



The Economic Club of New York

Brad Garlinghouse
Chief Executive Officer
Ripple

October 8, 2019
New York City

Moderator: Liz Claman
Anchor, FOX Business Network

Introduction

President Barbara Van Allen

I'm Barbara Van Allen, President of The Economic Club of New York currently in our 112th year. The Economic Club is the nation's leading nonpartisan platform for discussions of economic, social and political issues. More than 1,000 prominent guest speakers have appeared before the Club over the last century and have established a strong tradition of excellence. I'd like to take a moment to recognize those members in attendance of the Centennial Society, which is the backbone of the Club. It enables us to have a strong financial core and obviously it supports our wonderful, diverse programs such as the one we're having this morning. I also want to welcome in the back table on the right our 2019 attending Fellows which is a select cohort of our next-generation thought leaders, sponsored by members of the Club for our year-long program. Welcome to all of you. As a matter of fact, the 2020 Class of Fellows application is now on our website, so it's available. If you all would like to sponsor someone, those members in the room, we'd welcome you doing so.

It's a pleasure for me to now introduce Brad Garlinghouse, the CEO of Ripple, an innovative global payments company which uses the power of blockchain to provide one frictionless experience for sending and receiving money globally. Prior to Ripple, Brad served as the CEO of a file collaboration service, Hightail. From 2009 to 2012, he

was President of Consumer Applications for AOL, and prior to that, he held various executive positions at Yahoo.

Earlier in his career, Brad helped to pioneer the voice recognition process industry – sorry, obviously not my sweet spot – as CEO of Dialpad Communications. He currently serves on the Board of Directors of OutMatch and has held board positions at Ancestry.com and Tonic Health.

The format today is a conversation and we're fortunate to have FOX Business Network Anchor Liz Claman facilitating the interview. Liz will be sure to save time for questions from all of you, the members and their guests in attendance, starting with the first question from our Class of Fellows. As a reminder, please know that this conversation is on the record. We do have cameras here today. It's being carried Live. And if you could please turn your cell phones off, that would be super.

I'd like to now invite Brad and Liz both to come up on the stage and let the conversation begin. (Applause)

Conversation with Brad Garlinghouse, Chief Executive Officer, Ripple

LIZ CLAMAN: Good morning everybody. Thank you so much for being here. As Barbara

said, we're going to tee it up for questions at the end. Your questions may change if we answer something up here. But – he's going to be mad at me for saying this – tee it up, right? Throw curve balls right at his head. That's what we're here for. Brad, thank you for being here at the Yale Club. And we want to thank The Economic Club of New York. Fabulous. All right, I want to start with the what. We know that Ripple is a technology that acts both as a cryptocurrency which is XRP and also as this high-speed, real-time network. So let's begin first with the crypto part of it and we'll get to the payments in a minute. But tell us about crypto and the native coin that is Ripple, XRP.

BRAD GARLINGHOUSE: So, look, the crypto industry, I think, is still very nascent, still emerging. People ask me what inning we're in. I think we're still kind of in the batter's box. We haven't even gotten into the first inning. When I think about how this is evolving, I moved to Silicon Valley in 1997, in the earliest days of the internet, and it feels very similar in that your blockchain technologies and digital assets or crypto currencies I think are going to touch a lot of different industries, but I think we're still figuring out what those look like. In fact, I would argue that in many ways the hype has been ahead of the reality and you saw that in kind of the runup last year. The whole crypto market hit a peak of about \$800 billion of market cap. Now I think it's around \$200 billion and change. But that doesn't mean that there aren't lots of examples where these technologies will touch industries. I was explaining, Liz and I were talking beforehand and I was saying, to me the novelty of a blockchain is allowing two parties

to transact with certainty, but without trust. So today if Liz and I are going to do a business deal together, some central counterparty is going to commute trust. You know, as a consumer that's Visa and Amex. In a banking world, that's correspondent banks because you're using correspondent banks to do a cross-border transaction. Anytime you have a middle man facilitating a transaction, they are susceptible to how blockchains can enable two parties to transact without trust, but with certainty because there's this immutable record out there. Ripple is applying and using this open source technology, the XRP Ledger. We're using that to solve a cross-border payments problem. And I think by going deep in that vertical, we've gained a lot of traction and adoption as opposed to kind of some people have gone more horizontal and thin. We've gone kind of deep and narrow. But I think the cryptocurrency market is still in its nascent stages. I think it'll continue to grow and evolve as people understand use cases for how to apply these technologies.

LIZ CLAMAN: Well, okay. So let me just drill down on the XRP part of it. And why I wanted to start with that is simply because it helps people wrap their mind around it. We're not going to assume that everybody understands how crypto works. Talk about specifically the XRP coin. Is it, for example, is it a stable coin which means it's backed by the U.S. dollar? What is it?

