EMERGING TECHNOLOGIES AND LAGGING LAWS: ARTICLE 12 AND THE UCC'S ATTEMPT TO COMMERCIALLY INCORPORATE THE RAPIDLY CHANGING WORLD OF DIGITAL ASSETS

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INTRODUCTION

On the evening of Saturday, May 8, 2021, Elon Musk rolled out onto the set of *Saturday Night Live's* satire newsroom, "Weekend Update."[1] Musk was sporting an uptight bowtie, thick-rimmed glasses, and his normal awkward demeanor as he portrayed Lloyd Ostertag, a "financial expert" there to answer comedian Michael Che's questions about cryptocurrency.[2]

Che opened with a simple question. "For our viewers who may not know anything about this, what are cryptocurrencies?"[3]

"They're a type of digital money, but instead of being controlled by a central government, they're decentralized using blockchain technology."[4] Ostertag then pointed to his favorite example, Dogecoin.[5]

"Now, what is Dogecoin?" asked Che.[6]

"Well, it actually started as a joke, based on an internet meme, but now it's taken off in a very real way," said Ostertag matter-of-factly.[7]

Che had the only rational response. "Okay, but what is Dogecoin?"[8]

Ostertag tried again. "Well, it was created in 2013 and has a circulating supply of one hundred and seventeen billion coins, of which one hundred and thirteen billion have already been mined."[9]

Che thought it was worth one more shot. "Right, cool. So, what *is* Dogecoin?"[10]

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1. Saturday Night Live, *Weekend Update: Financial Expert Lloyd Ostertag on Cryptocurrency,* YOUTUBE (May 9, 2021), https://www.youtube.com/watch?v=x5RCfQyTDFI&t=46s [https://perma.cc/UMJ9-3656].
2. *Id.*
3. *Id.*
4. *Id.*
5. *Id.*
6. *Id.*
7. *Id.*
8. *Id.*
9. *Id.*
10. *Id.*

"Like I said, it's a digital currency—."[11]

Finally, Che, expressing the frustration that most of us have when trying to wrap our heads around the subject, pulled a crumpled-up dollar bill out of his pocket. "Like, okay. For instance, this is a dollar, right? It's real. See?"[12] He snapped the wrinkled paper in Ostertag's face before putting it back in his pocket.[13]

Ostertag mostly agreed. "Sort of, sort of real, yeah."[14]

"*So what is Dogecoin*?" Che exclaimed.[15]

From the very first time a commercial transaction was negotiated on a computer instead of a piece of paper, commercial laws have struggled to keep up with the implications of information evidencing commercial transactions that are no longer in tangible form. This problem was only exacerbated with the invention of blockchain technology and the new "digital assets" that it spurred. Today, technology is changing so quickly that lawmakers have had trouble figuring out how to simply define it, much less craft laws governing how it is to be treated in the modern economy.

The Uniform Law Commission ("ULC") and the American Law Institute ("ALI") are now taking on the issue by attempting to incorporate digital assets into state commercial codes.[16] By drafting a completely new Article for the Uniform Commercial Code ("UCC") along with conforming amendments to other Articles, the ULC and ALI hope to accomplish the broader mission of incorporating digital assets as well as define them a bit better than Ostertag did.[17]

In Part I, this Note provides a brief history of the UCC and the process by which it is changed. Part II takes a similar look at the history of the digital assets that are relevant to the UCC. Part III looks at where these two histories collide, explaining the new UCC Article 12 and how it applies to digital assets. Finally, in Part IV, the Note addresses the large number of questions and issues that have been raised by this code and others similar to it, analyzing each issue individually to recommend whether or not states should amend these sections of the code when adopting them.

I. OVERVIEW AND BRIEF HISTORY OF THE UCC

A. UCC Origins

Providing "the backbone of American commerce," the UCC traces its roots

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11. *Id.*

12. *Id.*

13. *Id.*

14. *Id.*

15. *Id.*

16. *See* Uniform Commercial Code and Emerging Technologies Committee Meeting Draft, AM. L. INST. & UNIF. L. COMM'N, (July 9-15, 2021) [hereinafter *Meeting Draft*] (the author of this Note was added as an observer in January 2022).

17. *Id.*

to the ULC when it was known as the National Conference of Commissioners on Uniform State Laws ("the Conference").[18] This organization consists of "commissioners" appointed pursuant to the laws of their respective states who draft and promote the enactment of uniform state laws in areas of state law where uniformity is desirable and practical.[19] Prior to the idea of a completely uniform commercial code in 1941, the Conference had already found success in producing separate commercial acts, including laws such as the Uniform Warehouse Receipts Act, which was enacted by all states prior to 1940.[20]

Despite this success, the Conference found that over time, these various separate acts required amending and eventually, it came to the consensus that it was time for "one comprehensive commercial code" that could be edited as time went on and as state economies changed.[21] However, the Conference also quickly realized that drafting an all-encompassing uniform commercial code for all states to adopt was a task that could not be completed alone.[22] The Conference began negotiations in 1940 to enlist the ALI and its body of twelve hundred lawyers in order to push ahead with a joint effort in drafting the code.[23] After some debate (and some advanced cash payments), the ALI agreed, and the eighty-year partnership that persists today was born.[24] With the work of over one thousand lawyers, debates by private business interests and the federal government, and the passage of ten years, the initial draft of the UCC was completed and offered to states in 1951, and it eventually found great success.[25] Pennsylvania became the first state to adopt the code in 1953, and all remaining states, including D.C., followed suit in the years after.[26]

The original code had nine substantive articles: Article I General Provisions, Article 2 Sales, Article 3 Negotiable Instruments, Article 4 Bank Deposits and Collections, Article 5 Letters of Credit, Article 6 Bulk Sales, Article 7 Documents of Title, Article 8 Investment Securities, and Article 9 Secured Transactions.[27]

Although the code still stands at nine substantive articles today, there have been several changes along the way, with some changes being more impactful

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18. *Uniform Commercial Code*, UNIF. L. COMM'N, https://www.uniformlaws.org/acts/ucc [https://perma.cc/4XAU-SCB8] (last visited Jan. 21, 2020) [hereinafter *UCC Summary*]; William A. Schnader, *A Short History of the Preparation and Enactment of the Uniform Commercial Code,* 22 U. MIAMI L. REV. 1, 1 (1967).

19. *UCC Summary*, *supra* note 18. Indiana has adopted many Uniform Law Commission recommendations in addition to the Uniform Commercial Code (IND. CODE § 26-1), *e.g.*, Uniform Partnership Act (IND. CODE § 23-4-1); Uniform Child Custody Jurisdiction Act (IND. CODE § 31-21-1); and Revised Unclaimed Property Act (IND. CODE § 32-34-1.5).

20. Schnader, *supra* note 18, at 2.

21. *Id.*

22. *Id.* at 3.

23. *Id.*

24. *Id.*

25. *Id.* at 5-7.

26. *Id.* at 8-9.

