

## NOTE

### A Plaintiff's Cryptonite: Charting a Path Forward for Minimum Contacts in the Cryptocurrency Era

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#### ABSTRACT

*American interest in cryptocurrency has gone to the moon. As of November 2021, sixteen percent of American adults have invested in or traded cryptocurrency. But interest is not projected to stop there—continued use will more than triple the international cryptocurrency market by 2030. Indeed, new research has found that around forty-one percent of American adults who have never owned cryptocurrency are likely to purchase it by May of 2023. Despite the strong enthusiasm, approximately seventy-eight percent of cryptocurrency users admit to not understanding decentralized finance very well, with almost half of those respondents claiming to know little to nothing about the concept. A consequence of so many unsophisticated laypeople buying into the cryptocurrency frenzy is that a large portion of them are likely to be uninformed as to the legal ramifications of cryptocurrency use. Numerous cryptocurrency service providers, including many based overseas, have perpetuated scams, engaged in fraudulent behaviors, or gone defunct. The legal ramifications are ultimately realized when, as a result of corporate fraud or mismanagement, cryptocurrency is stolen, frozen, or lost at the hands of these companies.*

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*As cryptocurrency transactions and investments continue to grow, more lay users will file civil cases in federal court against cryptocurrency service providers. Inevitably, these individuals will face personal jurisdiction as an obstacle. Civil plaintiffs will find it difficult to establish personal jurisdiction over cryptocurrency companies for three reasons. First, personal jurisdiction doctrine formulated for the traditional internet context fails to consider essential and unique features of cryptocurrency, such as the blockchain infrastructure, the tendency of service providers to lack a physical presence, and its anonymity. Second, cryptocurrency companies are largely located outside of the United States, and establishing personal jurisdiction over foreign defendants is notoriously complicated. Third, although limited discovery is a useful tool in identifying business activities targeting the forum, it is unclear whether the remedy could have a substantial effect on personal jurisdiction analysis. This is because cryptocurrency companies are not currently rigorously regulated, fueled by anonymity, and have a propensity to engage in deceitful practices.*

*Lower courts should apply a supplemental six-factor minimum contacts test specifically designed for civil cases against cryptocurrency companies to counteract these concerns. Though traditional internet doctrine should serve as the starting point for a court's minimum contacts analysis, a more accurate result can be reached by using factors specific to this novel technology. This Note asserts that cryptocurrency and its service providers' (1) reliance on blockchain technology, (2) lack of a physical presence, and (3) tendency to be subject to lax regulations abroad are unique and essential to the minimum contacts analysis, and therefore should be analyzed under a multifactor test.*

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## INTRODUCTION

Cryptocurrency is a rapidly growing force in finance. Over the past six years, the number of American adults who have used cryptocurrency as an investment tool, source of payment, or in other forms has increased sixteen-fold.<sup>1</sup> By early 2022, one in five American adults had bought or traded cryptocurrency.<sup>2</sup> Although cryptocurrency has not yet become a mainstream form of payment, it has earned enthusiastic support from American payment processors,<sup>3</sup> companies,<sup>4</sup> and social media influencers.<sup>5</sup> All this hype continues to attract many retail investors who, undeterred by “crypto winters,”<sup>6</sup> are optimistic about the currency’s long-term growth.<sup>7</sup>

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<sup>1</sup> See Andrew Perrin, *16% of Americans Say They Have Ever Invested in, Traded or Used Cryptocurrency*, PEW RSCH. CTR. (Nov. 11, 2021), <https://www.pewresearch.org/fact-tank/2021/11/11/16-of-americans-say-they-have-ever-invested-in-traded-or-used-cryptocurrency/> [<https://perma.cc/QT87-7T29>]. A similar phenomenon has occurred with respect to the percentage of U.S. adults’ knowledge of cryptocurrency. Eighty-six percent of that population has heard of cryptocurrency, and twenty-four percent of those adults have “heard a lot about” it. *Id.* Compare this widespread knowledge to the level of familiarity six years prior, where less than half of American adults reported they had heard of cryptocurrency to any degree. See *id.*

<sup>2</sup> Thomas Franck, *One in Five Adults Has Invested in, Traded, or Used Cryptocurrency*, NBC NEWS POLL SHOWS, CNBC (Mar. 31, 2022), <https://www.cnbc.com/2022/03/31/cryptocurrency-news-21percent-of-adults-have-traded-or-used-crypto-nbc-poll-shows.html> [<https://perma.cc/BP6P-PWW6>].

<sup>3</sup> See Zahra Tayeb, *More Companies, Including PayPal and Xbox, Are Accepting Bitcoin and Other Cryptocurrencies as Payment. Others Are Weighing Up Their Options*, BUS. INSIDER (May 7, 2021, 11:52 AM), <https://www.businessinsider.com/more-companies-accepting-bitcoin-cryptocurrency-paypal-starbucks-2021-4> [<https://perma.cc/TBG2-7NDV>] (discussing PayPal’s recent decision to allow its customers to use their accounts to “buy, sell, and hold” cryptocurrency).

<sup>4</sup> See *id.* (reporting the decision by videogaming giant Xbox to accept cryptocurrencies for its goods and services); CNNMoney, *Microsoft Begins Accepting Bitcoin*, HARTFORD BUS. J. (Dec. 11, 2014), <https://www.hartfordbusiness.com/article/microsoft-begins-accepting-bitcoin> (spotlighting Microsoft’s acceptance of Bitcoin as payment).

<sup>5</sup> See Pawan Nahar, *Elon Musk Pumps Dogecoin with yet Another Tweet, Token Surges 25%*, ECON. TIMES (Jan. 14, 2022, 2:45 PM), <https://economictimes.indiatimes.com/markets/cryptocurrency/elon-musk-pumps-dogecoin-with-yet-another-tweet-token-surges-25/articleshow/88894068.cms> [<https://perma.cc/B46S-5YFN>]; see also Christopher Boone & Melissa Landau Steinman, *“Are You Guys into Crypto????”: Celebrities Promoting Cryptocurrencies Become Class Action Targets*, JD SUPRA (Jan. 19, 2022), <https://www.jdsupra.com/legalnews/are-you-guys-into-crypto-celebrities-8613768/> [<https://perma.cc/NWY7-B2C2>].

<sup>6</sup> See Shubham Pandey, *Will Retail Investors Shape the Future of Crypto?*, BEINCRYPTO (Mar. 6, 2023, 2:22 AM), <https://beincrypto.com/future-retail-investment-cryptocurrency-promising/> [<https://perma.cc/4ASA-XUZY>] (“Last year, the market witnessed multiple collapses, such as FTX. Nevertheless, retailers were undeterred.”).

<sup>7</sup> John McCrack, *Analysis: Retail Investors Learn to Love the Crypto Rollercoaster*, REUTERS (May 21, 2021, 1:46 PM), <https://www.reuters.com/technology/retail-investors-learn-love-crypto-rollercoaster-2021-05-21/> [<https://perma.cc/3J2H-XU3Q>] (explaining how one retail investor grew his cryptocurrency portfolio, despite it being “slammed” by a sharp decline in

Along with the enthusiasm demonstrated by American individuals, there has been concurrent corporate interest in entering the market as service providers. Companies that facilitate cryptocurrency trading or encourage investing have emerged to meet the surge in interest,<sup>8</sup> many of which are situated overseas.<sup>9</sup> An impressive portion of these businesses have established themselves outside of the United States, often on purpose in an attempt to bypass increasingly stringent United States regulations.<sup>10</sup> Despite bans fashioned to deter American

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price, because he viewed cryptocurrency “as a serious long-term investment” that is “not for the faint of heart”). The COVID-19 pandemic has partially fueled the interest in day trading, as opposed to professional trading. See Mark Gilbert, *Optimistic Young Retail Investors Are Shooting for the Moon*, BLOOMBERG: OP. (Dec. 14, 2021, 1:00 AM), <https://www.bloomberg.com/opinion/articles/2021-12-14/optimistic-robinhood-crypto-retail-investors-are-shooting-for-the-moon> [<https://perma.cc/R2W7-98JZ>]. The increased interest in day trading sparked “dangers of misunderstanding the boundary between investing and gambling,” yet retail traders’ “appetite for risk shows no sign of abating” despite financial and legal risks. *Id.*

<sup>8</sup> See Daisuke Wakabayashi & Mike Isaac, *The New Get-Rich-Faster Job in Silicon Valley: Crypto Start-Ups*, N.Y. TIMES (Dec. 22, 2021), <https://www.nytimes.com/2021/12/20/technology/silicon-valley-cryptocurrency-start-ups.html> [<https://perma.cc/MLH8-JL6V>]; Ryan Browne, *Crypto Start-Ups Are Still Raising Serious Cash Despite a Slump in Prices*, CNBC (Feb. 7, 2022, 8:51 AM), <https://www.cnbc.com/2022/02/02/crypto-start-ups-raised-huge-venture-funding-rounds-in-january.html> [<https://perma.cc/WL7Z-SK9X>]; Pierre Samaties & Feroz Sanaula, *The Rise of the Crypto Economy*, ROLAND BERGER (Jan. 17, 2022), <https://www.rolandberger.com/en/Insights/Publications/The-rise-of-the-Crypto-Economy.html> [<https://perma.cc/T4F7-ZUZJ>].

<sup>9</sup> See Andrew Lisa, *Which Countries Are Using Cryptocurrency the Most?*, YAHOO (June 28, 2021), <https://www.yahoo.com/now/countries-using-cryptocurrency-most-210011742.html> [<https://perma.cc/WD6D-KFQA>]; see also Simon Chandler, *Corporations & Countries Watch and Learn From El Salvador’s Bitcoin Experiment*, CRYPTONEWS (Oct. 17, 2021, 7:00 AM), <https://cryptonews.com/exclusives/corporations-countries-watch-and-learn-from-el-salvadors-bitcoin-experiment.htm> [<https://perma.cc/UJE4-564K>].

<sup>10</sup> See *Bitcoin Exchanges*, BITCOIN, <https://bitcoin.org/en/exchanges#international> [<https://perma.cc/F4R3-GMD8>] (identifying dozens of cryptocurrency exchanges located in foreign countries); see also Brian D. Feinstein & Kevin Werbach, *The Impact of Cryptocurrency Regulation on Trading Markets*, 7 J. FIN. REGUL. 48, 48 (2021) (“Some policymakers and scholars warn that regulation will cause trading activity to cross borders into less-regulated jurisdictions.”); Sunaina Chadha, *Explained: Crypto Exchanges May Move Base Overseas but You Will Still Have to Pay Tax on Your Cryptocurrency*, TIMES INDIA (Feb. 22, 2022, 1:14 PM), <https://timesofindia.indiatimes.com/business/india-business/explained-crypto-exchanges-may-move-base-overseas-but-you-will-still-have-to-pay-tax-on-your-cryptocurrency/articleshow/89744307.cms> [<https://perma.cc/89H7-MYTF>] (explaining how cryptocurrency companies faced with tightening regulation may move to countries with less stringent rules); *Rebooting the U.S. Economy*, WALL ST. J. (May 4, 2021, 4:00 PM), <https://www.wsj.com/video/events/rebooting-the-us-economy/B8C7C44E-C1A8-41C4-954B-46A763DC5A9A.html> [<https://perma.cc/3VXV-FLQH>] (documenting Treasury Secretary Janet Yellen’s intent to protect crypto consumers and investors by filling gaps in cryptocurrency regulation); Jesse Pound, *SEC Chairman Gary Gensler Says More Investor Protections Are Needed for Bitcoin and Crypto Markets*, CNBC (May 7, 2021, 2:40 PM), <https://www.cnbc.com/2021/05/07/sec-chairman-gary-gensler-says-more-investor-protections-are-needed-for-bitcoin-and-crypto-markets.html> [<https://perma.cc/ALC5-HLRL>] (reporting that SEC Chairman Gary Gensler reiterated the need for “greater [Bitcoin] investor

customers from trading on overseas exchanges, cryptocurrency enthusiasts have easily circumvented these measures.<sup>11</sup>

Many of these cryptocurrency companies, particularly those located overseas, are “cashing in on the buzz around cryptocurrency and luring people into bogus investment opportunities in record numbers.”<sup>12</sup> Because blockchain technology keeps the personal information of the transacting parties undisclosed, cryptocurrency is particularly attractive to criminals intending to defraud investors.<sup>13</sup> Between October 2020 and May 2021, reports of investment scams “skyrocketed, with nearly 7,000 people reporting losses of more than \$80 million.”<sup>14</sup> This is roughly twelve times the number of reports logged during the same period a year prior.<sup>15</sup>

Even if a cryptocurrency company does not purport to scam its customers, the difficulty in successfully operating an exchange or soliciting investments through an initial coin offering (“ICO”) has caused many service providers to fail.<sup>16</sup> For example, many enterprises fall victim to cybercriminal hacks.<sup>17</sup> Investor and trader losses may

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protection,” especially for retail investors, given social media’s profound influence on financial markets).

