

KEEN ON RETIREMENT



What is Bitcoin? Blockchain? Should You Buy Some?

Welcome to Keen on Retirement
With Bill Keen and Steve Sanduski

- Steve Sanduski: Hello, everybody, and welcome back to another episode of "Keen on Retirement". I am your cohost, Steve Sanduski, and this is the show where we have conversations about helping you thrive before and during your retirement years, and I am here today with my cohost, Bill Keen, and Matt Wilson. Gentlemen, how are you today?
- Bill Keen: We're doing good here at Kansas City during this nice holiday season, Steve. How about you up there? Are you in the Christmas and holiday spirit?
- Steve Sanduski: We sure are. In fact, we've got a Christmas tree up, and we are anxiously awaiting the kids coming home. So we've got kids coming in from North Carolina and a couple kids over in Madison, Wisconsin, and a son-in-law, a couple of boyfriends, and a dog. So we're going to have a Siberian Husky for a few days.
- Bill Keen: Wow, oh my gosh. It sounds like that movie, what was it? The Chevy Chase Christmas Vacation, or something at your house, Steve?
- Matt Wilson: Yeah.
- Steve Sanduski: Yeah, yeah. So we're excited, we're looking forward to it. And then of course, we've got the new year coming up, and we've got college football, all kinds of great football games. So yeah, so we're looking forward to the season here.
- Bill Keen: Yes, well so are we. I just turned 49 here earlier in December, Steve. I know you probably aren't feeling sorry for me at this point, but you get to a point in life where you start realizing the holiday seasons and actually birthdays and just life in general, it goes by pretty quickly, doesn't it?
- Steve Sanduski: It does, yeah. In fact, I have a birthday coming up tomorrow.

Bill Keen: Oh my goodness.

Matt Wilson: Oh, wow.

Steve Sanduski: I think I'm old enough that you could be my son, Bill.

Bill Keen: Oh, well come on. Come on, you're going to have to come clean with it.

Steve Sanduski: Just kidding, just kidding.

Bill Keen: I was going to say, you wear it well, Steve.

Steve Sanduski: Yeah, yeah.

Bill Keen: Are you going to share a number with us? I mean I shared a number. Come on, you're safe here.

Steve Sanduski: I will. I will be 56.

Matt Wilson: Wow.

Steve Sanduski: Okay, very nice. Very well-traveled. A lot of wisdom from your journey.

Bill Keen: Well, hopefully.

Matt Wilson: Yeah, we're all December birth dates here. I have mine coming up later this week.

Steve Sanduski: Oh, you do?

Matt Wilson: I do.

Steve Sanduski: Okay, and how old are you going to be, Matt?

Matt Wilson: I will be 36.

Steve Sanduski: 36.

Bill Keen: Ooh.

Steve Sanduski: So you could be my son?

Bill Keen: So I guess you could tell Matt that he's closer to 40 than he is 30 now, huh?

Steve Sanduski: He is.

Matt Wilson: That is true.

Steve Sanduski: Yes, and I'm closer to 60, and Bill, you're closer to 50.

Bill Keen: I'm very close to 50.

Steve Sanduski: Fun with numbers.

Bill Keen: That's right. Well, the theme of that is time passes quickly, and time is a very valuable, elusive resource that we all have the same amount of, and I always say stop and enjoy the moment, and make memories. I want to look back each year, and say, "Wow, yes, the year went by quickly, but it was year well-lived."

Steve Sanduski: Yeah, and I think that is so true is oftentimes we just get caught up in the rat race and the busyness of life, that we don't often take time to just sit back and think, and reflect on just how good I think most of us have it. I think most of the people listening to this have pretty good lives, and a lot to be grateful for, and this is certainly a time of the season to be grateful for all the good things that we have and appreciative. And I know I try and take time every day to be grateful for all that I have and the blessings that I have, and just very appreciative of that. So yeah, this is a great time of the year to be thinking about that. Every day is a great day to be thinking about that, but especially this time of year.

All right. Well, today we are going to talk about something that is in the news a lot, and it has nothing to do with politics, right?

