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CRYPTO LOSSES

Xuan-Thao Nguyen*

Jeffrey A. Maine**

The crypto industry has been hit hard with various market forces and scams, leaving investors with trillion-dollar losses in recent years. The appropriate tax treatment of such losses has yet to be fully examined, as there is scant guidance and a dearth of academic literature on the subject. This Article attempts to fill this gap by applying general tax principles to crypto losses and making several recommendations to improve the clarity and consistency of tax results. It explores various theories of crypto loss “realization” (including theft, abandonment, and worthlessness), highlighting where additional guidance is needed. And it considers appropriate legislative limits on crypto loss deductions recognizing that, by offering a tax deduction subsidy, the government essentially shares in the risk created by crypto activities. The Article proposes a possible new tax framework for crypto losses—specifically, crypto losses should be deductible only against crypto gains and not against labor or other positive income. Such a rule would not be based on moral disapproval of crypto trading as opposed to other investment activity, but instead would be supported by the unified justification underlying many loss limitation rules in our tax system.

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I. INTRODUCTION

Crypto winter arrived in the summer of 2022, triggering the collapse of crypto platforms, igniting the crypto contagion and string of bankruptcies, and stripping millions of investors of their financial holdings.¹ In total, the crypto market wiped out an astonishing amount (in the magnitude of \$1.3 trillion) of the value of crypto assets during the first few months of 2022.² With dizzying speed, one storied company after another—from Genesis, Core Scientific, FTX, BlockFi, Celsius Network, Voyager Digital, to Three Arrows Capital—fell spectacularly from their commanding heights in the crypto world.³ Letitia James, New York Attorney General, heard plenty of stories of retail investors being deceived about their crypto investments, and urged them to contact her office in

1. *Crypto’s String of Bankruptcies*, REUTERS (Jan. 20, 2023, 11:27 AM), <https://www.reuters.com/business/finance/cryptos-string-bankruptcies-2023-01-20/> [https://perma.cc/6W5H-Q6DZ]; Chisom Maduonurah, *Crypto Bankruptcies*, MILKROAD (June 28, 2023), <https://milkroad.com/bankruptcies> [https://perma.cc/SF4G-QQUX]; Rohan Goswami & MacKenzie Sigalos, *Crypto Broker Genesis Files for Bankruptcy in Latest Blow to Barry Silbert’s DCG Empire*, CNBC, (Jan. 20, 2023, 7:35 AM) <https://www.cnbc.com/2023/01/20/crypto-lender-genesis-trading-files-for-bankruptcy-barry-silbert-digital-currency-group.html> [https://perma.cc/QPS7-6VQ8].

2. Tanaya Macheel, *Bitcoin Rises Above \$23,000 After Fed Chair Powell Says Inflation Is Coming Down*, CNBC (Feb. 7, 2023, 5:03 PM), <https://www.cnbc.com/2023/02/07/bitcoin-trades-around-23000-after-fed-chair-powell-warns-that-rates-could-rise-further.html> [https://perma.cc/SEJ6-WV6Q] (“More than \$1.3 trillion was wiped off the cryptocurrency market in 2022 as the fallout from the FTX collapse weighed on investor confidence.”). In fact, the crypto market had been declining throughout 2022. See Nina Bambysheva, *Crypto Market Shed \$1.3 Trillion in Value in First Half of the Year*, FORBES (June 30, 2022, 5:25 PM), <https://www.forbes.com/sites/ninabambysheva/2022/06/30/crypto-market-shed-13-trillion-in-value-in-first-half-of-the-year/?sh=43f93492dc17> [https://perma.cc/YA4C-PXLJ]. The crypto market also lost \$1.3 trillion in seventy-four days in early January 2022 compared to its peak in November 2021. Luc Olinga, *Crypto Market Lost \$1.3 Trillion in 74 Days—and It Might Not Be Over Yet*, THESTREETCRYPTO (Jan. 21, 2022, 8:49 AM), <https://www.thestreet.com/crypto/investing/crypto-market-lost-1-trillion-in-72-days-and-it-might-not-be-over-yet> [https://perma.cc/W6LA-B8XQ].

3. Julian Mark, *The Companies that Helped Create 2022’s Crypto Winter*, WASH. POST (Dec. 13, 2022, 11:34 AM), <https://www.washingtonpost.com/business/2022/12/05/crypto-ftx-collapse-bankruptcy-companies/> [https://perma.cc/N9E6-JH98].

August 2022.⁴ As it turned out, the crypto winter showed its chilling signs in early 2020 when six major crypto exchanges that were familiar names in the crypto world went bankrupt.⁵

Lost in the secretive and murky world of crypto are the losses suffered by many retail investors who bet their savings and hard-earned dollars.⁶ Retail investors purchased tokens and opened accounts with crypto companies that partnered with celebrity investors, sports figures, and social media influencers.⁷ Kim Kardashian unleashed her influence on 250 million followers; Paul Pierce, the former NBA player and ESPN commentator, released his tweet; and Floyd Mayweather, the former world champion boxer, muscled his power, in promoting the EMAX tokens.⁸ From Tom Brady and Giselle Bündchen to Shaquille O'Neal and Larry David, celebrity influence brought the attention of millions to the lure of crypto investments.⁹ For instance, Edwin Garrison, an Oklahoma resident, opened an FTX yield-bearing account with his own crypto assets to earn interest but FTX's fraudulent Ponzi scheme produced only losses for Garrison.¹⁰ Adrian Butkus, a 43-year-old father of two, emptied his \$600,000 life savings into an account at BlockFi before that exchange collapsed.¹¹ Likewise, Ontario Teachers' Pension Fund lost \$95 million in investment in the FTX collapse and the Canadian Pension Fund suffered a \$150 million loss in investment in bankrupt crypto lender Celsius Network, as crypto losses crossed international borders.¹²

4. Stephen Graves, *NY Attorney General Urges New Yorkers "Deceived" by Crypto Firms to Contact Office*, DECRYPT (Aug. 2, 2022), <https://decrypt.co/106465/ny-attorney-general-urges-new-yorkers-deceived-crypto-firms-contact-office> [<https://perma.cc/8MTE-GFJV>].

5. Francis Mailer, *6 Disastrous Cases of Cryptocurrency Exchanges Going Bankrupt*, MEDIUM (Jan. 9, 2020), <https://medium.com/canadian-cryptocurrency/6-cases-cryptocurrency-exchange-bankruptcy-5c87d452af03> [<https://perma.cc/JC7R-F9Y4>] (listing Mt. Gox, QuadrigaCX, CoinTied GmbH, BitGrail Srl, Einstein, and Youbit as the bankrupt entities).

6. See generally Class Action Complaint, *Huegerich v. Gentile* (2022) (No. 2:22-cv-00163).

7. *Id.* at 4–5, 12 (alleging Paul Pierce, Floyd Mayweather, and Kim Kardashian assisted in the promotion of EthereumMax's tokens when the company launched its tokens on May 14, 2021).

8. *Id.* at 23, 25; see also Jennifer Korn, *Why Tom Brady, David Ortiz, Jimmy Fallon and Other Celebrities Are Getting Sued Over Crypto*, CNN BUS. (Dec. 14, 2022, 1:46 PM), <https://www.cnn.com/2022/12/14/tech/celebrity-crypto-lawsuits/index.html> [<https://perma.cc/795A-DC69>]; Ciaran Lyons, *Celebs Who Got Burned Endorsing Crypto and Those That Got Away with It*, COINTELEGRAPH (Jan. 4, 2023), <https://cointelegraph.com/news/celebs-who-got-burned-endorsing-crypto-and-those-that-got-away-with-it> [<https://perma.cc/A8MQ-59Y9>].

9. Cheyenne Ligon, *Class-Action Lawsuit Against Sam Bankman-Fried and Celebrity FTX Promoters Gets a New Judge in Miami*, COINDESK (Dec. 12, 2022, 9:17 AM), <https://www.coindesk.com/policy/2022/12/09/class-action-lawsuit-against-ftx-celebrity-promoters-and-sam-bankman-fried-is-quietly-dropped/> [<https://perma.cc/Y3Z6-TQZM>].

10. Jody Godoy, *FTX's Bankman-Fried, Tom Brady and Other Celebrity Promoters Sued by Crypto Investors*, REUTERS (Nov. 17, 2022, 2:58 AM), <https://www.reuters.com/legal/ftx-founder-bankman-fried-sued-us-court-over-yield-bearing-crypto-accounts-2022-11-16/> [<https://perma.cc/3ABA-TDBL>]; see also Will Daniel, *Former FTX Users Say the Failed Crypto Exchange Was a Ponzi Scheme*, FORTUNE (Dec. 3, 2022, 6:30 AM), <https://fortune.com/2022/12/03/ftx-sam-bankman-fried-crypto-how-ponzi-schemes-work-sbf/> [<https://perma.cc/5BHA-DZ4K>].

11. Matthew Goldstein, *Ordinary Investors Who Jumped Into Crypto Are Saying: Now What?*, N.Y. TIMES (Dec. 5, 2022), <https://www.nytimes.com/2022/12/05/business/cryptocurrency-investors-ftx-blockfi.html> [<https://perma.cc/J48Y-SSJJ>].

