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Research Article

ARE BITCOIN AND ETHEREUMSECURITIES, CENTRALIZED AND DECENTRALIZED FINANCE, AND CRYPTOCURRENCY FRAUD AT CELSIUS NETWORK, LLC

***Donald L. Buresh, Ph.D., Esq.**

Morgan State University

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ABSTRACT

The aim of this paper is to examine whether Bitcoin, Ethereum, and other cryptocurrencies are securities. In this context, the paper the Securities Act of 1933, the Securities Exchange Act of 1934, and initial coin offerings. The piece then proceeds to review various issues with Bitcoin, Ethereum, and other cryptocurrencies, showing that cryptocurrencies are not similar to money because they are neither a store of value nor a unit of accounting, even though at times they are employed as a medium of exchange. The research proceeds to discuss centralized and decentralized finance, linking these to two notions to the Securities Acts of 1933 and 1934 respectively, as well as initial coin offerings. Finally, the paper discusses cryptocurrency fraud and how to possibly avoid it. Celsius Network LLC is employed as a case in point.

Keywords: Bitcoin, Celsius Network, LLC, Centralized Finance, Decentralized Finance, Ethereum, Initial Coin Offering.

INTRODUCTION

This paper attempts to link the notion of whether Bitcoin and Ethereum are securities with the characteristics of centralized and decentralized finance, and the cryptocurrency fraud at Celsius Network, LLC. In the first section, the Securities Act of 1933 and the Securities and Exchange Act of1934 are outlined. The next section highlights initial coin offerings, the differences between initial coin offerings and initial public offerings, and the intervention by the Securities and Exchange Commission of several initial coin offerings. The third section describes various Bitcoin and Ethereum issues. In the fourth section, centralized and decentralized finance is discussed. Finally, the paper concludes with a short analysis of cryptocurrency fraud, examining the fraud committed by Celsius Network, LLC.

DEFINITION OF A SECURITY

According to Kenton, "[s]ecurities are fungible and tradable financial instruments used to raise capital in public and private markets."[1] The types of securities include equity (ownership rights), debt (loans repaid through periodic payments), and hybrids (combines equity and debt).[2] The public sale of securities is controlled by the Securities and Exchange Commission (SEC).[3] Organizations that self-regulate, such as the National Association of Securities Dealers (NASD), the National Futures Association (NFA)or the Financial Industry Regulatory Authority (FINRA) also regulate securities.[4]

The United States Code defines a security as a "note, stock, treasury stock, security future, security-based swap, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, any interest or instrument commonly known as a 'security', or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing."[5]

An asset is fungible when it can be "interchanged with other individual goods or assets of the same type."[6] The reason that fungible assets exist is to simplify the trading and exchange process. Fungibility implies that assets that are traded are of approximately equal value.[7] A security typically represents ownership. It can take the form of stock, a creditor relationship with a governmental or corporate organization in the form of a bond, or the rights of ownership in the form of an option.[8]

Things that are not securities include:[9]

- Currency
- A check, certified or not, draft, bill of exchange, or bank letter of credit
- A note or other evidence of indebtedness issued in a mercantile or consumer, rather than an investment transaction

[1]Will Kenton, What Are Financial Securities?Examples, Types, Regulation, and Importance, *Investopedia* (Apr. 24, 2023), *available at*https://www.investopedia.com/terms/s/security.asp,
[2]*Id.*
[3]*Id.*
[4]*Id.*

[5]LII Staff, 15 U.S. Code § 77b –Definitions ; Promotion of Efficiency, Competition, and Capital Formation, *Legal Information Institute* (n.d.), *available at* https://www.law.cornell.edu/uscode/text/15/77b#:~:t.ext=The%20term%20"security"%20means%20any,or%20subscription%2C%20transferable%20share%2C%20investment
[6]Jake Frankenfield, All About Fungibility:What It Means, Why It Matters, *Investopedia* (May 7, 2022), *available at*https://www.investopedia.com/terms/f/fungibility.asp.
[7]*Id.*
[8]Will Kenton, *supra*, note 1.
[9]*Id.*

- An interest in a deposit account with a bank or a savings and loan association
- An insurance or endowment policy or annuity contract where an insurance company promises to pay money either in a lump sum or periodically for life or for some other specified period

SECURITIES ACTS OF 1933 AND 1934

In this section, the Securities Acts of 1933 and 1934 are discussed. The section lays the groundwork for understanding whether cryptocurrencies and their tokens are securities.

Securities Act of 1933

The Securities Act of 1933 (SA33) has the following two goals: (1) to demand that investors obtain financial and other information on securities being offered to the public; and (2) to outlaw deceit, misrepresentation, and other types of fraud in the sale of securities.[10] SA33 achieves these goals by obliging firms to disclose important financial information by registering securities so that investors may make informed decisions regarding their investment behavior.[11] In general, securities should be registered with the SEC or must qualify for a registration exemption.[12] The registration requirements include:[13]

- A description of the company's properties and business;
- A description of the security to be offered for sale;
- Information about the management of the company; and
- Financial statements certified by independent accountants.

Registration statements and any prospectuses are available to the public shortly after a firm files them with the SEC. All public companies, both domestic and foreign, must file registration statements and other forms electronically so that they are accessible to investors can then access them using the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system.[14] Common exceptions to registration include:

- Private offerings to a limited number of persons or institutions;
- Offerings of limited size;
- Intrastate offerings; and
- Securities of municipal, state, and federal governments.

The idea behind exempting small security offerings is to promote capital formation by decreasing the cost of offering securities to investors.[15]SA33 was created to protect investors after the stock market crashed in October 1929.[16] Its purpose was to generate transparency in the financial statements of public corporations and establish laws against misrepresentations and other fraudulent activities in securities markets.[17] SA33 was the first federal law to regulate the stock market.[18] The Act removed power from the states and gave power to the federal government by creating a series of rules protecting investors against fraud.[19] SA33 was part of the New Deal that was passed when Franklin D. Roosevelt was president (1933-1945).[20] The primary goal of SA33 was to create national disclosure requirements for firms selling securities, including critical information regarding property, financial health, and executive behavior.[21] Before SA33, companies were only subject to state regulations which were, for the most part, ineffective.[22]

Securities and Exchange Act of 1934

The purpose of the Securities Exchange Act of 1934 (SEA34) was to govern securities transactions on the secondary market, or after a security is offered to the public.[23] All firms that sell their stock on a stock exchange must adhere to SEA34 requirements.[24] These requirements ensure that stocks are traded fairly and that investors are confident when conducting security transactions.[25] SEA34 created the SEC, the organization that oversees "securities, markets, financial disclosures, and the conduct of financial professionals."[26] The main requirements of SEA34 include:[27]

- Registration of any securities listed on stock exchanges;
- Company financial disclosure;
- Proxy solicitations; and
- Margin and audit requirements.