Bill Keen: Can you believe it? It doesn't. I'm sure we can find a way to weave politics into it, but this episode was coming, Steve, Matt, it had to. You know it did. There's so much information now floating around about it. I think we need to go there, Steve.

Steve Sanduski: I do too. In fact, I think it's really interesting and fascinating to talk about it. So what we're going to be talking about is Bitcoin, blockchain, cryptocurrencies, so this is all over at least the financial press if people pay attention to that. A lot of people talking about this, and what I think is so fascinating about it is one, the technology behind it, I think is really intriguing. But then, number two, just the psychological behavior that people are exhibiting around this technology and around Bitcoin and cryptocurrencies, and how I think it's such a metaphor for what has been happening for thousands and thousands of years as humans, where we get caught up in manias like the tulip bulb mania from several hundred years ago. We're going to get into some of this stuff. But yeah, I think it's just a fascinating topic, and I think there's a lot of lessons here for us in terms of how do we understand our emotions and our behaviors in such a way that we make sure that we don't make bad financial decisions, so lots of good stuff to talk about here.

Bill Keen: Yes. First and foremost on that, for sure, Steve. But then, when you have something like the Bitcoin and the blockchain that actually has some very credible attributes to it, it makes it even more confusing for the general public especially on what exactly is this? How do I participate? Do I do nothing? Do I do something? Am I being left behind? What are the things that are legitimate about these technologies, and how can they better us when we look up five or 10 years from now?

Steve Sanduski: So Matt, what are some of your initial thoughts here as we start talking about blockchain and Bitcoin, and cryptocurrencies?

Matt Wilson: Yeah, I think it's good to define maybe a few of these terms the definition on Google for this is a digital currency in which encryption techniques are used to regulate the generation of units of currency and verify the transfer of funds, operating independently of a central bank. So according to Google, that is the definition of what a cryptocurrency is.

Bill Keen: Did you get that, Steve? I'm taking notes here.

Steve Sanduski: Yeah, yeah. Yeah, well, you know I've done a little bit of research and had some conversations with some people that know a lot more about this stuff than I do. I think I know enough to be dangerous.

Matt Wilson: I think I've read there's thousands of different types of coins out there, but Bitcoin in a sense was the first one and is the most popular by far. So when we're talking about Bitcoin, essentially we're kind of talking about just all cryptocurrencies in general.

Bill Keen: You know, language is so powerful that when you say the word "coin", you say "Bitcoin", I think it just draws into people's minds, gold coins of some kind, and that in itself creates confusion in my mind, I think for myself and the public as well. Actually, to hear the definition, we kind of made fun of the long definition, but to hear the definition helps, it really does. And I think today, gentlemen, if we could make some comparisons to things that folks can relate to, that can make this a lot easier as well.

Matt Wilson: When someone owns Bitcoins and they want to pay for something, they just transfer Bitcoins to someone else, and they process that transfer via the blockchain. And the blockchain is the most valuable aspect to all of this, I've got another definition for that, and again, it's a complicated process but essentially, the blockchain technology offers a way for un-trusted parties to reach agreement on a common digital history. A common digital history because digital assets and transactions are in theory easily faked and/or duplicated. Blockchain technology solves this problem without using a trusted intermediary.

Like right now we're familiar with banking institutions as intermediaries for transactions. Well, the blockchain eliminates a lot of the need for these, which

does reduce the costs of transactions and the time needed to make transactions happen. That is where there could be significant cost savings all the way to the end-user, to individuals because we could essentially eliminate many of these intermediaries, which slow down the process and add cost to our transactions.

Bill Keen: Well, think about escrow companies as well. We have these transactions whether they're here in the US or even between overseas parties. Something has to be fulfilled in a contract before assets or capital is released, and an escrow company has those resources tied up. Imagine eliminating that whole process. And not to mention that, but governments as well.

Steve Sanduski: Mm-hmm (affirmative). Yeah, I think one of the really interesting applications, so Matt, as you're talking there about how this can reduce cost in the system, and Bill, you gave an example there with an escrow. I was just having this conversation a couple nights ago with my dad and trying to explain to my 88-year-old father what Bitcoin and blockchain is. It was a good time.

