The Character of Cryptocurrency in the United States

The Interpretation of Cryptocurrency under Uniform Commercial Code 9

Soohun Jang

I.   INTRODUCTION

How many people can buy a real property in cash at one time? Regardless of the cultural backgrounds, most people in the world will give a mortgage to a bank in order to obtain a property title because of its expensiveness. How about a vehicle? The answer will be a little bit changed. Some people buy a car in cash immediately. However, others give a security interest to a dealer in promising pay-back of the principal and interest under a payment schedule. Like examples above, modern economy has been developed with the security system in which market participants may extend their credits in reliance on a collateral that the participant can provides a creditor with as a form of a debenture, note, or loan. The system regarding security interest has been developed with a connection to the economic growth. Plus, the system has set forth economic growth.

Cryptocurrency opens the new era not only in a perspective of technical progress but also an economic system. Most executive departments in the United States had not maintained a clear position regarding the feature of the cryptocurrency until the executive branch realized the potential and possible effects in near future on the United States market around 2007. After watching a transaction volume of the cryptocurrency, the Internal Revenue Service ("IRS") took initiative in creating the regulation for cryptocurrency taxation. This IRS regulation reflects the governmental stance to the cryptocurrency which will substantially affect national economic in the future. In the situation that the executive departments hesitated to unify the definition of the cryptocurrency, IRS, at least, made a tiny step forward the journey of the regulation about cryptocurrency.

The economic growth in a market is substantially subject to the system of security interest. The economic system cannot be separate from the security system in which it makes the market participants have plenty of sources for investment or consumption of products. Because of the significant role of the security interest, this article has a meaning for understanding the cryptocurrency character and its application in the current United States legal context.

II.   NATURE OF CRYPTOCURRENCY

Cryptocurrency was invented around 2007. Because of its short invention history, the cryptocurrency is still on the cloud in defining its nature. However, the nature of the cryptocurrency is narrowly trimmed down by executive departments and courts.

A.   Perspective of Security Exchange Commission

First, Security Exchange Commission ("SEC") takes an initiative in defining the cryptocurrency as an investment security. The mission of SEC is to protect investors, maintain fair orderly and efficient markets, and facilitate capital formation. To accomplish the general mission, the SEC investigates the key participants in the securities world, including securities exchanges, securities brokers and dealers, and investment advisors. Since the impacts caused by the misrepresentation and fraud

before and after the investment will severely undermine the market system, the SEC has kept the quality of information and its flow into the market.[1]

When Congress enacted the Securities Exchange Act of 1934, Congress had to decide which model of state regulation to use; (1) merely prohibiting fraud in offering and selling securities; (2) requiring a registration and full disclosure to investors, or (3) providing that the government would judge the merits of offerings, and determine which could be sold to the public. Congress chose a combination of (1) and (2).[2] The reason for the enactment was to prevent misrepresentation in the security market because the damage could easily spread out to the public, which impinges substantially on the credit system. Thus, the SEC could not set back from the cryptocurrency prevalence, but it defined the character of cryptocurrency in order to avoid potential misrepresentation when Initial Coin Offering ("ICO") occurs.

In 2017, the SEC published the report about whether the ICO should be regulated under federal securities law.[3] According to the report, the SEC recognized the need for the regulation to the ICO by looking through "Decentralized Autonomous Organization" case which was related to the organization's issuing a cryptocurrency token. It was because the cryptocurrency might entice anonymous investors into putting their money for the ICO which had been out of the SEC regulation at that time.

There was an example, in 2018, that the SEC asked the court to determine the feature of the ICO.[4] Zaslavskiy, the defendant, founded "REcoin" in Nevada and "Diamond" in Puerto Rico. The defendant was the sole owner of both companies. From January to October 2017, the defendant fraudulently induced investors to purchase purported cryptocurrency "tokens" or "coins" in connection with the REcoin and Diamond for ICOs.[5]

The issue in both cases was whether the cryptocurrency token is considered as security which determines the defendant should have complied with the federal securities laws before the ICOs. The court applied the "Howey Test" to define the feature of the cryptocurrency as security.[6] The court considered the fact that the defendant facilitated his business with the cryptocurrency as the security subject to the SEC regulation.[7] Those facts above indicated the cryptocurrency token was used for the source and the subject of the investment with an expectation to the profit as the fruit of the investment. The court also found the fact that before the ICOs, multiple investors deposited funds into the vehicle and took profits correlated with other investors. The Intent for raising profit from the ICO was proven. Therefore, the court ruled for the

---

[1] U.S. Securities and Exchange Commission, *Available at* https://www.sec.gov/Article/whatwedo.html (last visited on Mar. 22, 2019)

[2] William J. Carney, Corporate Finance Principles and Practice 361-362 (3rd ed. 2015). Foundation Press

[3] Report of Investigation Pursuant to § 21(a) of the Sec. Exch. The act of 1934: The Dao, Release No. 81207 (July 25, 2017).