BRAD GARLINGHOUSE: Everyone here I'm sure has heard of bitcoin. Bitcoin, you

know, started from the Satoshi white paper. And one of the things about how bitcoin works is the proof of work. It has mining. You've heard about, you know, miners that are using compute power to verify transactions. That's expensive and it causes a scalability problem. The inventors, the original engineers who developed the XRP Ledger were early bitcoin engineers who saw that there was going to be a scalability problem of bitcoin over time.

LIZ CLAMAN: Well, it's also finite. There are 21 million bitcoin and that's the end of that.

BRAD GARLINGHOUSE: That will be the end. Today there's fewer than that. There continue to be bitcoins mined so it's growing with the idea that it'll have a maximum of 21 million units. With XRP, the idea was, look, when you're doing this mining, it slows down transactions. It makes transactions expensive. There's a better way to do that. And they developed something called – that I won't technically go into – called the Consensus Algorithm. But basically the idea is you don't have to have mining to verify a transaction. But XRP, so this group of engineers developed the XRP Ledger. It's an open source technology. Ripple owns a lot of XRP. We own about 55% of all XRP. So clearly, we're very interested in the health and success of that ecosystem, but it is an open source technology that Ripple uses in its technical stack.

LIZ CLAMAN: What is the use case? We have people in this audience thinking why

would I buy an XRP? First, what's the value of it right now?

BRAD GARLINGHOUSE: I did not look this morning. I think it's around 27 cents, but I'm not sure.

LIZ CLAMAN: Okay, 27 cents per XRP.

BRAD GARLINGHOUSE: Correct.

LIZ CLAMAN: What is the use case? If I bought 10,000 of these to take a chance on it, a couple hundred bucks or whatever.

BRAD GARLINGHOUSE: Well, there's two things I think you're asking there. One is more of an investment question of, you know, are people speculating on digital assets?

LIZ CLAMAN: They are.

BRAD GARLINGHOUSE: Yes, 100%, people are. I mean I think one of the challenges for the crypto space is that, and I have said this publicly before, I think 99.9% of all crypto trading today is just speculation. I mean it's actually some amazing stats. About \$40-\$50 billion a day is trading in crypto. I mean that is a lot. That is a very liquid

market.

LIZ CLAMAN: By the way, there's something like 2,000 coins out there, different types.

BRAD GARLINGHOUSE: Different types of tokens, yes.

LIZ CLAMAN: Basically Top 10, sorry to interrupt, and XRP is one of them at the very top.

BRAD GARLINGHOUSE: So there's a lot, a lot of trading out there but most of it is just speculation. The question you're asking, I think, is what's the utility and what problem are we solving? I think that's the right question because I think over a long arc of time, I think the value of any digital asset will be related to its utility in the world. Ripple is using XRP to solve this correspondent – and we're going to talk about this later – a correspondent banking problem. You know I make the joke that if and I decided to have a race to see who could get \$10,000 to London the fastest, I would win if I just drove to JFK and flew it there. That's the fastest way to move money, which in 2019, in the world of the internet, is a pretty surprising stat. So we are using XRP to help banks, to help regulated financial institutions facilitate cross-border transactions. There's other companies out in the XRP world that are doing other things ranging from micro-payments to even identity management, other things using that open source

technology. But Ripple is very focused on using it for payments.

LIZ CLAMAN: Can you give an example to this audience about how somebody used Ripple to buy or sell something?

BRAD GARLINGHOUSE: XRP in that case, I think, yes. Well, I mean, you and I talked a little bit about this. XRP, in my judgment, and really any crypto, I don't think the use case is a consumer use case today. You know I imagine some percentage of people in the room before coming this morning stopped at Starbucks and you had no trouble paying. You used a Visa, maybe you had dollars in your pocket, I don't know. But it worked. And so when people talk about using crypto for a consumer use case, I go to the, well, what problem are we trying to solve? You know if there's not a problem, then like let's not force change. People aren't going to adopt a new thing unless it's helping you in some way. So I think in First World countries like the United States, the euro, the yen, the dollar, the RMB, I don't see the consumer use case for crypto anytime soon. So I say, in kind of the G20 markets because there are markets that have already lost control of their currency where, you know, the transaction costs for a Visa transaction isn't 150 bips or 200 bips, it's 800 bips. And, you know, you go to Argentina and you get a menu and it has three prices on it. You know, one is to pay in dollars, one is to pay in Argentinian pesos and currency and another is to pay with a credit card. You know that probably will, you know, is there risk for Argentina that cryptocurrencies are solving a

problem? Yes. I just don't think that's, you know, 95% of global GDP, I don't really think that you need to use a cryptocurrency to solve a fiat problem. And we can also talk about this later, but I think that's one of the biggest mistakes Libra, Facebook's white paper, they kind of positioned it as a new fiat currency. And that, of course, raises the ire of lots of governments.

LIZ CLAMAN: Oh, yes, particularly the United States. As we know, Jay Powell is not a fan of it and President Trump has said he's not a fan of it. The Ripple Network, so now let's dovetail to that. The peer-to-peer platform, right, it allows for seamless transfer of money. Would that include everything from U.S. dollars to yen to Canadian dollars to light coin to some of your competitors?