12. Layan Odeh, *Investor Studied Crypto for Years, Then Missed FTX's Red Flags*, BLOOMBERG (Nov. 19, 2022, 1:00 PM), <https://www.bloomberg.com/news/articles/2022-11-19/investor-studied-crypto-for-years-then>

Before the crypto winter's staggering losses, other types of crypto loss confronted crypto investors who forgot their passwords.¹³ More than \$100 billion in Bitcoin is estimated to have been lost by investors who could not gain access to their assets because they had encrypted private keys but forgot the password, or because they had a failed hard drive with private keys.¹⁴ In fact, a survey shows 40% of U.S. crypto owners forget their passwords.¹⁵ Hacking also produces crypto losses. In 2021, \$3.7 billion crypto losses were due to hacking activities by cyber criminals, and that number reached almost \$4 billion in losses in 2022.¹⁶

The crypto industry's current state of affairs begs the question: To what extent should the federal income tax system subsidize, through taxpayer deductions, investment losses sustained in crypto activity? It is an important policy question, which has yet to be critically addressed. Indeed, the magnitude of crypto industry losses is likely to exceed losses resulting from natural disasters.¹⁷ To the extent the tax system permits a tax deduction for crypto losses, the government is essentially sharing in the risk created by the investors' activities.¹⁸ This risk-sharing can encourage investment in cryptocurrency and disincentivize other investment activities of valuable economic significance. Risk sharing can also encourage investors to suddenly exit the crypto industry, which can harm legitimate exchanges and remaining investors.¹⁹

Current tax rules permit the deduction of various types of losses. At first glance, the general rules for deducting losses are straightforward. Losses in money-making endeavors are generally allowed.²⁰ Personal losses, by contrast, generally are not.²¹ But there are numerous exceptions and limitations because

missed-ftx-s-red-flags?embedded-checkout=true [https://perma.cc/ZF7X-86S7]; Stacy Elliott, *Canadian Pension Fund Takes \$150M Hit from Celsius Investment*, DECRYPT (Aug. 17, 2022), <https://decrypt.co/107665/canadian-pension-fund-150m-loss-celsius> [https://perma.cc/XY9P-7SCL].

13. D. T. Max, *Half a Billion in Bitcoin, Lost in the Dump*, NEW YORKER (Dec. 6, 2021), <https://www.newyorker.com/magazine/2021/12/13/half-a-billion-in-bitcoin-lost-in-the-dump> [https://perma.cc/J9MP-QZET] ("For years, a Welshman who threw away the key to his cryptocurrency stash has been fighting to excavate the local landfill.").

14. James Royal, *Are Your Lost Bitcoins Gone Forever? Here's How You Might Be Able to Recover Them*, BANKRATE (Dec. 13, 2023), <https://www.bankrate.com/investing/how-to-recover-lost-bitcoins-and-other-crypto/> [https://perma.cc/HD9P-U7AV].

15. Jamie Redman, *Survey Shows 40% of US Crypto Owners Forget Their Password, 20% Write Passwords on Paper*, BITCOIN (Aug. 3, 2021), <https://news.bitcoin.com/survey-shows-40-of-us-crypto-owners-forget-their-password-20-write-passwords-on-paper/> [https://perma.cc/F4GP-3NNF].

16. Tonya Riley, *Cryptocurrency Hacks Shot Up in 2022, Amounting to Almost \$4 Billion in Losses*, CYBERSCOOP (Jan. 5, 2023), <https://cyberscoop.com/cryptocurrency-hacks-2022/> [https://perma.cc/H8G7-ULM5].

17. Since 1980, the United States has sustained 377 weather and climate disasters, the total cost of which exceeds \$2.670 trillion. *Billion-Dollar Weather and Climate Disasters*, NAT'L CTRS. FOR ENV'T INFO., <https://www.ncei.noaa.gov/access/billions/> (last visited Mar. 19, 2024) [https://perma.cc/K9X8-KGSJ]. In 2023 alone, there were twenty-three weather/climate disaster events with losses exceeding \$1 billion each. *Id.* These events included one drought event, four flooding events, nineteen severe storm events, two tropical cyclone events, one wildfire event, and one winter storm event. *Id.*

18. See Mindy Herzfeld, *Who Will Pay for FTX's Losses?*, 177 TAX NOTES FED. 1073, 1077 (2022) (citing Noel Cunningham, *The Taxation of Capital Income and the Choice of Tax Base*, 52 TAX L. REV. 17 (1996)).

19. See, e.g., Andrew L. Lawson & William E. Foster, *Presidential Tax Discretion*, 73 ALA. L. REV. 292, 331–32 (2021).

20. 26 U.S.C. § 165(a), (c).

21. 26 U.S.C. § 262.

the factual variations that pervade the realm of loss deductions are infinite, and the arguments that can be constructed for allowing or disallowing deductions are limited only by human imagination. Personal casualty losses caused by natural disasters, for instance, are deductible, and the rationale “probably rests in the realm of compassion rather than in the realm of tax theory.”²²

Scant guidance exists on the tax treatment of cryptocurrency.²³ Indeed, the United States has fallen behind other countries in terms of comprehensive tax guidance on the taxation of cryptocurrency.²⁴ In 2014, the Internal Revenue Service (“IRS”) issued its first piece of guidance on virtual currency, which provided that convertible virtual currency is treated as *property* and that general tax principles applicable to property transactions apply to convertible virtual currency.²⁵ But the notice did not specify the type of property with which to equate virtual currency—whether commodities, securities, or simply intangible property.²⁶ Five years later, in 2019, the IRS released additional guidance considering the tax treatment of hard forks and airdrops, and it posted on its website answers to frequently asked questions expanding upon its 2014 guidance and applying general tax principles to additional situations.²⁷ In 2021, the IRS issued guidance specifically addressing whether exchanges of one type of cryptocurrency for another could qualify as “like kind” exchanges, which received preferential treatment under rules in place before 2018.²⁸

22. See JOHN A. MILLER & JEFFREY A. MAINE, *THE FUNDAMENTALS OF FEDERAL TAXATION* 179 (6th ed. 2023).

23. See James Creech, Dennis Leonard & Justin T. Miller, *A Critique of the Cryptic Rules for Taxing Crypto*, 176 TAX NOTES FED. 69, 69 (July 4, 2022) (“The sparse and evolving nature of formal guidance has created a vacuum in which misinformation and potential taxpayer noncompliance are rampant.”).

24. PricewaterhouseCoopers ranks countries on how comprehensive their tax guidance is on taxation of cryptocurrency. The United States ranked fourteenth in 2021. PWC ANNUAL GLOBAL CRYPTO TAX REPORT 2021, PWC 6 (2021) (ranking the U.S. at fourteenth).

25. I.R.S. Notice 2014-21, 2014-16 I.R.B. 938 (Apr. 14, 2014) (providing answers to sixteen frequently asked questions; focusing on Bitcoin—unsurprising considering its market dominance at the time—and defining “virtual currency” as a “digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value”). As “property,” cryptocurrency is “not treated as currency that could generate foreign currency gain or loss” for tax purposes. *Id.*; see also Rev. Rul. 2019-24, 2019-44 I.R.B. 1004.

26. For an examination of the terms “commodities” and “securities” in relation to the tax treatment of cryptocurrency, see Paul Carman, *A Systematic Approach to the Classification of Cryptocurrency*, 172 TAX NOTES FED. 2131 (2021). See also Letter from N.Y. State Bar Ass’n to Hon. Lily Batchelder & Hon. Thomas C. West, Jr. (Apr. 18, 2022), <https://nysba.org/app/uploads/2022/04/1461-Report-on-Cryptocurrency-and-Other-Fungible-Digital-Assets.pdf> (last visited Mar. 19, 2024) [<https://perma.cc/8TVE-N4NQ>] (calling on the IRS to issue additional guidance, specifically to clarify the exact characterization of cryptocurrency).

27. See Rev. Rul. 2019-24, 2019-44 I.R.B. 1004; see also *Digital Assets*, I.R.S., <https://www.irs.gov/businesses/small-businesses-self-employed/digital-assets> (last visited Mar. 19, 2024) [<https://perma.cc/HDF6-JH3M>]. In 2019, the government also began sending letters to taxpayers that may have failed to report income. I.R.S. News Release IR-2019-132 (July 26, 2019) (announcing three forms of letter—Letter 6173, Letter 6174, Letter 6174-A).

28. I.R.S. Chief Couns. Mem. 202124008 (June 8, 2021). In 2022, the IRS issued some additional guidance laying out some basic principles relevant to individuals’ tax filings and reportings. I.R.S. News Release IR-2022-45 (March 1, 2022).

Until recently, there was no guidance or authority directly addressing deductibility of the type of losses seen by so many crypto investors today.²⁹ In January 2023, in response to confusion surrounding abandoned and worthless cryptocurrency, the IRS weighed in on its deductibility, stating the obvious—that taxpayers cannot claim an abandonment loss without an affirmative act, and cannot take a worthless deduction for the temporary decline in value.³⁰ The non-taxpayer-specific guidance, which left so many questions unanswered, has been criticized as “premature and counterproductive.”³¹

As with administrative guidance, there is a dearth of academic literature addressing crypto loss deductions. Much of the commentary related to crypto taxation focuses on the tax implications of mining, staking, hard forks, or air drops, and not on the deductibility of crypto losses.³² Questions such as how the government should treat proof of state rewards as opposed to proof of work rewards³³ are receiving greater scholarly attention than questions with potentially broader consequences, such as the tax implications of crypto losses. This Article attempts to fill that gap.