[4] United States v. Zaslavskiy, No. 17 CR 647 (RJD), 2018 WL 4346339, at *1 (E.D.N.Y. Sept. 11, 2018).

[5] *Id.* at *2.

[6] *Id.* at *4–8.

[7] *Id.* According to the Howey test, the security must be subject to the requirements as follows:

a. It is an investment of money; and

b. There is an expectation of profits from the investment; and

c. The investment of money is in a common enterprise; and

d. Any profit comes from the efforts of a promoter or third party.

SEC, which is a good example of the definition of the cryptocurrency at the security market in the United States.

The SEC took initiative in building a guideline for the ICO because of its risk at the moment the cryptocurrency boomed. Although there is still no "bright-line rule" to determine what the securities were or were supposed to be, the cryptocurrency is finally considered security which is regulated under the federal securities laws. As a result, The SEC is entitled to regulate the ICO such as the initial public offerings.[8]

B. Perspective of Commodity Futures Trading Commission

Is the cryptocurrency treated as a commodity at the futures market? What is the future(s)? Basically, market participants want to make a deal in not only tangible or intangible goods in the present but also the goods in the future. These transactions of the futures entail risks that seller or buyers will take a burden on that the goods in the future will not be created. However, sellers and buyers who predict the market price and quantity of a commodity in the future will gain extra capital profits through the prior agreement before the commodity are physically produced.

When it comes to the issue that whether the cryptocurrency is one of the futures, Commodity Futures Trading Commission ("CFTC") determined in 2015 that virtual currencies are commodities which be regulated under the Commodity Exchange Act ("CEA").[9] In 2018, the CFTC filed a lawsuit against Patrick McDonnell and his company, Coin Drop Markets. The CFTC alleged that defendants operated a deceptive and fraudulent virtual currency scheme with purported virtual currency trading advice.[10] However, the defendants argued that the CFTC had no authority to regulate the transaction between investors and the defendants, filing the motion to dismiss.

The court rendered the verdict in favor of the CFTC that the defendants were subject to the Act because of the nature of commodity in the futures transaction. The court considered that virtual currencies are regulated by the CFTC as the commodities because virtual currencies were "commodities" exchanged in a market for uniform quality and value.[11] Moreover, the court also explained that the jurisdictional authority to regulate virtual currencies is exclusively designated to the CFTC under the CEA.[12] The CFTC has traditionally had its jurisdiction primarily of "futures" contracts regarding commodities. Moreover, the court extended CFTC's role reaching out to the virtual currency transactions in the contracts for commodities.[13]

The subject matter in this case was not the cryptocurrency but the virtual currency. However, we can reasonably infer that the CFTC opens the door that market participants are authorized to make a deal in the cryptocurrency as the future

---

[8] Anthony F. Fata, Brian P. O'Connell, The Blockchain Bandwagon: Cryptocurrency on the Move, CBA Rec., January 2018, at 26, 30

[9] 24 No. 14 Westlaw Journal Derivatives 09.

[10] Commodity Futures Trading Comm'n v. McDonnell, 287 F. Supp. 3d 213, 216 (E.D.N.Y.), adhered to on denial of reconsideration, 321 F. Supp. 3d 366 (E.D.N.Y. 2018).

[11] *Id.* at 228. The virtual currencies are satisfied with the common definition of "commodity" as well as the CEA's definition of "commodities" as "all other goods and articles in which contracts for future delivery are presently or in the future dealt in" under Title 7 U.S.C. § 1(a)(9).

[12] *Id.* at 228–29.

[13] *See* CFTC v. Gelfman Blueprint, Inc., Case No. 17–7181, 2017 WL 4228737 (S.D.N.Y. Filed Sept. 21, 2017).

commodity in a condition that they predict the future value of the cryptocurrency. Since the court reiterated the role of the CFTC in the futures market, market participants may understand the expansion of the cryptocurrency transaction which must be in compliance with the CFTC regulations.

C.   Perspective of the Internal Revenue Service

The Internal Revenue Service ("IRS") has not stayed back from the emergence of cryptocurrency. The IRS published "Notice 2014-21", a guideline of the cryptocurrency on March 26, 2014, which was the first announcement about the cryptocurrency among the departments in the United States. The IRS waited for the taxation on the cryptocurrency transactions until it found the exact time for the regulation in which the amount of the transaction substantially should be prevalent.
For example, the IRS did not impose a tax on the internet transactions until the amount of the transactions were developed enough to earn taxable benefits on the IRS side. The IRS finally imposed the tax on Amazon.com in which the corporation had substantially taken financial benefits for 20 years. The IRS waited and saw the electronic transactions amount going over $12 billion.[14]

Like the electronic online transactions above, after the amount of the transactions relating to the cryptocurrency went over $3 billion in 2014, the IRS finally published the regulation guideline, "Notice 2014-21." The notice explains the way to tax on the cryptocurrency transactions with attaching the diverse examples. The IRS kept an eye on the market in order to catch a good timing for the taxation on the cryptocurrency. [15] The important point is that executive departments have acknowledged the potential impacts of the cryptocurrency on the market, itself and its participants.