<sup>11</sup> See Alexander Osipovich, *U.S. Crypto Traders Evade Offshore Exchange Bans*, WALL ST. J. (July 30, 2021, 10:55 AM), <https://www.wsj.com/articles/u-s-crypto-traders-evade-offshore-exchange-bans-11627637401> [<https://perma.cc/FG3Z-Y8WJ>].

<sup>12</sup> Emma Fletcher, *Cryptocurrency Buzz Drives Record Investment Scam Losses*, FED. TRADE COMM’N: DATA SPOTLIGHT (May 17, 2021), <https://www.ftc.gov/news-events/blogs/data-spotlight/2021/05/cryptocurrency-buzz-drives-record-investment-scam-losses> [<https://perma.cc/NW5Q-N7MC>] (reporting that the frequency at which new investors have entered the cryptocurrency “Wild West” has “play[ed] right into the hands of scammers”).

<sup>13</sup> See *What To Know About Cryptocurrency and Scams*, FED. TRADE COMM’N: CONSUMER ADVICE (May 2022), <https://www.consumer.ftc.gov/articles/what-know-about-cryptocurrency-and-scams> [<https://perma.cc/2UWS-BMSF>]; see, e.g., *In re BitConnect Sec. Litig.*, No. 18-cv-80086, 2019 WL 9104318, at \*1 (S.D. Fla. Aug. 23, 2019) (discussing a class action complaint that alleged an exchange claiming to host a legitimate ICO actually operated a Ponzi scheme); Anton Shilov, *Crypto Exchange Founder Disappears with \$2 Billion*, TOM’S HARDWARE (Apr. 24, 2021), <https://www.tomshardware.com/news/turkish-crypto-exchange-goes-bankrupt-losses-2-billion-usd> [<https://perma.cc/ANG9-MT3D>] (reporting that the founder of a popular Turkish exchange fled the country with approximately \$2 billion in funds taken from approximately 300,000 accountholders).

<sup>14</sup> Fletcher, *supra* note 12.

<sup>15</sup> *Id.*

<sup>16</sup> Luke Parker & Aditya Das, *Crypto Exchanges Continue to Fail as Hacks and Exit Scams Bite*, BRAVE NEW COIN (May 19, 2022, 8:00 PM), <https://bravenewcoin.com/insights/36-bitcoin-exchanges-that-are-no-longer-with-us> [<https://perma.cc/42UK-B26Y>].

<sup>17</sup> See, e.g., *North Korea Hackers Stole \$400m of Cryptocurrency in 2021, Report Says*, BBC (Jan. 14, 2022), <https://www.bbc.com/news/business-59990477> [<https://perma.cc/U79W-MZHF>] (outlining a North Korean cryptocurrency exchange hack following a separate North Korean “hacking spree”); Ali Watkins & Benjamin Weiser, *Inside the Bitcoin Laundering Case That Confounded the Internet*, N.Y. TIMES (Feb. 13, 2022), <https://www.nytimes.com/2022/02/13/>

also arise at the hands of companies engaging in basic financial mismanagement, often propelled by cryptocurrency's susceptibility to extreme market volatility and uncertainty.<sup>18</sup> The lack of rigorous domestic and international oversight heightens the risk that unstable cryptocurrency companies will engage in mismanagement or neglect, resulting in financial ruin for its customers.<sup>19</sup>

When litigants pursue a civil claim for fraud or mismanagement against a cryptocurrency company, they might encounter difficulties, if not outright impossibility, in locating a domestic forum that can properly assert jurisdiction over the company.<sup>20</sup> Lower federal courts in several high-profile cryptocurrency cases have already encountered the difficult personal jurisdiction question.<sup>21</sup> Moreover, the "2017 ICO boom" and "recent declines in cryptocurrency prices" are projected to fuel a substantial increase in blockchain-related litigation.<sup>22</sup> The growing popularity in this novel currency among amateurish day traders,<sup>23</sup>

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nyregion/bitcoin-bitfinex-hack-heather-morgan-ilya-lichtenstein.html [https://perma.cc/UMF7-NEM8] (describing two anonymous hackers who stole and laundered cryptocurrency valued at over \$4 billion). Exchanges are especially attractive to hackers because cryptocurrency offers transacting parties a cloak of anonymity. See U.S. DEP'T OF JUST., REP. OF THE ATT'Y GEN.'S CYBER DIGIT. TASK FORCE CRYPTOCURRENCY ENF'T FRAMEWORK, at ix (Oct. 2020).

<sup>18</sup> See *Why Does Bitcoin's Price Fluctuate so Much?*, ETORO, <https://www.etoro.com/en-us/crypto/why-bitcoin-fluctuates/> [https://perma.cc/79GW-TSLZ] ("Bitcoin volatility is one of the scariest things for a cryptocurrency trader or user."); see, e.g., *Chamani v. Quasar Mining Grp., Inc.*, No. 2:20-cv-77, 2020 WL 2527022, at \*1 (D. Nev. May 18, 2020) (alleging the executives of a startup cryptocurrency company unjustly enriched themselves and breached their fiduciary duty after engaging in corporate misconduct, like never minting a single cryptocurrency token).

<sup>19</sup> See, e.g., *Lack v. Mizuho Bank*, No. 2:18-cv-00617, 2019 WL 4239128, at \*1–2 (C.D. Cal. June 24, 2019) (outlining a class action claim that negligence and fraud on behalf of the exchange's founders caused the sudden bankruptcy of a cryptocurrency exchange, preventing account holders from withdrawing or otherwise accessing their funds).

<sup>20</sup> See *Shaw v. Vircorex*, No. 18-cv-00067-PAB-SKC, 2019 WL 2636271, at \*2–4 (D. Colo. Feb. 21, 2019) (finding plaintiff, a Colorado resident, failed to establish the Court had jurisdiction over an out-of-state cryptocurrency exchange); see also *Vircorex Exchange Frozen Accounts Fraud Class Action*, CLASS ACTIONS REP. (Jan. 12, 2018), <https://classactionsreporter.com/vircorex-exchange-frozen-accounts-fraud-class-action/> [https://perma.cc/R8RK-DKCP] ("Vircorex's website currently says it is incorporated in Belize . . . . The company has also claimed to be in Beijing, China, but some indications point to Germany.").

<sup>21</sup> See, e.g., *Shaw*, 2019 WL 2636271. Judge Brimmer explained how he was "unaware of any judicial district to which the case could be transferred that would have personal jurisdiction over defendants." *Id.* at \*4. Although he mentioned that plaintiff failed to cite a forum other than Colorado in the complaint, this might signal an inability for litigants to know with certainty where they may bring claims against cryptocurrency companies. See *id.*

<sup>22</sup> Jaak Poldma, *Dragged to the U.S. Courts (Part 1): Jurisdiction and the Location of Blockchain Nodes*, ORRICK BLOG, <https://blogs.orrick.com/blockchain/dragged-to-the-u-s-courts-part-1-jurisdiction-and-the-location-of-blockchain-nodes/> [https://perma.cc/F8RD-TJQY].

<sup>23</sup> See generally Megan McCluskey, 'Someone's Going to Be Left Holding the Bag.' How Finance TikTok Is Navigating 'Meme Stock' Hype Among Young Investors, TIME (June 24,

as well as the projected surge in cryptocurrency-related litigation, means that lower federal courts will continue to confront the difficult personal jurisdiction issue.

Lower courts will struggle to accurately resolve the personal jurisdiction question for three reasons. First, the doctrine formulated for the traditional internet context does not encapsulate important features unique to the cryptocurrency context. Two features of cryptocurrency companies in particular—their reliance on blockchain technology and absence of physical presence—do not have appropriate analogs in the traditional internet space.<sup>24</sup> Second, the strong presence of cryptocurrency companies outside of the United States often implicates factual, regulatory, and jurisdictional challenges.<sup>25</sup> Third, the use of limited discovery to ameliorate a plaintiff's burden to prove personal jurisdiction is complicated by the very nature of cryptocurrency trading, which thrives on anonymity, insubstantial or nonexistent regulations, and criminal use.<sup>26</sup>

To provide cryptocurrency users and companies with greater jurisdictional certainty, lower courts should supplement traditional internet considerations with novel factors that better capture the nuances of cryptocurrency. It is the goal of this Note to articulate a multifactor test to guide minimum contacts analysis in civil cases involving aggrieved cryptocurrency users claiming injury against cryptocurrency companies. Section I.A will begin by providing an overview of the aspects of cryptocurrency relevant to the personal jurisdiction analysis, including its basic infrastructure and some of the companies facilitating its trade and investment. Section I.B will outline the minimum contacts doctrine, including internet-centric principles that courts have relied on in civil cryptocurrency cases.

Section II.A will explore some complexities of cryptocurrency that contribute to the need for clarification in minimum contacts analysis—its technological infrastructure, the corporate tendency to lack a physical presence, and the irresolute regulation targeting its service

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2021, 12:28 PM), <https://time.com/6073524/meme-stock-tiktok/> [<https://perma.cc/WSA9-X47E>] (explaining the rise in “meme stock” investing among young, amateur traders); *see also* Raisa Bruner, *They Went All-In on Meme Stocks One Year Ago. Here's What They Learned*, TIME (Feb. 22, 2022, 9:25 AM), <https://time.com/6149431/meme-stock-investors-one-year-later/> [<https://perma.cc/DL2T-KRZ5>] (describing the strong amateur trader interest in cryptocurrency assets).

<sup>24</sup> *See infra* Sections I.A, II.A.

<sup>25</sup> *See infra* Sections I.A, II.A.

<sup>26</sup> *See* Niji Oni & Co., *Jurisdictional Issues on Cryptocurrency Transactions*, SSRN (Apr. 20, 2021), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3830568](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3830568) [<https://perma.cc/F8DC-9KVA>].

providers. Section II.B will then investigate how courts have thus far relied solely on internet doctrine by synonymizing cryptocurrency transactions to a typical ecommerce or website interaction. Section II.C will pinpoint the flaws in this approach. Specifically, this analytical method does not fully comprehend the cryptocurrency network, nor does it appreciate the distinct features of cryptocurrencies that make establishing minimum contacts using traditional internet factors exceedingly difficult.

Finally, Part III will propose a six-factor test designed to ameliorate the minimum contacts issues presented by civil cryptocurrency cases. This test will provide a framework for courts to consider the cryptocurrency company's minimum contacts with the forum, including (1) the level of interactivity provided by its website, (2) the extent to which the company marketed its services in the forum and to whom it directed its messaging, (3) its customer base and transaction volume in the forum, (4) the location of light nodes in the forum, (5) physical presence, if any, in the forum or the United States, and (6) whether the company collected the customer's address or other personal information. Whereas the first three factors reflect traditional internet considerations properly applicable to this category of cases, the last three factors were devised specifically for the cryptocurrency context. By emphasizing the unique aspects of cryptocurrency, this approach will provide clarity, consistency, and efficiency to the personal jurisdiction analysis in civil cryptocurrency disputes

## I. BACKGROUND

Cryptocurrency is unlike traditional online transactions of fiat currency. First, although both mediums of exchange may be used to purchase goods and services or invest, cryptocurrency is completely intangible.<sup>27</sup> Second, transacting cryptocurrency is unique because the two parties are usually anonymous and there is no central bank to verify the transactions.<sup>28</sup> Cryptocurrency instead relies upon decentralized blockchain technology to uphold its legitimacy.<sup>29</sup> Third, because the cryptocurrency system is decentralized, there is no central place where data is stored; transactional data is instead kept on full nodes scattered throughout the world.<sup>30</sup> Fourth, every individual that uses a computer or other personal device to transact cryptocurrency

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<sup>27</sup> See *infra* Section I.A.

