum. We're not entirely positive what use cases are going to rise to the top and which ones are going to fall, but one area that you can see at a federal level is the lending-type products. Those don't traditionally fall within the purview of securities regulators. Those are under more banking-type legislation.

My colleague Mr. Thomas was talking about insurance coverage and trust law. You're starting to see financial services cases that are more at the federal level.

To respond a bit more to the 3% to 5%—and I may throw it back to Mr. Hyman for more of a technological...or Mr. Mosoff, potentially—when you think about the exchange-traded business, the 3% to 5% is what's moving on exchange or between users at any given time or at any particular moment, for example—

• (1155)

Mr. Brian Masse: What's that doing for the economy? In terms of that 3% to 5%, aside from speculative worth of the value of that trade, I wonder what it physically does for the economy.

It might be an oversimplified version, but I'm trying to distinguish this process from our financial systems. We have Money Marts and all kinds of different stuff like that, and payday lenders that are basically a drag on the economy. It's about borrowing and getting percentages from people. It doesn't really produce anything, other than just the access to capital and the insurance of making sure that those assets are going to be paid later on at a higher dividend at 20% or 25%.

That's what I'm trying to figure out. Where's the real value for people with what's being done during the day?

Mr. Adam Garetson: I understand. I think one of my colleagues may be better positioned to answer that.

Mr. Mosoff, I was thinking the committee might benefit from—

Mr. Brian Mosoff: Yes. I believe we're almost out of—

Mr. Adam Garetson: Yes, exactly. Great.

Mr. Brian Mosoff: I know you're bumped up against time, but the short answer is that in the long term, we believe that there's going to be very important activity that takes place on these open networks. The question is going to be who owns the tokens that verify, validate and secure all of that activity and those transactions.

You are 100% right that right now, we are in a very speculative part of the cycle. It's people betting that the size of that economy and that activity is many trillions of dollars, and that owning those underpinning tokens and the ability to offer security out to those networks is potentially very valuable.

That's where we are in the journey.

Mr. Aidan Hyman: I'll step in there really quickly. My organization does take part in speculation. We are a technology company that builds open-source developer tools that empower people to

build things, like the people on this call today. They might be using our open-source developer tools under the hood.

I would definitely—and I will share this with the rest of the committee—love to point you to things like Gitcoin that are enabling hundreds of millions of dollars in funding to public common goods, all on the Ethereum blockchain.

I'll point you to different regenerative technologies built on top of Ethereum that are directly contributing to creating a better world and regenerating our planet. There are some incredible use cases that we're seeing today built on top of Ethereum that absolutely do a lot more than just pure speculation. I would go so far as to say that I wouldn't be here speaking to you today if speculation was the be-all and end-all for this space.

When we joined this journey, it was specifically to restructure the fundamentals of the Internet. For most of the people in the early days, that was really their intention. It was never about how we make it easier to speculate on the stock market.

Obviously, the financial tooling and the infrastructure that comes along with this technology is fundamentally applicable throughout industry, which speaks to some of the use cases that my colleagues mentioned with respect to quicker settlement, immediate settlement and trusted settlement through a property of trustlessness and not needing to trust centralized intermediaries when participating in speculation, if that is what you want to do.

Mr. Brian Mosoff: Do we have 30—

The Chair: Mr. Mosoff, I'm sorry. This was a very interesting discussion. I kind of lost control of time, and we'll have to end it there.

We'll move to Mr. Williams for five minutes.

Mr. Ryan Williams (Bay of Quinte, CPC): Thank you, Mr. Chair.

Thank you to the witnesses.

I'm going to continue. This discussion is very important. I want to start at the top level, so we'll start at the top. We'll just start with whoever can answer these.

What is blockchain worth to Canada right now? We talk about its potential, but what is the industry worth in terms of jobs and GDP? Can anyone answer that for us to start with?

• (1200)

Mr. Brian Mosoff: This is going to be fairly speculative, because I think it's very hard to quantify, but I would say that if you imagined Ethereum as a business that was created, it would be one of the largest that Canada has ever seen. The total value of that platform is many hundreds of billions of dollars. At its peak, I suppose it was around half a trillion dollars.

That was born here in Toronto. Most of the key developers have left our jurisdiction to go to other places, because they thought it would be easier to build there and create the opportunities beyond just creating the initial foundation of Ethereum. They would do that in the U.S. They would do that in Europe. They would do it anywhere that would welcome that activity.

In terms of the number of jobs, I can't speak to that. Maybe someone else wants to jump in here.

Mr. Aidan Hyman: Yes, absolutely.

A 2021 report by Electric Capital said that there are just under 20,000 full-time blockchain developers, with an additional 34,000 blockchain developers who are contributing on a part-time basis. In looking at those numbers, it is also important to appreciate that these are not traditional paying jobs; these are incredibly well-paying jobs with incredible benefits.

The more that we can do, as Mr. Mosoff was alluding to, from a regulatory standpoint to ensure that more businesses can be based here in Canada, the more I think it will lead to more new-found resurgence in all of those developers now choosing to come home—I mean, not all of them, not all 20,000 Canadians who left Canada.

Mr. Brian Mosoff: I would also add to that. When I think about the next generation, the people who are 15 to 20 years old today, they're inspired to work in this industry. They see it as a design canvas that is so wide, with a lot of interesting intellectual problems that need to be solved. How do you do on-chain insurance? How do you have file storage that exists on one of these networks?

They look at the Internet as something that is going to be re-created with this technology underpinning it. Even though today it's murky, they see the opportunity to build the next Googles and the next Amazons, and it's inside of this world. They're not going into traditional financial institutions. Of course, some people will, but I think it's important to recognize that to that group, to that cohort, the idea of more digitally native money—money that is perhaps created by an algorithm rather than a central bank in their jurisdiction—is going to be something that resonates with them. That's who is going to make up this economy in the next five or 10 years.

Mr. Ryan Williams: I think it's neat that it's called Web 3.0. It seems to be similar to what happened in the late eighties and early nineties with the Internet. Is this similar? Is this sort of the next iteration? Has our technology developed so much that this seems to be where this is going next?

Mr. Brian Mosoff: I'll just go quickly. I would add two points to this.

