



Episode 1,481: Does Bitcoin Have What It Takes?

Guest: Saifedean Ammous

WOODS: I just love the Soho Forum, and I'm so glad that you got to participate in it. And I could tell from the crowd response that you had some supporters in that room. I mean, just really genuine supporters. So I thought it was an interesting debate, and I thought it would be a good moment to have you back on the show to review some of the points of contention in the debate. So as I mentioned in the introduction here to the episode, the debate has had to do with basically the plausibility of Bitcoin more or less replacing existing monetary systems and is it suited to do so. And it wasn't a question of, is it likely to do so, but is it suited for it? Is it up to the job, basically? And so you, of course, were arguing the affirmative. But I guess, I don't know how they worded the resolution, because maybe I guess it was Selgin arguing the affirmative? So what was that? Was the statement that Bitcoin is unsuited, and therefore —

AMMOUS: Yes, the statement was that Bitcoin is unsuited, and Selgin was arguing the affirmative.

WOODS: Okay, so Selgin was arguing the affirmative. Okay, so he went up and said more or less something like this: that he's not an opponent of Bitcoin. He finds it intriguing and the possibilities and the technology. And he says there are certainly merits that Bitcoin has. But, he says, there are drawbacks that he thinks are significant enough that would prevent Bitcoin from ever actually accomplishing what you are, by taking the negative of the resolution, proposing that it could accomplish, namely, replacing an existing money.

So the three things that he homed in on really were, number one, security, the security against hacking. So that's the first one. The second one was volatility, because of course, we observe the price of Bitcoin, and sometimes it fluctuates considerably. And then, finally, the cost of transactions. So that was another thing we heard people talking about, that I'm moving a little bit of Bitcoin, and yet the cost to do that, particularly if it's a small amount, just seems disproportionately high. And he thought these were the things. Now, once we deal with these three — and of course, you dealt with them the debate — I have another one that I want to raise, just to see how you would answer it.

Now, one of the things you said — and you answered these, but one of the things you said was that, look, a lot of people want to nitpick Bitcoin, but the fact is, it's what we have. Warts and all, it's what we have, and it is the thing that is by far the most likely to accomplish the ends that we want it to accomplish. And then he would come back with: it may well be that Bitcoin is what we have, and it may well be that it's the most likely thing we have to succeed, but it at the same time could be that my — that is, Selgin's — arguments are correct, that these are still fatal flaws that will make it unlikely to accomplish these end.

And so let's start with the first one. He says that something like one third of all Bitcoin exchanges have at one time or another been hacked, and that that compares quite unfavorably to, let's say, 1% of banks that have suffered some kind of failure one way or another. What's the answer to that? It can't just be, *Well, Bitcoin's the best we have*. What's the answer to that?

AMMOUS: Well, the answer is that the hacking of exchanges is similar to the theft of a bank, in terms of somebody breaking into the bank and taking the money out. It does not compromise the monetary system that is beneath it. And in other words, the Bitcoin network itself, that has never been compromised. We've never had theft on the Bitcoin network itself. You have to understand, when you have your Bitcoins in an exchange, they're not really your Bitcoins. You have an IOU from the exchange, that they are going to give you the Bitcoins that they have. But the exchange, they can have their security compromised. And effectively, the challenge of Bitcoin security is a very real one. I'm not trying to dismiss it, but I think people need to remember that this is a new technology, and the handling of it on platforms and so on is very counterintuitive. The notion of digital property is truly new to us. And people are making their ways learning it.

And I think, to be honest, my honest opinion is that people will learn how to use a technology if it is useful. A couple hundred years ago, it might have seemed insane to expect people to learn how to drive cars, but look at us: we've learned it because it's useful. So I think if the technology is valuable, people will likely develop kinds of secure ways of using it over time, in the same way that banking has become more and more secure against theft after hundreds of years of best practices in security and design and so on. But, of course, I think neither I nor Selgin are experts in these issues of usability and security of Bitcoin. And I think this was not why the people who came to the Soho Forum paid their money to watch two people who can barely get their email to work sit and debate. There are people who are much more expert in these issues who could debate them, and I think the more interesting arguments pertain to the economic stuff, the macroeconomics.

