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### Blockchain & Secured Transactions Proceedings of the 2021 Spring Conference: The Impact of Blockchain on the Practice of Law: Presentation 4

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SETH ORANBURG: Thanks. That was great, Zach. I think it wouldn't sell as well if we call them dumb contracts. I think this is sort of sales, but absolutely super interesting analogy to the vending machine, because really what you're talking about is something that simply hopefully just operates and doesn't really . . . . This is not intelligence. We'll have another talk about whether artificial intelligence is intelligence. But in any event, definitely join Zach in the breakout room for conversations about how coding interacts with lawyering at the intersection of smart contracts.

PRESENTATION 5: HEATHER HUGHES—BLOCKCHAIN & SECURED TRANSACTIONS

Seth Oranburg: Up next, we have Professor Heather Hughes who is going to talk to us about how blockchain can inform our understanding of secured transactions. So Professor Hughes, if you would, please.

HEATHER HUGHES: Thank you, Seth, and thank you for putting me after Zach, because in the second part of my presentation I will be relying on the concept of smart contracts. They have very interesting implications for secured transactions.

Secured transactions are governed by Uniform Commercial Code Article 9. UCC Article 9 governs *any* extension of credit secured by personalty. If you think about it, this statute governs a *massive* swath of market activity: secured credit facilities, margin trading of securities, asset securitizations, and purchase money transactions for goods, I could name more. But it's a statute that's very wide ranging. Given this expansive scope, blockchain-based transaction platforms have numerous implications for lawyers who deal with secured transactions. In my brief time here, I'm going to identify just two of them.

The first is asset classification. As any UCC Article 9 lawyer knows, the first order of business in a secured transaction is to take whatever assets the client is dealing with and determine what definition they meet under 9-102, which is the list of asset categories. Now, this task is crucial because the rules for assigning an interest and establishing priority in assets change depending on their classification. Blockchain-based assets complicate this basic secured transactions task.

I'm going to illustrate how complicated it can be using the example of cryptocurrencies. If you have a secured transaction involving cryptocurrencies, you have to figure out what the digital currency is in Article 9 terms. So right off the bat, it's not money because money is a medium of exchange currently authorized or adopted by a domestic or foreign government under UCC 1-201. Now, it complicates things that some governments *may* adopt central bank digital currencies. It also complicates things that the UCC definition of money does extend to monetary units of exchange established by agreement between governments. So you could have a deal where you're dealing with central bank digital currency or something recognized by an inter-governmental organization. But apart from those circumstances, deals involving cryptocurrency are not going to involve money in commercial law terms.

So, if we eliminate money as a possibility, cryptocurrency is going to be either a general intangible—that's the residual category under Article 9—or investment property. Now, if cryptocurrency is a general intangible, an investor must file a lien notice in the UCC-1 registry to establish priority. If it's investment property, on the other hand, that's a completely different asset class subject to different rules, including different choice of law rules. Lawyers dealing with these assets have to understand that cryptocurrency will be either general intangibles or investment property depending on how the parties to the transaction are holding and treating them.

Investment property under Article 9 means securities, securities entitlements, commodities, and the like. Now, this is a bit confusing because virtual currencies are not securities under the commercial code. They do not create participations in or contractual claims against the assets of an issuer. But they may qualify as investment property nonetheless if they are held by a securities intermediary.

So, investment property includes financial assets that are what the code calls "securities entitlements." If something is held by a securities intermediary pursuant to a contract in which the client and the intermediary agree to treat cryptocurrency as a financial asset, then all of a sudden, it becomes investment property for secured transactions purposes. In other words, the commercial code enables investment property classification for digital assets that would otherwise be general intangibles. This is important because interest in investment

property are subject to rules that enable investors to take control of assets and thereby have assurance of priority in the event of bankruptcy or other threat of subordination.