First, a lot of people will bucket the iteration of the web into three buckets. The first is Web 1.0, which was basically read-only.

You're connecting directly to someone else's information. You're reading it, and that's it.

In Web 2.0, you have this rent-extraction model. You have the emergence of these big, centralized players, and you have read and write. Social networking becomes a thing, and file storage up in the cloud becomes possible. I would say that most people on this call, whether they're in favour of blockchain or skeptical of blockchain, don't like that world, where we've trusted these big corporate entities to house all of our data. We hope they do it in a secure way, that they won't rent-extract in the background, using that information for advertising or in ways that we don't approve of.

The movement towards Web 3.0 is this: Can we move back to a decentralized web that's more secure, where that end user is more in control of their data?

As I was mentioning earlier, when I think about Ethereum, it's that tech layer that underpins all of this activity, and that's the reason so many people want to speculate or purchase those tokens today. It's because they believe that this world is coming and that those new verticals—file storage, social networking—will emerge, and it will need this global layer of truth. It's not going to be a corporation or a central authority that underpins that activity and runs a database and says you can or can't do something. That one layer of truth is shaping up to be Ethereum.

The last point I'd quickly make is that I think of this like the 21st century invention of the mechanical clock. In the 14th century, the mechanical clock was emerging. It could have been the 13th century; I can't remember. The point is that you couldn't coordinate economic activity prior to this, let's say, for anything less than one hour. Maybe it was a half-day. When you had this mechanical clock and you could coordinate activity down to 15 minutes or to one minute, the amount of economic unlock that came from that was enormous.

What we're seeing now is the tech layer, the Internet layer, where you can coordinate a layer of truth of information, as people were saying, for settlement to replace things, let's say, like the DTCC, or how stocks are traded outside that world—commodities, tokenized real estate. If that can happen on one layer of truth in a very efficient way, that to me is like the 21st century invention of the mechanical clock. That's why a lot of people are really excited. It's because they see that this world is coming and that this technology is not going to be built by a corporation or a government; it's going to be built in an open source way that the entire world can plug in to.

• (1205)

Mr. Ryan Williams: That's interesting.

Mr. Chair, speaking of clocks, I'm out of time. Thank you, sir.

The Chair: Thank you, Mr. Williams.

We will now move to Mr. Erskine-Smith for five minutes.

Mr. Nathaniel Erskine-Smith (Beaches—East York, Lib.): Thanks, Joël.

I want to start with bracketing blockchain from crypto for a moment, because Brian, I think your comments around the value of smart contracts and the economic activity that can be facilitated by blockchain are unquestionably true. We studied Estonia's KSI blockchain and digital ID in the last Parliament, and there's a huge economic value and savings in that regard.

Aidan, you mentioned the value of blockchain in relation to tracking international aid. There's obviously, unquestionably, the value of blockchain in tracking food supply chains and supply chains more broadly, but I guess the question around cryptocurrencies in particular is this: What value are they providing to society as against the volatility risk that we've seen with Terra?

Even if you want to bracket off FTX from this to say that's pure and outright fraud and they were making claims around FDIC protection that they didn't actually have a number of months ago, there are still concerns about the protection on a consumer basis.

All that is to say, let's bracket these conversations and put our focus specifically on cryptocurrencies. What value are they providing that isn't provided elsewhere, as against the risk that is being created for consumers?

Mr. Brian Mosoff: I would start by saying that you have to ask the question, "What is the definition of a blockchain?" This is perhaps a somewhat hotly debated topic.

My view is that a blockchain is a trust coordination mechanism, meaning if you have two counterparties that do trust one another, you probably don't need a blockchain. You could use a database such as MySQL or MongoDB. These are all excellent tools. You don't really need a blockchain.

A blockchain comes into play—again, this is my view, and some people may disagree—and is needed when you have counterparties that don't trust one another. The question is, what is the commodity or the asset that is being put at risk? In Bitcoin you have electricity and computing hardware being put at risk. The token that is rewarding them for their activity of being honest and secure, of being good actors, is bitcoin. It's a token that's native to that system.

In Ethereum now there's been a transition away from computing hardware and electricity, and people are moving that commodity from being external to the network to one that's internal, which is ether, the native token of Ethereum. The reason people want to buy those tokens is that they believe that these open blockchains—these databases for which you don't have to have counterparty risk and you don't have to trust anyone else—are going to be very valuable tools. They are purchasing those—

Mr. Nathaniel Erskine-Smith: Whoa; pause, pause, pause.

Take a token like Helium, which I understand to be contributing.... There's an incentive to add value to providing some of your network, contributing your network, and then there's value to having the token to then use the network. Then they are able to create a public good, a clear real-world public good, but if you're saying we're just creating these tokens in the hope that they get trusted

down the road and there's going to be value, in what world does that make sense?

Mr. Brian Mosoff: I can't speak to Helium. I would ask someone else to jump in if they know that system.

Again, if you look at why Ethereum was created to be different from Bitcoin, you see it's trying to build a settlement layer for any asset or any activity. Those assets can be real-world tokenized dollars, real-world tokenized real estate or crypto-native activity like on-chain trading, which are self-referential to their own ecosystem or NFTs in the metaverse. The question is what underpins that system, and there you need a token.

Does someone want to jump in on Helium?

• (1210)

Mr. Aidan Hyman: Yes. I could speak to one point Mr. Mosoff made earlier. I might not be 15 years old, but I missed the previous Internet boom and was born into this world that really owned me. Everything on the Internet owns everything that I put onto the Internet. People like me who are trying to re-create these systems in a decentralized way, taking away the power of the centralized actors, are the reason these cryptocurrencies are necessary. It is the—

Mr. Nathaniel Erskine-Smith: I understand, but hit pause there, Aidan. With that decentralization comes no central protection. What you end up with, in a case like Terra, is people losing their shirts. How do we have that decentralized model, that vision you have, while making sure people don't lose their shirts?

Mr. Aidan Hyman: Absolutely, and unfortunately the reality is that a lot of people on blockchain knew that Terra was an illegitimate alternative to something like MakerDAO, for instance, which is another decentralized stablecoin.