The example that I was sharing with him was I said when you buy a house or a piece of property, you have to get title insurance, so you have to pay whatever it is, \$200, whatever the number is, to an insurance company that basically says, "We're going to ensure that you actually are the rightful owner of this property." So every time you buy or sell a piece of property, you've got to get title insurance. Well, what the blockchain can do is we can initially, like if I just bought a house, and I went to a title insurance company and they verified Steve Sanduski is the owner of this house. Well, at some point in the future, they will be able to enter that on a blockchain. We'll call it the "Title Insurance Blockchain," and then that record that I own this piece of property now will be verified through the blockchain. And what that means is there could be hundreds or thousands of computers that are all networked together that when that initial transaction gets entered on the blockchain and there's some mathematical computations that take place for this, that all the other computers that are on that blockchain will verify that transaction.

So now, there is this record on the blockchain that says I own this piece of property, and I can't resell it again because if I did, then ... Well, I can resell it, but then it has to be verified through the blockchain, so I can't resell it again and sell the same piece over, and over again. So what this does is the next time I go to sell, I don't have to go through a title insurance company. I just use the title insurance blockchain and show them I own this, and here is my proof through the blockchain that I own this, and maybe that costs \$10 to verify that on the blockchain. So now, we have no need for title insurance companies anymore. That's just one very small example of these third-party trusted intermediaries that are verifying transactions that eventually could all go away because now this verification is done through the blockchain.

Matt Wilson: Even in securities transactions too. We just recently had a reduction in the settlement procedure here in the US markets. It used to be trade date, T plus

three they would call it. Trade date plus three days, and now it's reduced to trade date plus two days. You have two days to pay for any securities you purchased, and also it takes two days to receive your money from any securities you sell. Essentially, with the blockchain that could reduce to it could be instantaneously.

Bill Keen: That used to be five days, Matt, back when I got in the business in the early '90s. It was a five-day settlement, do you remember that, Steve?

Steve Sanduski: Mm-hmm (affirmative). Yeah. Yeah, it keeps going down.

Bill Keen: So it's taken us quite a while to get from five to three to two, hasn't it? And maybe we'll get to zero here pretty quickly.

Matt Wilson: That's probably the biggest thing, that's one of the biggest issues with blockchain right now is the scalability of it. Because there is no controlling entity of it, it requires participants to have these up-to-date ledgers. In Steve's example, it would have an updated ledger of who owns this piece of property, and so these participants all have to constantly be reviewing their ledgers and comparing them to each other so that they're up-to-date. They can process maybe 20 transactions per second, and to compare that to what we're familiar with, like a credit card company like Visa or Mastercard. Visa can process over 1,500 transactions per second. There's a lot of scalability that needs to happen for blockchain to be able to be accepted in more of our traditional forms of transactions. But that leads to the other issue is the power consumption.

Steve Sanduski: Yeah, that's a really interesting point there, Matt, and this also really ties into how is one of these digital coins or currencies created? It really gets back to the blockchain. So Bitcoin, which is the cryptocurrency is actually based on the blockchain technology, a Bitcoin blockchain. And so what happens is this whole verification process that you were talking about where going back to my example with the title insurance, in order to actually verify that transaction on the blockchain, somebody has to have computers that are programmed to solve the equations that help verify this transaction, and then it ripples across all the other computers that are verifying this transaction.

Well, who is managing these computers? Who is paying for these computers to actually solve these equations that verify the transaction? Those people are called miners, and so what they do is they have big fields of computers up in Iceland and various other places where the electricity is low, and they are sucking lots of juice out of the electrical system to power their computers to do the computations to solve these formulas to verify these transactions. Now, what's interested is the way that these miners get paid for verifying these transactions on a blockchain is they get paid in a currency. So some people get paid in a Bitcoin, and so when they solve a transaction, if they are the first computer to solve that formula that verifies a transaction, then the system awards them a Bitcoin, and that is how a new Bitcoin gets created.