27. *UCC Summary*, *supra* note 18.

than others.[28] Article 6, for example, was pertinent during the code's creation but has since been largely held as obsolete, with the ULC itself now recommending that states remove it from their codes altogether.[29] Other major additions have been added, such as Article 2A in 1987 covering leases and Article 4A in 1989 covering funds transfers.[30] These changes continue to occur today, leading to the current evolution that is underway.

B. How UCC Changes Occur

Today, the ULC and the ALI still work constantly to ensure that state codes stay current and applicable to today's commerce.[31] Using an editorial board, the ULC continued to monitor and update articles of large debate such as secured transactions under Article 9, which states even heavily amended at first adoption.[32] Despite these changes over time, the original nine substantive articles remain the only articles today (not counting articles 2A and 4A), and no completely new substantive articles have been created until now.

Even the committee that eventually drafted Article 12 did not start out with an intention to do so.[33] The ULC and the ALI first appointed an Emerging Technologies Joint Committee ("the Committee") in 2019 to simply be a study committee to consider whether changes to the existing UCC were appropriate, and this committee was not authorized to draft anything at that time.[34] In addition to the actual members performing the studies, "invitations were sent to large groups of potential stakeholders including trade organizations, financial institutions, technology companies, government agencies, academicians, and consumer groups" to total over two hundred and fifty "observers" to the process.[35]

After some review of the topics at hand, the study committee returned to the ULC and the ALI to request permission to act as a drafting committee, which was granted.[36] With this permission in hand, the Committee planned to hold large meetings to identify individual issues before creating several small working groups to address those individual issues.[37] In all, the Committee planned to hold three full meetings on top of its two annual meetings for 2021 and 2022, along with several smaller meetings for working groups to examine particular topics

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28. *Id.*

29. *Id.*

30. *Id.*

31. *Id.*

32. *Id.*; *see also* Frederick W. Whiteside, Jr., *Amending the Uniform Commercial Code,* 51 KY. L.J. 3 (1962).

33. *Meeting Draft, supra* note 16, at 1 (stating that the committee "was initially formed as a study committee").

34. *Id.*

35. *Id.*

36. *Id.*

37. *Id.*

and consider various stakeholder viewpoints.[38] Finally, the goal was to have the new draft completed by the Committee's 2022 annual meeting in order to be prepared for an initial approval at the ALI's May 2022 annual meeting, followed by a final approval by the ULC at its July 2022 annual meeting, thus changing the UCC for good.[39]

II. OVERVIEW AND BRIEF HISTORY OF DIGITAL ASSETS

One cannot understand any of the current digital assets on the market (or Article 12) without first having a basic understanding of blockchain technology. While this topic has been written about at length many times prior to this Note, it is nevertheless worth reviewing a brief explanation of how blockchain technology works.

A block can be thought of as a box that holds data, such as the information regarding a transaction, with the only way to put data in this box being the insertion of two different keys on opposite ends of the block.[40] One of these keys represents a unique fingerprint or "hash" that an individual provides on their end of the transaction, showing that this block came from only one specific individual.[41] On the other side of the block there is a signature that shows that this block was received by a particular individual, and only that particular individual.[42] Therefore, both of these keys act as a guiding system for the transaction, providing addresses that the transaction amount is traveling to and from, also known as "inputs" and "outputs" to the block.[43] This process continues on and on, creating a chain of blocks, or a "blockchain."[44]

Due to this secure mathematical process, this ledger of transactions can be distributed openly for anyone to see, which is why blockchain has become a subset of a larger technological category known as "distributed ledger technology" ("DLT").[45] The value here is that, because the chain is available for anyone (or any CPU) to see, anyone attempting to maliciously alter this chain and divert a block away from its originally intended recipient would not only alter that single transaction, but also every transaction down the line after it.[46] This

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38. *Id.* at 2.

39. *Id.*

40. Luke Conway, *Blockchain Explained*, INVESTOPEDIA, https://www.investopedia.com/terms/b/blockchain.asp [https://perma.cc/Y6JD-QYMQ] (last visited Oct. 18, 2021).

41. *Id.*

42. *Id.*; *see* United States v. Gratkowski, 964 F.3d 307, 309 (5th Cir. 2020).

43. Noelle Acheson, John Biggs, & Hoa Nguyen, *How Do Bitcoin Transactions Work?* COINDESK (Aug. 20, 2013) https://www.coindesk.com/learn/how-do-bitcoin-transactions-work-2/ [https://perma.cc/HH6H-4TV8].

44. *Id.*; *see also* Roger Lee, *Blockchain's 'Netscape Moment' Is Here*, FORBES (June 30, 2021, 7:40 AM), https://www.forbes.com/sites/forbesfinancecouncil/2021/06/30/blockchains-netscape-moment-is-here/?sh=446b91803db2 [https://perma.cc/QYE3-3KYT].

45. Conway, *supra* note 40.

46. *Id.*

means that the blockchain could only be altered (aka hacked) by a computer that is more powerful than the collective power of all of the computers involved in the entire chain.[47]

Bitcoin is possibly the most known digital asset today. Although his (or her) true identity is still unknown, Bitcoin's original creator who uses the pseudonym Satoshi Nakamoto, described the new currency system in 2009 as a "peer-to-peer electronic cash system" that was "based on cryptographic proof instead of trust" in a third party such as a centralized government.[48] Using the inherent value of units within blockchain technology to create "[t]ransactions that are computationally impractical to reverse," Nakamoto envisioned a world where two people no longer needed a government to back a unit of currency in order to make a transaction between them, therefore leaving behind all of the cross-border foreign exchanges, devaluation, and delay that came with those obstacles.[49]

Although they are potentially the most known, cryptocurrencies such as Bitcoin and Dogecoin are hardly the only way in which the blockchain is being utilized. Imagine that someone has an original Vincent Van Gogh painting. Why is it worth anything? Because there is only one original. How do you know it is an original? The experts examine it, they do their best to recreate the transaction history of the previous owners, and they attempt to ensure that the possessor is in fact the sole owner of the original painting that Van Gogh created. Since the days of *The Starry Night*,[50] online artists have begun making their own original artworks using digital graphics and sounds.[51] These artworks are then bought and sold just like a painting on a wall, only online, using the blockchain to verify original ownership and transfer.[52] These artworks have become more commonly known as Non-Fungible Tokens or "NFTs".[53] Although it may seem absurd from an outsider's perspective that someone would pay millions of dollars for something anyone can search for on Google, the thought is that, just like it is not difficult to purchase a replication of *The Starry Night*, the real value lies in being able to prove that one is the owner of the original work produced by the original artist. This is where the blockchain comes in. The blockchain proves with mathematical certainty that one is in fact the original owner, digitally tracing one's ownership all the way back to the artwork's creation with no question as to

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47. *Id.*

48. Adam Hayes, *Who Is Satoshi Nakamoto?*, INVESTOPEDIA (Jan. 3, 2023), https://www.investopedia.com/terms/s/satoshi-nakamoto.asp [https://perma.cc/5NNJ-7P9Q]; Satoshi Nakamoto, *Bitcoin: A Peer-to-Peer Electronic Cash System*, BITCOIN.ORG 1, https://bitcoin.org/bitcoin.pdf [https://perma.cc/869A-6SUZ] (last visited Oct. 18, 2021).