<sup>28</sup> See *infra* text accompanying notes 40–43.

<sup>29</sup> See *infra* text accompanying notes 44–45.

<sup>30</sup> See *infra* text accompanying notes 50–51.



invariably becomes part of the network infrastructure as a lightweight node.<sup>31</sup> Finally, cryptocurrency service providers tend to be loosely regulated.<sup>32</sup> As a result, these companies often engage in fraud or mismanagement and are prime targets for cyber thefts.

Aggrieved customers must prove personal jurisdiction to recover lost, frozen, or stolen funds in a civil suit against cryptocurrency enterprises. Most importantly, a customer is required to show that the corporate defendant had sufficient business contacts with the forum state to be properly subject to personal jurisdiction therein. Over the past several decades, courts formulated considerations specific for minimum contacts made over the internet. Courts have fit these considerations into three bedrock tests used to analyze the existence of minimum contacts. In the internet context, courts have repeatedly emphasized that this is a fact-specific inquiry that should account for the novel features of the internet that could impact minimum contacts analysis.<sup>33</sup> Because civil cryptocurrency cases commonly involve facts that diverge from those underpinning typical internet disputes, a minimum contacts analysis should include considerations specifically designed for the cryptocurrency setting.

### A. *Cryptocurrency Is Distinct from Fiat Currency*

Although cryptocurrency and fiat currency both intrinsically hold financial value, the two possess vast differences that impact the personal jurisdiction inquiry. Whereas fiat currency can exist physically in the form of bills or coins, cryptocurrency is a completely digital medium of exchange.<sup>34</sup> Virtual currency uses cryptography—hence the name “crypto”—to secure transactions between parties.<sup>35</sup> These computational algorithms prevent unauthorized parties from gaining access to the cryptocurrency being transacted, and they preclude the need for a bank or other intermediary to facilitate the transaction.<sup>36</sup>

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<sup>31</sup> See *infra* text accompanying notes 59.

<sup>32</sup> See discussion *infra* Section I.B.

<sup>33</sup> See discussion *infra* Section I.C.

<sup>34</sup> See Kate Ashford, *What Is Cryptocurrency?*, FORBES ADVISOR (June 6, 2022, 7:23 PM), <https://www.forbes.com/advisor/investing/cryptocurrency/what-is-cryptocurrency/> [https://perma.cc/PS8D-TE2Y]; see also Shobhit Seth, *Explaining the Crypto in Cryptocurrency*, INVESTOPEDIA (May 15, 2022), <https://www.investopedia.com/tech/explaining-crypto-cryptocurrency/> [https://perma.cc/LJ3J-DN2A].

<sup>35</sup> FED. INCOME TAX'N OF BANKS & FIN. INST. § 5.66, Westlaw (database updated June 2023).

<sup>36</sup> *What Is Cryptography?*, COINBASE, <https://www.coinbase.com/learn/crypto-basics/what-is-cryptography> [https://perma.cc/GS32-8DUQ].

Cryptocurrency can be used to purchase goods or services.<sup>37</sup> Individuals may instead choose to use cryptocurrency as an investment tool.<sup>38</sup> For instance, an individual may choose to purchase cryptocurrency with the hope that its value will increase in the future, at which point the individual could sell for a profit.<sup>39</sup>

Transmitting cryptocurrency is markedly different from transferring fiat currency. Assume two parties wish to exchange some amount of cryptocurrency. The party transferring the cryptocurrency has a “public key,” similar to an email address, which consists of a random sequence of characters that represents the amount of cryptocurrency the individual possesses.<sup>40</sup> To send the cryptocurrency associated with that address to another user, the transferor must have access to their “private key,” a separate sequence of characters which serves as a password to secure the transaction.<sup>41</sup> The receiver of the cryptocurrency can opt to store it in a cryptocurrency “wallet,” a digital storage space for the encrypted material.<sup>42</sup> When the receiver opts to use this device, they receive a private key enabling future access to the cryptocurrency stored therein.<sup>43</sup> Once the transaction is complete, it is added to the blockchain, the most vital feature of the cryptocurrency system.

Unlike fiat currency, cryptocurrency is decentralized, meaning there is no central bank charged with overseeing its value and verifying transactions.<sup>44</sup> Instead, it uses blockchain technology to authenticate transactions.<sup>45</sup> When two parties complete a transaction, there is technically no currency that changes hands. Rather, the blockchain is updated to reflect the transaction, including its date, the addresses used to send and receive the cryptocurrency, and the amount of

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<sup>37</sup> Andy Rosen, *What Is Cryptocurrency: A Guide for Beginners*, NERDWALLET (Feb. 14, 2023), <https://www.nerdwallet.com/article/investing/cryptocurrency> [https://perma.cc/5K3J-JHY7].

<sup>38</sup> *See id.*

<sup>39</sup> Madana Prathap, *Cryptocurrency Isn't for Everyone—But Here's How Some Are Using Digital Tokens to Make Money*, BUS. INSIDER (Apr. 25, 2022, 12:47), <https://www.businessinsider.in/investment/news/seven-ways-you-can-make-money-with-cryptocurrency/slidelist/85653413.cms> [https://perma.cc/365H-GRW7].

<sup>40</sup> *How Do Bitcoin Transactions Work?*, BITCOIN, <https://www.bitcoin.com/get-started/how-bitcoin-transactions-work/> [https://perma.cc/984A-L43L].

<sup>41</sup> *Id.*

<sup>42</sup> David Rodeck & John Schmidt, *What Is a Bitcoin Wallet?*, FORBES ADVISOR (June 14, 2021, 10:19 AM), <https://www.forbes.com/advisor/investing/what-is-a-bitcoin-wallet/> [https://perma.cc/44FY-MMBD].

<sup>43</sup> *Id.*

<sup>44</sup> *See* Jordan Pritchett, *Cryptocurrency: An Overview*, 134 BANKING L.J. 547, 547 (2017).

<sup>45</sup> *See How Do Bitcoin Transactions Work?*, *supra* note 40.

cryptocurrency transferred.<sup>46</sup> A blockchain therefore operates like a “big [Excel] spreadsheet.”<sup>47</sup> Each cryptocurrency coin has its own unique blockchain.<sup>48</sup> However, a cryptocurrency token, commonly distributed through ICOs and valid with only one merchant, is built on top of an already established blockchain.<sup>49</sup>

The decentralized nature of the blockchain means that there isn't a single geographical location where transactional data can be stored, as opposed to a centralized fiat currency system.<sup>50</sup> Instead, “blocks of data are stored on nodes.”<sup>51</sup> A node can take several forms, but two—full nodes and lightweight nodes—can be especially relevant to the personal jurisdiction analysis.<sup>52</sup> Full nodes, like servers,<sup>53</sup> support and secure the cryptocurrency network by “download[ing] a blockchain's entire history to observe and enforce its rules.”<sup>54</sup> Theoretically, each full node contains a copy of the blockchain, and the interconnection of all nodes serves as critical infrastructure of the system because the nodes are constantly exchanging transactional information between each other to keep the blockchain up to date.<sup>55</sup> Although each blockchain has its own set of nodes, the most popular cryptocurrency, Bitcoin,<sup>56</sup> has most of its full nodes in North America.<sup>57</sup> In contrast, lightweight nodes only contain a partial transaction history of the

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<sup>46</sup> See *id.*

<sup>47</sup> Brendan Rius, *Where Is the Blockchain Stored?*, MEDIUM (Jan. 23, 2018), <https://medium.com/@brendanrius/where-is-the-blockchain-stored-b7e9e00bc2c2> [<https://perma.cc/5VDU-7MCK>].

<sup>48</sup> See Nicholas Rossolillo, *Types of Cryptocurrency*, MOTLEY FOOL (June 28, 2022, 5:51 PM), <https://www.fool.com/investing/stock-market/market-sectors/financials/cryptocurrency-stocks/types-of-cryptocurrencies/> [<https://perma.cc/UM4S-BG7K>]. Two popular types of cryptocurrency coins are Bitcoin and Ethereum. See *id.*

<sup>49</sup> See *id.*

<sup>50</sup> See Rius, *supra* note 47.

<sup>51</sup> Jimi S., *Blockchain: What Are Nodes and Masternodes?*, MEDIUM (Sept. 5, 2018), <https://medium.com/coinmonks/blockchain-what-is-a-node-or-masternode-and-what-does-it-do-4d9a4200938f> [<https://perma.cc/4FZM-QQYD>]; see Rius, *supra* note 47.

<sup>52</sup> See *What Is a Blockchain Node and How Is It Used in Cryptocurrency?*, GADGETS 360 (Aug. 21, 2021, 10:23 IST), <https://gadgets.ndtv.com/cryptocurrency/features/what-is-a-blockchain-node-how-does-cryptocurrency-work-2515427> [<https://perma.cc/UKT2-X69F>].

<sup>53</sup> John Evans, *Blockchain Nodes: An In-Depth Guide*, NODES.COM, <https://nodes.com/> [<https://perma.cc/H5QN-TUYJ>].

<sup>54</sup> *What Is a Blockchain Node and How Is It Used in Cryptocurrency?*, *supra* note 52.

<sup>55</sup> See *What Are Blockchain Nodes?*, TIMES INDIA (Dec. 6, 2021, 10:46 AM), <https://timesofindia.indiatimes.com/business/cryptocurrency/blockchain/what-are-blockchain-nodes/articleshow/88116308.cms> [<https://perma.cc/UHL4-GWYG>].

<sup>56</sup> Ryan Haar, *The 10 Most Popular Cryptocurrencies, and What You Should Know About Each Before You Invest*, NEXTADVISOR (June 7, 2022), <https://time.com/nextadvisor/investing/cryptocurrency/types-of-cryptocurrency/> [<https://perma.cc/N7G5-TSTS>].

<sup>57</sup> Daniel Cawrey, *What Are Bitcoin Nodes and Why Do We Need Them?*, COINDESK

blockchain.<sup>58</sup> Every individual who uses a computer to transact a type of cryptocurrency is a lightweight node for that network.<sup>59</sup> This type of node “communicate[s] with the blockchain while relying on full nodes to provide them with the necessary information” to transact.<sup>60</sup>

### B. *Cryptocurrency Exchanges and ICOs Pose Risk to Consumers*

The lack of stringent domestic and international regulation of cryptocurrency makes using platforms to trade or invest it especially risky.<sup>61</sup> There are two types of cryptocurrency companies a user might encounter in trading or investing cryptocurrency—exchanges and companies that raise funds through ICOs. Because users cannot transact cryptocurrency using a traditional bank, cryptocurrency exchanges allow users to buy and sell cryptocurrency.<sup>62</sup> Customers may also store fiat money or cryptocurrency in an account hosted by the exchange.<sup>63</sup> As of July 2021, an estimated 240 exchanges provide these services.<sup>64</sup> Yet, pinning down even a rough approximation is difficult given the propensity for cryptocurrency exchanges to “appear and disappear on a regular basis” due to, *inter alia*, “basic mismanagement, outright founder criminality and/or mass government shutdown orders.”<sup>65</sup> Consequently, cryptocurrency traders risk having their funds hosted by the account lost, stolen, or frozen.<sup>66</sup>

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(Sept. 11, 2021, 6:44 AM EDT), <https://www.coindesk.com/markets/2014/05/09/what-are-bitcoin-nodes-and-why-do-we-need-them> [<https://perma.cc/M56T-DVJG>].