If history repeats itself, applying current tax principles to cryptocurrency losses will not be easy. When intellectual property’s role in the world economy increased, so too did the controversies between taxpayers and the government over the tax implications of intellectual property transactions. Courts initially struggled to understand the unique attributes of intellectual property and their relevance under general tax principles in resolving intellectual property disputes.³⁴ There was considerable diversity of opinion among commentators, and sound federal tax legislation and regulation were necessary in some cases to improve the clarity and consistency of tax results.³⁵ The same is likely to be true with respect to the tax treatment of crypto losses.

29. Creech et al., *supra* note 23, at 73 (“Some qualities unique to cryptocurrency losses seem to lend themselves to Section 165 applicability, but there does not appear to be any authority directly on point.”).

30. I.R.S. Chief Couns. Mem. 202302011 (Jan. 13, 2023).

31. See Lee A. Sheppard, *No Crypto Abandonment for You, Hodlers!*, 178 TAX NOTES FED. 625, 625 (2023).

32. See, e.g., Reuven S. Avi-Yonah & Mohanad Salaimi, *A New Framework for Taxing Cryptocurrencies*, 175 TAX NOTES FED. 1391, 1391 (2022) (criticizing the government’s approach of treating crypto like any other asset and proposing a new framework for taxing cryptocurrency throughout its life cycle); Shannon R. Jemiolo & Ian Redpath, *Issues in the Taxation of Cryptocurrency*, 175 TAX NOTES FED. 1377, 1378 (2022) (focusing largely on income issues).

33. See, e.g., Omri Marian, *Law, Policy, and the Taxation of Block Rewards*, 175 TAX NOTES FED. 1493, 1493 (2022) (addressing the taxation of block awards—offered to validators of blockchain transactions in exchange for maintaining the public blockchain ledger); Nizan Geslevich Packin & Sean Stein Smith, *ESG, Crypto, and What Has the IRS Got to Do with It?*, 6 STAN. J. BLOCKCHAIN L. & POL’Y 1, 8–9 (2022) (addressing taxation of PoS staking rewards).

34. See generally Xuan-Thao Nguyen & Jeffrey A. Maine, *The History of Intellectual Property Taxation: Promoting Innovation and Other Intellectual Property Goals?*, 64 SMU L. REV. 795 (2011) (tracing the historic development of the specific tax rules governing intellectual property, identifying present areas of policy dissonance in the intersection of intellectual property and taxation, and calling for an appropriate legal framework for future intellectual property legislation).

35. *Id.* at 797.

This article proceeds as follows. Part II takes a close look at the nature and magnitude of crypto losses. Many crypto owners have lost their crypto forever by misplacing their private keys, sending crypto to the wrong wallet, or losing their cold storage device. Many have seen their cryptocurrencies stolen through various hacks and scams. Many still have possession of their cryptocurrencies but have seen their values drop significantly because of the bad acts of blockchain managers. It is important to understand the nature of crypto losses in assessing their tax implications; as shown in Part III, the nature of a loss dictates the tax result.

Part III highlights the deduction rules governing losses in general and the difficulties associated with applying them to crypto losses. The deductibility of crypto losses under the current income tax framework requires two things: (1) a realization event fixing the claimed loss; and (2) specific statutory authorization for the claimed loss deduction. These requisites are considered in the context of crypto transactions that produce a quid pro quo for the taxpayer, as well as events that do not—stolen, misplaced, and abandoned crypto. The ability to deduct a loss for a mere decline in value is also considered. Part III reveals tax distinctions under the current regime that lack sound justification.

Part IV of this article asks important questions. Should the tax system subsidize cryptocurrency losses when the government has decided not to regulate cryptocurrency? If so, are loss limitations in the current tax framework sufficient, or should consideration be given to imposing additional loss restrictions for cryptocurrency? Ultimately the article proposes consideration of a new tax framework for crypto losses—specifically, losses from cryptocurrency should only offset gains from cryptocurrency. Such a rule would not be based on moral disapproval of crypto trading as opposed to other investment activities. Instead, it would be supported by the unified justification underlying many loss limitation rules in our tax system—losses from one type of activity should not be used to offset or shelter income from another activity. Such an approach would also improve the clarity and consistency of tax results.

II. NATURE AND EXTENT OF CRYPTO LOSSES

Once upon a short time ago, the crypto world was awash in high value as all witnessed the market cap surpass \$3 trillion on November 8, 2021.³⁶ In fact, the value of the crypto universe quadrupled in 2021 while the world was hunkering down in the wrath of Covid-19.³⁷ The dizzying high eventually fell back to earth, landing the total crypto market cap at \$1.07 trillion at the end of January

36. Joanna Ossinger, *Crypto World Hits \$3 Trillion Market Cap as Ether, Bitcoin Gain*, BLOOMBERG (Nov. 8, 2021, 3:17 PM), <https://www.bloomberg.com/news/articles/2021-11-08/crypto-world-hits-3-trillion-market-cap-as-ether-bitcoin-gain> [<https://perma.cc/JJ9X-CLJM>].

37. *Id.*

2023.³⁸ The recent massive losses can be seen in the crypto contagion of platform collapses.

A. *The Crypto Contagion*

The crypto winter can be traced to the unraveling of TerraForm Labs in early May 2022. The company built an ecosystem to bring stability to crypto-decentralized finance and touted that its algorithmic stablecoin UST carried a guarantee that each UST coin was redeemable for a dollar—but the UST lost its peg and began trading for as little as a nickel.³⁹ A reserve worth \$1.4 billion just before UST coin lost its peg vanished.⁴⁰ The company's governance token, LUNA, met a similar fate, falling from a market cap of \$30 billion to \$680 million within the same month, bringing down thousands of investors in its crash.⁴¹ Unfortunately, projects built on the Terra blockchain shared the same fate, including Anchor Protocol and Mirror Protocol, losing all of their value because their business model of high yield for UST deposits on their platforms was unsustainable.⁴² The crypto contagion began with LUNA wiping in total \$14 billion from the crypto market.⁴³

The crypto contagion then spread quickly to crypto lending platforms where customer accounts, withdrawals, swaps, and transfers on the platforms came to a screeching halt. For instance, Celsius Network faced a \$1.2 billion deficit on its balance sheet.⁴⁴ Just two months before Celsius filed for bankruptcy, the company enjoyed a portfolio of 1.7 million users for \$11.7 billion in assets under management.⁴⁵ When crypto continued to climb in 2022, Celsius made more than \$8 billion in loans and extended 17% annual yields on crypto deposits.⁴⁶ But the crypto contagion brought Celsius down on June 12, 2022, when the company froze users' assets. By July 13, Celsius had only \$167 million in cash.⁴⁷ All the investments users deposited in Celsius dissolved.⁴⁸

38. Shaun Paul Lee, *What is the Total Cryptocurrency Market Capitalization in 2023?*, COINGECKO, <https://www.coingecko.com/research/publications/total-crypto-market-cap> (Oct. 23, 2023) [<https://perma.cc/J5ND-DWN5>].

39. Stacy Elliott, *Terra Crashed Spectacularly. Here's How It Launched*, DECRYPT (May 21, 2022), <https://decrypt.co/101074/terra-crashed-spectacularly-heres-how-it-launched> [<https://perma.cc/Z8SY-4C8P>].

40. *Id.*

41. *Id.*

42. See Sam Kessler & Sage D. Young, *The LUNA and UST Crash Explained in 5 Charts*, COINDESK (May 11, 2022, 1:38 PM), <https://www.coindesk.com/layer2/2022/05/11/the-luna-and-ust-crash-explained-in-5-charts/> [<https://perma.cc/E797-XS3V>] (explaining that Anchor offered a yield of 20% to users who deposit their UST on its platform and "Anchor was home to 75% of UST's entire circulating supply").

43. Daniel Van Boom, *Crypto Crash Continues as Lender Voyager Digital Files for Bankruptcy*, CNET (July 6, 2022, 7:33 PM), <https://www.cnet.com/personal-finance/crypto/crypto-contagion-continues-as-lender-voyager-digital-files-for-bankruptcy/> [<https://perma.cc/63CE-HGQ3>].

44. Wayne Duggan, *Celsius Crypto Meltdown: A Crypto Lender in Crisis*, FORBES ADVISOR (Oct. 4, 2022, 1:17 PM), <https://www.forbes.com/advisor/investing/cryptocurrency/what-is-celsius/> [<https://perma.cc/ZQT9-2AJH>].