Mr. Nathaniel Erskine-Smith: Pause yet again, Aidan, because if people knew I could have gone on Wealthsimple—or Adam, I could go on your crypto platform—and I could have bought Terra, presumably, yet Aidan's telling me that people knew it wasn't legitimate.

Mr. Aidan Hyman: I didn't say it wasn't legitimate; it wasn't as—

Mr. Nathaniel Erskine-Smith: Come on, though.

Mr. Aidan Hyman: —algorithmically backed as something else. That's why we need this study—

Mr. Brian Mosoff: If I could just chime in here—

Mr. Aidan Hyman: —and to educate people and work together, as we're doing today, and have more of these committees. The issue is we weren't talking. The issue is we weren't making our voices heard. What we need now is to honestly work together to create the regulation that empowers people to participate in this new Internet without taking away their opportunity to participate. We need to work together, in ways that we never have before, to ensure that things like Terra are caught ahead of time, that things like FTX are caught ahead of time.

Mr. Nathaniel Erskine-Smith: I agree.

I'm out of time. I would just say that I think you're right in saying we need to focus on regulation and protection. If there's a way of matching that regulation and protection with the vision of decentralization that you have, it's great. The core thing is this: How do we make sure we, as regulators, as legislators who want to protect the Canadian public, are differentiating between tokens that are adding value to society and pump-and-dump schemes? At the end of the day, there are too many of those around, and people are going to lose their shirts.

[Translation]

The Chair: Thank you, Mr. Erskine-Smith.

It's over to Mr. Trudel now.

Mr. Denis Trudel: Thank you, Mr. Chair.

This is all very interesting. However, I'd like to look at all this from a different standpoint.

Let's talk about combatting climate change. The Quebec government is placing a huge emphasis on the development of batteries for electric vehicles, for example. But we know that gathering data via the Internet uses a lot of energy.

I was wondering whether there were numbers on how the cryptocurrency industry behaves compared to the traditional banking system. Do we know whether it will require more energy? Are there numbers on this?

My question is not for anyone in particular. Are any of the witnesses willing to answer?

[English]

Mr. Adam Garetson: Sure. Why don't I jump in? I'll just say right off the bat that I don't have an answer for you today. I apologize.

I think one of the challenges with providing a true response to that question is with respect to disclosure. I analogize to the traditional securities world and publicly traded company disclosure-requirement regimes as they exist and as they are evolving. My understanding is that regulators, primarily securities regulators, are working to enhance ESG-related disclosures for public companies, and those laws, I understand, have yet to take effect and have yet to have meaningful impact. However, that is an example of traditional legislation with respect to disclosure—whether it's around an individual asset or a market intermediary—that will be helpful for this space.

We are emerging and developing, but I think of WonderFi Technologies as a public company. As and when there are ESG-related

requirements for disclosure for our company, we will be adhering to those and giving disclosure to the world. That will theoretically be the case with traditional financial institutions in, hopefully, the near term as well, and that will allow for a more meaningful comparator.

I am not as close to the ins and outs of the technology as some of my colleagues here on the panel, but I understand that the industry is working quite hard to reduce its carbon footprint. I don't have a true comparator, but I believe that information is coming as the regulation develops.

● (1215)

Mr. Brian Mosoff: If I can add to that...

You've seen a shift in the two largest networks, Bitcoin and Ethereum. In Bitcoin mining, which uses electricity and computing hardware to validate the network, they are essentially arbing the cost of electricity. That's the simple way of thinking about what they are doing. There is an incentive to co-locate that activity next to renewables using cleaner sources of energy. What the percentages of that network are, I can't speak to at this time, but I know that they are incentivized just through economic forces to do so.

Ethereum, the second-largest digital asset by market cap, has transitioned away from proof of work to something called proof of stake and has reduced its energy footprint by over 99.9% because there is no more electricity in computing hardware, a commodity external to the network, being put at risk. Instead, it's the native token.

These things are moving toward greener solutions. Can they continue to get better? They can, 100%.

I also think it's important to think about every activity we do in society as something that consumes energy. When people say to me, "Don't you find some of these activities wasteful?" I ask them if they believe in watering lawns for people to go on a golf course, or turning on Christmas tree lights during the holiday time. Everything uses energy. The question is whether we think it's a good use of our energy.

The reason to be excited about these blockchains or blockchain technology is that we think a global settlement layer, a global financial system that's not run on corporate servers in a specific jurisdiction, is something that is very valuable. It's something that we can debate. People will have different opinions, but to me, that's the way to frame this question. Everything consumes energy. It's a question of whether we think this is a good use of a limited resource that we have as a society.

Mr. Aidan Hyman: I'll make sure that my team shares some data around energy consumption, specifically the move to proof of stake and what that's meant for energy consumption and blockchain networks because, with proof of stake, we are now able to say that we are using less energy than traditional financial services. I'll make sure to share some of those reports with the committee.

[*Translation*]

Mr. Denis Trudel: Thank you very much.

I believe I've run out of speaking time.

The Chair: That's correct. Thank you, Mr. Trudel.

I'm giving the floor now to Mr. Masse.

[*English*]

Mr. Brian Masse: Thank you, Mr. Chair.

I have no further questions, so if Mr. Trudel or anyone else wants some time, it's good.

It has been a very interesting discussion. There's lots to take in.

The Chair: Thank you, Mr. Masse.

We will move to Mr. Lobb for five minutes, please.

Mr. Ben Lobb (Huron—Bruce, CPC): Thanks very much.

It's great to see such a fantastic panel here today.

My first question is for Aidan or Brian.

I have spent a fair bit of time looking at this. I'm no expert—that's for sure—but I can think of one basic application.

I've known Brian Masse for years. We're good pals and our office is on the same floor. With regard to practical purposes, as we sit here in Canada, we are some of the luckiest people in the world. We don't have to worry about a lot, but there are people around the world who don't even have bank accounts. I think it's two billion people around the world who don't even have the ability to get a bank account.

Brian or Aidan, could you comment on the ability that this might give over the next number of years for people who are unbanked to have a bank and transact? Could you provide some comments on that?

Mr. Brian Mosoff: I would start by saying that the technology and ability to access this global financial layer is very important.