These requirements exist to promote transparency, fairness, and investor confidence.[28]SEA34 was also enacted when Franklin D. Roosevelt was president.[29] The law responded to the consensus that the Great Depression of 1929 was caused by irresponsible financial practices.[30] SEA34 was passed shortly after SE33 became law.[31] The other regulatory laws that were passed during the Roosevelt administration included the Trust Indenture Act of 1934 (TIA34), the Public Utility Holding Company Act of 1935 (PUHCA35), the Investment Advisers Act of 1940 (IAA40), and the Investment Company Act of 1940 (ICA40).[32] These laws were passed because, at the time, relatively few investors hoarded controlling interests in many corporations without the public becoming aware of this fact.[33]

Differences in Regulatory Approaches

SA33 and SEA34 were passed during the Roosevelt administration which had to deal with the effects of the Great Depression. Looking backward, one can always identify inconsistencies. This is likely to be expected because many attorneys and legislators worked on writing them. Also, the laws were separated by years of labor.

[10] SEC Staff, Registration Under the Securities Act of 1933, *U.S. Securities and Ex change Commission* (n.d.), *available at*https://www.investor.gov/introduction-investing/investing-basics/glossary/registration-under-securities-act-1933#:~:text=The%20Securities%20Act%20of%201933%20has%20two%20basic%20objectives%3A,in%20the%20sale%20of%20securities.
[11] *Id.*
[12] *Id.*
[13] *Id,*
[14] *Id.*
[15] *Id.*
[16] Will Kenton, Securities Act of 1933:Significance and History, *Investopedia*(Oct. 20, 2020) *available at*https://www.investopedia.com/terms/s/securitiesact1933.asp#:~:text=The%20Securities%20Act%20of%201933%20was%20the%20first%20federal%20law,of%20the%20security%20being%20sold.
[17] *Id.*
[18] *Id.*
[19] *Id.*
[20] *Id,*
[21] *Id.*
[22] *Id.*
[23] Will Kenton, What Is the Securities Exchange Act of 1934?Reach and History, *Investopedia*(Apr. 24, 2023) *available at*https://www.investopedia.com/terms/s/seact1934.asp#:~:text=The%20Securities%20Exchange%20Act%20of%201934%20regulates%20secondary%20financial%20markets,to%20current%20and%20potential%20shareholders.
[24] *Id.*
[25] *Id.*
[26] *Id.*
[27] *Id.*
[28] *Id.*
[29] Will Kenton, *supra*, note 23.
[30] *Id.*
[31] *Id.*
[32] *Id.*
[33] *Id.*

It is not surprising that there were different perspectives regarding these laws. It took time and effort to write these laws. It was likely that the individuals involved in the process had different perspectives on what the laws should say. Consistency is a difficult thing to achieve. It takes a ruthlessness that few people possess. Most individuals are more inclined to go along with a dominant personality for fear of losing their jobs or offending a powerful person. Thus, from a historical viewpoint, it does make sense to have different approaches in regulating different activities in the securities industry, even though it might not make sense from a logical or purist standpoint. In life, problems can only be addressed that are known. Humans are not omniscient, and neither were the writers of SA33 and SEA34. It is an unfortunate feature of human existence.

INITIAL COIN OFFERINGS

In this section, initial coin offerings (ICOs) are outlined. Here, initial coin offerings are defined, followed by a description of ICO characteristics. The next subsection highlights examples of ICOs. The third subsection compares ICOs with initial public offerings (IPOs). The final subsection talks about recent SEC interventions in ICOs.

Definition of an Initial Coin Offering

According to Frankenfield, an initial coin offering (ICO) is the "cryptocurrency industry's equivalent of an initial public offering (IPO)."[34]A firm may create a new coin, app, or service, and may initiate an ICO as a mechanism to generate funds. While some ICOs have resulted in positive returns for investors, many other ICOs have turned out to be fraudulent or have not performed well.[35] For an investor to participate in an ICO, they must first buy an established cryptocurrency as well as understand cryptocurrency wallets and exchanges. It should be remembered that ICOs are unregulated, implying that investors should probably be diligent in exercising caution when investing in them.[36]

Characteristics of an Initial Coin Offering

The following types of ICOs include:[37]

- Static supply and static price – Fixed number of tokens at a fixed price;
- Static supply and dynamic price – Fixed number of tokens at a variable price; and
- Dynamic supply and static price – Variable number of tokens and a fixed price

In the course of an ICO, a pitch book or white book is generated, where it contains:[38]

- The nature of the project;
- The need that the project would fulfill;
- The amount of money the project needs;
- The number of tokens the founders will own;
- The method or currency of payment; and
- The length of time the ICO will run,

The purpose of anICO white paper is to encourage investors to buy the tokens. Investors can typically use fiat or digital currency to purchase tokens, such as Bitcoin or Ethereum.[39] If the money raised is less than the money the project requires, the funds may be returned to the investor. In the United States, anyone can commence an ICO without regard to securities regulation from the SEC.[40] The dearth of regulation implies that it is important to investigate an ICO so that an investor has confirmed that the individual or organization is conducting the ICO is both real and accountable and that the individuals or organization has verifiable cryptocurrency experience. To avoid investing in an ICO scam, an investor may:[41]

- Ensure the project developers have clearly defined goals where the ICO white papers are straightforward and understandable;
- Check for transparency from the organization generating the ICO;
- Review the legal terms and conditions of the ICO to verify legitimacy; and
- Determine that ICO funds are contained in an escrow wallet that requires multiple access keys to protect against scams.

Examples of Initial Coin Offerings

In 2014, Ethereum raised $18 million over 42 days.[42] In 2015, Antshares, a company that was later renamed Neo, began a two-phase ICO, where the first phase ended in October 2015 and the second phase ended in September 2016. The firm raised approximately $4.5 million.[43] In March 2018, Dragon Coin obtained approximately $320 million.[44]And, in 2018, EOS.IO raised about $4 billion, where the ICO lasted a whole year.[45]

Differences Between an Initial Coin Offering and an Initial Public Offering

Initial Public Offerings (IPOs) are used by firms to raise money by distributing shares of corporate stocks to investors.[46] In contrast, crypto companies obtain funds by selling coins or tokens. In both instances, investors are usually quite bullish, believing that the value of the asset will grow over time. The between an ICO and an IPO is that an investor who invests in an IPO gets an ownership interest in the firm, whereas an investor in an ICO is betting that the cryptocurrency that is worthless at the time of the sale, increase in value over and above its purchase price. Also, IPOs are regulated by the SEC, while ICOs are not.[47] It should be remembered that IPO investors are generally conservative, while ICO investors are typically