49. *Id.*

50. *See Vincent van Gogh*, *The Starry Night*, MOMA, https://www.moma.org/collection/works/79802 [https://perma.cc/H67Y-PHR5] (last visited Jan. 22, 2023).

51. Robyn Conti & John Schmidt, *What You Need To Know About Non-Fungible Tokens (NFTs)*, FORBES (May 14, 2021, 12:17 PM), https://www.forbes.com/advisor/investing/nft-non-fungible-token/ [https://perma.cc/RM5E-PFAD].

52. *Id.*

53. *Id.*

its validity.[54] Indeed, because of blockchain security, one can be more certain of the provenance of a copy of "CryptoPunk #5822" than a copy of *The Starry Night*.[55]

III. THE ULC'S AND ALI'S RESPONSE TO DIGITAL ASSETS

A. Gaps in the UCC

As laid out by Indiana University Robert H. McKinney School of Law Professor Frank Sullivan, a current member of the ULC drafting committee and former Indiana Supreme Court Justice, the long existence of emerging technologies such as cryptocurrency and NFTs raise two opposing but fair questions to the ULC.[56] First, with technologies such as these being around for so long (Bitcoin, for example, being created over thirteen years ago), what has taken the ULC and ALI so long to respond?[57] To this question, Professor Sullivan responds with two points.[58]

First, the ULC and the ALI have in fact been active in the field of emerging technologies for some time.[59] Particularly, the organizations drafted the Uniform Electronic Transactions Act (UETA) in 1999, which was drafted by forty-nine states and was also accompanied by the Electronic Signatures in Global and National Commerce Act (ESIGN).[60] Both Acts paved the way for electronic transactions to begin replacing traditional physical transactions around the turn of the century.[61] Professor Sullivan also points out that the ULC has changed the UCC in very central and substantive ways to keep up with the digitization of the economy, transitioning from the term "writing" to "record" in order to help encompass electronic transactions that were no longer "written" on paper.[62]

Although not pointed to by Professor Sullivan, the ULC has also recently turned its attention to blockchain technology specifically, just not in the UCC.[63]

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54. *Id.*

55. *See* Shaheer Ansari, *CryptoPunk #5822 NFT Sold For A Record Breaking $23.7 Million,* CLOUT (Feb. 12, 2022), https://cloutnews.com/cryptopunk-5822-nft-sold-for-a-record-breaking-23-7-million/ [https://perma.cc/NKK2-R2G3].

56. Professor Frank Sullivan Jr., Member, Unif. L. Comm'n Drafting Comm., Remarks at the Indiana University Robert H. McKinney School of Law Faculty Colloquium 2-3 (Sept. 10, 2021) (transcript on file with author) [hereinafter *Remarks*].

57. *Id.*

58. *Id.*

59. *Id.*

60. *Id.*; UNIFORM ELECTRONIC TRANSACTIONS ACT (UNIF. L. COMM'N 1999); Electronic Signatures in Global and National Commerce Act, 15 U.S.C. §§ 7001-7031 (2000).

61. *See* UNIFORM ELECTRONIC TRANSACTIONS ACT (UNIF. L. COMM'N 1999); Electronic Signatures in Global and National Commerce Act.

62. *Remarks*, *supra* note 56, at 2-3; U.C.C. § 9-105 (AM. L. INST. & UNIF. L. COMM'N 2022).

63. IND. CODE § 32-39-1-10 (2021); *Fiduciary Access to Digital Access Act, Revised,* UNIF. L. COMM'N, https://www.uniformlaws.org/committees/community-home?CommunityKey=

In 2016, the ULC and ALI approved the Revised Uniform Fiduciary Access to Digital Assets Act, which was offered to and accepted by forty-seven states, including Indiana.[64] However, this Act did not apply commercial transactions between parties with competing interests, but instead governed the transfer of digital inheritance.[65] This lack of competing interests meant that the Act could offer an overly simplified definition of digital assets, which read as follows:

> (10) "Digital asset" means an electronic record in which an individual has a right or interest. The term does not include an underlying asset or liability unless the asset or liability is itself on an electronic record.
>
> (11) "Electronic" means relating to technology having electrical, digital, magnetic, wireless, optical, electromagnetic, or similar capabilities."[66]

Although not pertinent to the question of commercial transactions, this Act is another example that the ULC has kept its eye on these technologies.

Professor Sullivan also offers a second rebuttal to the question of delayed response time by the ULC: the UCC is "a lagging indicator by design."[67] As he points out, the UCC was never intended to be an authority for the states derived from abstract economic ideas.[68] Instead, the UCC was fundamentally designed to codify what the natural market already does, thereby allowing the free flow of the practices that most interstate transacting parties already prefer.[69] Producing a response to emerging technologies before observing how the market treated them would therefore be counter-productive to the UCC's fundamental purpose.

Professor Sullivan's second hypothetical question posed to the ULC was the converse of the first: with the UETA, ESIGN, and the potential for blockchain technology to squeeze inside Article 9's current definition of "general intangibles," does anything need to be done at all?[70] As the remainder of this Note will show, the Committee spent significant time studying this question, and its answer has been a resounding "yes."

When it was first formed, the Emerging Technologies study committee recognized two important trends driven by these technologies that called for the UCC to change.[71] "First, people are using the creation or transfer of electronic

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f7237fc4-74c2-4728-81c6-b39a91ecdf22 [https://perma.cc/UG7C-2WMV] (last visited Nov. 4, 2021).

64. IND. CODE § 32-39-1-10; *Fiduciary Access to Digital Access Act, Revised, supra* note 63.

65. *Fiduciary Access to Digital Access Act, Revised, supra* note 63.

66. REVISED UNIF. FIDUCIARY ACCESS TO DIGIT. ASSETS ACT § 2 (UNIF. L. COMM'N 2015).

67. *Remarks*, *supra* note 56, at 2-3.

68. *Id.*

69. *Id.*

70. *Id.* at 3-4.

71. *Meeting Draft*, *supra* note 16, at 3.

records to transfer rights to receive payment, rights to receive performance of other obligations (*e.g.*, services or delivery of goods), and other interests in personal and real property."[72] "Second, people have begun to assign economic value to some electronic records that bear no relationship to extrinsic rights and interests."[73] The study committee worried that these trends would "inevitably result in disputes among claimants to electronic records and their related rights and other benefits," and that the"[u]ncertainty as to the criteria for resolving these claims [would] create[] commercial risk."[74] Although there are numerous issues that the drafting committee eventually addressed as laid out in Part IV, it is worth taking a look at one in particular to frame the sort of puzzles that the Committee was attempting to solve.