D.   Deep in Side of the Nature of Cryptocurrency

Courts have recently handled the cryptocurrency through civil and criminal cases. They have not actively jumped into the world for making straight line for the nature and its transaction. However, they carefully dealt with the cryptocurrency issue

---

[14] Deidre A. Liedel, The Taxation of Bitcoin: How the Irs Views Cryptocurrencies, 66 Drake L. Rev. 107, 115–16 (2018).

[15] See *Id.* at 121–22. The valuation has not seemed like the issue for the security interest. However, the valuation is an important issue not only for the taxation but also for the security interest because the IRS can give the guideline for the area of the valuation. The IRS shows a concept for the valuation, which is "a reasonable and consistent manner." It is so general that taxpayer or tax lawyer will fall in confusion to confirm the measurement value of the cryptocurrency. In 2017, actual and potential investors experienced the high volatility (over 10% volatility on price per day) overall the cryptocurrencies from Bitcoin to new cryptocurrencies. Plus, the trait of the cryptocurrency makes it difficult to confirm the valuation because of its "decentralization." For example, public issued stocks are sold or bought in a regulated place such as NYSE. Futures and Options are transacted in the place CFTC takes charge in. However, there is no regulated or centralized place for the cryptocurrency transaction. This transaction is not detected or tracked under a government department in the United States. Because of both traits above, it is so uncertain for market participants to hold the value of the cryptocurrency for an annual tax report.15 IRS will announce the criteria of the "reasonable manner" in the future. However, we can still evaluate the cryptocurrency person to person out of relating government regulations.

in which we can infer, at a glance, through cases how the courts have looked at the nature of the cryptocurrency and its transactions.

i.   *Cryptocurrency as Security and Currency*

Before the IRS Notice 2014-21, a court showed the determination regarding the nature of the cryptocurrency as the source of the investment. In Shavers case, Shavers, the defendant, wanted to solicit potential investors for issuing a new cryptocurrency. In a term of an agreement, Shavers guaranteed 1% profit per day, which triggered the SEC's intervention to this agreement.[16] The issue was whether Bitcoin was the investment which should be regulated under federal securities laws. The defendant argued that the investment was not subject to the federal securities laws because the defendant used the cryptocurrency as the investment solicitation in which the SEC had not announced any guidelines with respect to the cryptocurrency, yet.[17]

However, the court decided that Bitcoin was a security subject to the SEC regulation because Bitcoin had a similar trait for the investment exchangeable to cash. The court also focused on the fact that the investors, in this case, expected the additional profit through this participation of the investment and the Bitcoin was likely to be liquidated into cash anytime at the end of the transaction.[18] Accordingly, the court rendered the decision that the cryptocurrency is security.

In contract to Shavers case, a court in Petix case presented a different aspect regarding a cryptocurrency.[19] In this case, Petix, the defendant, provided customers with money transmitting service with respect to a cryptocurrency. Petix did not check the permission requirement of the state government for this business because it believed there were no regulations for this transmitting business, especially, of the cryptocurrency.[20]

The issue, in this case, was whether the cryptocurrency was money as currency. Under 18 U.S.C. § 1960, it indicates that the money shall be issued by a sovereign power. It was generally recognized that the cryptocurrency was not issued by a centralized entity such as the United States. Since the issuant government did not have inherent sovereign power over the cryptocurrency, the court ruled for Petix that this business was not regulated by the state law because the cryptocurrency did not satisfy the character requirement of currency.

Both courts above looked through the facts in order to analyze the nature of the cryptocurrency. The courts did not show the "bright-line" rule about the feature of the cryptocurrency, which means that its definition can be interpreted in consideration of the diverse contexts in politics and economy. The courts were likely to expand the feature of the cryptocurrency when this issue came out into the world.[21]

---

[16] Sec. & Exch. Comm'n v. Shavers, No. 4:13-CV-416, 2014 WL 12622292, at *2 (E.D. Tex. Aug. 26, 2014)

[17] *Id.*

[18] *Id.* at *7.

[19] United States v. Petix, No. 15-CR-227A, 2016 WL 7017919, at *7 (W.D.N.Y. Dec. 1, 2016)

[20] *Id.*

[21] *See* Liedel, *Supra* note 14, at 131–32.

ii.   *Cryptocurrency as Property*

How about the courts' decision about the cryptocurrency as property? In "50.44 Bitcoins" case and "Holden" case, both courts opined the feature of the cryptocurrency.[22] The United States government tried to take an action to confiscate the cryptocurrency and the proceeds of the cryptocurrency because of defendants' illegal transactions.[23] Both courts applied the rule, 18 U.S.C. § 981, to both cases by considering the definition of the forfeiture property, making a decision of the cryptocurrency as the property.[24]

Those cases are important for a potential creditor to infer the feature of the security interest regarding the cryptocurrency and its proceeds. Since the courts permit governmental enforcement in activating its own right for the forfeiture through the legitimate procedure, the decisions give us an evident ground to forfeiture or confiscate the interest which legal creditors have secured upon the collateral.[25] The cryptocurrency is entitled to be treated as collateral which contains the property value.