[34]Jake Frankenfield, Initial Coin Offering (ICO): Coin Launch Defined, withExamples, *Investopedia* (Aug. 18, 2022), *available at*https://www.investopedia.com/terms/i/initial-coin-offering-ico.asp.
[35]*Id.*
[36]*Id.*
[37]*Id.*
[38]*Id.*
[39]*Id.*
[40]*Id.*
[41]*Id.*
[42]Carol Goforth, The Lawyer'sCryptionary: A Resource for Talking to Clients About Crypto-Transactions, 41 *Campbell L. Rev.* 1, 47-76 (Winter 2019), *available at*https://scholarship.law.campbell.edu/cgi/viewcontent.cgi?article=1665&context=clr.
[43]Tarun Khanna, Initial Coin Offering (ICO) Guide, *Deep Tech Bytes* (Mar. 30, 2022), *available at*https://deeptechbytes.com/initial-coin-offering-ico-guide/#:~:text=An%20initial%20coin%20offering%20(ICO,currency%2C%20app%2C%20or%20service.
[44]Jongsub Lee, Tao Li, &Donghwa Shin, The Wisdom of Crowds and Information Cascades, in FinTech: Evidence from Initial Coin Offerings, *FederalDepositInsurance Corporation* (May 2018) *available at*https://www.fdic.gov/analysis/cfr/bank-research-conference/annual-18th/17-li.pdf,
[45] Daniel Diemers, Henri Arslanian, Grainne McNamara, Günther Dobrauz, & Lukas Wohlgemuth, Initial Coin Offerings, A Strategic Perspective, *Price Waterhouse Coopers and Crypto Valley* (Jun. 28, 2018), *available at*https://cryptovalley.swiss/wp-content/uploads/20180628_PwC-S-CVA-ICO-Report_EN.pdf.
[46]Jake Frankenfield, *supra*, note 34.
[47]SEC Staff, Spotlight on Initial Coin Offerings (ICOs), *U.S. Securities and Exchange Commission* (n.d.), *available at*https://www.sec.gov/securities-topics/ICO.

risk-tolerant because they are keen to earn an exceptional return on investment. Finally, an ICO is different from crowd-funding because of the potential for financial gain.[48] Crowd-funding is "the practice of obtaining needed funding (as for a new business) by soliciting contributions from a large number of people, especially from the online community."[49]

Securities and Exchange Commission Intervention in Initial Coin Offerings

The rationale of the SEC is to suggest that cryptocurrency and tokens are subject to SEC regulation because they are securities. According to Shadab, U.S. securities regulation applies to cryptocurrency and tokens because they meet the definition of an investment contract.[50]The first time the SEC enforced security regulations on a crypto company was December 17, 2017, when the Commission stopped an ICO by Munchee, a California firm possessing a food review app.[51]Munchee was trying to generate funds to create a cryptocurrency that would work in concert with the app so that customers could order food. The SEC issued a cease-and-desist letter by considering the Munchee ICO as an offering of unregistered securities.[52]

Recently, the SEC announced charges against Justin Sun and his three companies, Tron Foundation Ltd., BitTorrent Foundation Ltd., Rainberry Inc. (previously named BtitTorrent) for offering and selling unregistered crypto asset securities Tronx (TRX) and Bit Torrent (BTT).[53][54] The SEC charged Sun et al. of engaging in wash trading of TRX, the simultaneous or near simultaneous buying and selling of a security to make it appear as if the stock was actively trading, and for paying celebrities to promote TRX and BIT without disclosing their profits.[55] The SEC also charged eight celebrities for illegally promoting TRX and BTT without revealing that they were financially compensated.[56]

ISSUES WITH BITCOIN AND ETHEREUM

In this section, issues with Bitcoin and Ethereum are described. The first subsection addresses issues with Bitcoin, while the second subsection considers issues with Ethereum. The final subsection talks about whether cryptocurrencies can be viewed as money.

Issues with Bitcoin

Cryptocurrency is currently being advertised as a new form of digital money. The defining feature of cryptocurrency is that it is not issued by a central authority or government entity, thereby making it immune from government interference or manipulation.[57] In other words, cryptocurrency exists outside the control of these entities. The purported advantage of cryptocurrency is that it facilitates cheaper and faster money transfers without a single point of failure.[58] Its disadvantage is its volatility. According to Gianti, Bitcoin (the undisputed leader in cryptocurrencies) is more volatile in the short run than in the long run (ATR 14 > ATR 200), where ATR stands for Average True Range.[59][60] Bitcoin is three times more volatile than Nasdaq in the short term, twice as volatile in the long term, and is ten times more volatile than the European Union (EU) Euro and the United States dollar.[61] Crypto tokens digitally represent an asset or interest and are layered onto a blockchain.[62] Crypto tokens are purported to bea store of value or a medium of exchange.[63] Crypto tokens represent value digitally employing blockchain technology and are typically used to raise money for projects.[64]

According to Godoy, Bitcoin is not a security because it is "anonymous and open-source origins mean investor profits are not dependent on the efforts of developers or managers."[65] Massari observed that the major theory of the SEC on whether a crypto asset is a security is dependent on whether the blockchain project that is affiliated with the crypto asset is sufficiently decentralized.[66] According to Hinman's theory, if the crypto asset is sufficiently decentralized, it is not a security. The theory has not withstood the test of time, because it is not supported by judicial precedent, and is impractical and impossible to apply to real-life blockchains.[67]in market distortions that harm both market participants and long-term innovation in the crypto industry."[68]

Massari aptly pointed out that grouping cryptocurrencies based on decentralization was a "deft bureaucratic solution to a practical problem."[69] In other words, it was a kludge. It was an attempt to ensure that Bitcoin and Ether, the two largest cryptocurrencies, were not securities. If these cryptocurrencies had been deemed to be securities, the companies would have violated registration and disclosure requirements for public securities offerings.[70] Cryptocurrency exchanges, brokers, and early investors would have been engaging in illegal security exchanges. By implementing the