WOODS: Well, sure, but of course, if the resolution had been phrased in such a way as to emphasize specifically economic arguments, that'd be one thing. But in Selgin's defense, this I think is a legitimate concern that somebody might have, because what Selgin is saying is that there are these network advantages to existing monies, given that everybody accepts existing money and not that many people accept Bitcoin. That's one of the hurdles that any upstart money has to overcome, the built-in advantage that the existing money has. But if on top of that problem, it also faces something like, *Oh, by the way, there are semi-regular headlines involving theft and hacking*, then that's another thing that undermines any transition to Bitcoin. I mean, I think that's reasonable.

AMMOUS: Yes, for sure. It is definitely. I mean, I'm definitely not one of the people who's trying to pretend like everything related to Bitcoin is rosy, and yeah, this is a serious problem. The handling of private keys is quite complicated, and it's not something that most people are very comfortable with doing. And most people seem to prefer to keep their Bitcoins with secondary layer solutions, like exchanges that hold on to the coins, and these can be compromised.

And I think this problem has been exacerbated recently by the fact that Bitcoin has appreciated enormously. I mean, you have to think that some of these exchanges were essentially online marketplaces that were trading various things for a few thousand dollars a

day. And then Bitcoin gets added to these online marketplaces, and then suddenly, Bitcoin increases in price by 100x over a few years. And suddenly, that tiny marketplace that was run by a couple of guys in their basement in their spare time becomes worth \$50 million or something like that. And the temptation for those people to just take these coins and disappear is enormous.

So I think this has definitely been a problem, but it is something that is not, I would say, an inherent technological limitation to the technology. If there is economic demand for people to hold the hardest money, people will learn how to make it into a way that's usable. In the same way that people made gold into coins that were uniform, we'll make Bitcoin into some digital equivalent way that makes it — and physical ways. We already have all kinds of solutions. And what we're seeing in terms of all of the security is the hard process of people learning about it. And I by no means want to suggest to your listeners that this is a problem that is solved. If you want to hold Bitcoin, you need to spend significant amounts of time studying how to secure your Bitcoins.

WOODS: And incidentally, it's not like other monies don't have their own problems.

AMMOUS: Of course.

WOODS: I mean, there is a problem potentially of counterfeiting, for example, of fiat monies. And more or less, people have figured out ways around that.

AMMOUS: Yes, and I think the key point people need to remember in the case of Bitcoin is that all of our information and economic activity is heading more and more toward the digital realm. And the amount of information that you have on your computer includes a lot of information that would have been extremely sensitive, that in the pre-digital era you would not have put somewhere that is publicly accessible. But because of the internet, because of our new fascination with new technology, we're very lax about how we treat our information and our data, something that people are complaining a lot about over the last couple of years.

But Bitcoin, really, you can think about it as the lesson, the school that's going to teach people computer security by monetizing computer security and making it so that, the way that you handle your data is the way that you handle your money. That's going to put you in shape for the 21st century, where the majority of your life already is online. Your business is mostly, for more and more people, it's becoming more and more linked to online. And it can be easily compromised by attackers; it can be easily viewed by attackers, as we see with ransomware attacks. And Bitcoin is allowing ransomware attacks to expose these security flaws in people's data.

And people say this is a bad thing about Bitcoin, but I think the way to think about it is that, now you're paying \$5,000 to unpack your business computers that were locked by ransomware, but if some random hackers in Russia or Korea or wherever can lock your business computer, just imagine what your competitor can get away with in terms of your computer security. So they're probably doing you a favor by making you realize that your IT guys are not very competent, and you should probably get another pair of eyes to check on your system and get things better. I think that people wanting to use Bitcoin, but also people using computers, are going to face this question of needing to get that data and security online sorted out, and Bitcoin is going to accelerate this process.

And in a sense, this makes the objections about the security of Bitcoin sound a little bit Luddite. I agree with you in that they are serious concerns, and of course, it can be a serious concern that could make the technology unadoptable. It might just be that we end up preferring something with the physical finality of gold, and I still maintain that possibility. On the other hand, as more and more of your information and data is becoming online, it seems inevitable that everything is going to be online, including economic value.