BRAD GARLINGHOUSE: All of the above. The only thing you said – Liz is demonstrating she's very proficient in this industry – she mentioned light coin. You know we work with fiat currencies. We use XRP to help banks solve this payments problem. You know, light coin would have been the exception to that list. But, you know, today we work with banks like Santander. I was flattered, Ana Botin was on stage at this event yesterday and talking about the work we're doing together. And, you know, Santander is a very large, global bank. It has lots of cross-border transactions. They deal with the friction of cross-border transactions depending upon SWIFT. What they saw, and she talked a little bit about yesterday, is that they were losing market share to the

Currencyclouds and TransferWises of the world. And for them to compete on a level playing field, they had to be able to have a different technology framework. And they went out and looked at the various options – this was about four years ago – and started working with Ripple and thus began that particular customer journey.

LIZ CLAMAN: I know sometimes this is proprietary information, but could you name some other customers that would give this audience a sense of how you guys have already put the infrastructure into place? It's servers, right? Is it Cloud?

BRAD GARLINGHOUSE: We actually primarily use technology behind the firewall and that's really because that's where the banks are comfortable. I think over time some of that will move to the Cloud. But, look, we work with a lot of household names – American Express. I mean here in the United States – American Express, PNC, Santander has U.S. and, you know, the largest bank in the eurozone. We work with Itaú in Brazil. We work with Siam Commercial in Thailand. You know we've now signed up over 200 financial institutions globally. Some of them you've certainly heard of, some of them, you know, when we sign contracts sometimes, I think I've never heard of that particular bank.

LIZ CLAMAN: There's MoneyGram as well. You've got a great partnership with MoneyGram.

BRAD GARLINGHOUSE: MoneyGram is a really big deal. The primary reason is I think MoneyGram, more than maybe any of our other customers, is demonstrating the value from a just pure economic point of view of why this is good for shareholders of MoneyGram. MoneyGram - for those who don't follow the company - is about a \$1.2 billion enterprise value company. They have a lot of debt so the market cap is only a handful, hundreds of millions of dollars. What's interesting there is that they have negative working capital of around \$300-\$400 million. Now that negative working capital is there because if I want to settle a transaction with the Bank of Liz and the Bank of Liz is dollars and I'll be Mexican pesos, I would pre-fund money to the Bank of Liz and the Bank of Liz would pre-fund to the Bank of Brad. And then we would use messaging to debit and credit that. But that means I have put dormant capital out into kind of, you almost think about it as the global transaction engine has to have oil in it to work. And so the oil is cash that sits in these accounts all over. For MoneyGram, that's several hundred million dollars of negative working capital. The idea is don't use cash and pre-fund but use digital assets in real time to move value. So the Bank of Liz could hold \$1, sell a \$1, buy a unit of XRP. Move the XRP across a digital ledger into, I guess you were dollars, I'm pesos, from a U.S.-denominated exchange to a Mexican-denominated exchanged. Sell the XRP, buy a Mexican peso. So I've gone from dollars to pesos in real time.

LIZ CLAMAN: On which value? Which currency value?

BRAD GARLINGHOUSE: Well, you went from dollars to XRP...

LIZ CLAMAN: Because currencies fluctuate day to day.

BRAD GARLINGHOUSE: That's a great question. And so these transactions are happening so fast, you're talking about seconds. One of the kind of red herrings here is people are like, hey, I've had bank executives say to me, look, we're not going to use cryptocurrencies, there's way too much volatility. And I let them get that out and they say, okay, wait a minute, let's actually look at the math on that. When you do a SWIFT transaction, the average transaction, let's just say is three days. That's 270,000 seconds, trust me I did the math on that. If you multiple 270,000 seconds in a low volatility asset, if you compare that to three or four seconds in a highly volatile asset like XRP, it turns out you're taking less volatility risk with an XRP transaction than you are fiat. Now, what happens with SWIFT is someone is hedging that risk for you. When you do a transaction to, you know, dollar, yen, what have you, someone is selling you that currency risk to the settlement of two to three days from now. With XRP, it's happening so fast you don't really need to hedge it because you're in and out of it in a few seconds. And so we haven't seen that be an issue. And MoneyGram went Live with us this summer. You know, unbeknownst to us, when they did their earnings call in August, you know, they went from skeptics to – you know, we were working for them for a year to get that deal done – they went from skeptics to holy cow, they couldn't say much

more nice stuff about us. So we're pretty happy with that.

LIZ CLAMAN: Okay, what about the revenue model? How do you guys make your money? Is it per transaction?

BRAD GARLINGHOUSE: There's two things we think about. And, you know, I'm fond of describing it. I grew up in Kansas. When my mom asks me what we do, Mom, we sell software to banks. We sell a software license. We have transaction fees. We have special services fees. We also carry, we own a lot of this digital asset. Anything we do that's good for that digital asset is good for us. So, if you're a gold mining company, you care about, you have a lot of reserves, you care about the value of gold. If you're Exxon, you care about the value of oil. So, you know, we sell software to banks. We think about how to create value, both in that context but also in the overall context of what's the value of the gold we have in the ground.