What we're watching right now is a bifurcation in our traditional financial system. We're seeing countries being cut off. We're seeing people's bank accounts being shut off. We're seeing businesses not able to get bank accounts as anti-money laundering and “know your customer” rules continue to ramp up. Some of them are for very good cause and are important, but it's becoming more difficult to perform a lot of economic activity.

The question is going to be, who has the right to approve that economic activity? Who has the right to give people a bank account? For the people who are outside of that system and who have been traditionally left behind, where is their access going to be?

There is a fundamental question for Canada: Do we have a responsibility to people in other jurisdictions in the world to help them be part of financial inclusion?

I suppose you could argue this either way, but the reason I'm so excited about Ethereum, Bitcoin or any of these layers is that as the world bifurcates further and countries get cut off from our econom-

ic activity, people are going to move toward something that is more open and inclusive than what we have.

I think a lot of the potential here is to give access to those people who are outside of the system. I think we're still a ways away. The cost to transact on many of the big networks like Bitcoin and Ethereum may still price out people in developing countries, but it will get there over time.

• (1220)

Mr. Aidan Hyman: One thing we can speak to as well is the development in wallet technologies and specifically self-custody wallet technology.

If we were having this conversation five years ago, the idea of having two billion people leveraging blockchain technology for their financial inclusion would be a complicated and complex thing to discuss. What we have seen over these last, say, five to 10 years is a huge influx of these self-custody wallets that leverage some really exciting cryptographic primitives to ensure that people do have the ability to recover while still having full self-custody.

The technology is now at a place that it has never been before to enable those two billion people, as you mentioned, to be included in this new world.

Mr. Ben Lobb: I wish I had a lot more time for questions here.

I think about one other real and practical application. We may gripe from time to time about our Canadian dollar and how it's against the pound, the American dollar or what have you, but it's fairly stable.

Countries like Lebanon, Turkey, Argentina and other countries have seen their currency crater against the U.S. dollar, and their wealth, in a global perspective, has been wiped out. I also think about the French African colonies that work off the French franc, the 14 countries there. Nigeria is another one I can think of. This gives them an opportunity to own a digital currency that protects some of their wealth.

Do you guys have any comments on that?

Mr. Brian Mosoff: I would agree with that, even though bitcoin seems extremely volatile, and it is volatile. It has been since its inception.

The question is this: Do people have a fundamental right to opt out of a monetary policy in their local jurisdiction? It's not something on which I can say “One hundred per cent, everyone should agree, yes,” or “One hundred per cent, everyone should agree, no.”

The fact is that it's what these technologies enable. If someone was living in Argentina and holding the Argentinian peso when it was one to one to the U.S. dollar, and the government then converted their U.S. dollars into pesos and they had a worse rate than the bank a number of years later, and now... I haven't looked at the rate recently, but it was something like 90 pesos to one U.S. dollar. Citizens in that jurisdiction would 100% benefit from being able to hold bitcoin or a tokenized version of a U.S. dollar or a Canadian dollar. That's where I see the opportunity.

As I mentioned earlier, when we're thinking about CBDCs or the digitization of the Canadian dollar, is there an opportunity to leverage into this technology and to lean into it in a compliant way that is very collaborative with industry, and recognize that people are going to want to hold other national currencies in a way that they maybe haven't had access to before?

As much as the U.S. may complain that the tokenized U.S. dollar and the stablecoins have been issued without oversight or in a compliant way, the reality is that U.S. dollars have become the default "quote currency" in many of these decentralized finance applications. Hundreds of billions of dollars are now sitting in tokenized U.S. dollars. I think the U.S. can lean into that and try to encourage more countries to want to adopt their currency.

There's also an opportunity for Canada to figure out how we push our currency into this technology, help other countries and strengthen the long-term ability of the Canadian dollar to remain relevant.

Mr. Ben Lobb: Do I have time for a quick question?

The Chair: Yes.

Mr. Ben Lobb: On the currency, it's not to replace but maybe to protect some of your wealth through a U.S. dollar coin or something.

The last question I would ask is this. We're studying moon shots in our science and technology committee. Brian, you see a number of proposals come across your desk through Ether Capital.

What are some amazing projects out there that could be complete game-changers for the world?

Mr. Brian Mosoff: I admittedly don't know what a moon shot is. I'm not sure if that's an application or an NFT. However, the technology today that is really exciting is figuring out how you scale up these networks to allow transactions to take place at a fraction of a penny, and what type of economic activity can happen if that becomes a reality in a secure way.

I can't speak to other blockchains. Helium was mentioned before. I'm not sure what that is at a tech level. However, I think that scalability and having the right to transfer something at a fraction of a penny anywhere instantaneously is very important. At the same time, I think that a lot of proposals are going to be developed in the coming years for financial institutions to figure out how they can leverage this technology and these open layers to digitize some of their current activities or use it for a faster or more efficient settlement, while respecting that they are going to need privacy.

Zero-knowledge proofs are something that speak to whether you can transact in a way that a bank does not expose what that activity

is to the open public. Can you transact in a way so that people can't see what it is, but can prove, verifiably, that they have a certain set of reserves and that a certain trade took place? That is developing very much in the background, and it will be a big part of the next few years. It's scalability and financial institutions leveraging the technology in a way that benefits their existing systems.

● (1225)

The Chair: Thank you very much.

Mr. Brian Mosoff: I'm sorry I don't know what moon shots are.

The Chair: We might have some more time toward the end, but I'll go now to Madame Lapointe for five minutes.

[*Translation*]

Ms. Viviane Lapointe (Sudbury, Lib.): Thank you, Mr. Chair.

I'm going to share my speaking time with my colleague Mr. Peter Fragiskatos.

[*English*]

My question is for Mr. Hyman. I would like to shift away from cryptocurrency and explore other uses for blockchain technology.

In your opening statement, you mentioned how blockchain technology can be a model for change, and you cited an example where a world food chain was created. I have heard the Minister of Innovation, Science and Industry, Minister Champagne say that when he meets with world leaders, food security is one of their top concerns.

You've touched on it a few times now, but can you explain to us how blockchain technology can be used in fostering food security globally?

Mr. Aidan Hyman: Absolutely.