[48]Jake Frankenfield, *supra*, note 34.
[49]CrowdFunding, *Merriam-Webster Dictionary* (n.d.), *available at*https://www.merriam-webster.com/dictionary/crowdfunding..
[50]Houman B. Shadab, Regulation of Blockchain Token Sales in the United States, IN REGULATINGBLOCKCHAIN: TECHNO-SOCIAL AND LEGAL CHALLENGES 249 (ed. Phillip Hacker) (Jun. 10, 2019), available at https://academic.oup.com/book/36505/chapter-abstract/321224728?redirectedFrom=fulltext#no-access-message
[51]*In the Matter of Munchee Inc.*, Respondent:OrderInstitutingCease-and-DesistProceedingsPursuant to Section 8A of the Securities Act of 1933, MakingFindings, and Imposing a Cease-and-DesistOrder, *U.S. Securities and Exchange Commission* (Dec. 11, 2017), *available at*https://www.sec.gov/files/litigation/admin/2017/33-10445.pdf.
[52]*Id.*
[53]*SEC v. Sun*, Case No. 23-2433 (Mar.22, 2023), *available at*https://www.sec.gov/files/litigation/complaints/2023/comp-pr2023-59.pdf.
[54]Joe Hernandez, & Jonathan Franklin, The SEC Charges Lindsay Lohan, Jake Paul and OtherswithIllegallyPromoting Crypto, *NPR: WBEZ Chicago* (Mar. 22, 2023), *available at*https://www.npr.org/2023/03/22/1165477713/lindsay-lohan-jake-paul-sec-crypto.
[55]*Id.*
[56]*Id.*
[57]Jake Frankenfield, CryptocurrencyExplainedwith Pros and Cons for Investment, *Investopedia*(Jul. 24, 2023), *available at*https://www.investopedia.com/terms/c/cryptocurrency.asp#:~:text=Advantages%20Explained,police%20transactions%20between%20two%20parties.
[58]*Id.*
[59] Stefano Gianti, Bitcoin vs Risk:UnderstandingVolatility, *Swissquote* (Apr. 7, 2021), *available at*https://medium.com/swissquote-education/bitcoin-vs-risk-understanding-volatility-472efe96e439#:~:text=Besides%2C%20we%20observe%20that%20Bitcoin,volatile%20than%20the%20EUR%2FUSD.
[60]Adam Hayes, AverageTrue Range (ATR) Formula, What It Means, and How to Use It, *Investopedia* (Dec. 20, 2022), *available at*https://www.investopedia.com/terms/a/atr.asp,
[61]Stefano Gianti, *supra*, note 59.
[62]Jake Frankenfield, What Are Crypto Tokens, and How Do TheyWork?,*Investopedia*(Feb. 12, 2023), *available at*https://www.investopedia.com/terms/c/crypto-token.asp,
[63]*Id.*
[64]*Id.*
[65]Jody Godoy, WhatMakes a Crypto Asset a Security in the U.S.?,*Reuters* (Jun. 7, 2023), *available at*https://www.reuters.com/business/finance/what-makes-crypto-asset-security-us-2023-06-07/#:~:text=Bitcoin%20is%20not%20considered%20a,at%20the%20University%20of%20Arkansas.
[66]William Hinman, Digital Asset Transactions:WhenHowey Met Gary (Plastic),*U.S. Securities and Exchange Commission* (Jun. 14, 2018), *available at* https://www.sec.gov/news/speech/speech-hinman-061418.
[67]JaiMassari, WhyCryotoassets Are Not Securities, *Harvard Law School Forum on CorporateGovernance* (Dec. 6, 2022), *available at*https://corpgov.law.harvard.edu/2022/12/06/why-cryptoassets-are-not-securities/#2b.
[68]*Id.*
[69]*Id.*
[70]*Id.*

Hinman theory, the SEC avoided catastrophic consequences for firms providing blockchain services.[71]

According to Cohen et al., the case law showed that there is little evidence to treat crypto assets as securities.[72] Cohen et al. separated capital raising transactions by blockchain project firms from the crypto asset which the authors claimed was not a security.[73] The approach is concerned with the SEC's regulatory jurisdiction when capital raising is the issue.[74] This approach tends to keep the Hinman theory more or less intact while addressing its weaknesses.

Issues with Ethereum

When being questioned by the House Financial Services Committee (HFSC), the current SEC chairperson, Gary Gensler, declined to testify whether Ethereum is a security.[75] According to HFSC chairperson, Rep. Patrick McHenry (R-NC), "Congress must provide clear rules of the road to the digital asset ecosystem because the regulators cannot agree." He further said that "[r]egulation by enforcement is not sufficient nor sustainable. Your [Gary Gensler's] approach is driving innovation overseas and endangering American competitiveness."[76] In contrast, Rep. Rep. Maxine Waters (D-CA) opined that the hearing was focused on Gensler, and not more urgent issues like the recent bank failures, a housing crisis and the potential debt ceiling default. Rep. Watters said that she "would also like to applaud Chair Gensler and his staff for the forceful actions the SEC has taken and dedicated more resources to go after crypto criminals."[77] Rep. Watters appears to be engaged in a misdirection or a Red Herring Fallacy, where the speaker changes the subject rather than discussing the issue.[78]

Former SEC chairperson Jay Clayton said that "things can go from being a security to not a security."[79] This is a very strange comment. If this statement is taken literally, it means that in terms ofEthereum, it could be a security in one point in time, whereas it would not be a security at another point in time. The change could occur in a moment, an hour, a day, a week, a month, or whenever. If Ethereum could be a security when an investor purchases an Ethereum coin, but not a security when the investor comes to sell the same Ethereum coin, then what is the investor dealing with? If Ethereum can change its status as a security, then Ethereum is a chameleon that changes its coloring when the environment changes. Please understand that this argument also applies to Bitcoin.For example, suppose one purchases what one firmly believes is a puppy with the hope that it will grow up into a dog. However, as the puppy grows, it somehow changes into a kitten. Now, the person bought a puppy, not a kitten. The individual purchased a puppy because the person wanted a dog, not a cat. It is the same way with Ethereum. Either Bitcoin and Ethereum are securities or theyare not. As Aristotle observed thousands of years ago, A is A, a thing is itself.[80] We are not dealing with Hegelian logic, where things are in the continuous process of becoming.[81]

Cryptocurrency as Money

There is a problem with viewing cryptocurrency as money. According to Krugman and Wells, money has the following three properties: (1) it is a medium of exchange, (2) a store of value, and (3) a unit of accounting.[82] Although cryptocurrency can be a medium of exchange for individuals and criminals,[83] with its significant volatility, cryptocurrency can hardly be considered a store of value or a unit of accounting. Cryptocurrencies act more like speculative stocks than money.[84] Thus, cryptocurrencies should probably be highly regulated by governments, if only to protect the asset values of its holders. It is imperative that regulation be instituted to ensure that the value of cryptocurrencies remains relatively stable.

Proposed Resolution

The proposed resolution is to treat cryptocurrency and crypto tokens as a security because that is what they are, highly volatile pseudo stock. The definition of a security, along with SE33 and SEA34, should probably be changed so that these laws oversee cryptocurrency and crypto tokens. This can be achieved by adding cryptocurrency and crypto tokens whenever securities are mentioned in these laws. If this suggestion is too cumbersome, then the definition of a security could be changed, leaving the laws untouched. However, cryptocurrency and crypto tokens likely possess unique characteristics that warrant specific changes in particular instances to SE33 and SEA 34. These options will preserve the existing securities laws while generalizing them to include cryptocurrency and crypto tokens.Please remember that crypto tokens are highly volatile.[85] Crypto tokens are many times more volatile than the Euro or the United States dollar.[86] Although crypto tokens can be employed as a medium of exchange, at least in the very short run, their use as a store of value or a unit of accounting is questionable. Its volatility makes crypto tokens not a reasonable measuring tool for financial performance.