45. *Id.*

46. *Id.*

47. *Id.*

48. *Id.*

While Celsius crashed, another crypto platform for lending, buying, and trading—Voyager Digital—also folded. Voyager was a retail-facing crypto platform that accepted digital assets from users as deposits and loaned digital assets to traders and firms.⁴⁹ One of Voyager’s institutional clients was the crypto hedge fund Three Arrows Capital (“3AC”), a Singapore-based entity that managed \$10 billion back in March 2022 before its own collapse.⁵⁰ 3AC defaulted on a \$650 million loan from Voyager, and soon the collapse of 3AC led to Voyager’s own filing for bankruptcy.⁵¹

Joining Voyager, other platforms like BlockFi and Genesis filed for bankruptcy after reporting their spectacular losses associated with both 3AC and FTX eruptions.⁵² FTX was the second largest exchange platform for all things crypto with a market capitalization of \$30 billion before it imploded and filed for bankruptcy on November 11, 2022.⁵³ BlockFi, a crypto lender, became the first large institutional victim of the FTX’s colossal collapse and filed for bankruptcy on November 28, 2022.⁵⁴ Genesis, a crypto trading and lending platform, which severely exposed itself through a massive loan of \$2.36 billion to 3AC, also met its demise shortly after FTX’s explosion.⁵⁵ These companies’ transactions were

49. Danny Nelson & David Z. Morris, *Behind Voyager’s Fall: Crypto Broker Acted Like a Bank, Went Bankrupt*, COINDESK (May 11, 2023, 12:22 PM), <https://www.coindesk.com/layer2/2022/07/12/behind-voyagers-fall-crypto-broker-acted-like-a-bank-went-bankrupt/> [https://perma.cc/8TUL-TKSX].

50. *Id.*

51. Van Boom, *supra* note 43 (“Voyager Digital holds billions of dollars worth of crypto assets and is the latest lender to suspend withdrawals.”).

52. Ian Allison & Danny Nelson, *Genesis Faces ‘Hundreds of Millions’ in Losses as 3AC Exposure Swamps Crypto Lenders*, COINDESK (May 11, 2023, 11:19 AM), <https://www.coindesk.com/business/2022/06/29/genesis-faces-hundreds-of-millions-in-losses-as-3ac-exposure-swamps-crypto-lenders-sources/> [https://perma.cc/TE8S-J3CD] (reporting that the trading colossus “suffered nine-figure losses partly through exposure to Three Arrows Capital and Babel Finance”). Genesis froze its users’ accounts in November 2022 and subsequently filed for bankruptcy protection. Danny Nelson, *Genesis Claims \$5.1B in Liabilities in First-Day Bankruptcy Filing*, COINDESK (May 9, 2023, 12:06 AM), <https://www.coindesk.com/business/2023/01/20/genesis-claims-51b-in-liabilities-in-first-day-bankruptcy-filing/> [https://perma.cc/NHB3-TMFF]; David Yaffe-Bellany, *Genesis, a Crypto Lending Firm, Files for Bankruptcy*, N.Y. TIMES (Jan. 20, 2023), <https://www.nytimes.com/2023/01/20/technology/genesis-bankruptcy-crypto.html> [https://perma.cc/YY9A-Z7CG] (reporting that BlockFi, a crypto lender, filed for bankruptcy in November 2022 as the first institutional victim of FTX’s collapse).

53. Eric Mack, *The Fall of FTX and Sam Bankman-Fried: A Timeline*, CNET (Feb. 24, 2023, 2:03 PM), <https://www.cnet.com/personal-finance/crypto/the-fall-of-ftx-and-sam-bankman-fried-a-full-timeline-of-events/> [https://perma.cc/F4MS-KJW4] (“In November, a series of revelations and Machiavellian chess moves by Binance, FTX’s biggest competitor, led to the collapse of FTX, the dethroning of Bankman-Fried as a leader in not only the crypto world, but also the philanthropic niche known as effective altruism.”).

54. Yaffe-Bellany, *supra* note 52 (reporting that BlockFi, a crypto lender, filed for bankruptcy in November 2022 as the first institutional victim of FTX’s collapse); Dan Ashmore, *What Does the BlockFi Bankruptcy Mean For Crypto?*, FORBES (Nov. 29, 2022, 3:16 PM), <https://www.forbes.com/advisor/investing/cryptocurrency/blockfi-bankruptcy/> [https://perma.cc/7FBG-5E74] (reporting that BlockFi encountered troubles “with a liquidity crisis in June during the collapse of crypto hedge fund Three Arrows Capital” in June 2022 and then “significant exposure to FTX” that led to the bankruptcy filing after FTX’s implosion).

55. Kate Irwin, *Bankrupt Three Arrows Capital Owes \$3.5B to Creditors, Including \$2.3B to Genesis*, DECRYPT (July 18, 2022), <https://decrypt.co/105416/bankrupt-three-arrows-capital-owes-3-5b-to-creditors-including-2-3b-to-genesis> [https://perma.cc/9P97-J9H8]; *Crypto Exchange Genesis Discloses Exposure to Bankrupt Three Arrows Capital*, REUTERS (July 6, 2022, 4:15 PM), <https://www.reuters.com/technology/crypto-exchange-genesis-discloses-exposure-bankrupt-three-arrows-capital-2022-07-06/> [https://perma.cc/6LQC-BW

interconnected: like dominoes they dramatically fell, taking with them their users and investors.⁵⁶

The crypto winter brought losses as evidenced by bankruptcy filings of giant companies in the crypto world. Their stocks are now worthless, along with their coins and tokens. Outside of the exchange and lending platforms, other crypto companies also faced worthlessness. For instance, Core Scientific, one of the largest publicly traded crypto mining companies in the United States, collapsed on December 20, 2022.⁵⁷ The company's stock dove 98% in 2022 as crypto prices plunged and the cost of energy rose to render mining unbearably challenging.⁵⁸ Heading towards a bankruptcy filing, the company informed its common stock shareholders that their holding could suffer "a total loss."⁵⁹ The company had previously enjoyed a \$4.3 billion valuation in July 2021, but saw the valuation evaporate after it went public and faced a market capitalization drop to \$78 million in December 2022.⁶⁰

The staggering losses that occurred before and during the crypto winter reveal that there are different types of losses. In addition to the losses suffered by investors (holding worthless digital assets or watching their investments eviscerated by crypto exchange collapses), lenders, bank-like institutions, and miners, some crypto investors suffered different types of losses stemming from pump-and-dump schemes, fraudulent transactions, forgotten passwords, and abandonments.⁶¹

The FTX implosion exposes a complex web of fraudulent transactions where embezzlements, thefts of customer money, insider trading, self-dealing, and a complete lack of corporate governance reigned supreme until the entire empire, built like a house of cards, collapsed. The FTX implosion reveals that more than 5 million investors once believed in FTX's myths and invested their

ZG]; Ryan Weeks & Yogita Khatri, *Crypto Lender Genesis Lent \$2.36 Billion to Three Arrows Capital*, BLOCK (July 18, 2022) <https://www.theblock.co/post/158167/crypto-lender-genesis-lent-2-36-billion-to-three-arrows-capital> [https://perma.cc/FRX4-SFCM]; Yaffe-Bellany, *supra* note 52 (reporting that Genesis could not survive any longer due to the fallout from FTX's explosion and filed for bankruptcy in January 2023).

56. Matt Phillips, *Crypto Dominoes Fall in the Wake of FTX's Collapse*, AXIOS (Nov. 17, 2022), <https://www.axios.com/2022/11/17/crypto-dominoes-ftx-collapse-winklevoss-gemini-blockfi> [https://perma.cc/T6NL-TBNQ]; Jocelyn Yang, *FTX Contagion Revives Dreaded 2022 Crypto Knell—the 'Withdrawal Halt'*, COINDESK (Nov. 23, 2022), <https://www.coindesk.com/markets/2022/11/23/ftx-contagion-revives-dreaded-2022-crypto-knell-the-withdrawal-halt/> [https://perma.cc/W6SK-5GQW] ("The downfall of the FTX exchange has caused a domino effect: a growing list of crypto firms, such as BlockFi and Genesis, halting withdrawals. CoinDesk counted 16 of these announcements just this year.").

57. MacKenzie Sigalos, *Bitcoin Miner Core Scientific Is Filing for Chapter 11 Bankruptcy—But Plans to Keep Mining*, CNBC (Dec. 21, 2022, 6:58 PM), <https://www.cnn.com/2022/12/20/bitcoin-miner-core-scientific-filing-for-bankruptcy-will-keep-mining.html> [https://perma.cc/C3LY-RUH6].