B. Article 9 and Digital Assets as Collateral

One of the most glaring and potentially hazardous of these problems arises under Article 9.[75] Article 9 of the UCC provides a legal regime for extending credit secured by collateral, i.e., to secure its payment obligation to a creditor, a debtor agrees that if the debtor defaults on its obligation, the creditor can seize and dispose of certain specified property of the debtor to liquidate the obligation.[76] The right of the creditor to seize and dispose of the collateral upon default is called a "security interest" or "lien."[77] A creditor's security interest in collateral of a debtor becomes enforceable against a *debtor* under Article 9 through a process called "attachment."[78] A creditor's security interest in the collateral of a debtor becomes enforceable against a *third party* under Article 9 through a process called "perfection."[79] Whether a security interest has "attached" and has been "perfected" depends upon compliance with rules set forth in Article 9, and these rules differ depending upon the category of collateral involved.[80]

This presents a problem for cryptocurrency and other digital assets. If the old version of the UCC property categories do not identify which category something such as an NFT should fall into, then entering into a secured transaction using the NFT (or other digital asset) as collateral means that a security interest might not "attach," i.e., be enforceable against the debtor; or might not be "perfected," i.e., be enforceable against third parties.[81]

Categorizing digital assets under the current UCC is not a complete guessing

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72. *Id.*
73. *Id.*
74. *Id.*
75. *See generally* U.C.C. art. 9 (AM. L. INST. & UNIF. L. COMM'N 2022).
76. *Id.*
77. *See id.* §§ 9-102(a)(12); 9-609.
78. *See id.* § 9-203.
79. *See id.* §§ 9-308 cmt. 2; 9-322(a)(1), (2), cmt. 2.
80. *See generally id.* §§ 9-301 to -316.
81. *Id.*

game, however.[82] Although there are several different options that Article 9 defines as collateral categories, the fact that digital assets have no physical properties narrows down the possibilities greatly.[83] The first and most obvious choice would be that of "money" defined at section 1-201(b)(24), but both this category and that of "deposit account" defined at section 9-102(a)(29), fail for similar reasons.[84]

Section 1-201(b)(24) requires that the "money" be "a medium of exchange currently authorized or adopted by a domestic or foreign government," while section 9-102(a)(29) defines a "deposit account" as "a demand, time, savings, passbook, or similar account maintained with a bank."[85] Both definitions fail to apply to digital assets not because there is some issue with the physical properties of the asset, but instead because there are issues with the institutions backing them.[86] At the time the drafting committee was considering UCC changes, there was no country that had authorized or adopted Bitcoin or any other digital asset as currency, meaning that the definition of "money" failed by default.[87] Similarly, due to its decentralized nature, no cryptocurrency has been maintained by a bank (and most crypto enthusiasts would shudder at the thought), meaning that "deposit account" also proved to be inadequate.[88]

"Investment property" comes a bit closer than the others, but the result of applying this category is still a bit unclear.[89] Section 9-102(a)(49) defines an "investment property" as "a security, whether certificated or uncertificated, security entitlement, securities account, commodity contract, or commodity account."[90] However, looking into the definition of "security" shows that Bitcoin and other similar cryptocurrencies once again suffer from their decentralized nature. Because section 8-102(a)(15) defines a "security" to include the "obligation of an issuer" (as does the definition of security entitlement under section 8-102(a)(17) and the subsequent "financial asset" definition in section 8-102(a)(9)), this means that because there is no obliged issuer behind a decentralized cryptocurrency like there is with a share backed by a corporation, it likely will not qualify under this definition either.[91]

Finally, "general intangible" under section 9-102(a)(42) is a default category of collateral that has generally been interpreted to cover digital assets.[92] At the

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82. *See* Barbara M. Goodstein, *Virtual Currencies (and Other Digital Assets) Under the UCC,* N.Y. L.J. (Aug. 4, 2021, 12:30 PM), https://www.law.com/newyorklawjournal/2021/08/04/virtual-currencies-and-other-digital-assets-under-the-ucc/ [https://perma.cc/KJ96-9USX].

83. *Id.*

84. U.C.C. §§ 1-201(b)(24); 9-102(a)(29).

85. U.C.C. §§ 1-201(b)(24); 9-102(a)(29).

86. *See* U.C.C. §§ 1-201(b)(24); 9-102(a)(29).

87. Goodstein, *supra* note 82.

88. *Id.*

89. U.C.C. § 9-102(a)(49).

90. *Id.*

91. *Id.* §§ 8-102(a)(15), (a)(17), (a)(9).

92. *Id.* § 9-102(a)(42).

end of the definition in the black letter, the section specifies that it does indeed "include[] payment intangibles and software."[93] And the Official Comment to the definition of "general intangible" cites "various categories of intellectual property" and "rights that arise under a license of intellectual property . . . ."[94] Still, the Committee recognized that there was plenty of room for legal dispute as to where this definition could fall, and instead of trying to make digital assets fit into sections of the code that were not originally written with those assets in mind, the Committee thought it best to update the code to keep up with the times.[95]

C. The Solution: Article 12 and Conforming Amendments

After studying this issue and many others, the Committee decided that simply amending the code was inadequate, and instead settled on drafting an entirely new Article along with conforming amendments.[96] As laid out by the Committee itself, Article 12 is "designed to reduce these risks by providing the legal rules governing the transfer—outright and for security—of interests in some, but not all, electronic records (*controllable electronic records*)."[97] Especially in regard to secured transactions, the Article aimed to "specify the rights in a controllable electronic record that a purchaser would acquire."[98]

The sections of the Article that are relevant to the substance of the UCC changes, in the order that this Note will address them, are as follows: sections 12-103 Scope, 12-102 Definitions, 12-105 Control of a Controllable Electronic Record, and 12-104 Rights in Controllable Electronic Records and Certain Accounts and Payment Intangibles.[99] There are also conforming amendments to other articles that are pertinent to the topic of this Note, and those will be briefly discussed as well.

A prefatory note to Article 12 simply clarifies that the provisions in Article 12 only apply to "controllable electronic records," a term which is initially defined in section 12-102.[100] Under that section, Article 12 first relies on section 9-102 of the UCC, which already defines a record as "information that is . . . stored in an electronic or other medium and is retrievable in perceivable form."[101] Therefore, "controllable electronic record" is defined in section 12-102 as "an electronic medium that can be subjected to control" before it is made clear that a number of already-existing items in the UCC are excluded from this definition,

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93. *Id.*

94. *Id.* cmt. 5(d).

95. *Meeting Draft, supra* note 16, at 2.

96. *Id.*

97. *Id.* at 3.

98. *Id.*

99. U.C.C. §§ 12-103, -102, -105, -104.

100. Uniform Commercial Code Amendments (2022), *Prefatory Note on Scope of Article 12*, at 230-31, AM. L. INST. & UNIF. L. COMM'N (July 8-13, 2022); § 12-102(a)(1).