However, in "GLD International Incorporation" case, the court avoided putting its toe into the interpretation of the cryptocurrency related to the security interest. The coin issuing entity created the gold-based cryptocurrency, which means that the cryptocurrency must be issued in proportion to the amount of the gold that the company possesses. Thus, this cryptocurrency was seemed to be stabilized in the valuation and the quantity in general.[26] The issue was whether the plaintiff filed a proper jurisdiction in between the United States and Australia.

The court dismissed this case on the ground of the lack of jurisdiction, commenting the forum non-convenience in consideration of party interest factors, public interest factors, adequate alternative forum, and the presumption of deference.[27] If the court had reviewed this case, the feature of the cryptocurrency would have been clearly interpreted. In short, the door is still opened to the court which will enlarge the description and interpretation about the cryptocurrency as a feasible collateral.

III.   CRYPTOCURRENCY UNDER UNIFORM COMMERCIAL CODE 9

At the beginning of this article, the creation of the cryptocurrency enlarges the economic territory, which affects not only technology development but also the collateral for the security interest. From this point, it will look into the practical method to secure the cryptocurrency as the security interest under Uniform Commercial Code 9 ("UCC 9").

---

[22] *See* the United States v. 50.44 Bitcoins, No. CV ELH-15-3692, 2016 WL 3049166 (D. Md. May 31, 2016); *See also* United States v. Holden, 908 F.3d 395 (9th Cir. 2018).

[23] *See* Liedel, *Supra* note 14, at 132–33.

[24] 18 U.S.C. § 981, 18 U.S.C. § 1960. the government finally was authorized to confiscate the proceeds of the cryptocurrency transactions.

[25] *Id.* at 132–33.

[26] Aaron Data Sys., Inc. v. GLD Int'l, Inc., No. 17-62111-CIV, 2018 WL 1973653, at *1–2 (S.D. Fla. Mar. 23, 2018), report and recommendation adopted, No. 17-62111-CIV, 2018 WL 1972439 (S.D. Fla. Apr. 26, 2018).

[27] *Id.* at *5-8.

A.   Character of Cryptocurrency under UCC9

The UCC is the rule of the explicit concession about the transaction of goods in the United States. Traditionally, UCC9 controls the security interest to goods, which includes intangible goods including property license, computer programs, and payment intangible systems. UCC9 almost covers the valuable properties except for a few things, especially money. The UCC9 articulates the secured transactions, categorizing collaterals in dependence on their features. Since the cryptocurrency is not explicitly mentioned in the UCC9, it can be reasonably inferred the feasibility for a collateral in interpreting the UCC9 provisions.[28]

i.   *Cryptocurrency as Intangible Good under UCC9*

The UCC9 traditionally concerns the tangible good in transactions. In a traditional aspect, the cryptocurrency hardly becomes a tangible good as the collateral for perfecting the security interest. It is because the cryptocurrency in nature is the technology, not the tangible product manufactured in a factory.
Despite its intangibleness, the UCC9 may cover the cryptocurrency as a high technology combining with computers or servers in a connection with the transaction or other goods. In a practical manner, people may buy and sell the cryptocurrency as the subject of the transaction online. Accordingly, they expect the profit gains from cryptocurrency transaction.[29]

For the reason above, the cryptocurrency may be considered as the "Good" under UCC 9-102 (44), a part of a computer program under a certain condition. The cryptocurrency is the part of the computer program in consideration of the way the cryptocurrency is created and published. Since a computer program is subject to UCC9-102(44), the cryptocurrency in the assumption of a computer program can be embedded in typical goods for a transaction relating to the program. However, if the good functions the medium of the transaction, the cryptocurrency is less likely to be treated

---

[28] *See* Unif. Commercial Code § 9-102(44). In UCC 9-102(44), it indicates the definition of "Good" as follow:
"Goods" means all things that are movable when a security interest attaches. The term includes (i) fixtures, (ii) standing timber that is to be cut and removed under a conveyance or contract for sale, (iii) the unborn young of animals, (iv) crops grown, growing, or to be grown, even if the crops are produced on trees, vines, or bushes, and (v) manufactured homes. The term also includes a computer program embedded in goods and any supporting information provided in connection with a transaction relating to the program if (i) the program is associated with the goods in such a manner that it customarily is considered part of the goods, or (ii) by becoming the owner of the goods, a person acquires a right to use the program in connection with the goods. The term does not include a computer program embedded in goods that consist solely of the medium in which the program is embedded. The term also does not include accounts, chattel paper, commercial tort claims, deposit accounts, documents, general intangibles, instruments, investment property, letter-of-credit rights, letters of credit, money, or oil, gas, or other minerals before extraction. Otherwise, The character of the cryptocurrency can be designated into the followings under a certain condition: investment property (UCC9-102(a)(49)), General intangible (UCC9-102(a)(42)), or payment intangible (UCC9-102(a)(61)).
[29] People in the United State may buy and sell tangible goods such as pizza, cell phones by using the cryptocurrency such a limited area. The reason why the IRS has intervened the transaction by the cryptocurrency is that the cryptocurrency, as a new technology, become the part of the property right like the goods.