CENTRALIZED AND DECENTRALIZED FINANCE

The purpose of this section is to figure out whether Decentralized Finance (DeFi) is more or less risky than Centralized Finance (CeFi). In the first section, DeFi is defined and its characteristics are highlighted. In the second section, CeFi is defined and its characteristics are briefly discussed. The third section discusses many of the risks associated with cryptocurrency financial crime. In the final section, the paper expounds on whether DeFi is riskier than CeFi. The conclusion here is that it is too early to tell. There is simply not enough data available to make an accurate decision. Even so, DeFi is likely riskier than CeFi because DeFi relies too much on

[71] *Id.*

[72] Lewis R. Cohen, Gregory Strong, Freeman Lewin, &Sara Chen, Sara, The IneluctableModality of Securities Law:WhyFungible Crypto Assets are Not Securities, *Social Science Research Network* (Nov. 10, 2022),*available at*http://dx.doi.org/10.21239/ssrn.4282385,

[73] *Id.*

[74] *Id.*

[75] Nikhilesh De, SEC Chair GenslerDeclines to Say if Ether Is a Security in ContentiousCongressionalHearing, *Coindesk* (Apr. 19, 2023), *available at*https://www.coindesk.com/policy/2023/04/19/sec-chair-gensler-declines-to-say-if-ether-is-a-security-in-contentious-congressional-hearing/.

[76] *Id.*

[77] *Id.*

[78] 20. How to Rebut LogicalFallacies, *Public Leadership Institute* (n.d.), *available at*https://publicleadershipinstitute.org/messaging-guide/20-how-to-rebut-logical-fallacies/#:~:text=(1)%20Red%20Herring%20Fallacy,feels%20more%20comfortable%20and%20confident.

[79] Ben Strack, Former SEC Chair: A Security Today May Not Be a Security Tomorrow, *Blockworks*(Apr.21, 2023), *available at*https://blockworks.co/news/jay-clayton-ether-sec-security.

[80] Jeff Landauer, & Joseph Rowlands, A isA:Aristotle's Law of Identity, *Importance of Philosophy* (2001), *available at* http://www.importanceofphilosophy.com/Metaphysics_Identity.html.

[81] Paul Austin Murphy, Hegel on Being, Nothingness and Becoming, *Medium* (Oct. 26, 2019), *available at*https://medium.com/@paulaustinmurphy2000/hegel-on-being-nothingness-and-becoming-with-stephen-houlgate-60311ab184e9.

[82] PAUL KRUGMAN AND ROBIN WELLS, ECONOMICS (Worth Publishers 6th ed. 2021).

[83] Stefano Gianti, *supra*, note 59.

[84] Yash Majithia, 15 Most Volatile Cryptocurrenciesin 2023, *Technopedia*(Aug. 11, 2023), *available at*https://www.techopedia.com/cryptocurrency/most-volatile-crypto#:~:text=Volatile%20cryptos%20experience%20significant%20price,through%20short-term%20trading%20strategies.

[85] Stefano Gianti, *supra*, note 59.

[86] *Id.*

software that can be modified by programmers with innocent motives that yield unfortunate results. With CeFi, because there is more human interaction, there seem to be more checks and balances than in DeFi.

Definition and Characteristics of Decentralized Finance

DeFi is a financial technology that is "based on secure distributed ledgers similar to those used by cryptocurrencies."[87] The idea behind DeFi is that it eliminates intermediaries by permitting individuals, merchants, and businesses to engage in financial transactions using security protocols, connectivity, as well as software and hardware emerging technologies via peer-to-peer financial networks.[88]

With DeFi, people can lend, trade, and borrow money employing distributed financial databases that are available to all users, where the transaction is verified via a consensus mechanism.[89] The goal of DeFi is to eliminate the need for a centralized finance model by allowing anyone to use financial services independent of who they are or where they are.[90] DeFi purports to provide users with more control over their money via personal wallets and trading services.[91]DeFi employs blockchain technology, the same technology used by cryptocurrencies. A blockchain is a"decentralized, distributed and public digital ledger that is used to record transactions across many computers so that the record cannot be altered retroactively without the alteration of all subsequent blocks and the consensus of the network."[92] Applications that are known as "dApps" control transaction and operate the blockchain.[93] Transactions in a blockchain are recorded in blocks, and then other users verify them. If the persons agree, the block is closed and encrypted. A new block is opened, where the previous block is connected or chained to the previous block. Information in previous blocks cannot be changed without altering succeeding blocks, thereby in theory making the blockchain seemingly secure and impossible to change.[94]

In DeFi, peer-to-peer financial transactions are the norm, where a peer-to-peer transaction is a transaction where two parties agree to exchange goods and services for money or cryptocurrency without an intermediary.[95] With DeFi, there is a software algorithm that connects lenders and borrowers. Payments are made using a dApp application.[96] The characteristics of DeFi include:[97]

- **Accessibility**– Anyone who possesses an Internet connection can engage in financial transactions independent of their physical location;
- **Low Fees and High-Interest Rates** – DeFi permits two parties to directly negotiate interest rates, thereby eliminating third-party surcharges;
- **Security and Transparency** – Anyone can review contracts published on a blockchain without revealing the identity of the parties to the contract; and
- **Autonomy** – DeFi platforms are not subject to adversity and bankruptcy because centralized financial institutions are not involved in a transaction.

The advantages of DeFi include:[98]

- Decentralized applications permit individuals to transfer funds globally;
- Investors can generate significant amounts of money for projects; and
- High security level.

The disadvantages of DeFi are:[99]

- DeFi is complex and participation is difficult to understand;
- High risk of fraud and scams; and
- High volatility.

Definition and Characteristics of Centralized Finance

With CeFi, a more traditional way of conducting transactions, "money is held by banks and third parties who facilitate money movement between parties, with each charging fees for using their services."[100] For example, if an individual purchases a good from a merchant and uses their credit card, the merchant forwards the credit card data via a credit card network to the bank associated with the card and either authorizes or denies the transaction.[101]

Within the cryptocurrency market, CeFi deals with the buying, selling, and trading of cryptocurrency tokens via a central exchange.[102]CeFi is the cryptocurrency equivalent of how traditional financial institutions address fiat currency and equity trading in public stock exchanges.[103] In contrast to fiat currency equity trading, CeFi is not as rigorously regulated, although regulations do exist in the United States and in some European countries.[104] With CeFi, knowledge of a customer is essential where a centralized exchange verifies a user's identity before using a centralized exchange. By authenticating a user's identity, efforts are being made to prevent tax evasion, money laundering, and terrorist funding.[105]In the CeFi model, a central exchange acts as a custodian of a person's assets. The CeFi exchange stores the private keys for cryptocurrency wallets that enable a person to access cryptocurrency tokens on a blockchain. In other words, the central exchange warrants the safety, security, and timely execution of transactions by properly reporting transactions to