Looking at how we utilize centralized databases right now to ensure accountability for things like food supplies, it's unfortunately in a position where anyone in a position of power can influence those numbers. At the same time, we don't have assurances that when capital is sent, wherever it is sent across the world, it is used specifically for the things we demand it be used for.

With blockchain technology comes an auditability to know exactly what information lies where and who is able to manipulate that information, obviously not always in a negative way. With that comes, again, the ability to audit the financial trail as well, in such a way that any person can see for themselves exactly where each dollar is going.

Ms. Viviane Lapointe: When we look at peer countries like the U.K. and Australia, where the governments have developed policies and strategies around blockchain technology, would you suggest that there are some good lessons to be learned there for Canada?

Mr. Aidan Hyman: I would say the greatest opportunity right now is to stand out. It is to do so much more than anyone around us. So many people are waiting for someone to take the lead.

As has been mentioned, we've seen some incredible adjacent legislation in Estonia with their online IDs for their e-Residency program. That really blew everyone away. Seeing something like that on such a global scale was never really considered.

I would actually say that the opportunity here is to stand out beyond our peer nations and to be that hotbed for incredible moon shot innovation that can come by fostering local initiatives to be based in Canada and to not leave.

Ms. Viviane Lapointe: Thank you.

Mr. Peter Fragiskatos (London North Centre, Lib.): Thank you to my colleague.

It's great to be sitting in on the committee today as a replacement for one of my colleagues. It's a very interesting discussion.

This question relates to risk exposure. I'm not sure who wants to take it.

Do we have data on the number of Canadians who have crypto assets—not ones that would be regulated in Canada, but abroad? Is there any information on that?

• (1230)

Mr. Evan Thomas: I can assist the committee with that.

I believe your question is getting at the number of Canadians who hold crypto assets. Do you mean with foreign platforms?

Mr. Peter Fragiskatos: That's correct, and therefore they are regulated in different countries.

Mr. Evan Thomas: Or perhaps they are not regulated at all.

Mr. Peter Fragiskatos: That's right—unregulated.

Mr. Evan Thomas: The Ontario Securities Commission recently did a survey that's quite instructive in this regard. It did more than capture the number of Canadians who own crypto assets. I believe I mentioned in my opening statement that it's about 3.75 million, or 12% of Canadians. The survey then goes on to break down the crypto trading platforms that are used by Canadians. Of the people who hold crypto assets, it has what percentage of them use which platform and lists them by name. I noted in my opening statement that three out of the four crypto trading platforms most used by Canadians are actually foreign-owned.

We could certainly provide the committee with a copy of that survey. It's published by the Ontario Securities Commission and provides more detail. That would give a sense of how many Canadians are using foreign platforms and holding their crypto assets abroad.

Mr. Peter Fragiskatos: I'm not a member of the committee, Mr. Chair, but maybe the committee would benefit from that information.

As I say, it's a question on risk exposure if Canadians hold crypto assets in environments that are either regulated to a small extent or not regulated at all. It's an important question that merits consideration.

Thank you.

The Chair: Thank you very much.

We'll now turn to Mr. Vis for five minutes.

Mr. Brad Vis (Mission—Matsqui—Fraser Canyon, CPC): Thank you, Mr. Chair, and thank you to all the witnesses here today.

I think this has been the most exciting meeting we've participated in since I joined this committee. That's a huge compliment to you and the industry you're working in. In some of the language used today, it's like the seismic shift that my children and many of the children of MPs around this table will invariably experience in their lifetime.

I have a quick question for Mr. Mosoff and Mr. Thomas to start off, just so I'm aware.

In some of the testimony today we heard about cold storage. If I'm a young person under the age of 40 who has a couple of thousand dollars in bitcoin or a coin issued through Ethereum, where is the cold storage today? Where is it physically located?

Mr. Brian Mosoff: I'll let Mr. Thomas chime in, but as I mentioned, I don't believe that the young people today are likely buying structured products like Bitcoin or Ethereum ETFs.

Those assets are being held in custody—or cold storage—largely with Gemini or Coinbase. These are two highly regulated, highly respected U.S. entities. Gemini, for example, holds a BitLicense in New York. It's a trust company. It's the gold standard of custody.

I don't think that most people—I don't want to say under-40s—who want to engage in a self-hosted wallet are the people who are buying the assets through that avenue. I would assume that those individuals are perhaps holding their assets on a crypto trading platform. It's up to that individual crypto trading platform as to how they are doing the custody.

It could be very well that they're using Gemini or Coinbase on the back end. They are perhaps using a software-based wallet called Fireblocks for some of the custody. The individuals may be withdrawing that asset to a wallet that they are in control of. It can be software-based or hardware-based—the hardware being a little USB key that they plug into their computer.

I also would point out that it's not risk-free. A lot of people say that it is a solution; it just comes with a different set of responsibilities. That end user would have to secure that wallet and have an appropriate backup to ensure they don't lose their funds.

Mr. Brad Vis: Okay, thank you.

I have some other stuff just in summary of what we've heard today. Anyone can chime in on this.

This is the first study done by Parliament, I believe, on blockchain. Is that correct, Mr. Chair?

The Chair: I can't speak to all other committees, but I would think so.

Mr. Brad Vis: Generally it's one of the first in which we're actually looking at this. I'm still trying to wrap my head around it. Today's testimony was instrumental in having a better understanding.

What I heard was that we need a national strategy for retail investment. We need asset custody regulation and we need better policies for insurance.

As a committee, when we're drafting a report to Parliament and the Minister of Industry, what other key points that haven't been mentioned today need to be covered in any type of national framework as we begin looking it, so we can get it right to protect Canadians as they embark on this new reality, as it was referred to in some cases today?

• (1235)

Mr. Brian Mosoff: I would just add in one very small thing. Understanding that while we protect Canadians and while we set off on that journey—of course in good spirit—it may mean blocking those same Canadians from participating in the cutting-edge technology and opportunities or assets.

They're at two different ends of the spectrum. Striking the balance, to me, is the key. It's not just leaning completely towards protection. Protection might just mean blocking them from essentially every asset and every activity that's at the cutting edge of this industry. It may be saying they can buy some bitcoin and they can buy some ether, but nothing else.