LIZ CLAMAN: Okay, 55% of XRP, the whole float – if you will – is what you guys own. Who owns the other part? Just people?

BRAD GARLINGHOUSE: It's float.

LIZ CLAMAN: Okay, what is the value of that, give or take right now? Your float.

BRAD GARLINGHOUSE: So there's 100 billion units of XRP that were created and today I think we said it was around 27 cents. So the total market is \$27 billion. We own 55% of that, so what's that, \$15 billion, plus or minus. Now, the float part is the remainder, so call it \$10 billion.

LIZ CLAMAN: And the free market judges, going back to your, they see, some see it as a tradable asset. You guys don't look at it that way. I get it.

BRAD GARLINGHOUSE: Well, we see it as a tradable asset to solve an institutional liquidity problem. So we definitely view it as a tradable asset. There's no doubt that we treat it as a currency in that regard. I just don't think that, I don't think any crypto – let alone XRP – is going to, you know, make inroads into solving that consumer use case.

LIZ CLAMAN: Keeping with the network and these banks that are now signing up, and some of them are becoming believers here, is there proof of work? Tell us how that can actually be, because we hear about blockchain being a digital ledger. But where's the central aspect of this? I guess you could call it the central authority of Ripple.

BRAD GARLINGHOUSE: Yes. Well, intentionally or unintentionally, you're walking into a very, very, very fraught with controversy question in the crypto space.

LIZ CLAMAN: Intentionally.

BRAD GARLINGHOUSE: Yes. So many, many people say, well, bitcoin is the most decentralized asset out there and there's no central operator and nobody can control it. Asterisk, that's sort of true. It's sort of not true. You know the nature of how proof of work works is you have these pools of mining capacity – mining meaning CPUs. So if you think about where would you have concentration of mining, well, that's where you have cheap power. So what has happened is you have 80% of bitcoin mining occurs in China. You actually have four miners who control more than 50% of the, you know, compute power of the bitcoin blockchain. The reason why that's significant is if you have more than 51% of the kind of compute power, you could actually change the blockchain. You could change...you have people talking about, well, it's decentralized, it's immutable, it can't be changed – except if you have 51% of the compute power. Now, this has actually only happened once with a token called Ethereum Classic, ETC. And someone did do something called a 51% attack and was able to steal millions of dollars of value through, simplistically said, a double spend problem. So, is bitcoin decentralized? Yes, I think bitcoin is decentralized. But the nature of proof of work means it's extremely expensive from a power consumption. But here's an amazing stat. One percent of global energy consumption is bitcoin mining. That is a holy shit moment in my opinion. Like, you know, you talked about the green protestors and you look at what people are doing with bitcoin mining and to me it makes no sense at all. Now, I

can't take any credit for this because this predates my involvement with Ripple, but the early engineers who developed the XRP Ledger, they saw this problem coming. And they said, look, this is not the right way to think about verifying transactions because you're going to have to throw more and more power at this and the further you get towards that 21 million, the more power you have to throw at it. So that has been growing more and more. What the XRP Ledger does, it's a very, very simplistic view that, look, if there's a table of people over here – and I happen to know Don Donohue – if Don hands somebody a dollar and everyone at the table agrees he handed them a dollar, the dollar moved and everyone agrees it moved, and we can agree that the consensus is that happened. The XRP Ledgers have over 50 million ledger closes and we've never had a transaction unwound and, you know, it works. It's just a fundamentally different model for how it works.

LIZ CLAMAN: I'm glad you brought up the dollar again because I want to transition, particularly for this audience of The Economic Club of New York. China and other countries, but specifically China, China has completed a prototype – I don't know if you all know this – a prototype of a so-called China coin, a digital currency, I believe it's backed by the yuan. And they are about to unleash their own network similar to, you know, what we're talking about here. Are we behind in that here in America? I mean the Fed is a skeptic when it comes to cryptocurrency. The President is a skeptic. You have a lot of people who still don't quite understand it. Singapore, which is considered a

financial center of the world, very forward-thinking when it comes to technology, that central banker has expressed a little bit of concern.

BRAD GARLINGHOUSE: Yes. So, let's first understand like what stable coins, central bank digital assets is kind of the way they're described. So what the Chinese government is doing is they are apparently going to launch a central bank digital asset. Let's go back to the thing I said about Starbucks earlier. What problem are we solving? So, I look at the Fed today and I'm sure there are bankers here in the audience, and if you want to go and call on the Fed for liquidity, you go to the Fed window. You don't get cash. You get digits in a ledger. And so when, when JPMorgan and I go to the Fed, the Fed is saying, okay, great, here's some sort of ledger change. It's already digitized. So I have actually been a little bit of a skeptic that central bank digital assets do much that we don't already do today.

LIZ CLAMAN: So you don't think the dollar should be tokenized?