<sup>58</sup> *Glossary of Terms: Lightweight Node*, BUNCH, <https://www.meetbunch.com/terms/light-weight-node> [<https://perma.cc/G6RC-GF8C>].

<sup>59</sup> See *What Is a Blockchain Node and How Is It Used in Cryptocurrency?*, *supra* note 52; *Node (Cryptocurrency Network)—Definition and Examples*, MKT. BUS. NEWS, <https://marketbusinessnews.com/financial-glossary/node-cryptocurrency-network/> [<https://perma.cc/6DMR-9DRZ>].

<sup>60</sup> Evans, *supra* note 53.

<sup>61</sup> See generally TIMOTHY G. MASSAD, BROOKINGS INST., *IT’S TIME TO STRENGTHEN THE REGULATION OF CRYPTO-ASSETS* (2019), <https://www.brookings.edu/wp-content/uploads/2019/03/Timothy-Massad-Its-Time-to-Strengthen-the-Regulation-of-Crypto-Assets-2.pdf> [<https://perma.cc/3VTG-WHTK>].

<sup>62</sup> See Kendall Little, *Want to Buy Crypto? Here’s What to Look for In a Crypto Exchange*, NextAdvisor (May 3, 2022), <https://time.com/nextadvisor/investing/cryptocurrency/what-are-cryptocurrency-exchanges/> [<https://perma.cc/Z8YJ-W2K6>].

<sup>63</sup> See *id.*

<sup>64</sup> See Parker & Das, *supra* note 16.

<sup>65</sup> See *id.*; see, e.g., *Lack v. Mizuho Bank*, No. 2:18-cv-00617, 2019 WL 4239128, at \*2 (C.D. Cal. 2019) (finding a Tokyo-based Bitcoin exchange “went dark” and eventually filed for bankruptcy after alleged mismanagement).

<sup>66</sup> See, e.g., Ben Butler, *The Search Is on for \$50M in Lost Cryptocurrency After Two Australian Exchanges Collapse*, GUARDIAN (Dec. 11, 2021, 2:00 PM), <https://www.theguardian.com/technology/2021/dec/12/the-search-is-on-for-50m-in-lost-cryptocurrency-after-two-australian-exchanges-collapse> [<https://perma.cc/W88J-4MM4>] (lost funds); Press Re-

A cryptocurrency investor may choose to transact with a cryptocurrency company that hosts an ICO.<sup>67</sup> Similar to initial public offerings, ICOs are a rapidly growing mechanism for cryptocurrency companies looking to raise capital for products and services.<sup>68</sup> Whereas initial public offerings (“IPOs”) typically involve “well-settled companies,” ICOs are generally orchestrated by “young and risky” businesses.<sup>69</sup> An investor typically contributes some amount of a more established cryptocurrency, like Bitcoin or Ether, and receives in return some other cryptocurrency coin or token.<sup>70</sup> ICOs are largely unregulated, so investors undertake financial risk when they choose to participate.<sup>71</sup> Moreover, a large number of ICOs have been found to be completely fraudulent; according to a 2018 investigation of 1,500 ICOs, seventy-eight percent were identified as scams, collectively valued at \$1.3 billion.<sup>72</sup>

Cryptocurrency and its trade are therefore different from fiat currency used in ecommerce. Its intangibility, anonymity, decentralized system, and tendency to attract largely unregulated negligent or criminal enterprises make it a novel technology. Because of cryptocurrency’s many nuances, it is improper to treat cryptocurrency like any other ecommerce transaction. If courts synonymize the two, aggrieved

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lease, U.S. Dep’t of Just., Two Arrested for Alleged Conspiracy to Launder \$4.5 Billion in Stolen Cryptocurrency (Feb. 8, 2022) (stolen funds); Anna Baydakova, *Chatex Users Ask US Treasury to Release Crypto Frozen by Sanctions*, COINDESK (Dec. 17, 2021, 12:50 PM), <https://www.coindesk.com/policy/2021/12/13/chatex-users-ask-us-treasury-to-release-crypto-frozen-by-sanctions/> [<https://perma.cc/FG9J-AUA8>] (frozen funds).

<sup>67</sup> Press Release, Jay Clayton, U.S. Secs. & Exch. Comm’n, Statement on Cryptocurrencies and Initial Coin Offerings (Dec. 11, 2017), <https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11> [<https://perma.cc/4MMG-SE8B>].

<sup>68</sup> Jake Frankenfield, *Initial Coin Offering (ICO): Coin Launch Defined, with Examples*, INVESTOPEDIA (Aug. 18, 2022), <https://www.investopedia.com/terms/i/initial-coin-offering-ico.asp> [<https://perma.cc/6XDL-3H9Y>]. Several high-profile ICOs have occurred over the past several years. See Pritchett, *supra* note 44, at 548–49 (highlighting the Tezos ICO, through which a new cryptocurrency network raised \$232 million in Bitcoin and Ether tokens, and the Bancor ICO, through which a platform for launching new cryptocurrencies raised \$153 million in the first three hours).

<sup>69</sup> Toshendra Kumar Sharma, *A Comprehensive Guide on ICO Scams and How to Identify Them*, BLOCKCHAIN COUNCIL (Feb. 25, 2021), <https://www.blockchain-council.org/blockchain/a-comprehensive-guide-on-ico-scams-and-how-to-identify-them/> [<https://perma.cc/QSN7-Z6F6>].

<sup>70</sup> Frankenfield, *supra* note 68.

<sup>71</sup> *Id.*

<sup>72</sup> Klaus Grobys, *Did You Fall for It? 13 ICO Scams that Fooled Thousands*, COINTELEGRAPH (Dec. 6, 2020), <https://cointelegraph.com/news/did-you-fall-for-it-13-ico-scams-that-fooled-thousands> [<https://perma.cc/7SZ9-KJ69>]; see Sharma, *supra* note 69 (identifying several types of ICO scams, including Ponzi schemes, exchange scams, and URL scams, where investors are directed to deposit cryptocurrency into fake websites with URLs matching those of ICOs).

cryptocurrency users will have a difficult time establishing where a cryptocurrency company conducted business for the personal jurisdiction analysis.

*C. Personal Jurisdiction Doctrine Turns on Minimum Contacts*

To validly confer a binding judgment over an out-of-state defendant, a court must have personal jurisdiction over that party under the Due Process Clause of the Fourteenth Amendment.<sup>73</sup> In an increasingly digital world, the personal jurisdiction requirement “ensures not only fairness, but also the ‘orderly administration of the laws.’”<sup>74</sup> When faced with a motion to dismiss for want of personal jurisdiction, it is the plaintiff’s burden to establish that their chosen forum has personal jurisdiction over the defendant.<sup>75</sup> The plaintiff need not allege “specific facts,” but must set forth more than mere “conclusory allegation[s].”<sup>76</sup>

The central question the court must confront is whether the defendant has such a connection with the forum state to reasonably expect to be haled into court.<sup>77</sup> To answer this question, the court must consider whether the defendant has “certain minimum contacts” with the chosen forum sufficient to establish that it is properly subject to the state’s jurisdiction.<sup>78</sup> Unless the court concludes that the defendant has the requisite minimum contacts, the court cannot issue a binding judgment over that defendant.<sup>79</sup> The requisite minimum contacts required to sustain proper personal jurisdiction depend on whether the plaintiff asserts that the defendant is subject to general or specific jurisdiction.<sup>80</sup> In cryptocurrency cases alleging injury arising from the transactions and services facilitated or initiated by corporate defendants, specific jurisdiction is most applicable.<sup>81</sup>

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<sup>73</sup> *Pennoyer v. Neff*, 95 U.S. 714, 724, 733 (1877).

<sup>74</sup> *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 294 (1980) (quoting *Int’l Shoe Co. v. Washington*, 326 U.S. 310, 317 (1945)); see *Hanson v. Denckla*, 357 U.S. 235, 250–51 (1958) (“As technological progress has increased the flow of commerce between States, the need for jurisdiction over nonresidents has undergone a similar increase. . . . But it is a mistake to assume that this trend heralds the eventual demise of all restrictions on the personal jurisdiction of state courts.”).

<sup>75</sup> See FED. R. CIV. P. 12(b)(2).

<sup>76</sup> *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 569, 565 n.10 (2007).

<sup>77</sup> See *Int’l Shoe*, 326 U.S. at 316.

<sup>78</sup> *Id.*

<sup>79</sup> See *id.* at 319.

<sup>80</sup> See Linda Sandstrom Simard, *Exploring the Limits of Specific Personal Jurisdiction*, 62 OHIO ST. L.J. 1619, 1623–24 (2001).

<sup>81</sup> General jurisdiction is asserted as a theory for minimum contacts when the claim does not arise by virtue of the defendant’s contacts with the state, but because the defendant’s con-

For a company to be properly subject to specific jurisdiction, (1) the claim must “arise out of or relate to” the company’s contacts with the forum, (2) the company must have “purposefully directed its activities” at the forum, and (3) only if the first two prongs are satisfied, the exercise of personal jurisdiction over the nonresident company must be “reasonable and fair.”<sup>82</sup> The most important prong of the specific jurisdiction analysis in civil cryptocurrency cases is the “purposeful” prong.<sup>83</sup> The defendant must have contacts with the forum state that sufficiently demonstrate it “purposefully avail[ed] itself of the privilege of conducting activities within the forum State.”<sup>84</sup> This requirement “ensures that a defendant will not be haled into a jurisdiction solely as a result of ‘random,’ ‘fortuitous,’ or ‘attenuated’ contacts, . . . or of ‘the unilateral activity of another party or a third person.’”<sup>85</sup> A defendant can subject itself to personal jurisdiction without stepping foot in the forum state.<sup>86</sup> Accordingly, a cryptocurrency

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tacts with the state are so “continuous and systematic” to render the company “at home in the forum state.” *Goodyear Dunlop Tires Operations, S.A. v. Brown*, 564 U.S. 915, 919 (2011). Because this Note focuses on claims arising from cryptocurrency companies’ transactions with resident users, general jurisdiction is not the appropriate theory. Moreover, because the window of opportunity for a plaintiff to succeed on a general jurisdiction theory is exceedingly narrow, see Judy M. Cornett & Michael H. Hoffheimer, *Good-Bye Significant Contacts: General Personal Jurisdiction After Daimler AG v. Bauman*, 76 OHIO ST. L.J. 101, 105–06 (2015), this Note will focus exclusively on the minimum contacts required to prove specific jurisdiction. See, e.g., *Chamani v. Quasar Mining Grp., Inc.*, No. 2:20-cv-77, 2020 WL 2527022, at \*3–5 (D. Nev. May 18, 2020) (holding a startup corporation that solicited investments in exchange for cryptocurrency tokens to the professional poker community was insufficient to make it “at home” in the forum); *Reynolds v. Binance Holdings Ltd.*, 481 F. Supp. 3d 997, 1003 (N.D. Cal. Aug. 26, 2020) (holding the investor failed to demonstrate that a cryptocurrency exchange subjected itself to general jurisdiction in the chosen forum because it was neither incorporated nor had its principal place of business in the state).

<sup>82</sup> 4A CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 1069 (4th ed. 2021).

<sup>83</sup> For purposes of this Note, the first “arising out of” prong will not be examined because it is assumed that the claim arises from the cryptocurrency company’s business contacts with the forum. The “reasonableness” prong will also not be explored because the “purposeful availment” prong is more integral to the analysis. Some jurisdictions find the “purposeful availment” requirement necessary but the “reasonableness” prong only discretionary. See *id.* at n.10 (citing *Penzoil Prods. Co. v. Colelli & Assocs., Inc.*, 149 F.3d 197 (3d Cir. 1998)). Other jurisdictions presume that the exercise of personal jurisdiction is reasonable unless the defendant can demonstrate *compelling* reasons to the contrary. See *id.* (citing *Chandler v. Roy*, 985 F. Supp. 1205 (D. Ariz. 1997)). The purposeful availment prong is thus most important to the three-part test in cryptocurrency cases and, consequently, in most need of clarification.