That will lead to no businesses, no jobs and perhaps missing out on future assets that are valuable, while protecting them from—

Mr. Brad Vis: Thank you, Mr. Mosoff. I have such limited time.

Does anyone else want to chime in on that point?

Mr. Evan Thomas: Very briefly, I would suggest adding taxation to your list.

There are various issues relating to taxation of transactions of crypto assets that could bear some clarification to assist Canadians. It's also to ensure, to the extent Canadians are using foreign platforms, that the revenues and profits that those platforms are generating from Canadians' activities are being appropriately taxed and received by Canada.

Mr. Brad Vis: Okay.

Is there anyone else on that point?

Mr. Adam Garetson: Related to that is enforcement on unregulated offshore platforms. Taxation is certainly one way, but other sanctions would be helpful as well to ensure that Canadians are using Canadian platforms.

Mr. Brad Vis: Thank you so much.

Mr. Aidan Hyman: I would just add further to Mr. Mosoff's point.

There is a spectrum where the most innovative, future-looking technologies are unstoppable and are centralized versions of some of the centralized services you're talking about regulating right now. We need to ensure we empower Canadians to be leaders and not followers. That means enabling them to engage in Web3 beyond just access, as we're talking about regulating today.

Mr. Brad Vis: Thank you.

I have one very broad-based, blue-sky question. Maybe Mr. Mosoff is actually best to answer this.

What I'm hearing today are tones of revolutionary language for the way we live our lives and the way we interact online. I think everyone would agree with that consensus.

In the geopolitical world we're living in right now, a lot of people have Iran and China on their minds. Because this technology is so new and nascent, in China, say, with the state controls it has on Internet usage now, are Chinese citizens able to participate in the blockchain economy in a free way, in the way that Canadians can right now? Has the state already intervened to stop that from taking place?

Mr. Brian Mosoff: I believe that in China, many citizens are able to run VPNs and likely participate on-chain in various activities. What China or any other state or country can do is regulate the on-ramps and the off-ramps and essentially block their citizens from being able to exit or enter that economy with their local currency.

Mr. Brad Vis: Does anyone else want to comment on the application of these technologies in totalitarian states?

Mr. Aidan Hyman: What we're seeing from these states is absolutely a stance against blockchain technology and everything it stands for. They do not believe in freedom. They do not believe in liberty. Quite frankly, they see this technology as stifling the ability for them to have that totalitarian control.

On our list of things to share with the committee, we will definitely make sure to share how these totalitarian regimes are regulating blockchain technology and stopping progress, in turn causing a brain drain, which we have to avoid here in Canada.

Mr. Brad Vis: Thank you all for your time today. This was really very beneficial.

The Chair: Thank you, Mr. Vis.

Now I need unanimous consent for this committee to keep going until 1 p.m. because the bells are ringing.

Do I have unanimous consent?

Some. hon. members: Agreed.

The Chair: That's great.

I'll now turn to Mr. Dong for five minutes.

Mr. Han Dong: Thank you very much, Chair.

First, I think it was Brian who mentioned that right now there are 3.7 million Canadians holding crypto assets.

Is that right? Okay.

• (1240)

Mr. Brian Mosoff: It was Mr. Thomas, but yes.

Mr. Han Dong: Oh, I'm sorry.

Of the 3.7 million Canadians, how many would you say are holding the asset as an investment and not as a tool to actually use for trading in blockchain technology?

Mr. Evan Thomas: I do not have the numbers committed to memory, but I do recall that there is some information on that topic in the Ontario Securities Commission study that I referenced and undertook to provide to the committee. I'd also note that the Bank of Canada has done some studies in this area about not only who is holding bitcoin, but also the purposes for which they are holding it. I would also be pleased to provide a copy of that study by the Bank of Canada to the committee.

Mr. Han Dong: Thank you. That's great.

I have to confess that to this point, in my head or in my observations, if you will, there have been a lot of contradicting elements to it. There is a lot of uncertainty with this technology. We heard honourable members talk about how people in some countries don't even have bank accounts, so they might benefit from this technology going forward. In my head I'm thinking you need Internet; you need some sort of digital platform to run these blockchains and some basic understanding so you will have the confidence and the trust in this system compared to in the traditional tool for trading, which is cash or foreign currency.

There are a lot of contradicting parts to what we are talking about today. What I'm very concerned about is what you said about tokenizing U.S. dollars. I say "U.S. dollars" because that is the currency of trade. The U.S. Federal Reserve has had enormous power in the last decades in terms of who gets to move what around the world. Decentralizing is going to stand up to that structure, for good or for bad. I don't know if Canada is going to benefit, because we're so close to the U.S. that our economies are tied.

I just want to collect your thoughts on this.

First, would this present opportunities for Canada, a medium-power country, to be part of that conversation in the next frontier of determining the currency or the tool used in trade? Ultimately, that kind of sets the allocation of resources on the planet.

Do you not think large countries like China or the United States will come up with their own public fund-backed currency to own this piece of the market share to continue dominating in the decision of who gets what around the world?

I want to get your thoughts on this.

Mr. Brian Mosoff: This is a question that I'm extremely passionate about, and I think about it a fair bit. I believe 100% that there is an opportunity here to lean into this world.

The way that I think about this is this. Let's say that 98% of transactions that take place in Canada are denominated in Canadian dollars and 2% are in a foreign currency and they tap when they go to pay.

The question that I ask a number of people is this: In 10 or 15 years, as the next cohort becomes more comfortable holding their assets in a digital wallet, which could just be Canadian dollars on an iPhone or a smart watch—this is not a smart watch, but pretend it is—and that group of people 10 years from now grows up understanding NFTs or an in-game asset like a sword in a highly popular game, and those marketplaces become more connected and more fluid and have higher velocity and lower friction, will they still be paying 98% of their transactions and denominating their net worth, given the way they think about their life, in Canadian dollars?

If you think that the number potentially is lower, that it's 90% or 85%, what we're really talking about is Canadians over time having less and less interest in doing commerce denominated in Canadian dollars.

Therein also lies the opportunity, though, because I believe that the frontier of crypto or digital assets is going to be about who gets to be a dominant player in this new financial system and be part of this big economic activity. Whoever leans in and designs those dollars—

Mr. Han Dong: I hate to interrupt you, because I know it's a big question that deserves a big answer. Could you write a paragraph? I really want to hear—to see, actually—what you have to say about this.