BRAD GARLINGHOUSE: It already is. If you think about it, like how many people here, like you look at your net worth statement on a bank account, and like those are just digits. You know, yes, you can go to the bank and get cash, but frankly if you're asking for any more than a few thousand dollars, you have to call in advance because they don't have the cash. So, most of the U.S. dollar is – you said tokenized – I would say

digitized. There is a little bit of a difference. But I think we always have to go back to what problem are we trying to solve? If we're solving a problem or creating customer value, then I think it's great. The only argument I have seen around central bank digital assets is if they want to expand the Fed window from serving a small number of regulated institutions to a mass audience. If everybody here can go directly to the Fed and have an account with the Fed, well, that's kind of interesting. Now we just put the entire commercial banking business out of business. That doesn't sound like a very good idea.

LIZ CLAMAN: I'm feeling the room shivering at the moment. But I would also say too, with China, they tend to have sometimes nefarious positions here. A China coin, if they ran it, they could see every financial transaction from everyone. They love that control. And on top of it, they could bypass U.S. sanctions with this.

BRAD GARLINGHOUSE: Well, the bypass point is an issue, I'm going to pause on that one for just a second. I mean people have made this argument before. I'm like, look, make no mistake about it, the Chinese government already sees every transaction. So whether it's a digital asset, yes, there's lots of efforts to circumvent through cash, but they see a lot of the transactions. Would this actually enhance their ability to see things? Maybe. Yes. I think that's fair. I think the challenge that Ripple struggles with, and you and I talked a little bit about before, is the crypto industry often gets painted with one

broad brush. And you have, as you often do with a nascent market, you have the charlatans and grifters and you have people trying to do bad things. And frankly, you have tokens designed for anonymity. And, you know, that is not going to fly. What Ripple is trying to do is say, look, you can use these digital assets to improve, to reduce friction, to reduce cost, to increase speed. That's good for global commerce. Whether you're the Bank of Liz, you're the Bank of Ward, you're the bank of anybody in this room, you know, there's an ability to use these technologies to improve customer experiences, improve cost. You know someone in this room I'm sure has lived overseas and you've dealt with personally the experience of trying to move money into and out of the United States. It is fraught with challenges. And, you know, SWIFT has a published 6% error rate. Think about that for one second. If 6% of your Google searches resulted in no results, you would think, like, how, the internet is broken. Yet, our global financial infrastructure has a 6% error rate.

LIZ CLAMAN: What is your error rate?

BRAD GARLINGHOUSE: I mean you're talking about virtually zero error rate. The reason is before a transaction happens on RippleNet, Ripple's technology, the Bank of Liz and the Bank of Brad, it's a chatty, like I'm already chatting with you. The way SWIFT works is a little bit more like a postcard. I go to the U.S. Postal Service box outside, I write a postcard, I write the address on it. I stick it in the mailbox.

LIZ CLAMAN: Hoping it'll get there.

BRAD GARLINGHOUSE: I have no idea what happens next. I don't know where it goes. I don't know how it gets there. I don't even know for sure it did get there. That's how the world was developed kind of 50 years ago. And by the way, I'm not trying – I mean I know this sounds like I'm shatting all over it. It works, but it could be much better. Like, you know, if you've lived in a house for 50 years, you want to renovate the kitchen, you want to renovate the bathroom. I look at how do we apply modern technologies to global financial infrastructure and cross-border payments as a way we can massively improve it for banks, for their customers, and we're not changing the regulatory framework. Every transaction is still KYC'd. Every transaction is checked for AML. Because the endpoint, the Bank of Liz, who we trust, is verifying those things already.

LIZ CLAMAN: Before we take questions, because we've got a couple of more minutes for the audience so I hope you guys are getting ready, I'm very interested to know about Facebook's Libra and how someone like you, running Ripple and, of course, XRP, looks at something like Facebook and the Libra coin that they expect to put out there. And I ask that because when that announcement happened, the value of a lot of cryptos, including XRP, jumped because people thought this gives it legitimacy. Do you view it that way?

BRAD GARLINGHOUSE: Well, one thing is I don't think XRP jumped. I would have to go back and look at when they actually announced it. I think, so first of all, it's level-set. Whenever someone asks me about Libra, I often interrupt them and say, you mean the Libra white paper. This is a white paper, people, like we are so far ahead of ourselves. And I frankly think the way Facebook has executed their rollout is, I don't understand why they handled it this way.

LIZ CLAMAN: PayPal doesn't understand either. They just backed out.