58. *Id.*

59. *Id.*

60. *Id.*

61. See Mailer, *supra* note 5 ("Crypto is valued for its anonymity, but it's also this anonymity that has made exchanges an easy target for criminals and allowed for management to get away with shady practices.").

financial resources without hesitation.⁶² Large institutions like Sequoia and Apple could withstand the losses but not the small ordinary investors.⁶³

Between the institutional investors and small ordinary investors are the celebrities whose investments in FTX were in the tens of millions. Tom Brady's FTX shares were once worth \$45 million and Gisele Bündchen's \$25 million; they both pitched FTX in a YouTube advertisement.⁶⁴ Other celebrities and high-profile investors in FTX include NBA champion Golden State Warriors' Stephen Curry, Jacksonville Jaguars quarterback Trevor Lawrence, Major League Baseball's Shohei Ohtani, tennis star Naomi Osaka, and Shark Tank's Kevin O'Leary.⁶⁵ These influencers brought along those who had very modest means and much more to lose, like one FTX customer who deposited his home savings in accounts held by FTX.⁶⁶ The construction site manager from California poured \$85,000 of fiat money along with \$55,000 worth of bitcoin and \$10,000 in altcoins into his account at FTX.⁶⁷ When FTX folded, he quickly attempted to withdraw his money but could not take it all out.⁶⁸ He lost \$60,000 in savings for his new family home but could not tell friends because of the embarrassment.⁶⁹ Other small investors hoping to save for homes experienced similar loss. A data analyst who was lured by the euphoria of crypto trading began to trade on FTX.⁷⁰ The analyst was unable to withdraw money from her virtual wallet when FTX froze all digital assets.⁷¹ A young tech worker with modest means who deposited his funds with FTX estimated that it would take him many years to save the amount he lost in the fiasco.⁷²

62. Elizabeth Howcroft & Medha Singh, *FTX Customers Are Still Grappling with Crypto Platform's Collapse*, REUTERS (Oct. 6, 2023), <https://www.reuters.com/technology/ftx-customers-are-still-grappling-with-crypto-platforms-collapse-2023-10-05> [<https://perma.cc/HMA9-FXDP>] ("Currently, around \$30 billion to \$35 billion worth of crypto is locked up in cryptocurrency bankruptcies, with around 15 million people affected, according to Xclaim. There was about \$16 billion in crypto stuck in FTX when it collapsed, according to Xclaim."); *FTX Revenues and Usage Statistics*, DEVTECHNOSYS, <https://devtechnosys.com/data/ftx-statistics.php> (last visited Mar. 19, 2024) [<https://perma.cc/4STB-ALRY>] ("According to FTX statistics, a total of 1.2 million users are registered on FTX's platforms, but the company hasn't updated this number since the start of 2021.").

63. *Id.*

64. Weston Blasi, *Tom Brady's FTX Shares Were Once Worth \$45 Million. Will He Lose It All?*, MARKETWATCH (Feb. 1, 2023, 9:31 AM), <https://www.marketwatch.com/story/tom-brady-steph-curry-and-kevin-oleary-set-to-lose-big-from-ftx-bankruptcy-filing-11668205535> [<https://perma.cc/WLP2-E9CM>].

65. *Id.* (reporting that Stephen Curry "was also made a global ambassador for FTX, and given an equity stake in the company in 2021").

66. Jedidajah Otte & Clea Skopeliti, *The Money Is Gone: People Who Lost Out in FTX's Collapse*, GUARDIAN (Nov. 19, 2022, 8:00 PM) <https://www.theguardian.com/technology/2022/nov/19/the-money-is-gone-people-who-lost-out-in-ftxs-collapse> [<https://perma.cc/Q8UD-DQ82>] ("Smaller investors tell how they found themselves unable to withdraw money as rumors of the exchange's troubles spread.").

67. *Id.*

68. *Id.*

69. *Id.*

70. *Id.*

71. *Id.*

72. *Id.*

B. Ponzi, Pump-and-Dump, and Other Fraudulent Schemes

Before the crypto winter and the 3AC and FTX contagion, crypto losses associated with fraudulent transactions were widely reported, but failed to attract substantial media attention.⁷³ Perhaps the losses from fraudulent schemes were smaller. Investors flocked to cryptocurrency for new approaches to investments and the promises of anonymity, but they encountered many fraudulent schemes, including Ponzi, pump-and-dump, and rug-pull scams that have rendered their investments worthless.⁷⁴

Investors in the United States lost in excess of \$2 billion when BitConnect ceased its trading platforms in early 2018.⁷⁵ In February 2022, the Department of Justice announced an indictment charging BitConnect founder Satish Kumbhani in connection with orchestrating a global \$2.4 billion cryptocurrency Ponzi scheme.⁷⁶ BitConnect operated a pyramid scheme in the form of the BitConnect Lending and BitConnect Staking programs, wherein investors were required to use either bitcoin or fiat currency to purchase BitConnect-created currency called BitConnect Coins (“BCC”).⁷⁷ The BitConnect Lending program presented itself as an opportunity for investors to lend their BCC back to BitConnect which in turn employed a trading algorithm to exploit the volatility of the bitcoin market.⁷⁸ Under the BitConnect Staking program, the investors could “stake” their BCC by holding them in digital wallets created by BitConnect.⁷⁹ The investors were guaranteed handsome returns of 3,700% annually on their participation in both of BitConnect investment programs.⁸⁰ To reach many investors, BitConnect cultivated a multilevel affiliate marketing system in that affiliates received commission for referrals and a portion of investments made by subsequent investors.⁸¹ BitConnect attracted many investors, but the fraudulent scheme could not last and BitConnect closed both trading and lending platforms as the price of BCC fell nearly 90% in value.⁸² At the time of filing of the complaint, the plaintiffs noted that BCC was effectively useless.⁸³ By January 2023,

73. See Mailer, *supra* note 5.

74. *Id.* (“Crypto is valued for its anonymity, but it’s also this anonymity that has made exchanges an easy target for criminals and allowed for management to get away with shady practices.”).

75. *In re BitConnect Sec. Litig.*, No. 18-cv-80086, 2019 WL 9104318, at *2 (S.D. Fla. Aug. 23, 2019).

76. Press Release, Off. of Pub. Affs., U.S. Dep’t of Just., BitConnect Founder Indicted in Global \$2.4 Billion Cryptocurrency Scheme (Feb. 25, 2022).

77. *BitConnect*, 2019 WL 9104318, at *1.

78. *Id.*

79. *Id.*

80. *Id.* See Jonathan Stempel, *U.S. SEC Charges BitConnect Founder With \$2 Bln Cryptocurrency Fraud*, REUTERS (Sept. 1, 2021), <https://www.reuters.com/technology/us-sec-sues-bitconnect-founder-over-alleged-2-bln-cryptocurrency-fraud-2021-09-01/> [<https://perma.cc/75XP-Q9F5>] (reporting that BitConnect promised returns of 40% per month and 3,700% annualized gains).

81. *BitConnect*, 2019 WL 9104318, at *2.

82. *Id.*

83. *Id.*

800 victims of the \$2.4 billion fraudulent scheme shared a pittance of \$17 million in restitution, but thousands of other affected investors received none.⁸⁴

Crypto loss stories do show up in litigation. For example, in *Hunichen v. Atonomi LLC*, the defendants minted ATMI tokens and sold them during an initial coin offering (“ICO”) period for a total of \$25 million.⁸⁵ During the first half of 2018, Atonomi held a private pre-sale of ATMI tokens wherein purchasers entered into a Simple Agreement for Future Tokens (“SAFT”) which identified the purchasers as accredited investors.⁸⁶ Eighty people, the putative class members to the lawsuit, purchased ATMI tokens under SAFT, and were promised additional bonus tokens.⁸⁷ Atonomi subsequently conducted a public sale of the ATMI tokens on June 6, 2018, where 14,000 people participated in the public sale without signing a SAFT.⁸⁸ According to the plaintiffs, Atonomi raised the funds through token sales “to retire a debt owed to” another entity within the defendants’ scheme.⁸⁹ The plaintiffs asserted that the ATMI tokens were worthless as others quickly engaged in “dumping tokens” after “they were unlocked, causing a chain reaction and the value of the tokens to crash.”⁹⁰ Specifically, the plaintiffs noted that instead of developing blockchain technology to enable security for Internet of Things devices, the defendants unlocked the tokens for trading and developed no substantive utility.⁹¹ Very soon, 99% of ATMI token value evaporated.⁹²

As a further example, the Securities and Exchange Commission brought an action against PlexCorps for engaging in a fraudulent fundraising scheme of initial coin offerings that amassed more than \$15 million from tens of thousands of investors who purchased PlexCoin Tokens.⁹³ PlexCorps promised potential purchasers that they would enjoy a return on token investment of 1,354% within twenty-nine days.⁹⁴ Likewise, in 2014 the SEC brought an action against Trendon T. Shavers for operating an online investment scheme called Bitcoin Savings and Trust (“BTCST”) where he falsely promised BTCST investors significant returns by trading Bitcoin against the U.S. dollar.⁹⁵ But Shavers used the new investment money to pay outstanding BTCST investments.⁹⁶ In some

84. Jesse Coghlan, *800 Victims of “Massive” BitConnect Fraud to Receive \$17M Restitution*, COINTELEGRAPH (Jan. 13, 2023), <https://cointelegraph.com/news/800-victims-of-massive-bitconnect-fraud-to-receive-17m-restitution> [https://perma.cc/3X57-QTUY] (“The millions will be distributed among the select number of victims, but thousands more were impacted by the \$2.4 billion fraudulent scheme.”).

85. *Hunichen v. Atonomi LLC*, No. C19-0615-RAJ-SKV, 2021 WL 5858811, at *2 (W.D. Wash. Nov. 12, 2021).

86. *Id.* at *1.

87. *Id.*

88. *Id.* at *2.

89. *Id.* at *1.

90. *Id.* at *2.

91. *Hunichen v. Atonomi LLC*, No. C19-0615-RAJ-MAT, 2019 WL 7758597, at *2 (W.D. Wash. Oct. 28, 2019).