<sup>84</sup> *World-Wide Volkswagen Corp. v. Woodson*, 444 U.S. 286, 297 (1980) (quoting *Hanson v. Denckla*, 357 U.S. 235, 253 (1958)); see *Burger King Corp. v. Rudzewicz*, 471 U.S. 462, 463 (1985).

<sup>85</sup> *Burger King*, 471 U.S. at 475 (citations omitted).

<sup>86</sup> See *id.* at 463.

company may subject itself to jurisdiction within a forum state solely by virtue of its online business activity with the state.

Courts generally rely upon three frameworks to guide their analysis of purposeful availment. The first approach is the *Burger King* continuing relationships test.<sup>87</sup> Under this test, a court explores whether the out-of-state defendant has “reach[ed] out beyond one state and create[d] continuing relationships and obligations with citizens of [the forum] state.”<sup>88</sup> The factors a court may use to guide its analysis include (1) past business negotiations between parties, (2) expected future consequences of the relationship, (3) the contractual terms, and (4) the “actual course of dealing” between the parties.<sup>89</sup> A second framework, the *Keeton*<sup>90</sup> market exploitation test, measures whether a nonresident defendant has “continuously and deliberately exploited” the forum state market.<sup>91</sup> Under this test, courts use metrics like (1) a high sales volume, (2) a large customer base, (3) high revenues, and (4) the extent of nationwide advertising or ads specifically targeting the forum state to conclude the existence of personal jurisdiction.<sup>92</sup> The third test is the harmful effects test, which requires a finding of personal jurisdiction over a nonresident defendant when its intentional conduct expressly targets a forum state and it knows that the brunt of the harm would be felt there.<sup>93</sup>

Following the advent of the internet, courts were left to grapple with what kinds of online contacts could subject a business to personal jurisdiction in the forum state. To accurately render a decision that reflected this new online reality, courts adopted a “sliding scale” approach to supplement the minimum contacts analysis.<sup>94</sup>

This additional consideration focuses on whether a company has purposefully directed its online commercial activity to the forum by evaluating the “nature and quality” of the online activity.<sup>95</sup> On one end of the spectrum are situations where a company clearly does business over the internet with the forum, and hence has the requisite con-

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<sup>87</sup> See, e.g., *Shaw v. Vircorex*, No. 18-cv-00067-PAB-SKC, 2019 WL 2636271 (D. Colo. Feb. 21, 2019).

<sup>88</sup> *Burger King*, 471 U.S. at 473 (quoting *Travelers Health Ass’n v. Virginia*, 339 U.S. 643, 647 (1950)).

<sup>89</sup> *Id.* at 479.

<sup>90</sup> *Keeton v. Hustler Mag., Inc.*, 465 U.S. 770 (1984).

<sup>91</sup> *Id.* at 771.

<sup>92</sup> *Old Republic Ins. Co. v. Continental Motors, Inc.*, 877 F.3d 895, 915 (10th Cir. 2017).

<sup>93</sup> See *Calder v. Jones*, 465 U.S. 783, 789–90 (1984); *Old Republic*, 877 F.3d at 907–08.

<sup>94</sup> *Zippo Mfg. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997).

<sup>95</sup> *Id.*



tacts to be subject to personal jurisdiction there.<sup>96</sup> On the other end of the scale, where the defendant does not have minimum contacts, are situations where the defendant merely posts information online which is freely accessible by residents of the forum state.<sup>97</sup> The middle of the scale represents more difficult situations where an internet user may exchange information with the company via an interactive site.<sup>98</sup> In these cases, minimum contacts are “determined by examining the level of interactivity and commercial nature of the exchange of information that occurs on the Web site.”<sup>99</sup>

Since the adoption of the sliding scale approach for cases arising from online contacts, various appellate courts have incorporated additional requirements for such contacts. For example, the Fourth and Sixth Circuits explicitly require the defendant to manifest an intent to conduct business or have other online interactions with the state.<sup>100</sup> Additionally, the Third Circuit concluded that the “mere operation” of an interactive commercial website should not subject the operator to any jurisdiction.<sup>101</sup> Instead, minimum contacts can only be concluded if the defendant directed its online activity to that forum and knowingly interacted with its residents through the website or other online contacts.<sup>102</sup>

Over the past few decades, the Supreme Court has emphasized that “personal jurisdiction is a fact-intensive inquiry” that cannot be effectively codified by bright-line rules.<sup>103</sup> The considerations embodied in the three foundational tests should continue to form the backbone of cryptocurrency cases. Like they did with the internet,<sup>104</sup> courts should remain flexible in their interpretation of existing considerations and their willingness to create new ones depending on the context of the case at issue.<sup>105</sup> Supplemental factors should thus guide the

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<sup>96</sup> See *id.* (“If the defendant enters into contracts with residents of a foreign jurisdiction that involve the knowing and repeated transmission of computer files over the Internet, personal jurisdiction is proper.”).

<sup>97</sup> See *id.* (“A passive Web site that does little more than make information available to those who are interested in it is not grounds for the exercise [of] personal jurisdiction.”).

<sup>98</sup> *Id.*

<sup>99</sup> *Id.*

<sup>100</sup> See *ALS Scan, Inc. v. Digit. Serv. Consultants, Inc.*, 293 F.3d 707, 714 (4th Cir. 2002); *Neogen Corp. v. Neo Gen Screening, Inc.*, 282 F.3d 883, 890 (6th Cir. 2002).

<sup>101</sup> *Toys “R” Us, Inc. v. Step Two, S.A.*, 318 F.3d 446, 454 (3d Cir. 2003).

<sup>102</sup> *Id.*

<sup>103</sup> Stephanie S. Monplaisir, *Obtaining Personal Jurisdiction: A Deceptively Complex Stage of Litigation*, 79 ALA. LAW. 174, 176 (2018).

<sup>104</sup> See *Zippo*, 952 F. Supp. at 1124.

<sup>105</sup> See Comment, *Websites and Personal Jurisdiction: When Should a Defendant's Internet Selling Activities Subject It to Suit in a Plaintiff-Buyer's State?*, 73 TEMP. L. REV. 829, 829 (2000)

minimum contacts analysis in cryptocurrency cases because these cases arise out of novel technology that is not accurately reflected in preexisting internet doctrine.

## II. ANALYSIS

Although typical internet-centric cases pose challenges to the minimum contacts analysis,<sup>106</sup> determining whether a cryptocurrency company purposefully availed itself of a state's jurisdiction is particularly complicated. Section II.A outlines three reasons why minimum contacts analysis is especially thorny in the cryptocurrency context. Most importantly, cryptocurrency companies rely upon blockchain technology that does not exist in any one jurisdiction. Instead, the infrastructure may be dispersed throughout the world in the form of nodes. Because cryptocurrency companies also tend to exist mostly, if not entirely, online, lower courts may be left with only abstract, virtual contacts to consider under a minimum contacts analysis. Finally, many cryptocurrency companies are based overseas in countries without stringent cryptocurrency regulations. As a result, a plaintiff might not be able to furnish sufficient business data to permit the court to conclude that the company targeted the forum state. The foregoing challenges cause parties to lose money and courts to sacrifice administrative resources.

By confining their analysis to considerations developed for the internet context generally, lower courts have reinforced the problems cryptocurrency poses to the personal jurisdiction analysis. Section II.B discusses the considerations courts have thus far found relevant or irrelevant in analyzing whether a cryptocurrency company targeted the forum. Specifically, lower courts have found useful (1) the degree of website interactivity, (2) the advertising activity, and (3) the customer base and transaction volume in the forum state. On the other hand, courts have found irrelevant (1) the location of the company's verifying servers and (2) whether the customer submitted their personal information to the company. Some courts have allowed plaintiffs limited discovery after suggesting, but not proving, that the company made the requisite contacts. Although courts are correct to use traditional internet considerations as a basis in the minimum contacts analysis,

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(arguing that personal jurisdiction in online ordering cases should be reviewed without relying exclusively on preexisting internet doctrine because online ordering cases are unique and do not always implicate the circumstances of other internet cases).

<sup>106</sup> Zoe Niesel, #*PersonalJurisdiction: A New Age of Internet Contacts*, 94 *IND. L.J.* 103, 103 (2019).

there must be considerations formulated specifically for the cryptocurrency context.

*A. Minimum Contacts Are Uncertain in Cryptocurrency Cases*

Without a modification to the current approach, determining when a cryptocurrency company has minimum contacts with a forum state will challenge courts. First, the blockchain makes it difficult to ascertain where trading or investing actually occurs. A blockchain ledger does not necessarily “exist” in a jurisdiction because it relies on full nodes and lightweight nodes scattered throughout the world to provide the cryptocurrency’s infrastructure.<sup>107</sup> In contrast, companies in a centralized market rely upon centrally controlled servers that make it easier to pinpoint where the transaction is verified.<sup>108</sup> When a banking customer uses their debit card to complete an online transaction, for example, a court can pinpoint the location of the verifying technology because the transaction is transmitted through the issuing bank’s centralized servers.<sup>109</sup> It is therefore unclear where the cryptocurrency company has conducted business when its customers’ transactional data is distributed through technology that possibly spans several states.

A second reason why minimum contacts analysis in the cryptocurrency context causes complications stems from companies existing largely, if not entirely, online. Without a clearly defined headquarters, or an office that otherwise acts as a “nerve center” for the company’s operations, plaintiffs may have a difficult time proving personal jurisdiction on the theory that the forum is the company’s “principal place of business.”<sup>110</sup> Even if a cryptocurrency service provider did claim to be headquartered in some forum state, “[c]ryptocurrency firms of all sizes and stripes—including some major cryptocurrency exchanges—have been accused of having ‘fake’ headquarters.”<sup>111</sup> In other words, their headquarters are listed at a certain address, but

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<sup>107</sup> Niji Oni & Co., *supra* note 26; Colin Kwan, *Centralized vs Decentralized Banking*, MEDIUM, (Feb. 23, 2016), <https://medium.com/@Magnr/centralized-vs-decentralized-banking-5c2a657e94b7> [<https://perma.cc/DQ89-89L6>].

<sup>108</sup> See Kwan, *supra* note 107; Will Kenton, *Centralized Market*, INVESTOPEDIA, (Nov. 29, 2021), <https://www.investopedia.com/terms/c/centralizedmarket.asp> [<https://perma.cc/43UK-UPMS>].

<sup>109</sup> See Randa Kriss, *How Does Debit Card Processing Work?*, NERDWALLET, (Dec. 2, 2020), <https://www.nerdwallet.com/article/small-business/debit-card-processing> [<https://perma.cc/MUV5-YJQT>]; Kenton, *supra* note 108.

<sup>110</sup> 28 U.S.C. § 1332(c); see *Hertz Corp. v. Friend*, 559 U.S. 77, 78 (2010).

<sup>111</sup> Rachel McIntosh, *Location, Location: Crypto Companies with Non-Existent HQs & What that Means*, FIN. MAGNATES (Sept. 19, 2019, 6:07 AM), <https://www.financemagnates.com/>

they aren't actually there.<sup>112</sup> Plaintiffs relying upon this information could misleadingly file suit in that forum state, only to encounter dismissal for lack of purposeful availment.

The absence of any other kind of physical presence, like brick-and-mortar stores or other offices in the United States, provides the plaintiff with even less certainty over a proper forum.<sup>113</sup> For instance, banks may have physical branches in the forum which suffice for the minimum contacts analysis, assuming the claim can properly be traced to those contacts.<sup>114</sup> Similarly, ecommerce retailers with physical in-forum locations may have minimum contacts if they have an interactive website *and* a substantial physical presence in the forum state, such as stores and distribution and fulfillment centers.<sup>115</sup> In contrast, cryptocurrency service providers often have little to no physical presence to establish or bolster a finding of minimum contacts. Walk-in exchanges in the United States, where “residents have unfettered access to the internet and online exchanges,” are rare.<sup>116</sup> Plus, in the blockchain industry generally, business activities are increasingly done online—videoconferencing replaces physical office meetings and cloud storage dispenses with onsite storage.<sup>117</sup> Because of this tendency for cryptocurrency companies to lack a physical presence, plaintiffs may have to rely solely on an intangible online presence that is difficult to trace to any particular state, which complicates the minimum contacts analysis.