WOODS: All right, let's move on to the second objection. This is more, I think, to the point. And that is that Bitcoin has been volatile, and that it's so volatile as to make it unattractive as a medium of exchange. And I think there is a reasonable response to that, and I think you more or less had it. So how does a Bitcoin supporter respond to that argument?

AMMOUS: I think, ultimately, the high volatility is a function of the low liquidity. And that effectively is the entrepreneurial opportunity that Bitcoin presents right now. Effectively, the potential upside is massive because the supply is limited, so if more people enter, the only way that the new demand can be met is through price appreciation, because nobody can make more Bitcoin. That's the whole point. Or nobody can make more than what the schedule already has determined. So it's because of the supply being inflexible, it follows then that the changes in demand and the variations in demand are going to remain volatile, as long as they are very significant in terms of the total size of the liquidity of the Bitcoins that are being traded. And so as the size of Bitcoin would grow further and further, you would expect that the variations in demand will become less significant overall.

And so, currently, Bitcoin is at about I think .2% of the global money supply or something like that, which is very tiny. So one billionaire somewhere, reading something about Bitcoin and being interested and moving a significant amount of their wealth into Bitcoin, will massively move the price. And it follows, then, that when they change their mind and decide to get out of it, they're going to also massively move the price, because the volume on all the world's exchanges, I mean, it's enormously large for a digital currency compared to where you would have expected it to be ten years ago.

If you'd told me ten years ago that Bitcoin would be where it is today, I would have thought it is wildly unrealistic. And yet here we are. But still, it's still tiny compared to global total money supply, still tiny compared to the US dollar or to the euro or to gold. And so therefore, the size of the order books on the exchanges are still relatively small, that a significant purchase can still move the market.

Now, imagine if the depth of the liquidity in Bitcoin is 10 times or 100 times larger than it is right now. All of these billionaires coming in and out will be far less significant in terms of the volume of the liquidity. They'll have far less of an impact. Effectively, this is Menger's saleability, and it's growing very quickly in the case of Bitcoin, but it's still not there. And so right now, this is the entrepreneurial opportunity, that you're willing to withstand the volatility and that you're willing to take the guaranteed zero returns on the prospect that this thing is going to appreciate over time. And that's essentially Bitcoin's growth strategy. That's how Bitcoin bootstraps itself: by incentivizing people to finance holding it.

WOODS: All right, now, then I want to go on to his third objection, which has to do with how expensive it is to transact in Bitcoin. And your response —

AMMOUS: Could I just add one small point to the volatility?

WOODS: Oh, please do.

AMMOUS: This is something that I should have mentioned in the debate, but I didn't get to.

WOODS: Yeah.

AMMOUS: Everybody in the world who is alive now has been alive in the world post-1914, and more importantly, since 1971, the majority of us. Most of our adult life, we've seen the world in which currencies are constantly changing. And people have to make do, and people have had to deal with portfolios of different currencies that are constantly changing in value compared to one another. Basically, the only people that have been protected from this are Americans who have never traveled from the US and who don't trade directly with foreigners. But everybody else on the planet has had to exchange currencies at some point. And Bitcoin is just one extra one. It happens to be extra volatile at this point, but that doesn't stop people from taking small positions in it. And as these positions continue to grow, the volatility, you would expect it to decline.

So, essentially, I think the problem with this objection is that it doesn't see the market process of the monetization, that this is what a real market would look like. This is how a market would monetize a good. It can't be done in an orderly fashion, and it can't be done by government diktat. We can't just one day wake up and decide, all right, one Bitcoin is worth \$1 million, and that's the monetary standard of the world. It's going to be a bumpy process on the ride, because markets are the process of discovery of knowledge. It's not knowledge that is given out to everybody all over the world at the same time.

WOODS: All right, so let's talk about the cost of transactions problem.

AMMOUS: Yes.

WOODS: Because your response was to say — I thought it was funny the way you phrased — how disappointed you were that this meant that Professor Selgin had clearly not read your book, because you did address this as really kind of missing the point. So in what sense?