Now, what is interesting about Bitcoin in particular is when it was initially designed by a guy named Satoshi Nakamoto, who nobody ...

Bill Keen: That's a group of people, or one person, or ...

Steve Sanduski: We don't know. Yeah.

Matt Wilson: Yeah.

Steve Sanduski: Yeah, we don't know if it's ...

Matt Wilson: It could be Steve Sanduski.

Bill Keen: Ooh.

Steve Sanduski: If it was, you wouldn't be talking to me, right now.

Matt Wilson: Okay.

Steve Sanduski: Because I would be worth many billions of dollars in Bitcoin.

Matt Wilson: Are you telling us that just because of that, you wouldn't talk to us, Steve? Is that what you just said?

Steve Sanduski: Yeah, well.

Bill Keen: I think he did, Matt.

Steve Sanduski: I think I would probably be cruising the South Pacific on my yacht.

Bill Keen: Okay.

Steve Sanduski: But yeah, so they get paid in a currency. Like in this example, I am saying they would get paid a Bitcoin for being the first miner to verify this transaction. Now, one of the things that makes Bitcoin in particular so speculative right now is that the way the whole Bitcoin system was designed is that there will only be 21 million, roughly 21 million Bitcoins will every be mined as part of this mathematical formula in terms of how they're making Bitcoin available. Right now, I think we have about 16 million that have been mined through the verification of these transactions, and it's estimated that the last Bitcoin will be mined in 2140. The year 2140.

So one reason why Bitcoin in particular is fluctuating widely in value is people are thinking, okay, there is a limited supply. There is only going to be 21 million Bitcoins ever mined, and so there's some speculative scarcity value there, which is one thing. And then, as we get closer and closer to that 21 million, the formulas become harder and harder to solve, and require more and more

computation power, require more and more electricity to solve. And so, yeah, this whole problem you were bringing up there, Matt, about how quickly we can verify these transactions, that is perhaps a potential cog in the system here.

Matt Wilson: Yeah, I read a report that said by 2020, the energy consumption for Bitcoin and blockchain would be equal to the energy consumption of the entire world today. Now, that seems a little ... I'm not sure how accurate that projection is because that does seem kind of ridiculous that in two years, we will have just this enormous energy need to process these transactions.

What's interesting about it too, I've heard about the 21 million Bitcoins. Something that happened recently was Bitcoin forked into two different cryptocurrencies. There is now just the traditional Bitcoin and then Bitcoin cash. So even though there is finite number, I do believe that's not necessarily going to stay that way. And because they are digital, the units can be broken down into however many decimal points we want. One Bitcoin, you can transact in 0.000001 Bitcoins if you need to. So almost the fact that there is a limited number of 'em isn't a restriction into what the process can happen.

Bill Keen: It's like a stock split or something that can happen.

Matt Wilson: That is right. That is right.

Bill Keen: So let me ask you gentlemen this, I am buying into the fact that there is creative destruction. Industries, entire industries go away as additional technology comes online and new things, new and better things are invented, and I'm totally buying that with this technology. So I am in with it, I think it's great.

How do I participate in this? If I want to be on the blockchain and someone that can get credentialed and verified, if you will, and participate, is this a voluntary thing, or is this something like we had with the Equifax situation, where it actually wasn't voluntary. Everybody's information was uploaded to Equifax. And then, Equifax had a breach. Is this something that everyone gets drawn into this thing against their will, or do you have to choose to be a participant?

Matt Wilson: Well, I do believe you ultimately have the choice, just like anyone has the choice of whether or not they use credit cards today. You may not be able to do many things if you don't choose to have a credit card. So with blockchain, if it becomes more of an acceptable technology, we may not have the choice of participating in the blockchain.

Now, the whole Bitcoin and cryptocurrency concept, now you do have a choice of whether you wanted to own Bitcoins or not, or any other type of cryptocurrency, so that is voluntary. And that's what's getting all the attention is the value of a Bitcoin, and who determines this value? And as Steve mentioned, some of it is maybe the scarcity. The way I was even thinking about this recently was comparing it to the dot com bubble in the late '90s. Back then, anything

with the word "dot com" at the end of it, it didn't matter if their business made money or not, their stock prices just went through the roof, and as we saw the aftermath of that, many of them were not very good investments and lost all of their value.