Lastly, finding a cryptocurrency company that had minimum contacts with a state is difficult because many cryptocurrency entities are

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cryptocurrency/news/location-location-crypto-companies-with-non-existent-hqs-what-that-means/ [https://perma.cc/NBT9-272C].

<sup>112</sup> See *id.*

<sup>113</sup> See *Lasala v. Marfin Popular Bank Pub. Co.*, No. 09-968, 2010 WL 715482, at \*1, \*3–4 (D.N.J. Mar. 1, 2010), *aff'd*, 410 F. App'x 474 (3d Cir. 2011) (dismissing for lack of personal jurisdiction when the foreign defendant has no physical presence in the jurisdiction or anywhere else in the United States, despite maintaining accounts with a corporation that has its principal place of business in the forum).

<sup>114</sup> See *Gucci Am., Inc. v. Weixing Li*, 135 F. Supp. 3d 87, 97, 99 (S.D.N.Y. 2015) (holding that a foreign bank had minimum contacts in the state because it established and maintained a branch in the forum state and that contact is a “but for” cause of the claim).

<sup>115</sup> See *Slyce Acquisition Inc. v. Syte-Visual Conception Ltd.*, 422 F. Supp. 3d 1191, 1200 (W.D. Tex. 2019) (finding a clothing store had minimum contacts under the theory of specific jurisdiction because it had a significant number of stores and online fulfillment and distribution centers in the forum, as well as an interactive website available to forum residents).

<sup>116</sup> Katie Deighton, *Walk-In Cryptocurrency Exchanges Emerge Amid Bitcoin Boom*, WALL ST. J. (Oct. 1, 2021, 1:01 PM), <https://www.wsj.com/articles/walk-in-cryptocurrency-exchanges-emerge-amid-bitcoin-boom-11633107697> [https://perma.cc/T3TM-W8E6].

<sup>117</sup> McIntosh, *supra* note 111.

based outside of the United States. Recent estimates show that nine out of the ten largest cryptocurrency exchanges are headquartered outside of the country.<sup>118</sup> Sometimes, foreign cryptocurrency defendants will avoid being subject to any country's jurisdiction, including the United States.<sup>119</sup> Establishing personal jurisdiction analysis over foreign defendants is already very complex.<sup>120</sup> Plus, the propensity for obscure cryptocurrency defendants to be located outside of the United States' regulatory reach means that a plaintiff might not be able to furnish sufficiently precise facts to demonstrate that the company specifically targeted the forum state. Without this information, courts may have trouble rendering this procedural decision.

The challenges posed by cryptocurrency technology and its service providers will result in lost resources. While trying to navigate doctrinal obscurities at the outset of their case, plaintiffs waste valuable time and money that could be spent more usefully on proving the merits.<sup>121</sup> If a plaintiff makes a misassumption about proper jurisdiction in a particular forum and the court subsequently dismisses the case, the plaintiff suffers a further loss of resources.<sup>122</sup> Compounding frustrations might prove so insurmountable from a temporal or financial standpoint that the plaintiff may be forced to abandon the claim entirely.<sup>123</sup> Cryptocurrency companies also suffer resource loss by relying upon uncertain doctrine to determine where they might be subject to jurisdiction.<sup>124</sup> Lastly, unclear minimum contacts doctrine

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<sup>118</sup> See *Largest Cryptocurrency Exchanges Based on 24h Volume in the World on November 14, 2022*, STATISTA (Nov. 14, 2022), <https://www.statista.com/statistics/864738/leading-cryptocurrency-exchanges-traders/> [https://perma.cc/R74B-N95P].

<sup>119</sup> See Nikhilesh De, *Former Customers Sue Crypto Exchange Vircorex Over Frozen Funds*, COINDESK (Sept. 13, 2021, 3:22 AM), <https://www.coindesk.com/markets/2018/01/12/former-customers-sue-crypto-exchange-ircurex-over-frozen-funds/> [https://perma.cc/N82C-M4A7] (“Vircorex’s steps to prevent its customers from suing included stating it was incorporated in Belize, which it is not, as well as indicating it might be based in Beijing. The lawsuit states the exchange is actually based out of Germany, but has never been legally incorporated in any jurisdiction, meaning it is not recognized as a formal business by any government.”).

<sup>120</sup> See Gerlinde Berger-Walliser, *Reconciling Transnational Jurisdiction: A Comparative Approach to Personal Jurisdiction over Foreign Corporate Defendants in US Courts*, 51 VAND. J. TRANSNAT’L L. 1243, 1243, 1249–50 (2018) (“The U.S. Supreme Court, in a series of recent cases, has restricted personal jurisdiction over corporate defendants—and foreign corporations in particular.”).

<sup>121</sup> See Scott Dodson, *The Complexity of Jurisdictional Clarity*, 97 VA. L. REV. 2, 3 (2011).

<sup>122</sup> See *id.*

<sup>123</sup> Cf. William S. Dodge & Scott Dodson, *Personal Jurisdiction and Aliens*, 116 MICH. L. REV. 1205, 1246–47 (2018) (noting that the courts’ narrow application of jurisdiction over foreign defendants disincentivizes plaintiffs to bring or maintain lawsuits in federal courts).

<sup>124</sup> See Dodson, *supra* note 121, at 11.

imposes judicial costs because overburdened courts ultimately spend more time and administrative resources trying to resolve the issue.<sup>125</sup>

*B. Courts Currently Synonymize Cryptocurrency Cases to Internet Disputes When Analyzing Minimum Contacts*

In finding relevant indicia of minimum contacts with the forum state, lower courts have applied preexisting internet principles as if the cryptocurrency defendant was just another company doing business over the internet. Under the traditional internet doctrine, the “creation and maintenance of a website constitutes an intentional act” under the “purposeful” requirement for minimum contacts.<sup>126</sup> Yet, creating a website on the internet for the world to access is insufficient to demonstrate minimum contacts; “something more” must be shown that “demonstrate[s] that the defendant directed his activity towards the forum.”<sup>127</sup> Web-based personal jurisdiction precedent guides the reviewing court to look to the level of interactivity and commercial nature between the website and the user.<sup>128</sup> Internet precedent also instructs the reviewing court to look to whether the online business advertised its products or services to the forum state or the country as a whole.<sup>129</sup>

As cryptocurrency cases filter into lower federal courts, judges have had to decide the extent to which minimum contacts doctrine established for internet transactions apply to cryptocurrency companies. So far, courts have relied upon the general minimum contacts considerations outlined by the *Burger King*, *Keeton*, and harmful effects tests.<sup>130</sup> Instead of treating the facts underpinning cryptocurrency differently under these analyses, however, courts have largely treated cryptocurrency companies analogously to typical ecommerce companies.<sup>131</sup> Courts have found relevant to this minimum contacts analysis

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<sup>125</sup> See *id.* at 8.

<sup>126</sup> *Lack v. Mizuho Bank*, No. 2:18-cv-00617, 2019 WL 4239128, at \*5 (C.D. Cal. June 24, 2019).

<sup>127</sup> *In re Tezos Sec. Litig.*, 2018 Fed. Sec. L. Rep. P 100,262, at \*5 (N.D. Cal. Aug. 7, 2018) (citations omitted).

<sup>128</sup> See *Lack*, 2019 WL 4239128, at \*5.

<sup>129</sup> See *Shaw v. Vircorex*, No. 18-cv-00067-PAB-SKC, 2019 WL 2636271, at \*3 (D. Colo. Feb. 21, 2019) (citing *uBID, Inc. v. GoDaddy Grp., Inc.*, 623 F.3d 421, 427 (7th Cir. 2010) (finding a domain name registration website made minimum contacts with the forum state because its marketing amassed hundreds of thousands of contributors nationwide who spent millions of dollars through the website)).

<sup>130</sup> See *id.* at \*3–4.

<sup>131</sup> See, e.g., *Lack*, 2019 WL 4239128, at \*1, \*5 (holding that the chosen forum state had jurisdiction over a Tokyo-based cryptocurrency exchange after determining that the company

(1) the degree of website interactivity, (2) the extent to which the cryptocurrency company advertised its products or services in the forum state, and (3) the size and characteristics of the customer base and transaction volume within the forum state.

The court in *Lack v. Mizuho Bank*<sup>132</sup> found it maintained jurisdiction over a cryptocurrency exchange largely because of the high level of interactivity on the exchange website.<sup>133</sup> In examining the interactivity of the online platform, the *Lack* court found that the in-forum users “opened accounts, communicated with the customer support desk, initiated bitcoin trades, made deposits, and processed withdrawals” through the exchange’s website.<sup>134</sup> The court reasoned that this was not merely a “passive” website insufficient to constitute minimum contacts, but a website that “allow[ed] the defendant to maintain some ongoing contact with the forum state.”<sup>135</sup> Although a highly interactive website is not by itself sufficient to establish personal jurisdiction over its owner,<sup>136</sup> it is certainly probative in the analysis.<sup>137</sup>

Several courts have focused on where and how cryptocurrency companies choose to advertise their website, supplemented by the makeup of customers presumably persuaded by its marketing efforts.<sup>138</sup> For example, in *In re Tezos Securities Litigation*,<sup>139</sup> the court held an ICO investor sufficiently demonstrated personal jurisdiction over the token issuer because the company directed most of its marketing efforts at the forum, a “significant portion” of the investors were citizens of the forum, and the website “encouraged [forum residents] to participate in the ICO.”<sup>140</sup> Because this case analyzed personal jurisdiction under the Securities Act, it considered whether a foreign cryptocurrency company purposefully directed its activities to-

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maintained a highly interactive website, which allowed the exchange to “maintain some ongoing contact with the forum state”).

<sup>132</sup> No. 2:18-cv-00617, 2019 WL 4239128 (C.D. Cal. June 24, 2019).

<sup>133</sup> *See id.* at \*5.

<sup>134</sup> *Id.*

<sup>135</sup> *Id.*

<sup>136</sup> *See In re Tezos Sec. Litig.*, 2018 Fed. Sec. L. Rep. (CCH) ¶ 100,262, at \*6 (N.D. Cal. Aug. 7, 2018).

<sup>137</sup> *See Lack*, 2019 WL 4239128, at \*5.

<sup>138</sup> *See Tezos*, 2018 Fed. Sec. L. Rep., at \*6. Although this class action is rooted in securities law violations, the plaintiff must still demonstrate that the defendant “purposefully avails himself of the privilege of conducting activities in the forum” and “the claim must be one which arises out of or relates to the defendant’s forum-related activities.” *Id.* at \*4.

<sup>139</sup> No. 17-cv-06779, 2018 WL 4293341 (N.D. Cal. Aug. 7, 2018).

<sup>140</sup> *Id.* at \*6 (finding the cryptocurrency company amassed a “significant portion” of their investors from United States, made it easy for U.S. participation by, for example, hosting an English language website, and structured their ICO to accommodate U.S. participation).

ward the United States as a *country*, as opposed to a specific state.<sup>141</sup> However, the underlying notion that attracting a large group of resident investors can impact minimum contacts is transferable to cases not implicated by the Securities Act.

The *Tezos* court also appeared to consider in its personal jurisdiction analysis the relatively unsophisticated nature of many of the investors who contributed to the ICO, evidenced by the large portion of American investors.<sup>142</sup> In concluding the existence of personal jurisdiction over a cryptocurrency company, the court noted that “[a] different conclusion might be warranted” if the plaintiff were only one of few “well-informed” resident investors who “managed to learn about and participate in an ICO exclusively marketed in [another forum].”<sup>143</sup> This dicta suggests that a sizeable population of lay investors may demonstrate the cryptocurrency company’s intent to amass as many lay investors in the forum as possible.