AMMOUS: In the sense that whatever is going to be the monetary standard in a world economy, people are going to want a money that travels further than what your hand can be handed over. So you're going to want something that's going to be settled over digital payment networks. Whatever it is, if you're going to have a monetary system that's going to be built on dollars or Bitcoins or gold or seashells or anything, ultimately, at the end of the day, we're not going to have the actual final asset itself being the physical dollar or the physical gold or the physical seashell or the on-chain Bitcoin transaction. We won't have that moving with every single time that somebody needs to buy a coffee or lunch.

And this was kind of the main driving idea behind writing my book, in that you need to think about Bitcoin as being only a few hundred thousand or a few million transactions done a day. And the way Bitcoin scales is not through the growth in the number of the transactions, but through the growth in the value of the transactions. Because over time, these become to resemble more the final settlement transactions, because that's actually what they are. You can send money with Bitcoin, and it is finalized within an hour or so with a few confirmations.

The movement of the money is final across national borders. That's really Bitcoin's comparative advantage.

And so that only compares with settlement payments between sovereign central banks, and these take much more than a couple of hours. And the example that I should have mentioned in the debate was recently when the German central bank asked for some of its gold back from the US central bank. And it took several years and several million dollars to ship actual physical gold from Germany to the US. And that's what real settlement of bare asset money is like. This is what settlement of final cash looks like. It's actually really expensive to move things around.

The best way of understanding Bitcoin is that Bitcoin allows us a way to move around this digital gold, that's really expensive and really kludgy to move around, because it's not a cheap process to make half a million transactions of Bitcoin, which is around what we do today. But we can move this digital gold around half a million times around the day, all over the world right now, and each one costs around a few cents. That's really, I think, the potential for it. And I think that over time, these are going to be used more as settlement transactions. And so therefore, it misses the point to compare the Bitcoin transaction to a credit card transaction. It's more accurate compare it to the German and US central bank settling gold with themselves.

And then on top of that, you can have gold-denominated payments with all kinds of manners of payment technology on your cell phone or on your computer or in your credit card or whatever it is. All of these can be denominated in any kind of currency. That's a completely separate point, and it's something that people have been debating over and over in Bitcoin for quite a while. And the quite disappointing thing about it is that there wasn't really anything original about the arguments that Professor Selgin was making, and there was nothing monetary about it.

This is really the problem. The real issue is that neither I nor Professor Selgin are experts in layered network scaling, and these are the kind of people that should have been discussing Bitcoin's cost of transaction compared to other alternatives. But the discussion, we were talking past each other, because he was trying to compare the final settlement of a Bitcoin transaction to the secondary-layer payment between two phones that have the same app installed, a completely separate question, because the phone apps, that payment can be reversed for many weeks because of the risk of fraud and chargeback and so on. So it's a very different comparison.

WOODS: All right, now I want to raise one of my own, and then we're going to raise a phantom objection that was kind of hanging in the background and never got raised, surprisingly, and yet – well, anyway, we'll talk about that in a minute.

AMMOUS: Yes.

WOODS: But mine, maybe you'll think this is a silly one, but I'm just trying to think from the point of view of the average person. And that would be ease of use.

AMMOUS: Yeah.

WOODS: I'm trying to think of — now, my grandmother's deceased, but I always use my grandmother as an example. Would my grandmother be able to — in listening to people talking about Bitcoin and learning about wallets and keys, would this sound to her like something that she would just be able to do tomorrow morning, and it would be a breeze and she'd love to transact in it?

AMMOUS: I mean, you know, a lot of Bitcoin purists like to say that everybody has to learn to use the private keys. But to be perfectly honest, I don't think that's really the case. I think the majority of people don't want to have full control over all of their money available to them. You don't want to have a few words written down somewhere in your house that contain the keys to all of your money. So I can't really see this happening in this way. I think we're going to have so many different types of consumer solutions, which are being developed as we speak, that appeal to people who have all kinds of different risk profiles, as well as ease-of-use profiles.