101. *Id.* § 12-102(a)(1); § 9-102(70).

including electronic documents and investment properties.[102]

Section 12-102 instead relies heavily on section 12-105 to truly separate the traditional electronic records such as purchase contracts from "both technologies that are known and those that may be developed in the future."[103] Focusing on the meaning of "control," section 12-105 defines the important concept as follows:

> (a) A person has control of a controllable electronic record if the electronic record, a record attached to or logically associated with the electronic record, or a system in which the electronic record is recorded:
> (1) gives the person:
> (A) power to avail itself of substantially all the benefit from the electronic record; and
> (B) exclusive power, subject to subsection (b), to:
> (i) prevent others from availing themselves of substantially all the benefit from the electronic record; and
> (ii) transfer control of the electronic record to another person or cause another person to obtain control of another controllable electronic record as a result of the transfer of the electronic record; and
> (2) enables the person readily to identify itself in any way, including by name, identifying number, cryptographic key, office, or account number, as having the powers specified in paragraph (1).[104]

After defining what the digital asset even is in sections 12-102 and 12-105, section 12-104 attempts to lay out the rights that accompany possession of, or security interest in, a digital asset.[105] Most importantly, this section deals with what rights a purchaser or creditor has in regard to adverse claims of interest by third parties.[106] First, to lay the ground work for the section, section 12-102(a)(2) lays out the important definition of "qualifying purchaser": "a purchaser of a controllable electronic record or an interest in a controllable electronic record that obtains control of the controllable electronic record for value, in good faith, and without notice of a claim of a property right in the controllable electronic record.[107]

Although section 12-104 generally deals with a few different rights that a purchaser can exercise when dealing with a controllable electronic record, the most important of these is section 12-104(e).[108] This subsection states that "[a]

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102. *Id.* § 12-102(a)(1).
103. *Meeting Draft, supra* note 16, at 4.
104. U.C.C. § 12-105.
105. *Id.* § 12-104.
106. *Id.*
107. *Id.* § 12-102(a)(2).
108. *Id.* § 12-104.

qualifying purchaser acquires its rights *in* the controllable electronic record free of a claim of a property right in the controllable electronic record."[109] Although the plain language of the statute leaves open the question of whether "rights" outside of the controllable electronic record are transferred, the Committee itself did address the issue, which will be explained and addressed in Part IV.[110]

Finally, outside of Article 12, there are also amendments to the code that affect the transfer and possession of digital assets.[111] However, the only one pertinent to this Note is an addition to Article 9 that relates to the "rights" addressed in section 12-104.[112] This amendment will also be addressed in Part IV, as it relates to the Committee's solution to the issue of rights versus records.

IV. ADOPTING ARTICLE 12: WHERE STATES SHOULD AND SHOULD NOT AMEND

As it stands, the modification of commercial law among the states to accommodate digital assets has been far from uniform. While some states have attempted to modify their commercial codes on their own accord,[113] others have adopted the ALI/ULC draft verbatim before it was officially approved.[114] This is demonstrative of the crossroads that states are at in regard to incorporating digital assets into their commercial codes. The remainder of this Note will look ahead to these crossroads, addressing various issues that the ALI/ULC draft addresses and then recommends to states whether to adopt or amend them.

A. Definition Adequacy

The first and most obvious problem with this new Article is the one that Ostertag failed to address on *Saturday Night Live*. As expressed by the Committee itself, it is not always certain that the term chosen to define these assets, in this case "controllable electronic record," will even reflect a readily understandable relationship between itself and the assets it was intended to govern.[115] After all, with such intangible concepts and ideas, it is difficult to formulate a definition that adequately captures what is even being disputed. However, looking to past attempts to define these assets shows how Article 12 is the best definition for the UCC's purposes, and amending it to reflect those past

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109. *Id.* § 12-104(e) (emphasis added).

110. *Id.* § 12-104.

111. *See Meeting Draft, supra* note 16, at 2.

112. U.C.C. § 9-203(b)(3)(D).

113. *See* Matt Crockett, *Wyoming's DIY Project Gets Western with the UCC*, 20 WYO. L. REV. 105, 107 (2020).

114. Indiana State Senator Chris Garten sought to introduce a digital assets bill similar to Wyoming's in 2022. With the cooperation of Professor Sullivan and the ULC drafting committee, Senator Garten instead agreed to adopt and introduce the ALI/ULC draft verbatim, which can now be found at Indiana Code § 26-1-9.1-102 (2022).

115. *Issues List for 2021 Annual Meeting Draft*, DRAFTING COMM. ON THE UNIF. COM. CODE & EMERGING TECHS. (Jun. 28, 2021) (on file with author) [hereinafter *Issues List*].

definitions would be a mistake.

The crypto debate in U.S. Congress has raged for some time, mainly regarding whether the U.S. Government should recognize digital assets as currency, securities, or something else entirely.[116] U.S. Congressman Don Beyer (D-VA) has introduced a bill to the House that attempts to incorporate digital assets into the Commodity Exchange Act, but unlike the UCC, its "digital asset" definition focuses more on how the asset is created.[117] The definition there reads as follows:

> (52) The term 'digital asset'
> (A) means an asset—
> (i) that is created electronically or digitally through software code;
> (ii) that is programmed with rules that—
> (I) govern the creation, supply, ownership, use, and transfer of such digital asset; and
> (II) are designed to resist modification or tampering by any single person or persons under common control;
> (iii) that has a transaction history that—
> (I) is recorded on a—
> (aa) distributed digital ledger; or
> (bb) digital data structure in which consensus is achieved through a mathematically verifiable process;
> (II) is updated as soon as possible in accordance with the digital asset programming rules related to transactions and ownership; and
> (III) after consensus is reached is designed to prevent modification or tampering with the ownership or transaction history by any single person or persons under common control;
> (iv) That is capable of being transferred between persons through a decentralized method without an intermediate custodian; and
> (B) is a broad term which includes several other terms used to describe digital assets by market participants and regulators such as 'virtual asset', 'virtual currency', and 'convertible virtual currency' among others.[118]

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116. Jason Brett, *Congress Has Introduced 18 Bills on Crypto and Blockchain in 2021,* FORBES (Aug. 22, 2021, 9:08 PM), https://www.forbes.com/sites/jasonbrett/2021/08/22/congress-has-introduced-18-new-bills-on-crypto-and-blockchain-in-2021/?sh=534c410b263b [https://perma.cc/P6U2-XV68].

117. Digital Asset Structure and Investor Protection Act, H.R. 4741, 117th Cong. § 201 (2021).

118. *Id.*

Although this bill attempts to address a very different issue than Article 12, there can still be temptation to structure the UCC similarly to Breyer's—that is, to focus on defining the asset based on how it is created instead of what kind of power the holder has over it. It could be argued that this type of definition is less abstract than the one provided by the ULC drafting committee and tailors Article 12 to a certain type of asset without needlessly encompassing too many types of assets.

While Breyer's definition is perfect for what he is trying to do—regulate crypto by action of the federal government—the fundamental goals of the UCC make this definition quite inadequate. The UCC hopes to incorporate as many different digital assets as it can in order for willingly transacting parties to be able to deal in them.[119] Choosing a definition that only describes the exact method that is *currently* used to create Bitcoin and other assets simply will not work.

For example, Breyer's legislation specifically requires that the data structure used for the asset has "consensus [that] is achieved through a mathematically verifiable process."[120] While this law is not even passed yet, there are already cryptocurrencies being created that no longer need "miners" to mathematically verify transactions at all like Bitcoin does.[121] While Breyer may not want to add future technologies to the Commodities Exchange Act, focusing on the method in which the asset is created essentially puts an expiration date on Article 12 and its incorporation into collateral and other commercial transactions, meaning that the Article could potentially go bad before it is even adopted by the states.