92. *Id.*

93. *SEC v. PlexCorps*, No. 17-cv-7007, 2018 WL 4299983, at *1 (E.D.N.Y. Aug. 9, 2018).

94. *Id.* at *2.

95. *SEC v. Shavers*, No. 4:13-cv-00416, 2022 WL 14318269, at *1 (E.D. Tex. Oct. 24, 2022).

96. *Id.*

instances, Shavers diverted new investments for his own personal purposes.⁹⁷ The court found Shavers and BTCST were liable for disgorgement and prejudgment interest in a total of \$40 million.⁹⁸

Likewise, in *Lagemann v. Spence*, twenty-two investors collectively pooled \$3 million in cryptocurrency and transferred it to the defendants, who promised investors “at least ‘20x’ growth” in the first year.⁹⁹ The defendants had represented to the investors that the funds utilized a proprietary trading methodology for lucrative returns on investments and had actively solicited investors around the world.¹⁰⁰ The funds soon lost significant value and the investors learned that the defendants were operating a Ponzi scheme; the investors lost all their investments.¹⁰¹

In *Rostami v. Open Props, Inc.*, the plaintiff alleged that the defendant’s Props Tokens sold to investors in exchange for U.S. dollars or other cryptocurrencies became completely worthless because the tokens could no longer be traded.¹⁰² The plaintiff purchased the Props Tokens during the ICO sale period in 2017 pursuant to purchase agreements called “Simple Agreement for Future Tokens.”¹⁰³ The defendant’s whitepapers and promotional materials made numerous representations about the decentralized platform.¹⁰⁴ But, the defendant subsequently informed the holders of Props Tokens that no U.S. exchange would list the Props Tokens.¹⁰⁵

In another fraudulent scheme, one crypto company created impressively-credentialed fictional executives and enlisted well-known influencers to promote their tokens prior to and during the ICO period.¹⁰⁶ Ordinary investors, dazzled by the hype and promotion, purchased the tokens, and while those who cashed out quickly at the height of the tokens made some money, the majority of investors suffered as they held worthless digital assets. Centra Tech, founded in May 2016, purported to mint CTR tokens in an ICO that would raise funds for many projects, including a debit card backed by Visa and Mastercard that enabled users to instantly use cryptocurrencies to make purchases.¹⁰⁷ Centra Tech’s ICO period, between July 23, 2017, and April 20, 2018, raised \$32 million from thousands of investors.¹⁰⁸ It turned out that Centra Tech’s executives were fictional: Centra tech had created LinkedIn profiles for its fictional executives using pictures of real people who had no relationship with the company.¹⁰⁹ To deceive

97. *Id.*

98. *Id.*

99. *Lagemann v. Spence*, No. 18-cv-12218, 2020 WL 5754800, at *1–2 (S.D.N.Y. May 18, 2020).

100. *Id.* at *2.

101. *Id.*

102. *Rostami v. Open Props, Inc.*, No. 22-cv-3326, 2023 WL 137748, at *2 (S.D.N.Y. Jan. 9, 2023).

103. *See id.* at *1.

104. *Id.* at *2.

105. *Id.*

106. *Rensel v. Centra Tech, Inc.*, No. 17-24500-Civ-Scola, 2019 WL 2085839, at *1 (S.D. Fla. May 13, 2019).

107. *Id.*

108. *Id.*

109. *Id.*

investors further, Centra Tech also recruited Floyd Mayweather, a professional boxer,¹¹⁰ and Khaled Khaled, a well-known celebrity and music producer, to promote the company's tokens.¹¹¹

C. *Crypto Theft*

Theft of crypto assets is rampant. Criminals have been employing hacking techniques and fraudulent misrepresentations to exploit computer and network vulnerabilities and seize tokens belonging to others. In the year 2022 alone, crypto investors lost \$3.8 billion to hackers.¹¹² That figure reflected an increase from \$3.3 billion in losses from crypto hacks in 2021.¹¹³ In the month of October 2022, the crypto world witnessed the largest loss of \$775.7 million in tokens stolen by criminals in thirty-two separate attacks.¹¹⁴ In particular, decentralized finance ("DeFi") protocols accounted for 82% or \$3.1 billion of all crypto assets stolen by hackers in 2022.¹¹⁵ Hackers targeted DeFi protocols where users borrow, lend, or make transactions in cross-chain bridge applications without an intermediary.¹¹⁶ For instance, hackers attacked the Binance exchange platform by exploiting security flaws within the cross-chain bridge transactions; hackers took \$570 million in cryptocurrency from Binance.¹¹⁷ Nomad, a token bridge where users can send and receive tokens between Avalanche, Ethereum, Evmos, Moonbeam, and Milkomeda C1 blockchains, lost \$200 million in crypto from hacks in August 2022.¹¹⁸ Hackers assailed the two-factor authentication system at

110. *Id.* at *2:

[O]n September 14, 2017, Mayweather posted a tweet with a picture of himself holding a Centra Tech debit card and captioned the picture: "Spending bitcoins Ethereum and other types of cryptocurrency in Beverly Hills . . ." On September 18, 2017, Mayweather tweeted "Centra's (CTR) ICO starts in a few hours. Get yours before they sell out, I got mine."

111. *Id.*:

[I]n September 2017, Khaled posted a picture of himself holding the Centra Tech debit card on his Instagram account and the caption read, "I just received my titanium centra debit card. The Centra Card & Centra Wallet app is the ultimate winner in Cryptocurrency debit cards powered by CTR tokens! Use your bitcoins, 3thereum, and more cryptocurrencies in real time across the globe. This is a game changer here. Get your CTR tokens now!"

112. Cheyenne DeVon, *Crypto Investors Lost Nearly \$4 Billion to Hackers in 2022*, CNBC (Feb. 4, 2023, 9:00 AM), <https://www.cnbc.com/2023/02/04/crypto-investors-lost-nearly-4-billion-dollars-to-hackers-in-2022.html> [<https://perma.cc/4BHF-JDUN>].

113. *Id.* (reporting the crypto hacks issued by Chainalysis).

114. *Id.*

115. *Id.*

116. *Id.* See also Khristopher J. Brooks, *Hackers Have Stolen Record \$3 Billion in Cryptocurrency This Year*, CBS NEWS (Oct. 13, 2022, 4:16 PM), <https://www.cbsnews.com/news/cryptocurrency-theft-hacker-chain-alysis-blockchain-crime/> [<https://perma.cc/H446-7DZN>]; Leo Schwartz, *The 5 Biggest Crypto Hacks of 2022*, FORTUNE (Dec. 30, 2022, 5:30 AM), <https://fortune.com/crypto/2022/12/30/5-biggest-crypto-hacks-2022/> [<https://perma.cc/P3BA-PBZX>].

117. *World's Largest Crypto Exchange Hacked with Possible Losses of \$500m*, GUARDIAN (Oct. 7, 2022, 12:06 PM), <https://www.theguardian.com/technology/2022/oct/07/binance-crypto-hack-suspended-operations> [<https://perma.cc/6DLJ-LDX3>] ("Binance, the latest crypto company to experience a targeted hack, temporarily suspends transactions and the transfer of funds.").

118. Carly Page, *Hackers Abuse 'Chaotic' Nomad Exploit to Drain Almost \$200M in Crypto*, TECHCRUNCH (Aug. 2, 2022, 7:03 AM), <https://techcrunch.com/2022/08/02/nomad-chaotic-exploit-crypto/> [<https://perma.cc/YXZ4-45Y8>].

Crypto.com to withdraw funds from 483 customer accounts.¹¹⁹ Hackers also took \$100 million from Harmony in June 2022.

The popular blockchain game Axie Infinity suffered a major setback when its Ronin Network faced a \$625 million crypto hack after an attacker used hacked private keys to forge fake withdrawals.¹²⁰ Though Ronin installed nine validators that required five signatures for withdrawals, all failed to protect against hacks because “the attacker found a backdoor” to exploit the vulnerability.¹²¹ Similarly, hackers took \$325 million in crypto assets from the Wormhole cryptocurrency platform after an attacker forged a valid signature for a transaction upon discovering a security flaw.¹²² Overall, crypto hacks have become so frequent that Investopedia published an article naming the largest hacks committed from 2018 to 2022.¹²³

Some crypto firms have attempted to unmask hackers by utilizing the judicial system to serve subpoenas on intermediaries. For example, in *SingularDTV, GmbH v. Doe*, the plaintiff commenced an action against unknown defendants who were alleged to have unlawfully hacked the plaintiff’s computer system and fraudulently obtained SNGLS tokens.¹²⁴ The plaintiff sought the defendant’s

119. Corin Faife, *Crypto.com Admits Over \$30 Million Stolen by Hackers*, VERGE (Jan. 20, 2022, 7:23 AM), <https://www.theverge.com/2022/1/20/22892958/crypto-com-exchange-hack-bitcoin-ethereum-security> [https://perma.cc/2D4V-25ZX]; Thomas Brewster, *Crypto.com Admits \$35 Million Hack*, FORBES (Jan. 20, 2022, 10:40 AM), <https://www.forbes.com/sites/thomasbrewster/2022/01/20/cryptocom-admits-35-million-hack/?sh=27a5191c7513> [https://perma.cc/9NSP-CLQS]; Anita Ramaswamy, *2FA Compromise Led to \$34M Crypto.com Hack*, TECHCRUNCH (Jan. 20, 2022, 12:13 PM), <https://techcrunch.com/2022/01/20/2fa-compromise-led-to-34m-crypto-com-hack/> [https://perma.cc/3DB6-N7Z2].