Because lower courts have largely treated cryptocurrency cases as any other internet-based claim, factors significant to the cryptocurrency context are deemed irrelevant or left unprobed. Specifically, in assessing whether a cryptocurrency company had the requisite contacts, lower courts have not found influential (1) the location of the company’s servers, (2) the company’s possible possession of customers’ personal information, and (3) whether the customers could reasonably access the company’s business data.

In *Alibaba Group Holding Ltd. v. Alibabacoin Foundation*,<sup>144</sup> the court concluded that the location of verifying servers did not fit within the scope of the personal jurisdiction analysis over a company which allegedly infringed upon a trademark to promote their cryptocurrency.<sup>145</sup> According to the court, akin to a debit card transaction, it would “strain common usage” to say that a cryptocurrency transaction occurred at the “potentially remote location of the servers.”<sup>146</sup> The court made this determination while interpreting the forum state’s long-arm statute,<sup>147</sup> rather than during its minimum contacts analysis.<sup>148</sup> Yet, the court demonstrated either its unwillingness to consider the important role nodes play in the larger cryptocurrency network or

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<sup>141</sup> *See id.*

<sup>142</sup> *See id.*

<sup>143</sup> *Id.*

<sup>144</sup> No. 18-cv-2897, 2018 WL 5118638 (S.D.N.Y. Oct. 22, 2018).

<sup>145</sup> *See id.* at \*3.

<sup>146</sup> *Id.*

<sup>147</sup> *See id.*

<sup>148</sup> *See id.* at \*3–4.



its unfamiliarity with this feature of the cryptocurrency system. According to this line of thinking, a cryptocurrency transaction or investment could not be considered minimum contacts at the location of the user's personal device—a light node—which completes the transaction and relays the information to update the blockchain. Nor would the location of the full nodes, which accept the information to update the blockchain and, therefore, ensure the continued functioning of that cryptocurrency's network, be relevant.

The court in *Shaw v. Vircorex*<sup>149</sup> refused to hold that the exchange “expressly aimed their actions at [the forum] or knew that the brunt of [the accountholder’s] injury would be felt [there].”<sup>150</sup> In forming this conclusion, the court placed emphasis on the “internet context,” including whether the defendant “intended harm to the plaintiff occurring primarily or particularly in the forum state.”<sup>151</sup> When making a transaction through an ecommerce site, a user will generally provide their personal information to successfully complete the transaction. Conversely, the cryptocurrency network thrives on anonymity; not only are transacting parties typically anonymous,<sup>152</sup> but certain kinds of wallets used to store and transact, called unhosted wallets, do not require the owner to hand over their personal information, like their name, address, or phone number.<sup>153</sup> As a result, cryptocurrency companies accepting business using unhosted wallets could easily defend themselves by claiming that they never had access to customer information, and therefore could not know where and in which state(s)

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149 No. 18-cv-00067, 2019 WL 2636271 (D. Colo. Feb. 21, 2019).

150 *Id.* at \*4.

151 *Id.*

152 See 10 JESSIE K. LIU, ALEXANDER C. DRYLEWSKI & PETER B. MORRISON, BUSINESS & COMMERCIAL LITIGATION IN FEDERAL COURTS § 111:35 (5th ed. 2021).

153 See Paul Kiernan, *Some Cryptocurrency Trader Disclosure Required in Proposed Rules*, WALL ST. J. (Dec. 18, 2020, 9:44 PM), <https://www.wsj.com/articles/treasury-department-proposes-new-requirements-on-cryptocurrency-transactions-11608329785> [<https://perma.cc/9NT4-PEQX>]; *How to Set up a Crypto Wallet*, COINBASE, <https://www.coinbase.com/learn/tips-and-tutorials/how-to-set-up-a-crypto-wallet> [<https://perma.cc/CVD6-P7Y2>]; see *Lack v. Mizuho Bank*, No. 2:18-cv-00617, 2019 WL 4239128, at \*5-6 (C.D. Cal. June 24, 2019) (finding the exchange knew or should have known harm would be felt in the forum state because accountholders disclosed their forum state personal addresses to the exchange when opening accounts hosted by the exchange). It should be noted that the *Lack* court emphasized that creating an account itself could not be considered minimum contacts because the defendant's relationship with the forum state “must arise out of the contacts that the defendant *himself* create[d] with the forum state” rather than the plaintiff's “unilateral activity.” *Id.* at \*5 (quoting *Walden v. Fiore*, 571 U.S. 277, 284 (2014)). Accordingly, the court did not solely rely on the accountholder's “unilateral activity” to conclude the forum state properly asserted personal jurisdiction over the exchange but went further to recognize that the exchange itself “initiated communications with all” accountholders. *Id.* at \*5-6.

they were doing business. The court, however, did not investigate whether the company was required to gather the customer's information before transacting with them.<sup>154</sup> Had the company been subject to regulations requiring the collection of customer information, the exchange should have known injury would be felt in the forum state.

Lower courts have permitted limited discovery when an aggrieved cryptocurrency investor suggested that the defendant had minimum contacts with the forum to support a finding of personal jurisdiction.<sup>155</sup> In *Ferrie v. Woodford Research*,<sup>156</sup> the user did not proffer sufficient evidence to establish that the cryptocurrency-related company purposefully targeted the forum; he merely assumed that the company had a substantial customer base in the forum state and knew the locations of these individuals.<sup>157</sup> Because of these suggestions, the court permitted the investor to obtain from the company information regarding its customer base in the forum and its potential knowledge of the resident investors' locations.<sup>158</sup> Courts should continue to grant these motions for limited discovery when a cryptocurrency investor or transactor suggests a company has a substantial customer base in the forum and knows of their location. This would serve to mitigate the plaintiff's burden when trying to prove jurisdiction over an elusive cryptocurrency entity not subject to strict regulations in terms of data collection and disclosure.

While conducting a minimum contacts analysis, lower courts should continue to use the internet factors that have similar applications in the cryptocurrency context. Treating cryptocurrency cases like any other internet case, though, is misguided. If lower courts are to accurately render personal jurisdiction decisions over cryptocurrency companies, they must acknowledge that the nuances of cryptocurrency demand flexibility. To alleviate some of the challenges posed by cryptocurrency,<sup>159</sup> lower courts should supplement their approach to encompass considerations specific to cryptocurrency cases.

### III. SOLUTION

Cryptocurrency is a technological phenomenon and, much like the advent of the internet, its novelty must be considered when choos-

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<sup>154</sup> *Shaw*, 2019 WL 2636271, at \*10.

<sup>155</sup> See *Ferrie v. Woodford Rsch., LLC*, No. 3:19-cv-05798-RBL, 2020 WL 3971343, at \*6 (W.D. Wash. July 14, 2020).

<sup>156</sup> No. 3:19-cv-05798-RBL, 2020 WL 3971343 (W.D. Wash. July 14, 2020).

<sup>157</sup> See *id.* at \*6.

<sup>158</sup> See *id.*

<sup>159</sup> See *supra* Section II.A.

ing a method to assess minimum contacts. In this era of digital currency, lower courts must remember that “the question of what Internet activity will be considered ‘minimum contacts’ is fact-specific,” and confining minimum contacts analysis to preexisting metrics might not accurately reflect business contacts in this new context.<sup>160</sup> Though several factors used in the traditional internet context should continue to inform the minimum contacts analysis, cryptocurrency’s unique features demand considerations specific to them. When deciding whether minimum contacts exist over cryptocurrency defendants, lower courts should thus use a set of considerations specific to cryptocurrency.

A supplemental six-factor test for civil cryptocurrency cases combines several traditional internet factors especially relevant in the cryptocurrency context with several new considerations not accurately captured by preexisting doctrine. A court should thus determine whether a cryptocurrency company has purposefully availed itself of conducting business in the forum state only after considering (1) the degree to which users may interact with the cryptocurrency company’s website, (2) the marketing activity within the forum, including both the level of advertising and to whom the advertising is likely directed, (3) the size of the customer base and transaction volume within the forum, (4) the location of lightweight nodes used to facilitate and verify the transaction and maintain the integrity of the blockchain, (5) the company’s physical presence in the forum, interpreted broadly, and (6) whether plaintiffs submitted their personal information to the company pursuant to corporate or know-your-customer policies.

Given its centrality to internet-based doctrine,<sup>161</sup> the interactivity of the website should remain the starting point of a court’s analysis. Because ICOs and exchanges exist primarily, if not entirely, through their online platform, interactivity remains highly important in determining minimum contacts. A website that allows users to create accounts, communicate with customer support, transact, and make deposits and withdrawals is highly interactive because it allows the cryptocurrency to “maintain some ongoing contact with the forum state.”<sup>162</sup> Although the existence of a highly interactive cryptocurrency

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<sup>160</sup> CLIFFORD R. ENNICO, *ADVISING EBUSINESSES* § 9:22 (2022).

<sup>161</sup> See *Zippo Mfg. Co. v. Zippo Dot Com, Inc.*, 952 F. Supp. 1119, 1124 (W.D. Pa. 1997) (“In [cases involving interactive websites], the exercise of jurisdiction is determined by examining the level of interactivity and commercial nature of the exchange of information that occurs on the Web site.”).

<sup>162</sup> See *Lack v. Mizuho Bank*, Case No. 2:18-cv-00617-RGK-GJS, 2019 WL 4239128, at \*5 (C.D. Cal. June 24, 2019).

website is probative into the existence of personal jurisdiction, “something more” is required from at least one other factor to demonstrate that the company purposefully directed its activity to the forum.<sup>163</sup>

The second factor, also informed by traditional online doctrine, is the advertising activity within the forum. Under this factor, courts should look to whether the company engaged in “extensive nationwide advertising” or created “ads targeting the forum state.”<sup>164</sup> Cryptocurrency companies have recently spent millions to advertise their services on the national level.<sup>165</sup> For instance, two prominent cryptocurrency companies marketed their services during the 2022 Superbowl,<sup>166</sup> which amassed a total viewership of 167 million.<sup>167</sup> Cryptocurrency companies have also used popular social media platforms, through methods like influencer partnerships, to develop more targeted advertisements for their offerings or services.<sup>168</sup> Because cryptocurrency companies rely heavily on digital advertising, as opposed to print or face-to-face marketing, courts should factor in the extent and geographical target of the advertising as they would in the traditional internet context.

In analyzing whether minimum contacts exist by virtue of the cryptocurrency company’s advertising, the court should also infer which population the company targeted. Marketing designed to reach the masses, as opposed to some well-informed traders or investors, may indicate the sort of extensive nationwide advertising that may constitute minimum contacts. For example, the entrancing sixty-sec-

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<sup>163</sup> See *In re Tezos Sec. Litig.*, 2018 Fed. Sec. L. Rep. P 100,262, at \*5 (N.D. Cal. Aug. 7, 2018).

<sup>164</sup> *Shaw v. Vircorex*, No. 18-cv-00067-PAB-SKC, 2019 WL 2636271, at \*3 (D. Colo. Feb. 21, 2019).

<sup>165</sup> See Aimee Picchi & Christopher J. Brooks, *Super Bowl Ads 2022: Crypto Companies Are Spending Millions to Win over Viewers*, CBS NEWS (Feb. 11, 2022, 7:32 AM), <https://www.cbsnews.com/news/super-bowl-2022-commercials-cryptocurrency/> [<https://perma.cc/RZS3-69VA>].

<sup>166</sup> *Id.* One of the cryptocurrency companies, Crypto.com, also announced a \$100 million ad campaign designed to reach new cryptocurrency users. See Lawrence Wintermeyer, *Crypto Advertisements Are Everywhere: The Consumer Isn’t a Moron*, FORBES (Nov. 11, 2021, 2:00 AM), <https://www.forbes.com/sites/lawrencewintermeyer/2021/11/11/crypto-advertisements-are-everywhere-the-consumer-isnt-a-moron/?sh=1fa902fd3daf> [<https://perma.cc/ML32-56M3>].