The governing rules for general intangibles on the other hand do not permit control of assets as a means to establishing priority. So it's very important for lawyers and clients, when companies are seeking to leverage the value of virtual currency, to understand when and how this currency can be investment property under the UCC. Asset classification affects governing law. If in any given deal cryptocurrency is a general intangible, then the law where the debtor is located governs perfection of a security interest. If cryptocurrency qualifies as investment property and an investor is going to establish control over the assets, then the jurisdiction where the securities intermediary is located will govern perfection of the security interest.

The bottom line is that lawyers working on secured transactions involving cryptocurrencies have to be diligent in establishing exactly what kind of asset, in commercial law terms, they are dealing with. You have to assess that correctly before you can prepare deal documents and certainly before you can render a perfection and enforceability opinion letter. When you think about the fact that asset classification affects governing law, you may have to make sure you are licensed in the jurisdiction that is going to govern perfection and the effect of perfection of the security interest before you can render an opinion letter to close a secured transaction involving virtual currencies.

Cryptocurrency is just one blockchain-based asset that presents these types of classification challenges. For example, several states are beginning to recognize decentralized autonomous organization limited liability companies. The classification of membership interests in those entities present analogous issues. I could come up with more digital assets that present these issues as well, cryptocurrency is just one of the most obvious. So asset classification is a major issue for lawyering in the blockchain space.

The second big issue I want to talk about is blockchain-based smart contracts and UCC Article 9. This second topic may be of particular interest to litigators. Agreements that market actors do not currently associate with UCC Article 9, when expressed as smart contracts, behave like se-

cured transactions. For example, consider a blockchain-based smart contract expressing a services agreement that automatically captures assets if one party fails to perform services on time. The parties may not associate their transaction with secured lending, but their agreement partitions assets for the enforcement of an obligation. And as such, a court could conceivably characterize such an agreement as a security interest governed by UCC Article 9. If a court did this, then it could test the asset capture and disposition mechanisms for commercial reasonableness under Section 9-610. If states enact limits on electronic self-help, and some do, then those statutory parameters would apply as well.

Under UCC Section 1-201, a security interest is any interest in personal property or fixtures which secures payment or performance of an obligation. And under Article 9, the statute applies to any transaction regardless of its form that creates a security interest in personal property by contract. Personalty of course is anything that's not realty, so any blockchain-based asset or digital asset. I could talk about digitized deeds to real estate, but I don't want to waste time on that now.

So, smart contracts do not impose duties. As Zach indicated, they're not like contracts really, they do not impose duties, they do not involve an exchange of promises. Rather, they implement a mechanism. They commit to a future outcome by submitting parties to self-executing terms expressed in code. So given that they do not involve duties or obligations to be performed or not at the discretion of the contracting parties, they are different in nature from the traditional contracts to which Section 9-109—the scope provision of Article 9—refers. But despite this difference, parties agree to a smart contract mechanism that dispatches assets in satisfaction of the agreement's terms. Because of this, we can view them as security interests within the scope of the statute. A perhaps very concise way of saying this is that with smart contracts, people say they're neither smart nor contracts, but they have a legal effect in that they segregate assets—they have property consequences—even if they do not have straight forward contract consequences.

As Article 9 lawyers know, to establish a security interest, there are three requirements: to have value given (that's a consideration requirement), the debtor has to have rights in the collateral (that's the property concept that you can only trans-

fer what you have), and there has to be evidence of intent to create a security interest (that's a statute of frauds requirement). You could go through each of those requirements and argue that a blockchain-based smart contract satisfies them.

Now, a litigant opposing security interest treatment for a blockchain-based smart contract could argue against it. Such a litigant could argue the agreement is not a contract within the meaning of the UCC and therefore not a security interest. Or a litigant could argue that blockchain-based asset transfers put the assets beyond the reach of creditors. So there are arguments to be made here.

The bottom line is lawyers should be aware of how the functionality of blockchain-based smart contracts invokes secured transactions law even in context that they might not traditionally associate with secured lending.

SETH ORANBURG: Thank you. That was really informative and it reminded me of how difficult it is to classify these new, well, "things" as I alluded to at the beginning. We had all these issues with . . . is a cryptocurrency as a security? And now also, is it a security interest? So, thank you for all of that.