as proper collateral under this provision because it is similar to money. [30] The cryptocurrency may be considered as a computer program suitable for collateral under UCC9 in a certain circumstance.

ii. *Cryptocurrency as Money under UCC9*

What if the cryptocurrency is treated as money in the future? Under UCC9-131, money is not subject to UCC9, which means that money cannot become the collateral under the UCC9.[31] Interesting point is that a security interest in money can be perfected by the secured party's physical possession. If the cryptocracy is admitted as the money in the future, the UCC9 will not be applied anymore with respect to the security interest and collateral for the cryptocurrency. Namely, the cryptocurrency will be denied for the collateral due to its newly defined money trait.[32]

B.   Preemption of Federal laws on Cryptocurrency

The second issue is whether other governing laws preempt the UCC9. Since federal laws preempt the UCC9, some items cannot be secured as the collateral such as an aircraft, deposit accounts, letter of credit. Accordingly, the items above cannot be regulated under UCC9 unless the federal laws make room for exceptions. In general, the UCC9 will not prevail over those items as the collateral.

Under UCC9-109(d), an assignment of the claim for wage, salary, or insurance policy is subject to the UCC9, which shows that the cryptocurrency is under UCC9 because it is not under an exception nor subject to federal laws. However, we must put the red flag on whether federal statutes pertinent to the cryptocurrency are newly enacted in the future.[33] It is because the federal government at all times can intervene in the nature and right of the cryptocurrency in which the UCC9 may not be applicable with respect to the security interest of cryptocurrency.[34]

---

[30] Russell A. Hakes, The ABCs of the UCC Article 9: Secured Transactions 9 (3rd ed. 2010).

[31] *See* Unif. Commercial Code § 9-131.

[32] *See* 18 U.S.C.A. § 981 (West); *See also* 18 U.S.C.A. § 1960 (West) The sovereign government must issue the monetary credited by its government; *See* United States v. Petix, supra note 19, at *7. The court did not treat the cryptocurrency as the money in the application of 18 U.S.C.A. § 1960 (West). The court considered the cryptocurrency as a computer program issued by a private entity, not a credited government entity; *See* Wisconsin Cent. Ltd. v. the United States, 194 F. Supp. 3d 728, 736–37 (N.D. Ill. 2016), aff'd, 856 F.3d 490 (7th Cir. 2017), rev'd and remanded, 138 S. Ct. 2067, 201 L. Ed. 2d 490 (2018) The court has not treated the cryptocurrency as money instead of property and security pertinent to a property right. The cryptocurrency has an important character, decentralized transactional module, in which no governmental entities regulate nor control the quantity of the money in their needs. However, in a tax perspective, the court rendered the verdict in favor of the United States for its charging tax on stock option. The court did not explicitly allow the government to impose a tax on any sort of the subject which could be exchanged to the money in the future. The court opened the door with respect to the interpretation of the money in the standard of the medium of exchange.

[33] Hakes, *supra* note 30, at 14-16.

[34] Hakes, *supra* note 30, at 38-39. Several types of collateral are governed by federal law that provides for national filing, or registration: aircraft under Federal Aviation Administration, Vessels, railroad cars, locomotives, and rolling stock or accessories under Surface Transportation Board, Ship mortgages under Secretary of Transportation. Also, Federal rules preempt the Code in relation to Federal Reserve Banks and security interests in Treasury securities issued by the federal government. However, Copyrights or

C.   Filing Financing Statement for Cryptocurrency

It explicitly permits identifying collateral by a specific list, by category, by use of the classification under the UCC9-108(b). Namely, it rejects formalistic, technical requirements but the adequate description is valid if it reasonably identifies the collateral. Therefore, the collateral document regarding cryptocurrency can be filed in a condition that a reasonable person can figure out the general information of the collateral, the cryptocurrency.[35]

i.   Filing and Perfecting

The UCC9 promotes filing a financing statement as the primary method of perfection according to the UCC9-310. The filing perfects a security interest in most collateral. There are two major exceptions for the normal perfection in the filing. First, filing cannot perfect a security interest in money, deposit accounts, or letter of credit rights.[36] For example, a security interest in money may be perfected only by the secured party's physical possession under the UCC9-131.[37] Second, federal laws prevail over the UCC9.[38] The cryptocurrency has not been designated as money nor a subject matter regulated by federal laws.