This is in contrast with the UCC "digital asset" definition, which focuses on the power that the owner of the asset has versus the method by which he or she obtained that control.[122] This is a much better approach for one core reason: digital assets only have value because of the ownership and control that a person can exert over it, meaning it is the one aspect of the technology that will never change. After all, there is a reason a screenshot of Jack Dorsey's first tweet will sell for $2.5 million (although some may that argue the reason is still not a good one).[123] An owner does not care how they can claim sole ownership of Dorsey's first tweet (or any artist's original work), just that they *can* do so.

Structuring the UCC definition around the control that an owner holds and his or her sole ability to transfer that control ensures that even if new technology is created without mathematical verification or even a blockchain at all, this definition will still apply, while a definition such as Breyer's will become

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119. *See Meeting Draft, supra* note 16.

120. H.R. 4741.

121. Mike Orcutt, *A Cryptocurrency Without a Blockchain Has Been Built to Outperform Bitcoin,* MIT TECH. REV. (Dec. 14, 2017), https://www.technologyreview.com/2017/12/14/104996/a-cryptocurrency-without-a-blockchain-has-been-built-to-outperform-bitcoin/ [https://perma.cc/W9MS-ZUH2].

122. U.C.C. § 12-105 (AM. L. INST. & UNIF. L. COMM'N 2022).

123. Annabelle Williams, *11 of the Most Expensive Pieces of Crypto Art Ever Sold, From Beeple to Steve Aoki,* BUS. INSIDER (Mar. 21, 2021, 12:04 PM), https://www.businessinsider.com/most-expensive-nft-list-top-selling-nfts-crypto-art-sales-2021-3 [https://perma.cc/M2VF-EU6C].

outdated.[124] By stressing the importance of the owner's "power to derive substantially all the benefit," their "exclusive power to prevent others from deriving substantially all the benefit," and their "exclusive power to transfer control," the UCC definition adequately codifies the decentralized (yet secure) transactional availability that makes digital assets valuable in the first place.[125]

It could also be argued that the definition should be structured toward a simpler definition such as the one found in the Revised Uniform Fiduciary Access to Digital Assets Act, but this too would be an error.[126] Stating that a digital asset "does not include an underlying asset or liability unless the asset or liability is itself an electronic record" could introduce problems in the future, particularly regarding NFTs and other underlying assets.[127] Structuring the UCC definition in this way could leave the code open to excluding future technologies that are similar to NFTs but do not store the underlying asset on an electronic record at all. Once again, approaching the definition from the angle of the control that the holder exerts over the asset would still cover future digital assets that do not store the underlying asset on an electronic record because that holder would still exert the same control over it as they did before.

Finally, there may also be a persisting argument that the definition of "money" will be adequate in the future, especially given current events. In a clear demonstration of the speed at which these technologies develop, El Salvador became the first country to adopt Bitcoin as officially recognized currency, right in the middle of the Article 12 drafting process.[128] As a result, it is now possible that at least Bitcoin could fall under the current definition of "money" under section 1-201(b)(24) because the currency has now been "authorized or adopted by a . . . foreign government."[129] Although the Committee responded to this development by amending the definition of "money" to exclude currency "in a system that exisited and operated for the medium of exchange before the [it] was authorized or adopted by the government" thus making the El Salvador development meaningless, these evolving markets could still pose problems.[130] Opponents of Article 12 will say that this is evidence that a completely new definition is not necessary since digital assets will fall into the existing code as they become more stable and mainstream.

However, this is evidence to the contrary. The entire purpose of Article 12 is to modernize the UCC in order to keep up with rapidly changing technologies.[131] The events that displayed how quickly Bitcoin became incorporated into the code

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124. U.C.C. § 12-105; H.R. 4741.

125. U.C.C. §§ 12-105(a)(1)(A)(i) to (iii).

126. REVISED UNIF. FIDUCIARY ACCESS TO DIGIT. ASSETS ACT § 2 (UNIF. L. COMM'N 2015).

127. *Id.* at § 2(10).

128. Joanna Ossinger, *Crypto's Wild 2021 Will Go Down as One for the Ages,* BLOOMBERG (Dec. 22, 2021, 12:01 AM), https://www.bloomberg.com/news/articles/2021-12-22/crypto-s-wild-2021-featured-elon-musk-bitcoin-btc-shiba-inu-bito [https://perma.cc/8AG3-G3RY].

129. U.C.C. § 1-201(b)(24).

130. *Id.*

131. *Meeting Draft, supra* note 16, at 1.

(literally in between two different meetings of the Committee) only show how unstable these definitions are when it comes to digital assets.[132] Should the Committee let this definition stand, El Salvador could recant its authorization tomorrow, and Bitcoin would find itself outside of the code once again. What would happen if two parties entered into a secured transaction while El Salvador recognized Bitcoin, but then while the Bitcoin was being held as collateral, they revoked that authorization? Could that security interest be enforced against that debtor?

This same issue was contemplated even as far back as the 1980s, when those monitoring commercial law were struggling with the similarly new and perplexing "plastic money" of Visa cards and other forms of checks.[133] There, the drafters of the "Uniform New Payments Code" recognized that having various forms of payments without clearly defined unified categories "creates an impossible situation if the payment system in question is an amalgam of two or more payment methods."[134] Instead, the drafting committee at that time saw that a unified approach to codifying payment systems "would avoid the legal quagmires and inconsistent approaches which have resulted and will continue to occur under our present state of affairs."[135]

These quagmires can also be avoided today. Without relying on the instability of world governments adopting and abandoning different cryptocurrencies at will, Article 12 instead provides a clear and definite pathway to peace-of-mind between transacting parties, and adopting this Article uniformly is crucial to achieve this goal.

B. Perfection Without Possession

Moving on from the problem of definitions, the next and most glaring issue that the Committee hoped to address was the Article 9 security interest problem laid out in Part III.[136] Even beyond clarifying what rights a creditor had when owning a security interest in an NFT or other digital asset, Article 12 also attempts to make the process of obtaining these rights by perfection easier for the creditor.[137]

As has been long established by the UCC with any type of collateral, a creditor will always want to "perfect" their security interest in collateral to ensure that they are the first in line to have rights to that property should the debtor default.[138] Traditionally, this was done in one of two ways. The first and more traditional way would be for a creditor to take physical possession of the asset in

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132. *See* Ossinger, *supra* note 128.

133. Ingrid Michelsen Hillinger, *UCC and ME in Process,* 13 COLONIAL LAW. 8, 9 (1984).

134. *Id.*

135. *Id.*

136. *Meeting Draft, supra* note 16, at 1-2.

137. *See generally* U.C.C. § 12 (AM. L. INST. & UNIF. L. COMM'N 2022).

