





FPA Annual Conference 2018 – Chicago, IL – October 3-5

The Future of Blockchain

Wednesday, October 3
5:15 PM - 6:15 PM
Location: Columbus G-J

 <p>Robert Powell, III, M.S. Editor, Columnist, Contributor TheStreet & USA TODAY</p>	 <p>William Cunningham Creative Investment Research</p>	 <p>Bobby Henebry, CFA CEO Henebry Blockchain & Cryptocurrency Consulting, LLC</p>	 <p>Hunter Horsley CEO Bitwise Asset Management</p>
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At the core of any conversation about the future of finance is the mostly unknown and highly disruptive world of blockchain technology. Join this panel of experts as they look closely at the impact this emerging technology will have specifically on the financial planning profession, and the financial industry.

Panelist bios:

William Michael Cunningham is an economist and impact investing specialist based in Washington, D.C. He’s an adjunct faculty member at Georgetown University and a leader in the movement for the integration of human values in finance.

Bobby Henebry, CFA, is founder and CEO of Henebry Blockchain and Cryptocurrency Consulting, which helps educate business groups about blockchain and cryptocurrencies, and consults with blockchain startups around the world.

Hunter Horsley is co-founder and CEO of Bitwise Asset Management, which launched the first cryptocurrency index fund. He is a former product manager at Facebook and Instagram.

Editor's note:

The following is an edited transcript of the FPA Annual Conference panel presentation, "The Future of Blockchain," held Oct. 3, 2018 in Chicago. It is presented here in a question and answer format. The questions were asked by the session moderator, longtime financial journalist Robert Powell, or by financial planners in attendance. This edited transcript has been approved for publication in the *Journal* by the panelists. To access a video recording of the full panel presentation, visit Learning.OneFPA.org.

Q: What is blockchain? What is Bitcoin? What is cryptocurrency?

Bobby Henebry: There's a conflation of three terms—Bitcoin, crypto, and blockchain—but you shouldn't conflate them. Think of one circle—that's Bitcoin. Bitcoin is the first cryptocurrency started by Satoshi Nakamoto in 2008. That inspired a whole other universe of cryptocurrencies—which is the second, larger circle. There are thousands of cryptocurrencies, and Bitcoin is one of them; it represents about 40 percent of the cryptocurrency market cap.

Then there's an even larger circle, which is blockchain. Blockchain is an infrastructure; it's a protocol that allows digital assets to be transferred. The first and most prominent digital assets being transferred are cryptocurrencies, but now there's a whole world of other applications—intellectual property rights, photographs, titles to real property, for example. Don't just assume that blockchain investments mean Bitcoin. They are many different applications of the same technology.

Bill Cunningham: *The key point is that blockchain, as the underlying technology of bitcoin, has applicability across a number of industries.* Blockchain is a growing list of records—called blocks—which are linked *cryptographically*. These blocks of data are tied together with cryptographically secure keys that make them immutable, so you can't get rid of them *or change them. It's like a big Excel spreadsheet. The rows consist of transaction information...who bought what when. The data is locked in place. Once you fill up a page, you move onto the next tab. Tabs can be considered blocks.*

Hunter Horsley: Think about blockchain technology like a database. *(I think I was the one with the Excel analogy....You have a spreadsheet, and it holds information.)* That's mostly what a blockchain is; it's an append-only database. And there are some advantages to an append-only database—you don't remove old records. *If you imagine an Excel spreadsheet, instead of changing a value in a cell, you would just put information into the cell next to the cell that you want to change.*

There are private blockchains and public blockchains. The distinction is a little like the distinction between the Encyclopedia Britannica and Wikipedia. They're both databases of information, but the Wikipedia database is updated by a group of people around the world who don't work for Wikipedia and don't contract with Wikipedia. Anyone can offer something up, and there is a set of rules and a system for filtering that information.

Private blockchains are ones in which there's a limited set of individuals who can participate, and it's not so different from whatever database your firm uses today.

Work is being done in both these areas. IBM is working with 63 companies to try to implement private blockchains. Bitcoin and 2,000 other cryptocurrencies are attempting to coordinate people around a common (public) database who don't work for each other, may not know one another, and don't have contracts in place.

Q: How secure is Bitcoin's blockchain technology?

Bill Cunningham: When Satoshi came up with this idea, he understood that security was going to be a key issue. So, to make it as secure as possible, for every part of the record that you attach to this blockchain open ledger, you add what's called a "hash," which is a cryptographically created key that you need in order to read that line of the database. It cements it in place. It says: this data came in on this day, at this time, from this source. In that way, you enhance the security. (See: <http://twisri.blogspot.com/2017/05/summary-of-bitcoin-and-its-underlying.html>)

Hunter Horsley: Every public blockchain uses a hashing function. The one used by Bitcoin is called SHA256—it's what most of the Internet uses. For example, when Google is serving you a webpage over a set of routers that they don't control, they use SHA256. For that encryption function to be cracked, the whole Internet would be in trouble.

Over the 10 years of its existence, the Bitcoin blockchain has not been hacked. During that same period, JP Morgan has been hacked, Target has been hacked, Facebook was hacked, Tumblr, Yahoo, everyone you can imagine. I think in the cybersecurity environment we're in, a lot of people have accepted that their perimeter might be penetrated by a malicious actor. And concurrently, we now have this new system which is: take the data, put it on a blockchain, and then encrypt it.

Bobby Henebry: There's another important distinction here. The currency can't really be corrupted because it's immutable in how it's stored, but it's still a fledgling kind of custodial environment for crypto.