[87]Rakesh Sharma, What Is Decentralized Finance (DeFi) and How Does It Work?,*Investopedia*(Sep. 21, 2022), *available at*https://www.investopedia.com/decentralized-finance-defi-5113835.
[88]*Id.*
[89]Kaihua Qin, Liyi Zhou, YaroslavAfonin, Ludovico Lazzaretti, &Arthur Gervais, CeFi vs. DeFi — ComparingCentralized to Decentralized Finance, *arXiv* (Jun. 16, 2021), *available at*https://arxiv.org/pdf/2106.08157.pdf.
[90]Rakesh Sharma, *supra*, note 87.
[91]*Id.*
[92]Synopsys Staff, Blockchain, *Synopsys*(n.d.), *available at*https://www.synopsys.com/glossary/what-is-blockchain.html#:~:text=A%20blockchain%20is%20a%20decentralized,the%20consensus%20of%20the%20network.
[93]David Gogel, DeFi Beyond the Hype: The Emerging World of Decentralized Finance, *University of Pennsylvania: Wharton School of Business* (May 2021), *available at* https://wifpr.wharton.upenn.edu/wp-content/uploads/2021/05/DeFi-Beyond-the-Hype.pdf.
[94]NIST Staff, Blockchain, *National Institute of Standards and Technology* (n.d.), *available at*https://www.nist.gov/blockchain.
[95]Fabian Schàr, DecentralizedFinance: On Blockchain- andSmartContract-Based Financial Markets, *Federal Reserve Bank of St. Louis Review* (Second Quarter 2021), *available at*https://files.stlouisfed.org/files/htdocs/publications/review/2021/04/15/decentralized-finance-on-blockchain-and-smart-contract-based-financial-markets.pdf.
[96] WEF Staff, Decentralized Finance (DeFi) Policy-Maker Toolkit, *World Economic Forum* (Jun. 2021), *available at*https://www3.weforum.org/docs/WEF_DeFi_Policy_Maker_Toolkit_2021.pdf.
[97]Rakesh Sharma, *supra*, note 87.

[98]*Id.*
[99]*Id.*
[100]*Id.*
[101]*Id.*
[102] Susan Michael Kerner, Decentralized Finance vs. CentralizedFinance:What's the Difference?.*Tech Target* (Jun. 9, 2023), *available at*https://www.techtarget.com/whatis/feature/Decentralized-finance-vs-centralized-finance-Whats-the-difference.
[103]*Id.*
[104]*Id.*
[105]*Id.*

every user.[106]CeFi is different from traditional centralized exchanges in that only the user engaging in a transaction has the information reported to them. Like traditional centralized exchanges, CeFi exchanges may charge transaction fees for the buying, selling, and trading of tokens.[107] A CeFi may also be active in cross-chain bridge operations, where users can convert from one cryptocurrency to another.[108]CeFi exchanges can also do margin trading as was directly provide loans to users.The advantages of CeFi include:[109]

- **Customer Service** – Customer service is an integral part of CeFi cryptocurrency exchanges;
- **Fiat Money Conversion** – CeFi exchanges can convert fiat money to cryptocurrency and vice versa;
- **Cross-Chain Support** – CeFi usually has mechanisms for cross-chain exchanges of cryptocurrency tokens;
- **Margin Trading** – With some CeFi exchanges, users can engage in margin trading, where a portion of a token is loaned with interest to a user; and
- **Income** – In CeFi exchanges, users have the potential to earn interest income on assets.

The disadvantages of CeFi are:[110]

- **Custody** – Funds are held by the CeFi, not the user;
- **Regulatory Risk** – Regulators may require compliance with existing regulations; and
- **Accounting** – The CeFi conducts accounting and the reconciliation of accounts.

Risk of Financial Crime

A DeFi scam occurs when "a scammer programs a crypto token's underlying smart contract to figuratively pull the rug out from under investors."[111]A DeFi scammer may change a token's smart contract, making it impossible to sell the token or permit a scammer to mint unlimited tokens or charge excessive trading fees.[112] A smart contract is a "self-executing program that automates the actions required in an agreement or contract. Once completed, the transactions are trackable and irreversible."[113] For example, Browne wrote that in 2021, criminals stole about $10.5 billion in DeFi scams and thefts, a seven-fold increase over 2020.[114]

A **rug pull scam** happens when "a scammer creates a new cryptocurrency, convinces users to invest in it, and then liquidates their holdings abruptly, leaving investors with tokens worth nothing."[115] An **exit scam** occurs when "a scammer aggressively promotes a token before pulling the rug out from under investors. Exit scammers may create fraudulent marketing websites, announce fake partnerships, or use bots to wash trade."[116]***Crypto wash trading*** entails "one entity execut[ing] both sides of a trade, both buying and selling a cryptocurrency or [non-fungible token] NFT.[117]When crypto wash trading is extensively employed, investors can come to believe that the trading volume or market value of a token is higher than it actually is.[118] Before pulling out the rug, exit scammers can:[119]

- Create misleading marketing websites;
- Announce non-existent partnerships;
- Assert false claims about their development team or backers;
- Give themselves token allocations much greater than what they publicly claim to own;
- Engage in wash trading to inflate their token's price and/or volume; or
- Use bots to generate positive news about the token on social media platforms.

Solidus identified the following types of DeFi scams:[120]

- **Honeypots** – Prevent buyers from re-selling their tokens;
- **Hidden Mints** – Allow developers to create unlimited new tokens;
- **Fake Ownership Renunciations** – Permits tokens' developers hide the fact that they can call sensitive functions;
- **Hidden Balance Modifiers** – Allow developers to edit users' balances;
- **Hidden Fee Modifiers** – Permit developers establish sell fees as high as 100 percent;
- **Hidden Maximum Transaction Amount Modifiers** – Let developers set maximum transaction values as low as zero; or
- **Hidden Transfers** - Permit developers transfer tokens from users to themselves.

Solidus compiled the following statistics regarding scam tokens by exploit type:[121]

Scam Description	Number of Scams	Scam Percentage
Honeypots	98,442	44.8%
Hidden Mints	60,985	27.8%
Fake Ownership Renunciations	48,974	22.3%
Hidden Balance Modifiers	8,340	3.8%
Hidden Fee Modifiers	823	0.4%
Hidden Maximum Transaction Amount Modifiers	40	0.0%
Hidden Transfers	2,026	0.9%
Total	**219,630**	**100.0%**

The trend in rug scams is quite telling. According to Solidus, from September 2020 to December 2020, there were 1,548 rug scams, whereas in 2021, there were 83,368 rug scams, but in 2022, there were 125,084 rug scams.[122] It should be noted that the number of rug scams seems to be following an S-curve, where the number of rug scams seems to be flattening out.[123]

Opinion Regarding Risk of Financial Crime

[106]*Id.*
[107]*Id.*
[108]*Id.*
[109]*Id.*
[110]*Id.*
[111]Solidus Labs Staff, Whatis a RugPull?DeFiScamsExplained, *Solidus Labs* (Oct. 27, 2022), *available at* https://www.soliduslabs.com/post/rug-pull-crypto-scams#:~:text=A%20DeFi%20scam%20is%20when,exorbitant%20trading%20fees%2C%20for%20example.
[112]*Id.*
[113]Jake Frankenfield, What Are Smart Contracts on the Blockchain and How They Work, *Investopedia* (May 31, 2023), *available at*https://www.investopedia.com/terms/s/smart-contracts.asp.
[114] Ryan Browne, Criminals Have Made Off with Over $10 Billion in 'DeFi' Scams and Thefts this Year, *CNBC News* (Nov. 19, 2021), *available at*https://www.cnbc.com/2021/11/19/over-10-billion-lost-to-defi-scams-and-thefts-in-2021.html.
[115]Solidus Labs Staff, *supra*, note 111.
[116]*Id.*
[117]Solidus Labs Staff, Crypto and NFT Wash Trading Explained, *Solidus Labs* (Nov. 23, 2022), *available at*https://www.soliduslabs.com/post/crypto-wash-trading.
[118]*Id.*
[119] Solidus Labs Staff, *supra*, note 111.
[120]*Id.*
[121]*Id.*
[122]*Id.*
[123]Anna Baluch, What Is the S-Curve In Project Management?,*Forbes Adviser* (Jun. 7, 2023), *available at*https://www.forbes.com/advisor/business/s-curve/.