I want to give some time to my colleague, MP Erskine-Smith, on this issue.

I do want to make one comment. In the beginning, the money wasn't there. It was created so that there's trust embedded in this tool, so that people can trade. Are we going around the circle?

I expect an answer in your paragraph. Thanks.

• (1245)

The Chair: Go ahead, Mr. Erskine-Smith.

Mr. Nathaniel Erskine-Smith: How much time is left?

The Chair: Actually, Nate, if you don't mind, we're out of time for your round.

Han, it's been five minutes already. I know time flies, but we'll have time to come back to Nate a little later.

Mr. Nathaniel Erskine-Smith: Thanks, Chair.

[*Translation*]

The Chair: You have the floor, Mr. Trudel.

Mr. Denis Trudel: Thank you, Mr. Chair.

I'm going to go in another direction.

At the moment, we are experiencing a serious labour shortage in various fields. I was speaking to people in construction recently, and was told that they would like to build housing in Canada, but that there is no one to do the building.

The labour shortage is therefore a problem in several industries, and I would imagine that's the case in yours too. Cryptocurrency is booming at the moment. I would imagine that you find people from within the traditional banking industry.

How do you handle these challenges? Where do you go to find people? Are there immigration-related issues? Should specific criteria be adopted for this industry to attract talent from abroad? Would you say that things are going relatively well for the time being and that you find the people you need for the industry to thrive here in Canada?

[English]

Mr. Evan Thomas: If I may, working in this industry, building businesses in this industry, requires employees with a range of expertise to operate crypto trading platforms. For example, we have engineers; we have designers; we have operational professionals; we have anti-money-laundering specialists and other regulatory specialists. We have to bring together all of their various talents in order to offer these services. Yes, it certainly is a challenge.

The other challenge is that blockchain, Web3 and crypto currency are a global market, a global industry. There is intense competition globally for individuals who have the talent and expertise to work in this area. Some of my colleagues have alluded to Canadians who have left Canada to work elsewhere in this industry because it is truly a global industry, and the individuals within it are very mobile and can and will leave.

At the same time, one thing I would note is the opportunities it creates and the skills required are very high-value employment opportunities. To your question, certainly it is a challenge, not just because of the general economic conditions you referred to but also because we are competing with businesses around the world.

Mr. Aidan Hyman: We can speak directly. We have 120 colleagues in over 32 countries, and absolutely anything that the Government of Canada can do to make it easier for highly skilled workers to come to Canada, be trained in Canada and be able to participate in these incredible organizations that are here in Canada would absolutely be appreciated by Canadian businesses.

First and foremost, I think we need to start at the education level. My cofounders and I come from the blockchain education network, which was a network of university groups that were in maybe 50-plus universities seven years ago. It is really initiatives like that that help foster the kind of great skills that are necessary to participate in these high skill opportunities.

Mr. Adam Garetson: If I could layer on there quickly, I think the hope from my perspective on the employment side is that regulatory certainty over Canadian-domiciled entities will foster confidence for employees working with companies in our space. You'll know who the regulators are, who the people running the companies are. You'll know that they have to be registered and that they have reporting oversight. The hope throughout and, I think, one of the consistent themes, which I hope is a takeaway from what you're

hearing today, is that regulation will drive confidence in a lot of different areas around digital assets and blockchain, including in the employment space.

Thank you.

[Translation]

The Chair: Thank you very much, Mr. Trudel.

I will now give the floor to Mr. Perkins for five minutes.

[English]

Mr. Rick Perkins: Thank you, Mr. Chair.

I agree with Mr. Vis: This has been a fascinating beginning to the study.

My first question is for Mr. Hyman. I'm going to go on to issues other than fraud, so don't worry, but since every transaction in and out of those funds was recorded and kept in the electronic ledger, the blockchain system in those cases was actually very instrumental in proving that what we had going on here was fraud, was it not?

• (1250)

Mr. Aidan Hyman: It was absolutely, and what we saw further was that people on Twitter were the ones breaking the news to the world as to how that fraud was taking place.

Mr. Rick Perkins: Yes, I saw that.

Again, the banks are obviously always worried about being—I don't know if they still call it this—disintermediated, as they used to call it, out of their business. It was a thing in the nineties that mortgage brokers basically made mortgages a commodity and they were looking at other areas in which what they were offering was becoming a commodity, and they were losing their connection with the customer. As they lost this connection with the customer, they lost the opportunity to sell them more products.

I don't know who's most appropriate to answer this. Maybe it's you, Mr. Garetson, since you worked at RBC at one time, but what do you see as the evolution of the use of blockchain? Will it replace the traditional banks, or are they spending as much money as, say, the industry is in trying to figure out how to fit into the future?

Mr. Adam Garetson: Sure. Thank you for the question.

My own personal view is that for legacy traditional financial institutions, their most likely path of exploration in this space is primarily on the nature of the blockchain technology itself and which legacy systems can be improved based on that.

I would venture that anybody who's currently sitting in a position of market power or dominance would be interested in ensuring that they're not disintermediated completely, but they would be looking to find ways whereby they can retain a sense of their current measure of control.

To answer the question a little bit more directly, I think the answer will be somewhere in the middle. I think right now there is an opportunity for companies like ours and those of the members of this panel to advocate for our positions as leaders in the space at this time. We have this opportunity both domestically and globally.

Mr. Rick Perkins: There was some discussion earlier about bank accounts and the challenges in other countries with respect to bank accounts. We also have those here: If you do not have acceptable government photo ID, you can't get a bank account in Canada. There are low-income areas in this country and high immigrant populations in this country in which they are not yet in a position to do that, so I would imagine that this would eventually be of some assistance in that way as well. Perhaps you could comment on that.

Also, Mr. Thomas, you mentioned insurance. I've never known insurance companies to not be willing to find a way to sell insurance and make some money. Your parent company owns one of the biggest insurance companies in this country, Manulife. Is there any chat within the Power Financial group of Manulife or anyone else looking at ways, or is the cost just too prohibitive at this stage for companies to buy it?