About filling out on the financing statement, the UCC9 breaks these minimal requirements into two categories: requirements for legal effectiveness (UCC9-502), and requirements for acceptance by the filing office (UCC9-516(b)). To make it effective legally, a financing statement must provide the debtor's name, the name of the secured party or its representative, and an indication of the collateral (UCC9-502(a)). In the assumption that the cryptocurrency is one of valid goods for the collateral, the cryptocurrency can be filed in the local administrative office if petitioner complies with UCC9-500 for a valid format when the financial statement is created.[39]

Patent are not certain to the preemption rule. Moreover, the law of the state of the debtor's location governs perfection of most security interests that are perfected by filing. This conclusion requires careful reading of §9-310 and §9-305. §9-310(1) applies the law of the state in which the debtor is located to the perfection, effect of perfection or non-perfection, and priority of security interest in collateral, unless provided to the contrary in §9-301 or §9-303 through §9-306. It shows the implication that the federal government at all times can intervene in the nature and right of the cryptocurrency in which the UCC9 may not be applicable with respect to the cryptocurrency security interest. the federal government has not enacted rules with respect to the cryptocurrency. Departments pertinent to financial affairs such as CFTC, SEC promulgate regulations, notices fragmentary. However, there is no sequential action against the cryptocurrency transaction. Until the legislative branch in the United State enacts a law about the cryptocurrency, UCC9 will be applicable for the collateral issues.

[35] Hakes, *supra* note 30, at 39-44.

[36] *See* Unif. Commercial Code § 9-312.

[37] Hakes, *supra* note 30, at 60-61.

[38] Hakes, *supra* note 30, at 16.

[39] *See* Hakes, *supra* note 30, at 39-44; *See also* Hakes, *supra* note 30, at 63-66. The perfection is valid, but only if the secured party actually possess those with follows: deposit accounts, letter of credit rights, investment property, electronic chattel paper, and electronic documents. Those can be perfected by secured party's obtaining control of the collateral. § 9-314. If the cryptocurrency is within the possession primary perfection procedure, the physical controls prevail the perfection over other methods; *See also* Unif.Commercial Code § 9-312(b)(3). A security interest in money can only be perfected by possession;

ii.   Priority over the Collateral, the Cryptocurrency

Under the UCC9-322(a)(3), it explicitly awards priority for the creditor who attach it as the security interest at the first time over more than two creditors who hold unperfected security interests in accordance with UCC9-322(a)(2). Likewise, the rule is also applied to the cryptocurrency as the collateral.

For example, Bob is a buyer and Sally is a seller of a kitchen appliance. Bob had the cryptocurrency on his hardware in the computer. Bob determined to provide Sally with the cryptocurrency as the collateral because Bob needed urgent financial aid. After Bob received some sort of money from Sally who had a security agreement with Bob before her sending the money to Bob, Bob contacted Carrol to take additional financial support in the situation that Carrol did not recognize Sally's security agreement. Carrol transferred the money to Bob after they made the same agreement that Bob and Sally previously confirmed. Who will take a priority among creditors?

According to UCC 9-322(a)(2), the party who quickly files the financing statement to the state office will take the priority over another. No one, in this case, did not file it, which causes them to have no priority over each other. If Sally files first, Sally has it. On the other hand, Carrol has a priority if Carrol files first. This is the basic concept to the "first to attach" rule under UCC9-310(b) and 9-322(a).

What if both parties filed in a condition of Carrol first and Sally second? Does the actual or contractive knowledge matter to determine the priority to the cryptocurrency? Under UCC 9-317(a)and 9-322(a), actual knowledge of a previous unperfected security interest is irrelevant for the priority. Therefore, regardless of Carrol's knowledge that Sally already had had the security interest over the cryptocurrency, Carrol prevails over Sally if Carrol filed the financing statement first. Although general rule governs in typical cases, the duty of good faith in UCC1-203 may cause a secured creditor with actual knowledge of an earlier unperfected security interest to lose priority in egregious circumstances, such as being affiliated with the debtor and taking advantage of the prior unperfected party.[40] In an assumption of the valid collateral as the cryptocurrency under UCC9, accordingly, the secured party is entitled to take back the collateral or the proceed of it through a legitimate procedure.

D.   Proceeds of the Cryptocurrency Collateral

The perfection may continuously affect the proceeds of the collateral, which is the automatic perfection. Automatic perfection protects the right of the secured party

---

See also Unif.Commercial Code § 8-106, 9-106(b)(2), 9-106(c)(d)(e), 9-314(a)(3). When it comes to Perfection by control, the code specifies the steps needed to obtain control for each type of collateral, which all involved obligations of a third party. In this case, if a secured party obtains control, that third party will be protected when the secured party seeks to enforce the obligations. Here, the cryptocurrency might be treated as the investment property which is also perfected by control under the specific rule; *See also* Unif.Commercial Code § 9-102(a)(49). Investment property includes several subcategories of property (§9-102(a)(49)); certificated securities, uncertificated securities, security entitlements, securities accounts, commodity contracts, commodity accounts.

