

Matt

Welcome and thank you for tuning in to Alternative Investment Talks with Midland IRA where we talk everything alternative investments. I'm Matt Almaguer with Midland IRA today I'm joined by Robert Long a partner at Bell Nunnally Attorneys & Counselors in Dallas. Today we will be discussing a very interesting and hot topic at the moment, crypto currency and bitcoin. Rob, thank you for joining me today. Why don't you us a little bit about yourself and your specialty.

Rob

Sure, I'm a partner at the law firm of Bell Nunnally Attorneys & Counselors. Before entering private practice, I was a Senior Attorney at the US Securities and Exchange Commission and the financial industry regulatory authority. And I also previously served as a federal prosecutor. My practice is national and based on my background I can defend white color and regulatory matters and advice clients on regulatory and compliance issues. And one thing I did want to clarify for your listeners is that I will not be providing any legal advice today or offering any investment advice. But having said that I'm happy to provide information and insights on bitcoin and crypto currencies. And to discuss the regulatory framework for crypto currencies in the United States.

Matt

Fantastic! Well definitely look forward to you know the information that you're going to provide today. As I mentioned it's a very hot topic and kind of interesting discussion piece. I'm very interested to get your insight. So, before we get into the specifics of bitcoin, can you start at the beginning and explain how and when it came to curition. And kind of the reasoning behind it.

Rob

Of course. The bitcoin story really begins in October of 2008. At the time, the securities markets were in turmoil and financial institutions were stumbling and collapsing. It was in that context in October 31st 2008, a white paper was published on the internet titled, Bitcoin – A Peer to Peer Electronic Cash System. And the white paper described that peer to peer electronic cash and payment system, that allowed payments to be directly sent from one party to another party without going through a financial institution. Now, Satoshi Nakamoto reportedly the author of the white paper, but in reality it is widely believed that Satoshi Nakamoto was just an alias and the true author or authors have remained anonymous. But regardless of who authored the white paper, the reasoning behind bitcoin was simple, to create a more efficient transaction system that did not rely on financial institutions, to create a transaction system with irreversible transactions that were less susceptible to fraud and meddling by financial institutions, and to create a transaction system where payments could be transmitted from one party to another party at no cost or virtually no cost. Thereby allowing small transactions to occur that previously would have been cost prohibited.

So, after the issue in Satoshi's white paper it took some time for kind of the techies and cryptographers to develop the software but ultimately on January 12th 2009, the first transmission of bitcoin occurred. And on May 22nd 2010, the first recorded purchase with bitcoin occurred. And the interesting thing is that was a purchase of a Papa Johns pizza for 10,000 bitcoins, and to put that in perspective based on today's prices, those 10,000 bitcoins would be worth approximately 39 million dollars. Kind of interesting, you know the price for bitcoin today and this is a very kind of volatile pricing, September 25th, 2017 the price is around \$3,900. But that can change at any moment.

Matt

Right and I think that is kind of why it's a hot topic right now is that volatility. You know it jumped the past couple of months and has been gaining a lot of attention and you know I wish that I was that Papa Johns owner of that franchise store there and collected those 10,000 bitcoins but...

Rob

Gotcha, it just to kind of clarify a little point, that particular transaction was kind of a privately negotiated Papa Johns purchase so...

Matt

Yeah. Very simple transaction for some pizza. So, as mentioned this is mostly a very educational podcast and that's the whole point of these different episodes together. So you know, what is bitcoin?

Rob

Let's almost take a step back and discuss real quick what a real currency is. So according to the Department of Treasury Financial Crimes Enforcement Network. Which is also generally referred to as "FINCEN", a real currency is the coin and paper money of the United States or of any other country, that is designated as legal tender and that circulates and is customarily used and accepted as a medium of exchange in the country of []. So here bitcoin is not a real currency. It is a decentralized digital currency also known as a virtual currency. So the SEC and the Commodities Futures Trading Commission have defined what a virtual currency is. They've defined it as "a digital representation of value that functions as a medium of exchange, a unit of account, and or a store of value but does not have legal tender status in any jurisdiction. So essentially Bitcoin is not backed by any government. Bitcoin transactions are effected through the internet and in its pure form, bitcoin transactions are conducted on a peer to peer basis without going through a bank or any other financial institution.