BRAD GARLINGHOUSE: Yes, they definitely don't understand. They're out. So I think, you know, they went out and said, look, are there ways we can apply these technologies to, you know, benefit society? Yes. They decided maybe the best way to do that, in my judgment, as they described, to launch what is effectively a new fiat currency. I don't think, I mean going back to what I said earlier, I don't think we need a new fiat currency. And I think it confuses people to have, like okay I'm going to have a Libra token in my Facebook wallet and it's going to be tradable with dollars, as opposed to like if I'm in the United States and I have a Facebook account, let's just use dollars. I think what Facebook did, also I would just observe as kind of interesting, had PayPal led that, had PayPal announced Libra and then Facebook joined two weeks later, would we be having this same conversation the same way? Facebook wanted to lead that

effort and I think in some ways their rollout demonstrated a kind of, maybe a lack of self-awareness about their position with governments around the world. Libra's likelihood of success would have been higher had someone else led that effort. And there were 28 members at the beginning, but I think at the end of the day, you know, it is a Facebook-led effort. I think all of these things, and Ana Botin was so brilliant yesterday, and one of the things she talked about is the word trust. In the world I live in of banking, but certainly around crypto, trust is critical. And, you know, fair or unfair, I'm not even going to take a position on, Facebook has eroded its trust with its users and certainly it's eroded its trust with governments. And so now you're saying, hey, we're going to get more aggressive in this. The comparison, because I launched around June, and right around June the announcement of the white paper was around June, right around then Boeing was having, you know, another crisis around the 737 Max problem. A friend of mine reached out to me and said, you know, Facebook announcing a cryptocurrency is a little bit like the idea of Boeing announcing in the middle of the 737 Max crisis they're going to launch a new double-decker airplane. And it's just like, why would you do that? You know you already have this massive problem, why don't we get that sorted out and solved before you go and create a whole other front.

LIZ CLAMAN: Well, whether it's Facebook's Libra white paper announcement or people's bitcoin disappearing and them calling the Fed and screaming about it, you know one thing is coming, and that is regulation. If you were in the room with the

regulators, whether it be the Securities and Exchange Commission, FDIC, whoever, what two or three things would you insist be in that regulation?

BRAD GARLINGHOUSE: Well, you're going to think I'm dodging the question. I swear I'm not. We have regulations. I mean because what you're asking me is what are the new regulations? In effect, you're saying what new regulations should exist for this? And I think, well, we have extremely robust banking regulation. Any new entrant into that should be subject to those regulations.

LIZ CLAMAN: But when people in this room say are you a banker, you would say no.

BRAD GARLINGHOUSE: Well, I am not a bank, meaning like I don't hold deposits. I don't have accounts. I don't have wallets. You know when I go talk to regulators, what I quickly explain to them is your regulatory framework that exists today is going to exist exactly the same the day after. Before we went Live with MoneyGram – we didn't talk much about that – we got on the phone with MoneyGram's regulators and together we briefed their regulators about what we were doing. And as soon as they understand that this is just a simpler infrastructure, I mean, look, in some ways we're plumbers, like we're enabling a much more efficient plumbing. But the endpoint, where regulators care is, you know, some governments care about capital flow control, some care a lot more about KYC and AML and OFAC and any other acronyms. They get enforced at the

endpoint. We don't change that. You can't do an anonymous transaction on RippleNet because every endpoint we work with is a regulated financial institution.

LIZ CLAMAN: But by that logic you're saying that nothing bad will ever happen at Ripple. There will never be a breakdown.

BRAD GARLINGHOUSE: Well, what I'm saying is there's no difference in the risk today than tomorrow. So, yes, today there is risk when you're using SWIFT and when you're using ACH and when you're using all the different infrastructure technologies today that allow money to move. There's risks. Right? There's hacking risks. There's fraud risk. There's all kinds of things. And we see those. Nothing changed. You started using Ripple's technology underneath and all those risks are still the same, but they didn't get worse. Now, in some ways you could argue they got better in various ways. I'm not even trying to argue that. I'm just trying to explain when regulators look at this and they say what new regulations should we have, I look at it and say, no, no, no, we have a robust regulatory framework. Ripple's attitude is we're pro-regulation, like we're not trying to change that. We are not trying to circumvent it. And the challenge for us has been many in the crypto community, you hear crypto, some people in this room, you heard crypto and you're like, ooh, Silk Road, drugs, you know. And yes, there are bad actors in that system. There are also bad actors that use the U.S. dollar. This is a new way to do that. And, you know, what we're trying to do is say we can bring these

technologies to bear in a regulated world to solve real problems that really improve the economy.

LIZ CLAMAN: Well, I know, but you know the way the regulators think, they want to create something. So you want to be part of that conversation.

BRAD GARLINGHOUSE: For sure.

QUESTION AND ANSWER PERIOD

LIZ CLAMAN: I want to open this conversation right now to the audience. We do have a roving microphone. But let's begin with the Fellow table at the back. And please state your name, with whom you work, and of course your question.

Hi, I'm Peter. I work for Citi Private Bank. My question was just what do you see in terms of your risk going forward, whether that's regulatory or security, digital security?