Mr. Evan Thomas: I can't speak to the internal discussions within Power, but the challenge with insurance, in my perception from being in the market and seeking coverage for our business and from otherwise talking with other players, is that to a certain extent the insurance companies themselves still view it as a new category of risk. It's difficult, then, for them to underwrite the risk in terms of determining what the risks are and what the losses may be.

I think they also have regulatory concerns. They obviously of course are subject to a regulator, and generally any insurance company answers to a regulator, and if they do not feel comfortable entering this new business line because they're unsure of where their regulator stands on it, then they're going to proceed with trepidation if they're going to proceed at all.

However, there is certainly demand for it, not just by platforms from Canada but around the world. As businesses engage in crypto assets, they may require various types of insurance and will be looking for it.

I am aware, as I mentioned, that OSFI is looking at it, and I regard that as a very positive first step towards expanding the insurance marketplace for crypto in Canada. One thing I would highlight is that we must ensure that these officials, who have been looking at these issues and who are working on these issues, have the support and resources to do that, since they're doing very important work in terms of understanding the nature of the industry and the risks it may create so that they can provide advice on how to improve the regulatory framework to create those opportunities.

I would highlight again that there is that opportunity, not just within Canada but globally, because this is a market that remains very underserved at present.

• (1255)

Mr. Aidan Hyman: I would just add that we do have instances of Canadian companies going to Bermuda for insurance because of the favourable offerings that are there, and absolutely, if Canadian insurance providers would offer these services, Canadian companies and potentially global players would look to Canada as a service provider.

The Chair: Thank you very much.

Last, we'll now turn to Mr. Erskine-Smith for five minutes.

Mr. Nathaniel Erskine-Smith: Thanks very much. I just want to return to the conversation from my last intervention about this acknowledgement in the industry that some tokens and some companies are less legitimate than others.

Mr. Garetson, on the crypto trading platforms that your company operates, is there any acknowledgement for consumers, any discernment for consumers and retail investors, with respect to what would be credible and what wouldn't be credible, the difference between what's legitimate and what's not? This, apparently, is common knowledge in the sector.

Mr. Adam Garetson: I can help shed some light on that.

Just to give a bit of perspective on the scale, if I had to guess off the back of the envelope, I would say maybe a million different types of crypto currency assets have been created.

Our platform at any given time will trade about 30 or 36 of them. One of the requirements we as a crypto trading platform are subject to is product due diligence, so we have to review the risk profile of the asset from a technology, operations, legal and regulatory perspective prior to making it available for trading on our platform. It's not perfect, obviously, but it is better protection than you can get in a lot of other places around the world by having market intermediaries that are held to those standards by securities regulators. Part of that is also disclosure.

Mr. Nathaniel Erskine-Smith: When you say "around the world", though, you're not comparing yourself to the Canadian framework.

Mr. Adam Garetson: I believe the Canadian framework is one of the strongest in the spaces globally at the moment.

Mr. Nathaniel Erskine-Smith: Then before it went bust, I could purchase Terra on your platform?

Mr. Adam Garetson: That's correct.

Mr. Nathaniel Erskine-Smith: Then what's the due diligence there?

Mr. Adam Garetson: The due diligence is on all of those factors. As I said, it's not perfect. That was certainly a black mark on the industry writ large, for certain.

Mr. Nathaniel Erskine-Smith: Okay, so pause for a second.

Of the dozens of products that I'd be able to trade on your platforms, how many are adding a discernible value, a real-world value today, versus how many of these tokens and coins are speculative investments that people are trading with the hope that others will perceive them to be more valuable and they will trade up down the road and then they'll profit as a result of that speculation?

Mr. Adam Garetson: I think there are a number of questions built in there, but the way I would like to address it is from a marketplace perspective. You'll hear a similar sentiment coming from regulators as well.

We're not in the business of picking winners and losers. What we are seeing is that Canadians are interested in potentially picking winners and losers, investing in speculative assets. What we are doing is—

Mr. Nathaniel Erskine-Smith: Despite the fact that there is no....

Look, there are penny stocks in this country, and there's an underlying business case to those penny stocks, but they may be worthless in the end, right? However, we're not listing a venture that has no underlying...just to say "This might be worth more." What did SBF say? It's a box, and the more people who have money in the box, the more other people see it as valuable, so the box has more value.

Isn't that something we ought to prevent, from a retail investment perspective?

Mr. Adam Garetson: I think one of the ways to look at that question is that disclosure is certainly very important when a new asset is created. It's what's being said in the white paper that creates it, what is being said by the founders.

Platforms like ours have to provide disclosure statements and risk-acknowledgement forms to the individuals who are going to be trading in those assets. Really, education and disclosure are key to addressing that perspective.

Again, we're an evolving industry looking to get it right and as right as we can. As I said, we're in a stage of evolution, but where we are focused is on disclosure and education for investors in making investments.

• (1300)

Mr. Nathaniel Erskine-Smith: If we're educating investors, how useful do you think this education is?

After the fraud of SBF—after the fraud—your principal investor, the namesake of your firm, the so-called Mr. Wonderful, was out there publicly saying that he was one of the most brilliant traders in the crypto universe and he also built one of the most robust platforms: "We used FTX actively." Then, when asked whether he would invest in it again, he said yes.

What education are we really bringing to bear with comments like that?

Mr. Adam Garetson: That's a very strong point.

Mr. O'Leary's comments in that regard were his own with respect to his own investments, so I can't speak directly to that.

What I can say, from a platform perspective, is that I'm very happy that our regulators require us to put out disclosure statements that are prescribed, and we do everything we can to make sure we are adhering to those guidelines on a real-time basis.

Mr. Nathaniel Erskine-Smith: Thanks very much.

To both Mr. Garetson and Mr. Thomas, I would very much like to know, in your view and your companies' views, how you think we can better protect retail investors in this space. If you can follow up in writing at some point with some suggestions for what we might consider, I would appreciate it.

Mr. Adam Garetson: We would be pleased to do that.

The Chair: Thank you very much to all, and to our witnesses.

I will echo my colleagues. This has been one of the most fascinating meetings of this committee that we have had. I take a keen interest in this subject, so I appreciate your taking the time. Thanks to all.

This meeting is adjourned.

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