So for somebody who just wants ease of use for making their payments, there is absolutely no reason why all of the current technologies that we have cannot be done with Bitcoin. We can actually have physical paper cash backed by Bitcoin and redeemable in Bitcoin. You could actually have physical papers that people could use. And you'd have a full reserve bank that backs them by Bitcoin, and you could have a bank run if they issued too much paper. And the difference is, of course, with Bitcoin, you can audit all of their balances if they make them public, so you can always see how much money they have and all of their obligations and liabilities and all their movements.

So in terms of the ease of use, ultimately, I think the question comes down to — it might really be the case that it really comes down to finding an institutional-grade custody solution that would allow all the current custody solutions that currently exist and are currently workable — and of course, you know, they're not ideal in any way. But I guess the way that I would think of it is that if modern-day banks and financial institutions can start dealing with Bitcoin with the same institutional competence and reliability with which they deal with both physical cash as well as digital cash on their balance sheets, then it doesn't matter what your grandmother thinks about Bitcoin. She won't ever have to deal with Bitcoin. She will deal with whatever forms of money are available for her that she likes to use.

And I think the market will provide people with anything you want. Essentially, if you like your paper cash, there's no reason why Bitcoin entrepreneurs won't make cash backed by Bitcoin, different kinds, different denominations, different values, different colors. Similarly, with cards, similarly with all kinds of apps. I think the user experience will be streamlined and made easier.

And I think the option of using Bitcoin on chain and the private keys, all of that stuff, it's not likely that we need everybody to use these for Bitcoin to grow. I think what we need is a much more decentralized base-layer infrastructure where many more people are able to use this and many more people have access to base-layer money and are able to escape controls that are geographic on money. I think that that's what really matters.

WOODS: All right, now finally, let's talk about the issue that was not raised, but yet I know people in Selgin's camp, including Selgin himself, have raised as being one of the problems with Bitcoin. Not an issue that, let's say, a super hard-money person would raise, but namely that it has fixed supply. And that's going to come as a surprise to some listeners, because

they're going to think, well, how could anybody who's even an Austrian fellow traveler be worried about the fixed supply of Bitcoin when that's obviously a benefit?

AMMOUS: I mean, yeah, exactly.

WOODS: But for somebody like Selgin, given the way he thinks about monetary disequilibrium and all that stuff, he is going to view this as a drawback. So can you try to describe, as sympathetically as possible, what the argument against Bitcoin in this area is? And then give me basically your traditional Austrian-style response?

AMMOUS: I honestly can't describe the argument [laughing].

WOODS: Oh, wow, okay.

AMMOUS: Because I have not ever encountered anybody trying to make this argument spell it out coherently and explain it directly. I've not seen this. And it's quite curious, because after my book came out, *Reason* published a review, and essentially, they dismissed my book because it didn't tackle this question and it didn't tackle Professor Selgin's work on this question — even though my book clearly focuses and begins the analysis about the how, clearly, Nakamoto was not influenced by the idea that money needs to increase because he made it so that the supply is fixed. And I discuss the issue of how this was similar to the situation of the gold standard, and I quote Rothbard and Mises in describing why this wouldn't be a problem. So I talk about it extensively, and yet the *Reason* review says, well, you know, it doesn't address the criticisms of Professor Selgin.

And then the Cato Institute, also, where Professor Selgin works, also publishes a review which essentially says: yes, but the book misses the chance to tackle serious questions — I forget the exact quote, but it misses the chance to tackle the objection of the deflationary nature of Bitcoin.

And then Professor Selgin himself will tweet the *Reason* review and says something about, well, if Bitcoin fans think this won't be a problem, then how would they explain deflation of 2008 and 1930 to 1933, or something like that? And I tried to get into a back-and-forth with him on Twitter, and I didn't get much in terms of a coherent explanation for why is it that this would be a problem. I'm waiting for somebody to spell it out, why it really would be a problem. But I have failed.

So the problem with the debate at the Soho Forum is, because of the phrasing of the question, he was the one who was supposed to offer the reasons why Bitcoin would fail. And so at no point did it make sense for me to bring up this objection, because it is no objection in my mind. And even though I bring it up in the book, but there was no point for me at the debate to go and say, *And yeah, incidentally, Professor Selgin had said that the supply is not adequate*, because I would be putting his arguments forward for him.