Matt

So that's also really interesting because the main, in my understanding, the main draw to the creation of bitcoin and cryptocurrency in general is to get the decentralization of money for these types of transactions. So, you know understanding the actual definition of this type of currency if you will, is pretty interesting in the fact that it is decentralized and there's a lot of hype around it, and that's why we're having this discussion. You know obviously a couple of years ago it was one of those, is this something that's going to stick around, is it not, is it here today, you know, gone tomorrow? But with all of the recent you know volatility and more interest I would think this is something that is going to stay whether it's in bitcoin or a different type of cryptocurrency. So, it's really interesting to kind of see where it all started and where it's at today and kind of where it's going. And I know we'll touch on a lot of these different points throughout this podcast. But again, going back to the educational aspect of it, where do bitcoins come from and what does it mean when you hear someone say mining for bitcoin? What does that really mean?

Rob

Sure, so, well, since there's no central authority to issue bitcoins Satoshi had to come up with a way to issue them. So his idea was to issue bitcoins as an incentive for verifying and recording transactions. Those bitcoins are issued to computers that verify bitcoin block transactions. And verifying transaction blocks requires computers to solve complicated math problems. The math problems adjust in complexity to ensure that bitcoin is issued approximately once every 10 minutes. So regardless if whether there's 100 or 100,000 computers racing to solve these math problems a bitcoin will be issued approximately once every 10 minutes. And Satoshi kind of compared it to mining for gold. A gold miner expends resources to mine for gold to place into circulation. For example, a gold miner must figure out where to dig, dig out the gold, transport it and process it. Bitcoin mining also requires the expenditure of resources. A bitcoin miner must acquire a computer capable of calculating complex math problems and devote CPU time and electricity to the project. So, bitcoin miners range from individuals with home computers and graphics cards, to massive mining farms with rows and rows of computers and utilizing specialized computer chips. A number of bitcoins generated per block and issued to miners decreases as certain issuance thresholds are hit. So ultimately a total number of bitcoins that can be issued are expected to be approximately 21 million. And I'd say currently approximately 16.5 million bitcoins have been issued.

Matt

And that's really interesting as well. I've heard that that same number so it is a fixed kind of finite amount of actual bitcoins that can be created.

Rob

Correct

Matt

Okay. So what are some of the key features of bitcoins?

Rob

Well I suppose that some of the key features would be that anybody with a computer or a smart phone and internet access can transmit it. Bitcoin transactions are final and irreversible. And generally you can transmit it worldwide very efficiently. You don't need a bank account to transmit bitcoin. And transactions can be done peer to peer without going through any third party. And also bitcoins utilize block chains technology which is pretty interesting.

Matt

Yeah you know we hear a lot about block chain and how it's can be applicable to you know different aspects of different markets. You know so what is the block chain and could it have implications to financial market in other industries?

Rob

Yes, you know this technology is one of the most exciting and ground breaking aspects to bitcoin. In essence, block chain technology is an incorruptible digital ledger verified by a network of computers that does not rely on a central authority or middle man. But interesting enough the software and ledger can be programmed to record virtually any transaction because no central authority or middle man is needed. Transaction fees are low or nonexistent. So basically in a bitcoin context, it works like this. Lets say you have a proposed transaction. The proposed transaction is essentially a proposed entry into the public bitcoin ledger. The proposed transaction gets broadcasted to the bitcoin mining network, and then miners combine the transaction with other transactions and form a block. Then the miners race to test and verify their blocks. And the first miner to test and verify their block with a proof of work announces the results to the mining network and ultimately the new block is then added to the block chain.

Matt

Wow, that ah, it's definitely a little bit more involved then I think a lot of people think but the technology behind it I think can be used for you know a number of industries and

more specifically the financial markets. I know one initially came out, the block chain technology was ultimately the attention grabber more specifically in kind of the hedge fund world and being able to put on bigger trades and ah things of that nature. It's interesting to kind of get a better understanding of that as well so that you know when people are talking about it and have clear understanding of the block chain. So how can individuals buy and trade bitcoins?