120. Andrew Thurman, *Axie Infinity’s Ronin Network Suffers \$625M Exploit*, COINDESK (May 11, 2023, 11:47 AM), <https://www.coindesk.com/tech/2022/03/29/axie-infinitys-ronin-network-suffers-625m-exploit/> [https://perma.cc/G4KF-VDAR].

121. *Id.* See also Adi Robertson, *Axie Infinity’s Blockchain Was Reportedly Hacked Via a Fake LinkedIn Job Offer*, VERGE (July 6, 2022, 11:57 AM), <https://www.theverge.com/2022/7/6/23196713/axie-infinity-ronin-blockchain-hack-phishing-linkedin-job-offer> [https://perma.cc/ES9Z-6JSG].

122. Corin Faife, *Wormhole Cryptocurrency Platform Hacked for \$325 Million After Error on GitHub*, VERGE (Feb. 3, 2022, 11:43 AM), <https://www.theverge.com/2022/2/3/22916111/wormhole-hack-github-error-325-million-theft-ethereum-solana> [https://perma.cc/26FU-Y8ZY]; Mark Kolakowski, *Crypto Worth Over \$320 Million Taken in Wormhole Hack*, INVESTOPEDIA (Feb. 3, 2022), <https://www.investopedia.com/crypto-theft-of-usd320-million-wormhole-hack-5218062> [https://perma.cc/QZ54-8E7E] (reporting that Wormhole was able to later retrieve the stolen assets).

123. Kevin George, *The Largest Cryptocurrency Hacks So Far*, INVESTOPEDIA (Dec. 2, 2023), <https://www.investopedia.com/news/largest-cryptocurrency-hacks-so-far-year/> [https://perma.cc/W92N-3VCK]. See also *The Coincheck Hack and the Issue with Crypto Assets on Centralized Exchanges*, REUTERS (Jan. 29, 2018, 1:39 AM), <https://www.reuters.com/article/us-japan-cryptocurrency-q-a/the-coincheck-hack-and-the-issue-with-crypto-assets-on-centralized-exchanges-idUSKBN1FI0K4> [https://perma.cc/BVT2-LYMS] (“Hackers have stolen roughly 58 billion yen (\$532.6 million) from Tokyo-based cryptocurrency exchange Coincheck Inc., raising questions about security and regulatory protection in the emerging market of digital assets.”); Alex Hern, *A History of Bitcoin Hacks*, GUARDIAN (Mar. 18, 2014), <https://www.theguardian.com/technology/2014/mar/18/history-of-bitcoin-hacks-alternative-currency> [https://perma.cc/CAN8-5WXA] (“25,000 bitcoins were stolen from their wallet after hackers compromised the Windows computer they were using. Even at the time, that sum was worth more than \$500,000; it would now be worth a little less than £10m.”).

124. *SingularDTV, GmbH v. Doe*, No. 1:21-cv-06000-VEC, 2021 WL 3668161, at *1 (S.D.N.Y. Aug. 16, 2021).

name and identifying information from Google and crypto exchange platform Binance, as well as information about the stolen crypto assets from Binance.¹²⁵

D. Forgotten Passwords and Other Lost Possessions

Some crypto investors have suffered losses because they forgot their passwords or mislaid their own private keys. They watched in pain as the value of their lost crypto assets rose but remained beyond their reach. For instance, Stefan Thomas was an early adopter of bitcoin: he earned 7,002 bitcoins, making him a multimillionaire, but he lost the password to his IronKey, the USB hard drive that contains the digital wallet that holds his bitcoins.¹²⁶ Thomas has only two out of ten guesses left to unlock his fortune worth \$220 million, and years ago he lost the paper on which he wrote down his password.¹²⁷ Thomas is not the only bitcoin owner who has lost the password to a fortune.¹²⁸ Brad Yasar of Los Angeles owns a number of desktop computers containing thousands of Bitcoin he minted: he cannot reach his digital assets because he forgot his passwords and, out of frustration, has had to store his computers away, out of sight.¹²⁹ Gabriel Abed asked a colleague to reformat his laptop, which contained Abed's private keys to his Bitcoin wallet and 800 Bitcoin worth about \$25 million.¹³⁰ Abed can no longer access his fortune.¹³¹

About 20% of the existing Bitcoin with a value of about \$140 billion is either in lost or stranded wallets.¹³² Unlike accounts with banks where customers can reset their passwords, Bitcoin "has no company to provide or store passwords," a system that poses great risk to owners who forget their passwords.¹³³ Recovery is nonexistent because only the creator of the password knows the password.¹³⁴

In addition to password problems, investors have lost crypto assets by sending their cryptocurrency to the wrong wallets.¹³⁵ In some instances, the investors

125. *Id.*

126. *This Man Owns \$321M in Bitcoin—But He Can't Access It Because He Lost His Password*, CBC (Jan. 15, 2021, 6:02 PM), <https://www.cbc.ca/radio/asithappens/as-it-happens-friday-edition-1.5875363/this-man-owns-321m-in-bitcoin-but-he-can-t-access-it-because-he-lost-his-password-1.5875366#> [https://perma.cc/AA75-2Y64].

127. Nathaniel Popper, *Lost Passwords Lock Millionaires Out of Their Bitcoin Fortunes*, N.Y. TIMES (Jan. 12, 2021), <https://www.nytimes.com/2021/01/12/technology/bitcoin-passwords-wallets-fortunes.html> [https://perma.cc/F6KZ-YPGP].

128. *Id.*

129. *Id.*

130. *Id.*

131. *Id.*

132. *Id.*

133. *Id.*

134. *Id.*

135. Dana J. Wright, *How to Recover Crypto You Accidentally Sent to the Wrong Network Address*, MEDIUM (Dec. 18, 2021), <https://danajwright.medium.com/how-to-recover-crypto-you-accidentally-sent-to-the-wrong-network-address-b4eb167a8204> [https://perma.cc/69BG-CRWK] (describing how tokens failed to arrive in a wallet upon completion of the transaction because the networks that support the transfer were mismatched).

may be able to retrieve their digital assets if their coins are not an obscure type.¹³⁶ But in other instances, the sender cannot do much to retrieve their assets, as indicated by Coinbase's Help Center:

Due to the irreversible nature of cryptocurrency protocols, transactions can't be cancelled or reversed once initiated. If you sent funds to the wrong address, you'll need to contact the receiving party and ask for their cooperation in returning the funds. If you do not know the owner of the address, there are no possible actions you can take to retrieve the funds.¹³⁷

Many investors who have forgotten their passwords have also lost much sleep and live in agony.¹³⁸ They browse the internet scouting for information regarding how to recover their bitcoins,¹³⁹ a course of action that might put them at risk of re-victimization by unscrupulous schemers who promise bitcoin recovery.¹⁴⁰

In summary, long before the crypto winter, a wide range of ordinary and accredited investors in crypto suffered massive losses due to hacks, fraudulent schemes, and forgotten passwords. The crypto winter magnified such losses further as the crypto contagion affected multiple companies engaged in complex crypto dealings, initiating an uncontrollable chain of collapse. As different government agencies hastened to enforcement in early 2023, more victims were revealed, and further losses were tallied.¹⁴¹

136. *Id.* (describing how to recover coins with certain steps and documentation).

137. *I Sent Funds to the Wrong Address. How Do I Get Them Back?*, COINBASE HELP, <https://help.coinbase.com/en/coinbase/trading-and-funding/sending-or-receiving-cryptocurrency/i-sent-funds-to-the-wrong-address-how-do-i-get-them-back> (last visited Mar. 19, 2024) [<https://perma.cc/LAC9-W7R2>]. Coinbase, founded in 2012 as an exchange crypto platform, has more than 100 million users and \$101 billion in assets. *About Coinbase*, COINBASE, <https://www.coinbase.com/about> (last visited Mar. 19, 2024) [<https://perma.cc/5ZCX-W9S8>].

138. Onkar Singh, *How to Control Stress and Depression in a Crypto Winter*, COINTELEGRAPH (July 20, 2022), <https://cointelegraph.com/news/how-to-control-stress-and-depression-in-a-crypto-winter> [<https://perma.cc/B5ZU-2WLE>] ("When you keep playing with crypto projects despite losing your sleep, appetite or even money, you are exhibiting the symptoms of crypto addiction [I]nexperienced crypto investors are susceptible to emotional pressure from crypto losses.").

139. See Dean Takahashi, *Father and Son Help Cryptocurrency Owners Recover Their Lost Assets*, VENTURE BEAT (Jan. 2, 2023, 8:00 AM), <https://venturebeat.com/security/how-a-father-and-son-are-helping-cryptocurrency-users-recover-their-lost-assets/#> [<https://perma.cc/NQ67-SBLC>].