138. *See generally id.* §§ 9-301 to 316.

which they held a security interest, such as a promissory note.[139] The second and much more common option would be by filing a "financing statement" with the Secretary of State, meaning that the first creditor with a financing statement on file with the Secretary of State would be first in line should that debtor default.[140]

However, these traditional solutions contained in the UCC can present problems with digital assets. With assets such as cryptocurrency, there is neither a physical place where the assets actually exists or an issuer located somewhere that can be held responsible for it as there is with an uncertificated security.[141] First, the option of physical possession is obviously not a viable one when that asset only exists on the blockchain, or whatever other electronic medium is used to store it. Second, the Secretary of State filings can depend on the physical location of both the creditor and the assets. Because there is no physical location of a digital asset itself, at best the creditor can keep tabs on the location of their debtor and try to file another financing statement in that respective state in order to continue the perfection of their interest. This method is not particularly attractive to creditors though, as there is a short grace period in which they can refile and failing to do so could lead to losing their perfection in the security interest.[142]

As odd as this issue seems, this is not the first time the UCC has wrestled with it. In the past, the code has responded to the constant digitizing of purchase contracts and other documents by creating a framework that replaced the concept of "writings" with "records" and focused on the "control" and allowing that to serve as a perfection of security interest in the deal that the record represented.[143] However, this differs from today in that the digital contract to purchase a car was not the thing of value itself—that was the car. Today, as in the case of Bitcoin, the record does not contain a transaction for a thing of value—it *is* the thing of value, meaning that the current state of the UCC did not accurately reflect the vital importance of the control over that record.

It has been suggested that the solution to this problem could be an "ecosystem of smart contracts and smart devices" that would resort to "automatic, self-executed remedies" that would instantly take control (in this case, meaning digital keys or other identification factors) from a defaulting debtor and immediately transfer that control to the creditor.[144] While this could be a robust and viable path in the future, that ecosystem simply does not exist today, and the UCC could not create it single-handedly. Instead, the ULC has taken a more conservative approach.

In response, they settled on the solution to hone in on the meaning of

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139. *Id*. §§ 9-309(4), 310(b).

140. *Id.* § 9-310(a).

141. *Id.* § 8-102(a)(9).

142. *Id.* § 9-316.

143. *Id.* § 9-105.

144. Teresa Rodriguez de las Heras Ballell, *Digital Technology-Based Solutions for Enhanced Effectiveness of Secured Transactions Law: The Road to Perfection,* 81 LAW & CONTEMP. PROBS. 21, 41 (2018).

"control" and expand it beyond what it once was for things such as digitally stored contracts. This led to the three part "control" definition under Article 12 requiring the possessing party to have 1) the power to derive substantially all the benefit from the controllable electronic record, 2) the exclusive power to prevent others from deriving substantially all the benefit from the controllable electronic record, and 3) the exclusive power to "transfer the controllable electronic record to another person or cause another person to obtain control of" a controllable electronic record that derives from the controllable electronic record.[145]

Even the old system of the financing statement is not as catastrophic as some have claimed it to be when it comes to digital assets.[146] Although it would come with headaches such as tracking the debtor, it would still be at least workable for the time being. Instead, adding the option of perfecting a security interest using this advanced version control only makes a workable process much more efficient, modernizing the code to recognize the increased mobility of both debtors and their assets in an increasingly digital age without attempting a complete overhaul of the "ecosystem" as it stands.[147]

In fact, the new version of the act could even be amended to allow this method of perfection to be used on other digital records that are not inherently valuable, such as purchase contracts. This would take the focus away from the tangible object of purchase, such as the car, but also would make commercial transactions much smoother by preventing repeat filings for perfection and would also make creditors more confident in entering into deals due to losing the fear of missing the grace period to refile.

C. Third-Party Interests and the "Take-Free" Rule

After codifying the mechanics of how a party can acquire a security interest in, place a lien on, or simply come to possess, a controllable electronic record, there still lies the issue of what to do about competing third-party interests.[148] This is, of course, a new spin on a classic property issue: what if the interest of this property has been promised elsewhere? The difference today is that this record is completely digital, and there are no longer records that can be physically filed or located, as well as no issuing party that would keep these records.

The general rule of Article 9 is that a security interest continues in collateral notwithstanding sale, lease, or other disposition *unless* the secured party authorizes the disposition free of the security interest.[149] However, there are some exceptions carved out in the code that allow the transfer of certain assets to be automatically free of third-party interests, without prior authorization.[150] Here, the

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145. U.C.C. § 12-105.

146. Rodriguez de las Heras Ballell, *supra* note 144, at 28.

147. *Id.* at 40.

148. *See* Peter F. Coogan, *The New UCC Article 9,* 86 HARV. L. REV. 477, 512 (1973) (discussing original "take free" issues that Article 9 attempted to address).

149. U.C.C. § 9-315(a).

150. *Id.* cmt. 2.

Committee was faced with the decision of which of these routes to take in regard to the transfer of controllable electronic records.

In response, the Committee created section 12-102, which creates the status of a "qualified purchaser," much like the status of the "bona fide subsequent purchaser" in traditional property law.[151] Under Article 12, the purchaser must acquire the controllable electronic record 1) "for value," 2) "in good faith," and 3) "without notice of a claim of a property right in the controllable electronic record."[152] This means that as long as the purchaser meets these three qualifications, they will "take-free" the asset without any worry of competing interests from third-party claimants.[153]

Although no one has yet taken the vast step that Article 12 does, states have already attempted to at least move in this direction. In Wyoming, the state legislature broke away from the UCC to make its own commercial code revisions intended to "create an attractive environment for those utilizing" blockchain and other emerging technologies.[154] These changes included an amendment establishing how the take-free rule applied to digital assets.[155] However, this rule was distinctly different from the UCC revisions, as it "only applie[d] to a security interest perfected by *a method other than control*," thus leaving unresolved the "Achilles heel" of digital assets.[156] This is in contrast to the ULC provisions, which deliberately apply the take-free rule to security interests that are in fact perfected by exactly that method.[157]

The drafting committee itself has questioned whether their approach is the correct one.[158] With the only real barrier being the notice of a third-party claim, this creates an arguably low bar for purchasers to acquire all rights to the asset free and clear, and a conversely high bar for a claimant who has a legitimate interest but could not notify the subsequent purchaser. However, given the nature of the recent emergence of digital assets, there is no other approach to take.

Unlike the days of physical deeds and assets that did exist somewhere and with someone, today's assets are completely intangible, making fraudulent claims of third-party promissory interest much more possible. After all, it is not like the purchaser can send an attorney down to the Bitcoin clerk's office to search for a title. This inability may make buyers and creditors skeptical to enter into transactions without some sort of safe harbor from competing interests. If commercial codes did not provide this safe harbor, transactions would likely grind to a halt as soon as purchasers began noticing that third-party interest claims were becoming commonly litigated in court. Therefore, if a state wishes to encourage transactions involving digital assets, then the take-free rule as it

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151. *Id.* § 12-102.

152. *Id.*

153. *Id.* § 12-104.

154. Crockett, *supra* note 113, at 107.

155. *Id.* at 132.

156. *Id.* at 132 (citing WYO. STAT. ANN. § 34-29-103 (d)) (emphasis added); *id.* at 135.

157. U.C.C. § 12-104.

158. *Issues List, supra* note 115.

stands in Article 12 is the only option. Amending the code to provide for anything but a "take-free" approach to the purchase of digital assets would only slow the incorporation of such assets to a state's economy. Adopting the code as-is is the best route to increased commerce in this sector.