Rob

There are a variety of ways an individual can buy bitcoins. Certainly, bitcoins can be purchased in a peer to peer transaction. Which would essentially be a transaction between two people and their smart phones and computers. Bitcoins can also be purchased on a US based exchange. The US based exchange will accept US dollars for bitcoin or other virtual currencies. And these US based exchanges are typically licensed within the states that they operate as money services businesses. So some examples of US based exchanges would include Coin base, Kraken, and Gemini. And by the way these are just examples, I'm not endorsing them or recommending them. Bitcoins can also be purchased automated teller machines or bitcoin teller machines. These ATMs except US dollars for bitcoin. These are considered a money services business. And for regulatory reasons, the ATMs allow limited transactions. So for example a customer may be limited to one transaction per day with a maximum value of possibly just a few hundred dollars. I suppose bitcoin can also be purchased on a foreign based exchange, but, these are often suspect and can potentially be illegal so I don't want to get into to much detail on those here. There's also after you have the cryptocurrency or the bitcoins, there are coin only exchanges where basically you cannot purchase them for cash or sell them for cash but you can exchange them for other types of cryptocurrencies. So a couple of examples of those would be poloniex or bittrex and these are coin only exchanges where you can for example change you know exchange bitcoin for a thorium or vice versa or any of the other number of cryptocurrencies out there but they will not accept US dollars or payout US dollars. And by the way, those two coin only exchanges I reference them just as you know examples and I'm not endorsing them or recommending them.

Matt

Right. So the coin only exchanges that's something relatively new to me. I didn't really know those kind of existed. I'm familiar with some of the others and again we're obviously not endorsing or promoting any one exchange or anything like that. It's interesting to know that there are you know these coin only exchanges with the development of the cryptocurrencies. Which kind of leads to my next question is you know people are buying and trading these bitcoins, you know how do people actually own them or store them? You know you hear a lot about wallets and things like that, but how do people store their bitcoins?

Rob

Sure. So you know there's kind of a variety of ways they can be held or secured. You know they could be held on a smart phone or on a computer. They can be held on a digital wallet. And there's two types, there's what's called kind of a hot wallet which is a wallet that is online or is consistently connected to the internet. There are also cold wallets and these are almost UBS like devices, a little more advanced. But these are not online and generally not connected to the internet. And then the third way to hold these or secure these types of you know coins would be through an exchange.

Matt

Makes sense. You know we talk a lot about the technology and computers and smart phones and regardless of how well those are built and the security features input into them there's always vulnerability when it comes to technology. And I think that's one of the main topics around bitcoin is the vulnerability to be hacked. So how likely is it that cryptocurrencies or cryptocurrency accounts in general can be hacked?

Rob

Great question and you know and frankly I'm glad you asked it. I mean there are special risks with securing bitcoins and other cryptocurrency. So kind of talk a little bit about the you know the ways they can be secured and kind of potentially a risk. So if you hold bitcoins or any cryptocurrency for that matter on a smart phone, a computer, or digital wallet. And your smart phone, computer, or digital wallet crashes, dies or is damaged or is stolen or is hacked, you're very likely going to lose your coins forever. Remember we don't have a financial institution in the middle that is going to be somebody you can kind of pick up the phone and call to say hey give me my coins back or you know put them back in my account or track them down so if something like this happens you know you're very likely going to be out of like. You can also one of the other ways we talked about holding these coins is on an exchange and so then kind of the question is you know if you hold them on an exchange are there any risks there? And I mean the answer is yes. You know there are risks there as well you know theres been you know in the past some of these exchanges, you know largely foreign exchanges you know have been hacked. There was a exchange based in Japan in 2014 called Mt. Gox that was hacked. Hong Kong based Bitfinex was hacked in 2016. And South Korea based Bythom was hacked in 2017. So these are kind of foreign exchanges but it does occur and there are risks. In addition to the risks as opposed to the risk of the exchange being hacked, there is also the risk that the account itself at an exchange can be hacked. So if you have an account and you know even with you know what's kind of called out there two factor authentication, it is possible for hackers to you know get in there and basically you know hack an account.

Matt

Right

Rob

When that happens you know it is possible again that somebody whos got their coins and if they get hacked and their dissipated a very good chance that they aren't going to be able to get those coins back.

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