So it didn't make sense for me to bring it up in a debate. He didn't bring it up. I mentioned it on Twitter. He still hasn't responded on there. He still hasn't even responded. So I asked him just yesterday: *What happened to your monetary arguments? Why are you discussing all of these arguments on transaction costs and scaling and security, which none of us are experts in, neither of us are an expert in? What about your monetary argument?* And essentially, he's

saying, well, that's not a very important argument. So he's not saying that he doesn't stand by his original tweet. I don't know what the reviewers think about it, if they would like to offer a coherent explanation for why this is a problem. But yeah, for some reason, there are people who think that the money supply needs to grow [laughing]. I don't have a coherent explanation for why they think that. I can explain the opposite.

WOODS: I know that in my — you know what? Maybe what I'll do is I'll link it on my show notes page. On the show notes page for today, TomWoods.com/1481, we'll link to your book there, which people should be reading, but I'll also link to a couple of episodes I've done on deflation from a long time ago, where I'm pretty sure, if memory serves, I did take this on. And you'll see it is not an insuperable difficulty in any way. And frankly, it's an embarrassment, to see people who, at least — I mean, George Selgin doesn't call himself an Austrian anymore, but I think he would say he's at least a sympathizer and he doesn't think that we're the devil or anything. So to see people go for these types of arguments, that are arguments that I would hear a Keynesian make, they're arguments I would hear in the mainstream, it's embarrassing to me. So I'll link to deflation episodes.

Let's talk about something much, much happier, which is what you're going to be doing, is taking your knowledge of Bitcoin but also your knowledge of Austrian economics. I mean, reading *The Bitcoin Standard*, the reader cannot fail to notice that you know a lot about Austrian economics. I mean, you are like the precise flavor of Austrian economist that I prefer. So I mean, it couldn't be better.

AMMOUS: Thank you. I'm going to quote this on my website.

WOODS: I don't know if that's going to help or hurt [laughing]. But anyway, you're teaching online courses, and I agree with you that that really is the future in a lot of ways. So talk about what it is that you teach and where you're teaching.

AMMOUS: I'm teaching on my own website, Saifedean.com. I'm offering courses on Bitcoin and Austrian economics. After publishing my book, I was astonished at just how many people became interested in Austrian economics because of reading my book. And so I got a lot of feedback from people on the internet telling me that they would really be interested in learning more about Austrian economics. And I wrote a blog post last summer that went really viral, just about a thousand words or a couple of thousand words, in which I just offer a brief introduction to what I view as a great reading list in Austrian economics. And it got a lot of feedback, and I keep getting a lot of feedback from people telling me, you know, "I came across this book by Hazlitt or Rothbard or Hayek, and I love it. Thank you for recommending it."

And so I've decided I should be putting my time into doing this in a more systematic, structured way online. And so now I'm offering classes on — initially I have the two classes I'm offering right now. One is on Bitcoin, on *The Bitcoin Standard*, so of course, based on my book. Ten lectures, each one based on one chapter, in which I get into more detail about the material of the book and the background material and mainly the Austrian economic stuff that goes into writing these books, these chapters. And then the second course is on the more recent research that I've done after finishing the book, which is also mainly pertaining to Bitcoin and Austrian economics.

And then in a few weeks, I'm going to start teaching actual Austrian economics as a curriculum, so I'm going to start teaching straight out of *Man, Economy, and State*. And my question to you, Tom — I'm going to take advantage of this interview — is, I wanted to quiz you on how you would teach *Man, Economy, and State*, because I am preparing the syllabus right now, and so I hope you have your own copy of *Man, Economy, and State* handy to dig out and give me some tips on how you would structure a course around — I'm going to structure several courses, obviously, around this book.

WOODS: Well, not only do I have a copy; I have a copy signed to me by Rothbard from October '93.

AMMOUS: Oh, wow.

WOODS: Yeah, so eat your heart out. So I do have that. What I would recommend —

AMMOUS: I'm honored to say that my course has been inspired by this. So please go ahead [laughing].

WOODS: [laughing] The way he signed it: "To Tom, for man and economy and against the state. Best regards, Murray Rothbard." What a great inscription. Well, first of all, have you looked at Bob Murphy's study guide to *Man, Economy, and State*?