The question is whether DeFi, as opposed to a traditional financial structure used in other crypto projects, creates a greater risk of financial crime. Based on the information presented above, it is likely too early to say one way or the other. Even so, it appears that more data needs to be collected and analyzed. Any objective analysis would necessarily have to multiply the exposure factor by the value of an asset, where the exposure factor is the "percentage of loss a realized threat could have on a certain asset."[124]. For example, if the exposure factor was 5 percent and the value of the asset was $100,000.00, then the single loss expectancy (SLE) would be $5,000.00. To make valid comparison, one would have to compare the annual loss expectancy (ALE) for both DeFi and CeFi, where ALE equals ALE times the annualized rate of occurrence (ARO), where the ARO is "[t]he value represents the estimated possibility of a specific threat taking place within a one-year timeframe"[125] For example, if the SLE is $5,000.00 and the ARO is 0.2 (meaning that the event occurs once in five years), then the ALE is $1,000.00. If this information is present for both DeFi and CeFi, the question can be answered accurately, and with some precision.

It appears that the traditional financial structure has a smaller risk of financial crime. The reason is subjective. Many programmers do not program defensively, attempting to process errors before the occur. They are typically more concerned with the normal flow of data to program for the abnormal, which is usually an afterthought. It is an unfortunate set of circumstances that occurs all too frequently. Simply stated, there is more human intervention that occurs in CeFi than in DeFi. Thus, it appears that DeFi is likely riskier than CeFi.

CRYPTOCURRENCY FRAUD

There are various ways for an investor to protect themselves against cryptocurrency fraud.[126] First, one must understand the types of scams that are used to entice an investor to part with their money. Second, an investor should take reasonable steps to ensure that they do not become cyber victims. Even so, one should remember that anyone can be a cyber victim. No one is immune from wiles of clever cyber criminals.

Common Cryptocurrency Scams

The common types of cryptocurrency scams are:[127]

- **Phishing Scams** - Cybercriminals that impersonate legitimate individuals or organizations to mislead investors into sharing sensitive information or sending money to their digital wallets. Phishing scams can occur on fake websites, in emails, or social media messages.
- **Ponzi and Pyramid Schemes** – These schemes lure investors by promising high returns on an investment. A constant inflow of new investors are needed to ensure payouts. In this scheme, early investors are paid with money coming from later investors.
- **Fake Initial Coin Offerings (ICOs)** – An ICO is a mechanism for a young firm to raise money. Some scammers generate fake offering to get investors to purchase token for projects that do not exist. After they collect the money, the scammers typically disappear.
- **Pump-and-Dump Schemes** – With pump-and-dump schemes, an organization artificially inflates a cryptocurrency price via coordinated buying, and then sells the cryptocurrency after the price has risen significantly. Investors may be duped into purchasing the cryptocurrency, and are typically fleeced out of their money when the price crashes.
- **Malware and Ransom ware Attacks** – Cybercriminals may use malware to gain access to cryptocurrency wallets. The cybercriminal then encrypts the victim's data, demanding a cryptocurrency payment to unlock the data.

Avoiding Cryptocurrency Scams

There are several things that an investor can do to avoid a cryptocurrency scam, including:[128]

- **Research Thoroughly** – In other words, check the legitimacy of the cryptocurrency, the members of the team behind the cryptocurrency, and the track record of the team. Search for independent reviews of the cryptocurrency as well as expert opinions in making an informed decision.
- **Verify the Authenticity of Websites and Emails** – One should be cautious when clicking on links contained in emails and text messages. Double-check a URL to verify that it matches the organization's official website. Check for a secure sockets layer symbol "https" in the address bar, indicating that the website is secure.
- **Protect One's Personal Information** – Never share sensitive information, including private keys or wallet passwords, with anyone. Use strong, unique passwords for all online accounts, and enable two-factor authentication (2FA) if possible.
- **Be Cautious About Unrealistic Promises** – If the investment sounds too good to be true, it likely is. Do not fall for guaranteed high returns or get-rich-quick schemes.
- **Employ Reputable Exchanges and Wallets** – Select well-established, reputable cryptocurrency exchanges and wallets, where the operational track record is verifiable. Check the history of security breaches and enabled security features, including 2FA and withdrawal address white listing, or address in an investor's contacts that are approved to make cryptocurrency withdrawals.
- **Keep Informed** – Keep abreast of the latest news and trends in the cryptocurrency market. Join online forums, follow industry experts on social media, subscribe to reputable newsletters, and be aware of industry best practices.

Celsius Network, LLC

Celsius Network LLC (Celsius) was incorporated in Delaware in 2018 as a crypto asset platform that permitted its investors to earn yields on their crypto assets, take loans secured by their crypto assets.[129] The crypto company is headquartered in Hoboken, New Jersey. The firm's founder and Chief Executive Officer (CEO) is Alex Mashinsky.[130]Celsius promoted itself as a safe place for crypto assets and currency. Celsius offered investors the ability to deposit their crypto assets into a Celsius wallet, and then earn a percentage yield that was supposedly generated by pooling investor assets, and then lending them out through retail lending, institutional lending,

[124]SHON HARRIS, & FERNANDO MAYMI, CISSP EXAM GUIDE 113 (McGraw-Hill Education 2019).
[125]*Id.*
[126] Mercer Advisers Staff, How to Defend Against Crypto Scams, *Mercer Advisers* (Jul. 7, 2023), *available at*https://www.merceradvisors.com/insights/personal-finance/how-to-defend-against-crypto-scams/.
[127]*Id.*
[128]*Id.*
[129]USDOJ Staff, Statement of Facts, *U.S. Department of Justice* (n.d.), *available at*https://www.justice.gov/media/1305436/dl?inline#:~:text=Celsius%20was%20founded%20in%20approximately,crypto%20assets%2C%20among%20other%20services.
[130]*Id.*

investments, exchange trading, and other profit-making activities.[131] Celsius investors could receive their interest in their native crypto token or in Celsius' token CEL. At its peak, $25 billion in assets that were allegedly deposited in ordinary retail investors and not large institutions.[132] Essentially, Celsius was purportedly engaged in the activities of a federally regulated bank or credit union.