There was this Mt. Gox issue where people said, Bitcoin can be hacked. It's not that the Bitcoin was hacked. Think of it this way: I have my Charles Schwab account where my IRA is stored. And I just happen to post in an email or on my Facebook page my password, or somebody hacks into my computer and gets my password. They can take my U.S. dollars. Does that mean that U.S. dollars are corrupt? No. That means I had a data problem.

Q: Is there a good blockchain investment?

Bobby Henebry: The only proof of concept where blockchain has worked is crypto. And there's \$220 billion of proof, in the market cap of all crypto. Over the past few years, people started paying attention, saying: if we can transfer cryptocurrencies this way, what else can we do with blockchain technology? What's really happened in this run-up is a lot of people saw potential and they invested in crypto, but then this year there's also been about \$10 billion of traditional venture investments in blockchain applications. Then there's another \$11 billion in ICOs. There's a huge investment globally right now in new blockchain ideas.

My mentor has this great analogy. You're lining up this shot for this investment, and it's like an

elliptical billiard ball, and you're trying to shoot right in that corner pocket. That's traditional technological venture investing. Now throw blockchain in, and we're playing pool on a cruise ship in the middle of a typhoon.

We're trying to figure out what winners are going to come out of these new applications, but it's going to take two, three, or five years, especially for these really big markets where people are applying blockchain in new and novel ways.

It's easy to invest in crypto. You can open a Coinbase account and you can buy the big guys. You can't really invest in blockchain. It's like traditional angel investing; you've got to find a deal, but you're probably going to lose money, statistically. Allocation funds like Pantera out of Silicon Valley are trying to invest in the premiere of private equity, but not all your clients are going to get in on that.

Because you can't easily invest in blockchain applications outside of crypto, that's why I invest in Ethereum, personally—I view it as a proxy on more digital applications. I think if you see more success in blockchain, you'll probably see more success in crypto. I think there's a correlation there, because the blockchain market is really private and inaccessible to most.

Q: What is the difference between cryptocurrencies?

Not sure this one is mine...but if the recording says it is...Bill Cunningham: Let's take two of the biggest and well-known cryptocurrencies: Bitcoin and Ethereum. The difference is, there are certain things you can do on the Ethereum blockchain that you can't do on the Bitcoin blockchain. For instance, smart contracts. You could have certain if/then statements that are embedded into each transaction, each block, each part of the Ethereum blockchain, and you can't quite do that with Bitcoin.

Then you've got Ripple, which has some other characteristics; and then you have Litecoin, which has some other characteristics. There are about 2,000 cryptocurrencies. They all have little differences in their capabilities, but they all come from a common understanding, a common technology, a common platform, and that's blockchain.

Q: What impact will blockchain, Bitcoin, and other cryptocurrencies have on the financial planner's practice and the profession?

Bill Cunningham: No. 1, planners are getting a lot of questions from clients about Bitcoin or digital currencies. They're turning to you as a trusted expert, and that means you need to up your skills and your knowledge, but you're used to that and you're good at that.

The more serious impact is going to be how blockchain technology is going to be used by corporations. Walmart is using blockchain to track lettuce. They want to be able to specifically track which farm lettuce comes from. They put code on a block on a blockchain, and if there's an issue with that lettuce, they can go back and search that blockchain and pick out that particular record. That record will tell them: that lettuce was grown at this farm, and we harvested it on this day, and we put it on this truck going to this store.

What they used to do is, if there was an issue, they would just throw everything out, because we

didn't know where it was coming from. So, it allows you a little bit of granularity with respect to product sources.

Now, the question for you is: what impact does that have on the stock valuation of Walmart? Or better question: what impact does that have on the value of a company that is *not* doing that? Does that mean that their share price should be \$1 lower? 50 cents lower? 20 cents lower? 5 cents higher? I don't know. But I know that I can model that impact. Eventually, people are going to turn to you and say, this technology should be imbedded in the valuation of the assets—regular stocks and bonds—that you're buying for me.

Bobby Henebry: I think it's more back-office where we'll see it in our profession. There are a lot of conversations around KYC/AML—know your customer, anti-money laundering. In my [former] RIA, we had a South African CEO who had a trust in Isle of Man with 20 trustees, and he wanted to send us \$3 million. I still regret not being able to manage that account, because we had to get driver's IDs and all this stuff for all 20 trustees on the trust to let Charles Schwab—or any custodian here—touch the money. Well, what if you could get all that documentation sorted out when the accounts are opened up, and that data for each of the 20 trustees on that trust is recorded immutably on a blockchain? Regulators would love that, but we're still in the development phase where people are trying to build that kind of application.

Q: What's your key takeaway on blockchain and cryptocurrencies for financial planners?

Bill Cunningham: We did a survey at the beginning of the year that asked savvy people in finance and in technology what they thought the possible future was for blockchain and cryptocurrencies. Bottom line: everybody agrees the blockchain technology itself is the killer app; that's the technology that matters. Cryptocurrencies are going to be volatile. So, the takeaway is: know what the cryptocurrencies are, but focus on the blockchain, the underlying technology itself. (Survey: [Most Appropriate Applications for Blockchain Technology](https://www.researchandmarkets.com/reports/4656172) <https://www.researchandmarkets.com/reports/4656172>) Don't have to put this in, of course....

Hunter Horsley: To make that even more specific, I think you should focus on public blockchains, not private blockchains.

Bobby Henebry: If there's a carrot in front of you and you're trying to chase it to learn it, well crypto and blockchain is this carrot that keeps getting bigger and accelerating away from you the closer you get to it. It's a very complex space, but there are a lot of really smart people with a lot of capital going into it. No one knows what's going to happen in blockchain. But, I think if you have these three variables: globalization, smart people, and a lot of capital going into it—stay tuned. Let's see what really interesting things come out of it.