People think they're participating in this emerging new technology of blockchain by buying Bitcoins? I don't think that's a very good investment thesis there because really there's no floor to it. A business, you can liquidate it. We know what a business ultimately is worth in a fire sale type situation, but Bitcoin is truly only worth what someone will buy it from you. Right now, the prices are very high. We're seeing 17, 18, 19,000 for one Bitcoin up from ... Gosh, I don't know. Were they implemented at \$1, Steve, back in the day when this thing was first created in 2008?

Steve Sanduski: No, I think they were like a penny.

Matt Wilson: Yeah.

Steve Sanduski: There's an old kind of the historical lore about Bitcoin is that the first real-world Bitcoin transaction occurred in May 2010. And as they say, a Bitcoin user paid another user 10,000 Bitcoins for two pizzas.

Matt Wilson: Yeah, wow.

Steve Sanduski: So think about 10,000 Bitcoins, if you still held those today, and I'm almost afraid to say what the price of Bitcoin is today.

Bill Keen: Don't even do the math. Don't even do the math. We don't want to know.

Matt Wilson: Yeah.

Steve Sanduski: It's a lot of money.

Matt Wilson: Yeah.

Bill Keen: Right.

Steve Sanduski: Those were two expensive pizzas.

Matt Wilson: And that's because the prices are running up. So like in the late '90s, we saw this dot com stocks run up in price. I think because people thought they're participating in the emergence of the internet and what's going to happen. The investment thesis even was wrong with that back then. So with these coins, I can't say what's going to happen with the price of them in the future. I do think the blockchain is really where all the value is, and so the coins maybe are representing a value of the blockchain. But ultimately, I don't know what's going

to drive these coin prices higher or lower in the future besides truly just supply and demand of those specific coins.

Steve Sanduski: Well, before we wrap up here, guys, I do want to share right along the lines of what you're talking about here, Matt, in terms of the value of these cryptocurrencies, and let's use Bitcoin as an example. There is really no intrinsic value to a Bitcoin. Like you mentioned, there is no liquidation value of a Bitcoin. There is nothing backing it. There is no goal of backing it. There is no physical assets backing it. It's only worth what some person is willing to pay, and I just wanted to give you some numbers here that I think are really fascinating, and it ties in with this idea of how so often, humans are taken over by emotion.

So just using Bitcoin as an example, in April of 2011, Bitcoin was trading for \$1. And then, people started talking about it, and then two months later, in June 2011, it was up to \$30. So in two months, it went from \$1 to \$30. That's a 30X return. That's not too bad.

Bill Keen: Yeah.

Steve Sanduski: Okay. Well then, six months later, it was back down to \$2. So it goes from \$1 to 30, back down to two, all within one year. Then, let's move to 2013. In May of 2013, Bitcoin's price rose briefly above \$250, and then it fell 80%. Later, the same year, it rose above \$1,000, and then crashed by 80%. And now, the current boom, so in 2015, it was about \$200. And today, again, I hate to give a number but it's in the \$17,000-18,000 range for a Bitcoin. And just two-and-a-half years ago, it was in the \$200 range, so who knows where it's going to go?

Matt Wilson: As a form of currency, that volatility does really impede the value of it as a currency because if you're trying to pay somebody with these Bitcoins, and they don't know what the price is going to be, it could lose 80% of its value very quickly. I wouldn't want to be paid in Bitcoins just because of that. The other takeaway too is when historically when we've seen this happen when something should have basically been killed off, where in the case of Bitcoin it had significant drops in value but still survived. That does lend to the usefulness of it. It should have died several times, since 2008, and it hasn't. That is one of the reasons that I think it is worth watching, and specifically, the blockchain aspect of it. One of the things that we even haven't mentioned yet is the whole smart contract component too, which is another use of this technology.