BRAD GARLINGHOUSE: Well, so I agree with what Liz was saying earlier, you know, even though I really wasn't dodging the question. I think regulatory dynamics are probably the most important thing for the crypto industry and certainly for Ripple. And you see, you know, the macro trend line here, I think, is going very, very well. So three

or four years ago, it was, I think, a very uncertain world. Now you do have things like Facebook happening which makes it much more, you know, front and center. But the U.K. government has been very progressive around this and very clear about their view on the regulatory frameworks around crypto – the Singaporean government, the Japanese government. But you also have a bunch of governments that have either been, you know, neutral. The U.S. has been kind of silent-ish. India has been rather negative. So I think that is the journey we are on and I think anytime you have a new technology, people are trying to figure out how could it be abused, what are the risks? But I think that the number one risk and opportunity is really on the regulatory side. You asked also about security. Look, I think, I count security as a challenge for fiat, it's a challenge for crypto. JPMorgan and Citi have been dealing with it for 100 years and yet still – not that anyone at Citi wants to admit it, but every day, one way or another, Citi is hacked. Now it's not because of Citi, it's because of the end user. I mean every human in his room is the softest endpoint of any, you know, cyber risk. So I think that's still a risk and will continue to be so in the crypto world.

LIZ CLAMAN: Yes, I mean it's happening on a daily basis and it was ever thus. We were talking earlier and I said that's like people flipping out of their minds because Tesla had a car fire and yet there's something like 45,000 car fires with classic, combustible engines every day on American roads. And you're going to hold Tesla to some different structure or level. It's important to keep it in perspective because we all are hearing

about this. So I'm sure you guys are still maybe not sure. If you really want some questions here, raise your hand, and we're happy to. Yes, ma'am.

Q. Dail St. Claire, Park Avenue Finance. Have you worked with any of the financial institutions, specifically IFEs, permissioned by OCIF in Puerto Rico under Act.273?

BRAD GARLINGHOUSE: You're going to have to translate that one for me. Sorry.

Dail St. Claire: I am happy to. No, no, I'm happy to.

BRAD GARLINGHOUSE: That was over my head.

Dail St. Claire: So OCIF, Office of Financial Institutions in Puerto Rico, in 2017 we helped craft the infrastructure for Act. 273, which allows IFE licenses focused in crypto-banking with a host of permissions.

BRAD GARLINGHOUSE: Oh, right, right, yes.

Dail St. Claire: So you haven't worked with them. That's great. I just wanted to know.

BRAD GARLINGHOUSE: I am mildly familiar with this in the context that a number of

different crypto companies decided to domicile in Puerto Rico. And I actually think some people, people I know decided they were going to relocate to live in Puerto Rico for tax reasons. I'm not super close to it. I'd actually love to learn more about it afterwards and hear more about it.

Dail St. Claire: Great. I'll come talk to you. Thank you very much.

LIZ CLAMAN: This gentleman right here.

Q. Hi. Phil Bruno from McKinsey. Around the world many central banks and banking systems are setting up real-time payment systems so you can move money from one account to the other in two seconds or less. And in Scandinavia this year, they're standing up a company called P27. So you can now move currency across border in four countries. Why don't we just link up these real-time payment systems and be done with it? Why do we need Ripple or cryptocurrencies?

BRAD GARLINGHOUSE: I think it's a great question. I'm going to answer it in two different ways. First, I'm going to say I imagine a number of people in here have a PayPal account and you probably have a Venmo account. Have you ever tried to move money from...by the way, PayPal owns Venmo, just to be clear – have you ever tried to move money from Venmo to PayPal? You can't do it. You have to go Venmo back to

your bank and then back to PayPal. The reason why I start with that answer is in a perfect world, we see an interoperable payments network world of the future where all payment networks are interoperable. The world we live in today, and I'm using PayPal and Venmo as the example is highly not interoperable. What you're talking about, you know, the U.S. Fed and the faster payments, that's a domestic clearing. You know we actually think, yes, that would be fabulous. Actually, Ripple was one of the, kind of leads on that task force. At some point, though, you have to go from the U.S. dollar to another currency. There are examples, as you've described, in the Nordics that are coming together in small pockets. The question is can you do that across hundreds of countries or a couple hundred countries and thousands or tens of thousands or hundreds of thousands different payment networks? We see a world where today the internet of information uses TCP/IP and HTTP to enable interoperability across information networks. How do we enable interoperability across payment networks so that if I want to go from my BAML account to Paytm, the leading mobile wallet in India and it's Mother's Day and I want to send my mom \$100 U.S. dollars, that I can do that with no big deal? Today, to send that \$100 to my mom in India, you know, would be very expensive and very uncertain as to how it would ever get to Paytm, the largest mobile wallet provider in India. So, I view those as all positive developments. You know some governments have, some domestic governments, like Mexico's local clearing is way better than the United States. That's good. Now if we get into one, with MoneyGram we get into one bank in Mexico. We can get to any other bank in Mexico in sub-one hour.

That's way better than the United States. So I think we want to see that advancement.

LIZ CLAMAN: The lovely lady in the way back.

Q. Hi. My name is Rebecca Darst. I'm a Topeka High School alumna, by the way. So I just wanted to ask you quickly. You mentioned that you see limited use case scenarios for consumer applications. But I wondered how you feel about whether you see a future for Ripple and/or XRP and/or cryptos generally in asset tokenization specifically, which I know has gotten some attention lately.