The Case Against Celsius Network, LLC

According to the Department of Justice (DoJ), Celsius engaged in a scheme to defraud investors by "(1) making false and misleading statements about the degree of risk to which those investors' funds were exposed through Celsius' yield-generating activities, and (2) manipulating the market price and volume of CEL to give investors the impression that CEL was more valuable and liquid than it actually was."[133] The alleged fraud was conducted at Mashinsky's direction.[134]

From 2018, Machinsky marketed Celsius by making false and misleading statements regarding the safety of Celsius' ability to generate positive yields and the long-run viability of the organization. Machinsky and senior executives promoted Celsius by engaging in weekly Twitter interviews with its investors that were then posted on YouTube. In the beginning of 2020, Celsius employees raised issues about Machinsky's statements in these weekly Twitter interactions, editing the recorded versions of the interviews. Celsius never retracted any statements made by Machinsky.[135]

Mashinsky's statements allegedly created a false image of the safety and security of the yields from Celsius. The yields from the Celsius investments did not justify the sustained returns paid to its investors. Machinsky apparently made false statements regarding the risk exposure to Celsius investors. Machinsky also stated publicly that Celsius' ICO raised $50 million when the company actually raised $32 million. Machinsky indicated that the CEL price was a measure of Celsius' financial health and well-being. Celsius bought back CEL from its customers with the alleged intent of artificially supporting the CEL price.[136]

In all fairness, Celsius had several months where the firm was profitable, but in general, sustained large losses using failed strategies that were not disclosed to its investors. By the Summer of 2022, the market for crypto tokens collapsed. Celsius could not meet the flood of investor withdrawals. On June 2022, Celsius halted all withdrawals, preventing its investors from accessing more than $4 billion in crypto assets.[137]

DidCelsius Network LLC Commit Fraud?

As previously stated, Celsius was apparently acting as a crypto bank. The firm walked like a duck, quacked like a duck, and flew like a duck. Celsius was a duck, or in this case, a bank. The SEC was apparently justified in pressing charges against Celsius. In my opinion, the SEC and the DoJ should look at Celsius' behavior and the statements Machinsky and its senior managers made over an extended period in deciding whether to prosecute. And to their credit, that is exactly was they did.

CONCLUSION

If Bitcoin or Ethereum can change from a security to a nonsecurity with the passage of time, why invest in one or more of them in the first place? Only an irrational investor would invest in something not knowing for a surety where and how they are investing their money. Characteristics of investments matter, just as language matters. One cannot say that "security" is only a word, as if it had no meaning. The fact is that words have meanings. Without pre-specified meanings of words, people cannot understand each other. Individuals would be like the people at the tower of Babel, where they lost the ability to communicate with one another.[138]

In terms of centralized and decentralized finance, the interest in decentralized finance is even more telling. The reason that SE33 and SEA34 became law in the first place was to protect investors from unscrupulous swindlers. The point of centralized finance is to protect investors and in a sense level the playing field. It should be remembered that organizations that offer a decentralized financing opportunity have a far greater amount of information about the investment than the individual investor. Essentially, with decentralized finance, asymmetric information exists because entities offering the investment have far more information about the investment than the individual investor. The work involved in obtaining a similar level of information about an investment is an onerous task for an investor. It is easier for an investor to rely on the investee, thinking and believing that they have conducted due diligence, which may or may not be correct. This conclusion can be readily seen when evaluating common cryptocurrency scams and examining methods that can be used to avoid cryptocurrency scams. The scams that can be employed may be rather complicated, appearing to be reasonable on face value, but with an in depth assessment, the result may be quite different. Celsius is a case in point. In the end, investors should never forget that all that glitters is not gold.

In conclusion, it appears that it is time for the SEC, the financial community, and even society to decide whether Bitcoin, Ethereum, and other cryptocurrencies are securities or not. There is no middle ground. Cryptocurrencies are not chameleons. They cannot be securities one day and not securities another day. They are one or the other or something else completely different. Finally, if cryptocurrencies are not securities, then what are they? Cryptocurrencies have to be something. They are not money as argued above because of their volatility. If, as the Supreme Court has opined, some cryptocurrencies such as Bitcoin are not securities because they are sufficiently decentralized, then they may be in a league of their own. Even so, it should be remembered what Aristotle said thousands of years ago, A is A. It is past time to decide.

DONALD L. BURESH BIOGRAPHY

Donald L. Buresh earned his Ph.D. in engineering and technology management from Northcentral University. His dissertation assessed customer satisfaction for both agile-driven and plan-driven software development projects. Dr. Buresh earned a J.D. from The John Marshall Law School in Chicago, Illinois, focusing on cyber law and intellectual property. He also earned an LL.M in intellectual property from the University of Illinois Chicago Law School (formerly, The John Marshall Law School) and an LL.M. in cybersecurity and privacy from Albany Law School, graduating summa cum laude. Dr. Buresh received an M.P.S. in cybersecurity policy and an M.S. in cybersecurity, concentrating in cyber intelligence, both from Utica College. He has an M.B.A. from the University of Massachusetts Lowell, focusing on operations management, an M.A. in economics

[131] *Id.*
[132] *Id.*
[133] *Id.*
[134] *Id.*
[135] *Id.*
[136] *Id.*
[137] *Id.*

[138] Genesis 11:1-9, *available at*https://www.biblegateway.com/passage/?search=Genesis%2011%3A1-9&version=NIV.

from Boston College, and a B.S. from the University of Illinois-Chicago, majoring in mathematics and philosophy. Dr. Buresh is a member of Delta Mu Delta, Sigma Iota Epsilon, Epsilon Pi Tau, Phi Delta Phi, Phi Alpha Delta, and Phi Theta Kappa. He has over 25 years of paid professional experience in Information Technology and has taught economics, project management, negotiation, managerial ethics, and cybersecurity at several universities. Dr. Buresh is an avid Chicago White Sox fan and keeps active by fencing épée and foil at a local fencing club. Dr. Buresh is a member of the Florida Bar.

LIST OF ABBREVIATIONS

Abbreviation	Description
ALE	Annual Loss Expectancy
ARO	Annualized Rate of Occurrence
ATR	Average True Range
BIT	Bit Torrent
Celsius	Celsius Network LLC
CEO	Chief Executive Officer
CeFi	Centralized Finance
DeFi	Decentralized Finance
DoJ	Department of Justice
EU	European Union
FINRA	Financial Industry Regulatory Authority
HFSC	House Financial Services Committee
IAA40	Investment Advisers Act of 1940
ICA40	Investment Company Act of 1940
ICO	Initial Coin Offering
IPO	Initial Public Offering
NASD	National Association of Securities Dealers
NFA	National Futures Association
PUHCA35	Public Utility Holding Company Act of 1935
SA33	Securities Act of 1933
SEA34	Securities Exchange Act of 1934
SEC	Securities and Exchange Commission
SLE	Single Loss Expectancy
TIA34	Trust Indenture Act of 1934
TRX	Tronx

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