[40] *See* Hakes, *supra* note 30, at 95; *See also* Tompson v. the United States, 408 F.2d 1075 (8th Cir. 1969).

even if the party does not file an additional financing statement about the proceeds of the original collateral. Automatic perfection covers proceeds of collateral under the UCC9-315(c) and (d). It provides that a security interest in proceeds including checks and deposit accounts is automatically perfected for twenty days if the security interest in the original collateral was perfected.[41]

The UCC9-322(b) allows the secured party to raise the "relation-back doctrine" to the proceeds of the collateral, which means that the time for the automatic perfection is considered as the same moment in time of the original filing. This rule is particularly important for many priority contests with proceeds for the secured party's side.[42] Since the priority date of the proceeds is on or after the date of the disposition or collection of the original collateral, the creditor having the first priority of security interest prevails over other creditors.[43]

For example, a debtor bought the cryptocurrency, giving the creditor it as collateral. However, a debtor exchanged the cryptocurrency to a house appliance which was the proceed of the collateral. If the creditor properly filed the financing statement, the creditor had the priority to the proceed attaching to the collateral. The general rule above will be valid unless a federal law articulates the priority of security interest about the cryptocurrency.

According to the UCC9, the proceeds of the cryptocurrency also are protected by the perfection which provides a creditor with the security interest to retrieve the proceeds of the collateral. Therefore, we expect to achieve the proceeds of the security interest step by step in accordance with the UCC9.

E.   Purchase Money Security Interest to the Proceed

There are some exceptions superseding the general rule, "the first in time, the first in priority." The purchase money security interest ("PMSI") is a typical example for the exceptions in which this interest can be obtained in goods and in related software.[44]

Bob, for example, is a buyer and Sally is a seller of a kitchen appliance. Bob visited Sally's store to buy a kitchen appliance for over $5,000. The purpose of the appliance was to organize goods in the kitchen. Bob only paid one of fourth to the whole price, promising to pay back the rest of price no later than 6 months. After Bob took the appliance for 3 months, he determined to sell it to Carrol, 1Bitcoin instead of cash. In reliance on the agreement between Bob and Carrol, Bob transferred it to Carrol in

---

[41] *See* Hakes, *supra* note 30, at 71-72; *See also* Unif.Commercial Code § 9-102(a)(9), 9-315(d)(2).

[42] *See* Unif.Commercial Code § 9-308, § 9-203, § 9-322. The debtor does not obtain rights in proceeds until the disposition or collection of the original collateral.

[43] *See* Hakes, *supra* note 30, at 97; *See also* Trimarchi v. Together Development Corp., 255 B.R. 606 (D.Mass. 2000), In re Peregrine Entertainment, Ltd., 116 B.R. 194 (Bankr. C.D.Cal. 1990), In re Avalon Software, Inc., 209 B.R. 517 (Bankr. N.D. Cal. 1999).

[44] *See* Unif. Commercial Code § 9-103; *See also* Hakes, *supra* note 30, at 102. The software is defined that software must be acquired in an integrated transaction with the goods in which the software is to be used, and the goods are subject to the purchase money security interest. The PMSI may arise in several ways. A seller of goods on credit obtains or retains a security interest in the goods to secure payment of all or part of their purchase price, a lender loans money for the acquisition of goods, the money is used to acquire the goods, and the goods secure repayment of the loan, or a consignor obtains a security interest in the consigned goods.

exchange for the Bitcoin without notice to Sally. Bob did not pay the debt at the end of 6 months. How does Sally can enforce the forfeiture?

According to the UCC9-309, the PMSI is automatically perfected, which shows that the collateral is secured without filing the financing statement. Here, the fact that whether Sally filed the financing statement is not a decisive factor to determine perfection. Since Bob bought the appliance for domestic use instead of a commercial one, Sally had automatically secured collateral at the moment of the transaction. Although Bob changed mind from domestic to commercial use after the transaction, Sally still had secured collateral against the third party in a condition that Sally reasonably believed that Bob purchased it for domestic use. Thus, Sally had the right to confiscate not only the collateral but also the proceeds of it when the contract was breached.

When Bob sold the appliance containing the security interest on Sally to Carrol, Bob obtained the proceeds of it, Bitcoin. Regardless of goods' status, Sally may assert the right to procure the proceed including cash or property interest. Therefore, Sally was eligible to confiscate Bitcoin as the proceed of the collateral. If Carrol was a bona fide purchaser at the moment the transaction with Bob, Carrol would not forfeit the object of the purchase, the appliance, from Sally.