<sup>167</sup> Press Release, NBC Sports, NBC Sports’ Coverage of Super Bowl LVI Averages Total Audience Delivery of 112.3 Million Viewers, Reaches 167 Million Viewers on Unprecedented Day in Sports Media History (Feb. 15, 2022), <https://nbcSPORTSGROUPPRESSBOX.COM/2022/02/15/nbc-sports-coverage-of-super-bowl-lvi-averages-total-audience-delivery-of-112-3-million-viewers-reaches-167-million-viewers-on-unprecedented-day-in-sports-media-history/> [<https://perma.cc/U6DD-8ZMS>].

<sup>168</sup> See Christina M. Claxton, Note, *Private Offerings in the Age of Surveillance Capitalism and Targeted Advertising*, 74 VAND. L. REV. 1187, 1189–90, 1206–07 (2021).

ond Coinbase commercial featuring a QR code linked to its platform attracted so many visits while airing that its website crashed.<sup>169</sup> A lower court could also infer whether the ad is meant to target hordes of laypeople, or a defined group of professional investors and traders, by virtue of its content. For instance, it can be inferred that an Israeli cryptocurrency brokerage firm intended to target the lay masses by including in its advertisement references popular with retail investors, like the phrase “to the moon.”<sup>170</sup>

The third factor measures the cryptocurrency transaction volume and customer base within the forum. This may indicate the cryptocurrency company’s purposeful exploitation of the forum state market.<sup>171</sup> However, because of the “less-than-transparent world of global crypto trading,”<sup>172</sup> this information may be difficult to acquire prior to the discovery stage.<sup>173</sup> In *Ferrie*, for example, the district court declined to rule that an entity soliciting cryptocurrency investments had expressly targeted the forum because the plaintiff only assumed that the entity had a “substantial base of subscribers, viewers, and customers” in the forum state and could not “identify the location of these individuals.”<sup>174</sup> However, because the plaintiff’s claims suggested the defendant had such contacts, the court found that limited discovery into the customer base in the forum was justified.<sup>175</sup>

When an investor or trader plaintiff makes claims suggesting that the cryptocurrency company had a large customer base or high transaction volumes in the forum, courts should be more willing to grant

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<sup>169</sup> See Taylor Locke, ‘To the Moon’: You Probably Saw the Crypto Super Bowl Ads—Here’s What to Know Before Buying in on the Hype, CNBC (Feb. 15, 2022, 11:29 AM), <https://www.cnbc.com/2022/02/14/what-to-know-about-crypto-before-buying-into-super-bowl-ads.html> [<https://perma.cc/Z9CV-U4QL>].

<sup>170</sup> *Id.*; see Nicholas Rossolillo, *What Are Meme Stocks?*, MOTLEY FOOL (Jan. 6, 2023, 5:38 PM), <https://www.fool.com/investing/stock-market/types-of-stocks/meme-stocks/> [<https://perma.cc/Y4TH-Y39X>].

<sup>171</sup> See *Shaw v. Vircorex*, No. 18-cv-00067-PAB-SKC, 2019 WL2636271, at \*3–4 (D. Colo. Feb. 21, 2019) (holding the court lacked personal jurisdiction over the exchange, despite plaintiff’s assertion that the exchange froze fifty million dollars in funds of thousands of account holders, because plaintiff did not show what portion of the funds originated in the forum, and therefore could not show that the exchange regularly made sales there).

<sup>172</sup> Rakesh Sharma, *Are Crypto’s High Trading Volumes a Scam?*, INVESTOPEDIA (Sept. 1, 2021), <https://www.investopedia.com/news/are-cryptos-high-trading-volumes-scam/> [<https://perma.cc/A448-M6CQ>].

<sup>173</sup> See *Ferrie v. Woodford Rsch., LLC*, No. 3:19-cv-05798, 2020 WL 3971343, at \*6 (W.D. Wash. July 14, 2020) (finding an investor provided insufficient information to establish that a cryptocurrency-related company targeted the forum based on customer volume in that state).

<sup>174</sup> See *id.*

<sup>175</sup> See *id.*

motions for limited discovery. This may be a particularly useful device when the cryptocurrency company is loosely regulated in a foreign sovereign or otherwise lacks credibility because the customer could not reasonably be expected to have access to public—not to mention credible—data. If the plaintiff cannot proffer evidence that the defendant consistently solicited business or investments from individuals within the forum state, the plaintiff will face a procedural hurdle in establishing personal jurisdiction, considering the importance of this evidence to the *Burger King*, *Keeton*, and harmful effects frameworks.

The fourth factor asks whether the company relied upon lightweight or full node servers located in the forum state to facilitate cryptocurrency transactions. When a plaintiff uses their personal device to buy or sell cryptocurrency, their device, as a lightweight node, invariably becomes a component of the cryptocurrency network.<sup>176</sup> This connectivity makes most cryptocurrency transactions multijurisdictional.<sup>177</sup> When a new transaction occurs on that blockchain, “every other node” in the system “must verify its validity.”<sup>178</sup> Even if a person’s personal computer used for transacting cryptocurrency “only download[s] just enough blockchain data to process and verify new transactions,” it sustains the existence of the blockchain ledger.<sup>179</sup> Because personal devices help maintain the integrity of blockchain infrastructure, which cryptocurrency companies use to conduct business, the location of that device within the forum, if known by the company, should be considered probative in the personal jurisdiction analysis.

To alleviate the problems caused by foreign businesses and other almost entirely digital companies, the fifth factor focuses on the physical presence of the company in the forum or the United States generally. Here, physical presence should be interpreted broadly to not only include typical indicia, like offices and storage centers, but also full nodes or other verifying servers. The *Alibaba* court held “it would strain common usage” to conclude that a cryptocurrency transaction occurred at the “potentially remote location of the servers.”<sup>180</sup> However, the high level of anonymity and the tendency for many cryptocurrency companies to avoid the United States’ regulatory re-

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176 See *Node (Cryptocurrency Network)—Definition and Examples*, *supra* note 59.

177 See *Niji Oni & Co.*, *supra* note 26.

178 *Types of Nodes: Light Nodes, Full Nodes, and Masternodes*, CRYPTOPEDIA (July 22, 2021), <https://www.gemini.com/cryptopedia/masternode-dash-bitcoin-node> [<https://perma.cc/HRW5-5K5Y>].

179 *Id.*

180 *Alibaba Grp. Holding Ltd. v. Alibabacoin Found.*, No. 18-cv-2897, 2018 WL 5118638, at \*3 (S.D.N.Y. Oct. 22, 2018).

game means a company may avoid litigation in *any* domestic forum. Relying upon the *Alibaba* reasoning could therefore threaten relief for many transacting Americans. The *Alibaba* court also falsely analogized cryptocurrency transactions to bank transactions because banks, even those headquartered abroad, more often establish a physical presence in the United States, thereby offering at least one potential forum for an aggrieved plaintiff.<sup>181</sup>

Finally, the sixth factor evaluates whether the customer, in creating an account with the company or otherwise using its service, submitted their personal information to the company. The minimum contacts test often requires actual or constructive knowledge that the defendant's activities reach the forum state.<sup>182</sup> Consequently, if its customers are required to hand over information identifying their location, the company can reasonably be expected to know whether they are transacting with parties located in the forum state and therefore cannot hide behind the illusion of anonymity. For example, the creation of a hosted wallet on an exchange requires the owner to first enter their personal information.<sup>183</sup> A company being subjected to know-your-customer rules might also be grounds for inferring its knowledge of customer(s) location in the forum state.<sup>184</sup> Traditional know-your-customer practices compel cryptocurrency exchanges, for instance, to gather identifying information from customers, including their names and addresses.<sup>185</sup> These rules are growing in scope and may bind more cryptocurrency companies in the future.<sup>186</sup>

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181 See *ABC's of Banking*, STATE OF CONN., DEP'T OF BANKING, <https://portal.ct.gov/DOB/Consumer/Consumer-Education/ABCs-of-Banking---What-is-a-Foreign-Bank> [<https://perma.cc/CTS2-TDSF>] (stating foreign banks maintain a "significant presence in the American financial system" and can establish physical banks, agencies, loan offices, and representative offices in the United States).

182 See *Shaw v. Viracurex*, No. 18-cv-00067, 2019 WL 2636271, at \*3 (D. Colo. Feb. 21, 2019).

183 See *How to Set up a Crypto Wallet*, *supra* note 153 (instructing wallet owners to enter their personal information after deciding to open a hosted wallet with an exchange).

184 See Anna Baydakova, *How Binance, Coinbase and 22 Other Crypto Exchanges Handle Your Data*, COINDESK (Feb. 4, 2022, 4:46 PM), <https://www.coindesk.com/layer2/privacyweek/2022/01/27/before-you-click-i-agree-how-binance-coinbase-and-22-other-crypto-exchanges-handle-your-data/> [<https://perma.cc/9DTY-JDYR>].

185 See *What Is KYC and Why Is It Important for Crypto Exchanges?*, COMPLY ADVANTAGE (Oct. 11, 2022), <https://complyadvantage.com/insights/what-is-kyc-crypto-exchanges/> [<https://perma.cc/4MBQ-XMLH>].

186 See Requirements for Certain Transactions Involving Convertible Virtual Currency or Digital Assets, 87 Fed. Reg. 5280 (Jan. 31, 2022) (proposing a rule to "require . . . money service businesses (MSBs) to submit reports, keep records, and verify the identity of customers in relation to transactions involving convertible virtual currency (CVC) or digital assets with legal tender status ('legal tender digital assets' or 'LTDA') held in unhosted wallets, or held in wallets hosted in a jurisdiction identified by FinCEN."); Nikhilesh De, *The Unhosted Crypto Wallet Rule*

When a user does not explicitly submit their personal information to the company, it becomes more difficult to conclude that the cryptocurrency company knew with whom they were conducting business. This is often the case for ICOs, where users simply buy cryptocurrency anonymously.<sup>187</sup> However, some companies “routinely gather technical information about the devices users are logging in from, including . . . location and time zone settings of computers and phones their clients use to trade.”<sup>188</sup> Because this crucial information may not be readily available for plaintiffs to overcome a challenge to personal jurisdiction, courts should also permit limited discovery for this sort of data collection when a plaintiff suggests that the company had sufficient contacts with the forum predicated on the knowledge of its users’ locations.<sup>189</sup>

### CONCLUSION

The current approach to minimum contacts—to treat cryptocurrency cases like any typical internet dispute—fails to consider the unique aspects of cryptocurrency. Lower courts should therefore rely upon a supplemental test to guide the minimum contacts analysis. This Note proposes a test which combines internet factors accurately used in the cryptocurrency setting with considerations that seek to alleviate problems caused by blockchain and the companies that facilitate cryptocurrency transactions and investments. Due process will not be well served if courts merely apply “yesterday’s legal rules to today’s environment.”<sup>190</sup> It is therefore imperative to the personal jurisdiction analysis that courts begin to acknowledge the novelty of cryptocurrency and tailor their approach to the minimum contacts inquiry accordingly.

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*Is Back*, COINDESK (Jan. 31, 2022, 10:13 AM), <https://www.coindesk.com/policy/2022/01/29/the-unhosted-crypto-wallet-rule-is-back/> [<https://perma.cc/MPS9-UUTG>].

<sup>187</sup> See Saheli Roy Choudhury, *It's a Very Good Time to Be a Money Launderer, and You Can Thank Cryptocurrencies*, CNBC (Aug. 5, 2017, 1:19 PM), <https://www.cnbc.com/2017/08/04/icos-may-be-seen-as-securities-by-u-s-and-singapore-regulators.html> [<https://perma.cc/779C-EJDB>].

<sup>188</sup> Baydakova, *supra* note 184.

<sup>189</sup> See, e.g., *Ferrie v. Woodford Rsch., LLC*, No. 3:19-cv-05798, 2020 WL 3971343, at \*6 (W.D. Wash. July 14, 2020) (holding that limited discovery was necessary to determine whether defendant company’s viewers and customers in the forum state established sufficient contacts for personal jurisdiction).

<sup>190</sup> Adam R. Kleven, Note, *Minimum Virtual Contacts: A Framework for Specific Jurisdiction in Cyberspace*, 116 MICH. L. REV. 785, 787 (2018).