My layperson's mind trying to relate this to what it really means and to compare it to things that we can understand. The points that we get on our credit cards for spending money, whether it's American Express or Southwest Airline points or what have you, would those be essentially considered a cryptocurrency, Steve?

Steve Sanduski: They wouldn't technically be a cryptocurrency because a cryptocurrency by definition uses cryptography as part of its base in terms of verifying

transactions. So from that standpoint, loyalty rewards programs and points, they are not a cryptocurrency because there's no math behind verifying transactions. So from that standpoint, they're not.

But conceptually, it would be similar in that we are ascribing some amount of value to a cryptocurrency like a Bitcoin and to rewards points that we can "cash them in" for something of value. So from that standpoint, they're sim. Now, what's also interesting is that when we talk about this blockchain technology, American Express has a patent on something related to using blockchain technology in loyalty rewards programs. So we've got some forward-thinking companies out there that are already thinking about how can we use blockchain technology in things like reward programs?

Bill Keen: I don't know if I told you this, but Carissa and I are going to head up to New York and we're going to see "Hamilton", Steve. We broke down.

Steve Sanduski: Oh, you got tickets, huh?

Bill Keen: Yes, we did. We did. But you know, one of the scams we mentioned in an earlier podcast was a couple of gentlemen who claimed to be raising money to buy "Hamilton" tickets and then distributing these falsified tickets. I've heard discussions around those types of areas where tickets to events will be run through the blockchain so it eliminates, hopefully, the possibility of duplication of those types of things, and also scalpers buying tickets and charging people times 20. As I listen to us talk today, and I study these things. Of course, I watch what all the major financial firms are saying. I watch what the Securities and Exchange Commission is saying about these things. But then again, my mind comes back to what are the practical applications that people can relate to that these efficiencies could actually be product?

Steve Sanduski: Right.

Bill Keen: Those were a couple that really struck home with me.

Steve Sanduski: Yeah, and I think one thing we always have to keep in mind when it comes to technology is there is a lot of gee-wiz stuff out there, and sometimes we see technology that is a solution in search of a problem. And I think we also have to be careful with things like blockchain that we don't start trying to use blockchain to solve a problem that isn't a big problem, or using blockchain might be a more expensive way or a more inefficient way to solve a problem that's being more effectively handled elsewhere. Like people talk about these cryptocurrencies, well there are some things where it still makes sense to use money because it's much simpler just to use money or to use a credit card to pay for something than it is to use a cryptocurrency to pay for something. So I think we also have to be rational here and know when it makes sense to use this new technology, and when the existing system that we have works just fine.

Bill Keen: That is right. And I think as we close here, I hate to do this to throw another acronym out there at our listeners, but I think we should talk about the acronym, ICO, even if it's just brief.

Matt Wilson: Well, yeah. ICO stands for an Initial Coin Offering. Essentially, that's like in the example of an American Express or any institution or an individual can offer to sell these cryptocurrencies, create their own coin so-to-speak. You can buy those and I guess the idea is you can sell them at a higher price in the future date, or use them for some sort of added benefit. One of the examples I heard was about Burger King in Russia offering Whopper coins. Essentially, I guess if you racked up enough of these Whopper coins, you could use them to get a free Whopper, and so almost like a loyalty program but more maybe playing on the fad of the day so-to-speak with these initial coin offerings.

Steve Sanduski: Yeah. Well, what's also interesting about these initial coin offerings is a lot of listeners might be familiar with the initials, IPO, Initial Public Offering. So this is when a company raises capital in the public marketplace to help fund their operations, and fund their growth. And typically, you do that after you have a business that is operating and is showing some amount of success, and you're raising money from the capital markets.

But with these initial coin offerings, they almost reverse the process. They do an initial coin offering before they launch the business, and they start with a whitepaper that basically says, "This is the idea. This is what we're going to do. This is how we plan to use the proceeds." It's a way to generate money to actually start a business as opposed to an IPO, initial public offering, which is typically used to fund the growth of an existing business.

Bill Keen: Okay. So now, you are starting to talk language where I do start to think of the word "Bubble". We get a lot of questions about that. You know, Matt, Steve, both, all of us were recently at the Schwab Impact Conference, where we heard from some very influential folks, and that word "Bubble" came up a few times when talking about this ICO concept, didn't it?