D. Records vs. Rights

Even aside from the value and rights inherent in the record itself, problems still exist with associated rights outside of the intrinsic value of the record itself. Blockchain technology in general has created this new problem that was not necessarily an issue until now. Traditionally, a record or "information," such as a purchase contract, did not have inherent value but instead was simply evidence of the rights of the parties to a transaction, such as the right to have something delivered at a later date in exchange for money. However, with the invention of blockchain technology, the "record" of the blockchain may sometimes become not the evidence of rights between the parties, but the actual thing of value itself, as it is in exchanges of any cryptocurrency.

Blockchain, though, serves other purposes as well and can indeed provide the means by which two parties create a contract of sale. The question then becomes, if a purchaser acquires this record, do they only acquire the inherent value of the record, which may have been the only reason they purchased the record? Or do they acquire the other rights on the record, such as the right to receive the goods in the transaction that is evidenced on the record? While it was not traditionally an issue that someone would buy a piece of paper that may have a contract on it, the blockchain has now opened up the possibility that this could become a reality that could lead to legal disputes, and the current state of the UCC did not directly deal with this issue.

This is the issue that this Note alluded to in Part III regarding whether the UCC governed the transfer of the rights that exist "outside" the record, as opposed to the rights "in" the record addressed in section 12-104.[159] Although the plain language of the code was not clear, the Committee clarified that "Article 12 applies to records and not to rights evidenced by records (or to rights that records purport to evidence)."[160] Instead, the Committee diverts this issue from Article 12 entirely, stating:

> [L]aw other than Article 12 would govern what steps must be taken for a person to acquire an interest in a controllable electronic record and the rights, if any, that the person acquires in other property as a result of acquiring an interest in the record. This "other" law includes UCC Article 9.[161]

With the drafting committee's silence on the issue, states would then have two options when adopting the code: (1) amend Article 12 on its face to directly

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159. U.C.C. § 12-104.

160. *Meeting Draft, supra* note 16, at 7.

161. *Id.*

address the transfer of associated rights during a controllable electronic record transaction, or (2) make separate amendments to other Articles, such as Article 9, depending on what type of right was attached to the record. Out of the two options, the second would likely prove to be the most efficient because these outside rights could be addressing anything from purchasing contracts to simple payment obligations, and states may wish to deal with each of these rights in more nuanced fashions, rendering some of these rights easier to acquire than others.

However, even the better of these two options could have unintended consequences. Suppose one state made the associated rights of purchasing contracts automatic with the purchase of the record, just as the drafting committee did with payment obligations, while another state made them not automatic, and instead much more difficult to obtain. This could obstruct a transaction across state lines, with competing law governing who did or did not own the right to the purchase contract after the purchase of a controllable electronic record.

Instead, it would be a much better option for the drafting committee to do its best to draft amendments into the UCC to address as many of these types of scenarios as possible. Although it would be impossible to encompass all categories, crucial ones such as purchase contracts should be addressed in order to provide uniformity among the states, clarity among transacting parties, and hopefully far fewer disputes.

E. Article 8 and Opting Out of Article 12

Finally, as discussed earlier, the term "investment property" under Article 8 was on the short list of definitions that digital assets could use to be incorporated into the UCC. According to the "issues list" created for the Committee, Article 12 as it stands remains silent on and does not affect the right of parties to "opt-in" to this option and classify digital assets under Article 8 as an "investment property" in the unusual case where a digital asset is indirectly held through an exchange or other intermediary, as required by Article 8.[162] This means that then (and only then) that asset could be treated as an "investment property" and "excluded from Article 12 entirely even if the digital asset would otherwise be a controllable electronic record," thus subjecting the asset to all of the differing rules found in Article 8 and omitting it from those of Article 12.[163] In a narrow sense, this is in relation to the very first issue discussed earlier in the Note, pertaining to whether to classify digital assets as "money" or something else within the code. But in a much broader and more important sense, this means that the drafters have allowed for the same type of asset to be treated commercially different under the code, negating the creation of Article 12 altogether in regard to that asset.

The Wyoming legislature took a different approach to the problem but came up with a similar solution. There, instead of remaining silent like the UCC,

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162. *Issues List, supra* note 115.

163. *Id.*

Wyoming chose to expressly state that the Article 8 flexibility was in fact still allowed with digital assets.[164] The key distinction, however, is that unlike the UCC, Wyoming's legislature went out of its way to state that a custodial bank does in fact qualify as the "securities intermediary" needed to back a digital asset in order for it to be treated as a financial asset under Article 8.[165]

Although this issue has not been finally settled by the Committee, leaving this area of flexibility would likely be a problem and states would be justified in amending. In a step away from both the UCC and Wyoming's commercial code, the best solution would likely be to close the option entirely. As with every state's commercial code, there is an interest-balancing that occurs between the will of two transacting parties and keeping the codes uniform enough to maintain the free flow of interstate commerce.

The entire purpose of Article 12 is to mitigate the confusion that comes with conducting transactions using digital assets and other emerging technologies and leaving this option open would lead to the unraveling of other questions answered by Article 12. For example, an indirect third-party holder does not resolve the question of whether a good-faith purchaser may take a controllable electronic record free from competing property claims. If the Committee decides to leave this flexibility in place, states should instead amend Article 12 to close this door and keep all digital assets firmly within the playing field that is designed to house them.

CONCLUSION

Since its inception, there has always been the lingering question of whether the UCC would stand the test of economic time or if federal legislation would eventually be necessary to unify state commercial codes in order to maintain the efficiency of interstate commerce. Thus far, the UCC has proven to be a historic document and a triumphant display of states' abilities to regulate their own interrelated commerce without federal intervention. To maintain this status well into the future, the UCC must change.

Although technically possible, leaving the UCC in its current state to deal with emerging technologies would be like trying to fit a square-shaped peg into a very outdated circle-shaped hole. After the tedious study by the Committee, combined with the input of literally hundreds of representatives from the industries that this code will affect, Article 12 was born along with other amendments in a big step toward modernizing the UCC.

There are several problems these updates attempt to address. The problem of third-party claims, associated rights, security interests in secured transactions, and simply defining emerging technologies have all proven to be obstacles that the Committee has attempted to overcome. Individual state legislatures may not like every answer the UCC provides, though, and these states would be justified to disagree on and even amend some of these matters such as the Article 8 flexibility

164. Crockett, *supra* note 113, at 115.

165. *Id.* at 116.

and the omission of law governing the transfer of associated rights. Amending their own state commercial codes on these issues would not likely create an inefficiency within interstate commerce and would still maintain the overall UCC goal of free-flowing commerce between states. However, the other areas such as the core definition of the digital assets as well as the "take-free" rule should be left alone and remain uniform among the states.

The drafting commission itself has been a stage for vigorous debate, showing how complicated some of these questions can be. Although the new additions to the UCC may not be perfect as a whole, they are nevertheless a massive advance in keeping at least some sort of uniformity among states with such vastly changing technologies. It is vital states continue to take part and show their ability to conduct business uniformly even in the face of vast technological changes.