In the same example above, except for domestic use, let's assume that Bob intended to use the appliance at his restaurant. Bob explained to Sally that the appliance would be the most suitable good to organize the kitchen in his restaurant. After Bob paid one of fourth the price, Sally immediately filed the financing statement properly. After 3 months, Carrol and Bob made the purchase agreement about the appliance. Bob subsequently breached the payment contract with Sally at the end of the due date. Does Sally still have the security interest over the proceeds of the appliance?

Under the UCC9-103, non-consumer-goods are not protected by the automatic perfection rule. Here, Bob expressly showed the commercial purpose for using the appliance. Subsequently, Sally must perfect in the legitimate procedure, filing the financing statement. Since Sally immediately perfected the collateral, Sally is eligible to the right to take the proceeds of the collateral. Thus, Sally still has the right to retrieve the proceeds of the transaction between Bob and Carrol.

What if Sally neglected filing the financial statement within 20 days after the original selling event occurred between Sally and Bob? The result will be totally changed. Because Sally did not have a proper security interest over the appliance, Sally could not hold the right against the third party, Carrol. In this scenario, Sally will lose her right to retrieve the proceeds of the collateral, Bitcoin.[45]

---

[45] *See e.g.* Unif. Commercial Code § 9-313. Perfection by possession or control is another method to procure the security interest without filing the financing statement like PMSI and proceed of the original collateral. UCC9-313 is applied to the money for determining perfection by possession or control. The status of cryptocurrency is unstable regarding the feature of money and currency. Although the court has not opined the status of the cryptocurrency in a currency's aspect, we can apply the UCC9-313 in the same context.

For example, Bob borrowed 5 Bitcoins from Sally who had a lot of Bitcoins on her account. Bob had to transfer 5 Bitcoins after 6 months dated as of the agreement. After 5 months from the date of the agreement, Bob transferred the 5 Bitcoins to Carrol who is the agent of Sally. At this moment, Carrol had the perfected collateral without any filing procedure in a condition that the cryptocurrency was considered as money for medium to goods.

IV. OBSTACLE FOR THE PREVALENCE OF CRYPTOCURRENCY AS COLLATERAL

We see a possible scenario that a creditor has the security interest to some amount of Bitcoin in exchange for the money for the proportion of the Bitcoin value in market. However, we have not seen the confliction regarding the cryptocurrency as the security interest in legal context, yet. Why the cryptocurrency is not used for the collateral although a lot of investors are interested in its potential value in the future?

The main reason is high volatility of the cryptocurrency which restricts its general use for the collateral. In major economic theory, it assumes that people are risk-averse, not risk-preferred. People prefer a stable value over an unstable one. This tendency is substantially prevalent in the loan market in which banks accept the mortgage back up by the mortgage with real property that a debtor provides with. The banks have experienced through history that the real property is very strong collateral maintaining the steady value or even increasing. In contrast to the real property, the cryptocurrency is highly fluctuating month to month, even day to day.[46] Huge money holders such as banks cannot rely on the value of the cryptocurrency because of its severe volatility. Rather than that, typical creditors such as banks will take more effort to seek potential collateral which holds stable value insulated from a market circumstance. Thus, the cryptocurrency is not such a fascinating one for the new collateral in present.

V. CONCLUSION

The cryptocurrency emerges from technology development. The nature of the cryptocurrency is unsettled by the executive, legislative, and judicial branch because the history of the cryptocurrency is too short to define it and predict the impact of the definition which may affect national and global market severely. However, we cannot escape from this strong trend of the new technology overwhelming a traditional market nor set aside it from domestic and global economy. The government in the United States has shown how to approach and deal with the cryptocurrency in diverse perspectives of SEC, CFTC and courts. When it comes to collateral, the UCC9 determines the legitimate process for the security interest on the cryptocurrency until Congress enacts the federal statutes regulating the cryptocurrency. Although there are some disadvantages to use the cryptocurrency as the collateral, right now, the time will come that the cryptocurrency is used for a tool beyond our expectation. It is important to see

---

However, the perfection by control is inapplicable although the cryptocurrency is deposited in an account. According to UCC 9-104, Control of deposit accounts can be obtained in one of three ways. If the secured party is the bank where the deposit account is maintained, control is automatic. If the secured party is the bank's customer regarding the account, the perfection can be secured by the control. In the real world, cryptocurrency exchange institutes control over the customer's accounts with respect to the cryptocurrency. The institutes are not chartered by the State nor the Federal government, which makes the huge difference between the status of banks and one of the institutes. Since the institutes are not stable as the same level to banks which UCC 9-104 confers a privilege and exception. Thus, control of the accounts can be inapplicable.

[46] *See* Greta Guest, Cryptocurrencies: High volatility and returns, *available at* https://phys.org/news/2018-11-cryptocurrencies-high-volatility.html (last visited on Mar. 28, 2019).

the cryptocurrency development for confirming the nature of cryptocurrency in tailored to economic, political, and social background.