Matt Wilson: Yeah, it did. And as we like to say, history doesn't repeat itself, but it does rhyme. Whether this is the formation of a new bubble, or what, but it sure does have the makings of that. Especially, with these coins. Again, I think in this podcast, we have been trying to separate the technology of blockchain versus these coins themselves. They're kind of two different things, and the coins do feel very bubble-ish, whereas the technology, that's very intriguing. It's interesting to watch, and I am glad I am on the sidelines, just watching this unfold.

Steve Sanduski: Yeah. Well, and just one thing I want to add to what you're saying there is, is this a bubble? Is this like the tech stock boom in the late 19980s? Well, some people are comparing this to the internet. So the early years of the internet, you go back to like 1969, ARPANET, which was more of a government type

organization that was really essentially the forerunner of the internet. That goes back to 1969.

Well, it wasn't until 25 years later in 1994, that Netscape came out with its browser where people could more easily access what became the internet, so it took 25 years. Now, I don't think it's going to take 25 years if blockchain and Bitcoin is going to have as big of an impact on society as the internet, or maybe not quite that big. I don't think it's going to take 25 years for that to happen just because the cycle of technology innovation is so much faster today than it was back in the late 1960s and 1970s.

We're going to go through these boom and busts, and it's just human nature that we're going to go through that. And what I love about what you guys do is you really help people through all this. You help them try and understand, and make sense of what's going on, and not let emotions get in the way of making good reasonable financial decisions. And so having these types of conversations about timely topics like blockchain and Bitcoin, I think is important because it really shows that you guys are understanding what's happening and you're looking at it through your lens, and through your filter, and doing what's in the best interests of your clients.

Bill Keen:

That's right. And Steve, to close out today, I wanted to just put a little bit of attention on what the Securities and Exchange Commission came out earlier this month and issued a statement, and did a very good job explaining this. I would recommend if anyone has an interest, and you may not have an interest in looking at this. You might just want to be kind of standing by, watching how things play out over the coming months and year.

But if you do have an interest, there is a public statement by the SEC that was released December 11th, 2017. In that, it gives some sample questions for investors considering a cryptocurrency or one of these ICOs that we mentioned, and just a couple of those questions would be things like, "Who exactly am I contracting with? Who is promoting and marketing the product? What is the product? What are their backgrounds? Have they provided a full and complete description of the product? Do they have a clear business plan? Where is this enterprise located? Where is my money going, and what will it be used for? Is it going to cash out 'others' from this enterprise? What specific rights come with my investment? Are there financial statements? If so, are they audited, and by whom? Is there trading data? Who do I verify all this with? How and when can I sell the investment? If a digital wallet is involved, what happens if I lose the key? Do I still have access to my investment?" These are the kinds of things. "Do I have legal rights? Can I effectively enforce them, and then will there be adequate funds to compensate me if my rights are violated? What about fraud, a hack, a malware, or a downturn in the business prospects"

These are all things the SEC specifically has come out and said before investing in anything like this, to get those questions answered. And I'll tell you

gentlemen today, I think we've done a good summary on what could the positive effects of this technology be long term on us and the markets? But I think today, I'd like to simply come out and say it would be our recommendation at Keen Wealth to not to participate in any of these ICOs at this time, or to speculate in these markets, especially for the folks that we're talking to about having pools of capital that they're trying to make last the rest of their life and live and support a long-term retirement. These types of direct investments are highly, highly speculative. I know that we won't be participating in anything like this any time soon in the firm here, will we, Matt?

Matt Wilson: No, that's right.

Steve Sanduski: All right. Well, hey, thanks, guys. Great, great conversation. Important topic, and lots of implications in terms of how people react and how emotions get in the way of decisions. Thank you for the conversation, and Merry Christmas, Happy New Year, and we'll look forward to the next episode of "Keen on Retirement".

Bill Keen: All right. Thank you so much, Steve.

Matt Wilson: Yep, thank you.

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