AMMOUS: I have, yeah, yeah.

WOODS: Yeah, because that even has discussion questions in it, and he's conceived of it I think as a way of teaching the book, and I don't know if I could improve on that. I mean, obviously there are some chapters that can be taught as a unit. Like the production chapters can be taught as a unit and stuff like that.

AMMOUS: Yeah.

WOODS: And I was telling you before we went on that, up until Shawn Ritenour's book — I think it's *Fundamentals of Economics*? I forget the name of it, but it's a textbook. Until Shawn's book came out at Grove City College, Jeff Herbener was teaching basically like — I think he was teaching micro and macro out of *Man, Economy, and State*. And then he would teach public finance out of *Power and Market*. I mean, that's as hardcore as it gets. So he's definitely somebody who has classroom experience with *Man, Economy, and State* who can recommend it. But I can't see how you go wrong being inspired by Bob, especially, as I say, because he comes up with really good Bob-Murphy-style conundrums and questions at the end of each chapter.

AMMOUS: Yeah. Yeah, absolutely. I'm thinking I will make the first five chapters into one course and then the second five chapters into a second course.

WOODS: Yeah.

AMMOUS: But then chapters 11 and 12, each one of these would be a course, but it would expand on much more than just what's in that book, so I'd bring in much more material on

business cycles. Actually, chapter 12, we could maybe have several courses on that, because each one of them could be a topic that could have a whole course.

WOODS: Right, and I think Austrians have really — I think they've developed their exposition of the business cycle even to a greater extent, and I think it's been enriched in the ensuing years. So definitely, Rothbard could be supplemented by some more modern takes on the Austrian business cycle here. So there's a lot to be done there. And of course, the last chapter of *Man, Economy, and State* is a summary of *Power and Market*, so *Power and Market* could be a course.

AMMOUS: Yeah.

WOODS: So there's so much material you could do. And I'm sure there's some good material that could be drawn from the — I read it so long ago now, but *Money, Bank Credit, and Economic Cycles* by Jesús Huerta de Soto, that huge book.

AMMOUS: Yes, absolutely.

WOODS: You could also probably draw some material from that. So if people go to Saifedean.com — I just want to remind you that's spelled Saifedean.com — and then click on Academy at the top, that's where you're going to find these courses.

AMMOUS: Yes.

WOODS: And you'll do well to take them, and I say that as somebody, I offer courses. I have a whole site full of courses. You'd think I would be promoting that, which I am, but this is a worthy project.

AMMOUS: I'd like to promote them too. Also take Tom's courses, yes.

WOODS: Right, yeah, there you go. But this is a really worthy thing, and you have become in your niche — I think it's safe to say, you've become, this might sound silly, but a kind of a superstar. I mean, you have fans. You have people who think the sun rises and sets on you. I mean, you have really, really major supporters, and I think that's not for nothing. I think it's because you really genuinely know your stuff. And we should be drawn to people like that, and if somebody like that is offering his wisdom, we should learn.

AMMOUS: Thank you, Tom. I'm really humbled. But no, I assure you, the intersection of Bitcoin and Austrian economics, the world is still small enough where I've still never been recognized by anybody I don't know, except outside of Bitcoin.

WOODS: Oh, you mean like in person, like people coming up to you?

AMMOUS: Yes.

WOODS: Nobody in Lebanon has ever come up to you and said, "Are you" —

AMMOUS: Not in all my travels.

WOODS: Oh, well, okay.

AMMOUS: It's still a pretty big world out there, so I'm happy about that. But thank you very much. I really appreciate you saying that.

WOODS: Well, the pleasure is mine. So, two action steps today. If you haven't yet read *The Bitcoin Standard*, I'm linking to it at TomWoods.com/1481, and I will also link to Saifedean's website and directly to the page with the courses, also at TomWoods.com/1481. So continued, not just good luck, but keep on doing this hard work you've been doing because it certainly benefits us. And I really, really enjoyed your debate. I thought you did an excellent job. And I hope we hear an awful lot more from you. Thanks so much.

AMMOUS: Thank you so much. Pleasure.