BRAD GARLINGHOUSE: Yes, so first of all, I'm from Topeka, Kansas and she is also apparently. That was a long time ago. But the tokenization of assets to make them more fungible, I do think there are some interesting projects going on in this space, in the crypto world. There's people saying, hey, you know, you want to buy, you want to buy as an investment, you know, say an apartment building in London, but you don't want to buy a whole apartment building. Can people tokenize the apartment building and then allow me to buy part of it and then benefit from that appreciation, I think, is the question you're asking. I actually do think that's interesting. I don't know much about it. I think one of the challenges for the crypto industry has been there's a lot of ideas and not as much execution. I want projects like that to be successful. Ripple has invested about \$500 million in other crypto projects around the ecosystem. And now part of that is

because, sure, we want to make money, but part of that is because we want the whole, we want all boats to rise. And so I'd actually, and I'm going to really screw this up and I hate that this is being videoed out, but we invested in a company that's doing something like that. I think it's called Securitize. And the CEO of that company is going to send me an email and be really angry that I can't remember.

LIZ CLAMAN: Well, that's the one thing about Ripple here you guys should know is that they, at a time when a lot of these coins and these systems are going under or consolidating, Ripple just bought Algrim, which is an Icelandic company. You guys are doing bolt-on acquisitions, right?

BRAD GARLINGHOUSE: Yes. We bought, the first four and a half years I was at Ripple, we didn't buy a single company because my attitude was focus, focus, focus, gain traction in what we're doing. You know, like maybe when the dot.com bust happened, you know the strongest used that as an opportunity to acquire things and add things on. We talked a little bit about, I've always been enamored with Amazon and kind of watching how they grew during that time. I certainly think where Ripple is, we're in a very strong financial position, not just in the investments we're making, but we also made two acquisitions in the last few weeks. It was both small acquisitions but to kind of bolster the theme and take advantage of, you know, the "crypto winter."

LIZ CLAMAN: And the engineers that come with it. Are we way behind – and bankers are dealing with this too – in training and teaching engineers in this country?

BRAD GARLINGHOUSE: Yes. And, you know, Ripple is trying to help on that. We announced something called the University Blockchain Research Initiative. We gave away \$50 million of grants to schools – about half in the United States, half outside the United States – to actually see blockchain research and blockchain education at universities. Because we do feel like this is their ten or twenty-year evolution of how technologies can apply...

LIZ CLAMAN: But not K through 12, right? I mean don't you have to lay the groundwork?

BRAD GARLINGHOUSE: Yes. We were focused on...

LIZ CLAMAN: That's your next project. Any other questions as we wrap this up? Yes, sir.

Thank you. Max Niederste-Osholt with Rally Road. I was wondering, if you could start over again right now, what would be sort of the perfect use case that you would want to get into? Or are there use cases that you think are better than Ripple that you might

want to pursue?

BRAD GARLINGHOUSE: You know when I joined Ripple, we were a small company. It was about four and a half years ago. And there were three use cases the company was focused on. One was a smart contracts platform called Codius using the XRP Ledger. The second was a company or a project called Global Identity. And the third was the payments thing. My view was we had to focus, focus, focus, focus and choose one. And if we're lucky with that one over a period of years, maybe we'd get the opportunity to do number two or number three or number four. I don't look, I mean given what has transpired, one could argue that we should have focused more on smart contracts and what happened with the Ethereum network. I don't regret that. I think the payments, look, you have north of \$20 trillion going cross-border each year. It is fraught with error rates and it's slow, it's expensive. For me, it's the classic, like Silicon Valley going up against the big behemoth, Goliath. But it's so broken. I mean when I go talk to banks, it's a beautiful thing for me because banks don't like SWIFT. They're frustrated with SWIFT. Their customers don't like SWIFT. That's a great place to be when you're selling into that. So, do I think there's other vertical use cases and maybe if I went back, could we do it differently? Yes, sometimes I wonder that. But I also think we have been so fortunate, through a little bit of luck and a little bit of skill, that we find ourselves with a lot of momentum, I think, really solving a problem using these technologies at scale.

LIZ CLAMAN: This is such an important morning. I hope you guys all appreciate this because you're at the forefront of getting Brad's story about Ripple, cryptocurrency, and the networks here. Thank you so much. And if you have other questions – a little bit of a tease here – afterward, I'm going to be interviewing Brad once the room clears and it will air at 3 p.m. Eastern on The Claman Countdown on the FOX Business Network. But I will have a surprise question for him that he doesn't know I'm going to ask. So you have to tune in if you can. (Laughter)

BRAD GARLINGHOUSE: Thank you everyone.

LIZ CLAMAN: Thank you so much to The Economic Club of New York. (Applause)

PRESIDENT BARBARA VAN ALLEN: Thank you both. That was just a terrific conversation. Brad, Liz, thank you. I want to just mention that we have some great upcoming events. Bob Iger will be here from Disney, Elena Botelho, David Cordani of Cigna is coming. Michael Dell, we just added November 21 to the schedule. The CEO of Uber and, of course, we're going to wrap up with Larry Fink of BlackRock with our closing dinner in December. Thank you all. Have a great day. (Applause)