140. *Don't Be Re-Victimized by Recovery Frauds*, CFTC, <https://www.cftc.gov/LearnAndProtect/AdvisoriesAndArticles/RecoveryFrauds.html> (last visited Mar. 19, 2024) [<https://perma.cc/U5WP-9ZFQ>].

141. Emma Roth, *Terra Founder Do Kwon Charged with Fraud Over Its \$40 Billion Crypto Crash*, VERGE (Feb. 16, 2023), <https://www.theverge.com/2023/2/16/23603360/terra-luna-securities-fraud-sec-do-kwon> [<https://perma.cc/ZD9B-8T87>]; Martin Young, *Bithumb Owner Arrested in South Korea Over Alleged Embezzlement*, COINTELEGRAPH (Feb. 2, 2023), <https://cointelegraph.com/news/bithumb-owner-arrested-in-south-korea-over-alleged-embezzlement> [<https://perma.cc/3626-ZKAV>]; *Bitzlato Crypto Founder Charged with \$700m Financial Crimes*, BBC (Jan. 18, 2023), <https://www.bbc.com/news/business-64322576> [<https://perma.cc/KR4F-BFLG>].

III. APPLYING THE EXISTING TAX FRAMEWORK TO CRYPTO LOSSES

In the United States, the federal government derives the bulk of its revenues from an *income* tax.¹⁴² The main difficulty of an income tax is defining the base. What is income? Specifically, what economic benefits, receipts, and gains should be added, and what economic outlays, expenditures, and losses should be subtracted, in arriving at taxable income? As to benefits, receipts, and gains, the Supreme Court long ago adopted a broad rule: “undeniable accessions to wealth, clearly realized” are included in the income tax base unless Congress chooses to exempt them.¹⁴³ As to outlays, expenditures, and losses, the Supreme Court left the matter to Congress: allowable deductions are a “matter of legislative grace.”¹⁴⁴

As can be seen, Congress has considerable political power to decide what transactions factor into the income tax base. And since the inception of the modern income tax, it has exercised that power considerably. Today there are numerous statutory rules that exclude, or partially exclude, certain types of receipts or gains from the income tax base, although they represent clear accessions to wealth.¹⁴⁵ Similarly, there are numerous statutory rules that address the deductibility of various expenditures and losses.¹⁴⁶

There is one significant requirement for taxation, however: *realization* is generally a prerequisite to income for tax purposes.¹⁴⁷ The realization requirement is a principle of accounting that has important tax applications. It essentially determines the proper timing of taxation by telling us when income and deductions should be recorded.

For example, increases in the value of property are not taken into account for tax purposes when they accrue each year, but only when they are realized by

142. Ideally, a tax system should levy taxes commensurately with one's ability to pay those taxes. For a brief consideration, see MILLER & MAINE, *supra* note 22, at 5. For a history and critique of the ability-to-pay doctrine, see generally Stephen Utz, *Ability to Pay*, 23 WHITTIER L. REV. 867 (2002). To many commentators, income is a good index of ability to pay. See, e.g., Richard Goode, *The Economic Definition of Income*, in COMPREHENSIVE INCOME TAXATION 1–10 (Joseph Pechman ed., 1977).

143. *Comm'r v. Glenshaw Glass Co.*, 348 U.S. 426, 431 (1955). Section 61 of the Internal Revenue Code (hereinafter I.R.C. or Code) provides that gross income means “all income from whatever source derived,” unless excluded by law—it includes income realized in any form. The Supreme Court has frequently stated that this broad all-inclusive language was used by Congress to exert the full measure of its taxing power under the Sixteenth Amendment to the United States Constitution. *Glenshaw Glass Co.*, 348 U.S. at 432 n.11. All Section references are to the Internal Revenue Code of 1986, as amended, and the regulations promulgated thereunder unless otherwise indicated.

144. See *INDOPCO, Inc. v. Comm'r*, 503 U.S. 79, 84 (1992); *Deputy v. du Pont*, 308 U.S. 488, 493 (1940); *New Colonial Ice Co. v. Helvering*, 292 U.S. 435, 440 (1934).

145. See, e.g., I.R.C. §§ 101–140. Some statutory rules merely defer taxation of income to a later year. For example, earnings that are saved in retirement accounts are not taxed currently. Instead, those earnings are taxed years later when they are distributed from the accounts. In effect, taxation is deferred on that income until it is consumed, causing the income tax to resemble a consumption tax.

146. *Id.*

147. Recall *Glenshaw Glass Co.* defined income as “undeniable accessions to wealth, clearly realized.” *Glenshaw Glass Co.*, 348 U.S. at 431 (emphasis added). See *supra* note 143 and accompanying text.

a potentially taxable event (*e.g.*, when the taxpayer actually sells the property).¹⁴⁸ It is often suggested that the realization requirement rests on the idea that taxing someone on “paper gains” before the conversion of property to cash creates cash flow problems.¹⁴⁹ In any event, the realization requirement gives us consistency, objectivity, and certainty in tax.

The realization requirement applies not only to gains but also to losses. In other words, as with gains, losses are not taken into account for income tax purposes as they accrue each year.¹⁵⁰ They potentially produce tax consequences only when they are actually “sustained.”¹⁵¹ Thus, the mere decline in the value of assets is insufficient to create losses for tax purposes. Losses must be evidenced by “closed and completed transactions, fixed by identifiable events.”¹⁵²

With that introduction, we see that the deductibility of crypto losses under the current income tax framework requires two things: (1) a realization event fixing the claimed loss; and (2) specific statutory authorization for the claimed loss deduction. These requisites for loss deduction are addressed below. As the IRS treats convertible virtual currency as property, the tax principles governing property losses generally apply to crypto losses specifically.¹⁵³

A. “Realization” of Crypto Losses

Decreases in the value of cryptocurrencies are not taken into account for tax purposes as they accrue, but only when they are realized.¹⁵⁴ With respect to any property, realization usually does not occur until there has been an identifiable event—*i.e.*, a “sale or other disposition” of the property.¹⁵⁵ The phrase “sale or other disposition” is broad and includes most transactions producing a quid pro quo for the taxpayer. Treasury regulations provide examples, such as the conversion of property into cash, or the exchange of property for other property differing materially either in kind or in extent.¹⁵⁶ But there are various other

148. See *Eisner v. Macomber*, 252 U.S. 189, 190 (1920). There are some statutory exceptions. See, *e.g.*, I.R.C. § 1256 (annual mark-to-market requirements).

149. See, *e.g.*, *United States v. S.S. White Dental Mfg. Co.*, 274 U.S. 398, 401 (1927).

150. *Id.*

151. *Id.* This is specified in the Code provision (and the regulations thereunder) authoring tax deductions for certain uncompensated losses. See I.R.C. § 165(a) (“There shall be allowed as a deduction any loss *sustained* during the taxable year and not compensated for by insurance or otherwise.”) (emphasis added); Treas. Reg. § 1.165-1(b) (1960).

152. Treas. Reg. § 1.165-1(b) (1960).

153. See *supra* note 25 and accompanying text.

154. *White Dental Mfg. Co.*, 274 U.S. at 401 (“The statute obviously does not contemplate and the regulations forbid the deduction of losses resulting from the mere fluctuation in value of property owned by the taxpayer.”).

155. I.R.C. § 1001(a) (referring to the “sale or other disposition of property”).

156. Treas. Reg. § 1.1001-1(a) (2017) (“Except as otherwise provided in subtitle A of the Code, the gain or loss realized from the conversion of property into cash, or from the exchange of property for other property differing materially either in kind or in extent, is treated as income or as loss sustained.”).

identifiable events, such as casualties, thefts, and abandonments, which may suffice to sustain a loss.¹⁵⁷

1. *Third-Party, Quid Pro Quo Transactions*

The most obvious identifiable events for loss deduction purposes are those in which the taxpayer receives a quid pro quo. A taxpayer would clearly experience a realization event if he or she sold cryptocurrency for a price lower than paid. Assume, for example, that a taxpayer purchased Fakecoin in Year 1 for \$500 and sold that Fakecoin in Year 3 for \$300. The \$200 decline in Fakecoin value (which may have occurred in Years 1 and 2) would be realized (and, hence, potentially deductible from income) in Year 3—the year of sale. The measure of the loss is the difference between the “amount realized” in the deal (\$300 cash received) and the taxpayer’s “adjusted basis” of Fakecoin (\$500 original cost).¹⁵⁸

Crypto losses may also be realized in barter-type transactions. A popular transaction involves trading of one crypto for another crypto.¹⁵⁹ A coin-to-coin trade is a realization event even though the taxpayer does not receive cash in the deal. Using the simple example above, if the taxpayer exchanged Fakecoin (worth \$300) for Safecoin (worth \$300) in Year 3, the taxpayer would sustain a

157. Courts look for “some affirmative step that fixes the amount of the loss, such as an abandonment, sale, or exchange.” *Lakewood Assocs. v. Comm’r*, 109 T.C. 450, 459 (1997); *see also Higgins v. Smith*, 308 U.S. 473, 475 (1940) (“[L]oss is sustained when realized by a completed transaction determining its amount.”).

158. I.R.C. §§ 1001(a) (providing the loss formula), 1001(b) (defining “amount realized”), 1011(a) (defining “adjusted basis”), 1012(a) (defining basis as cost). In determining the amount of gain or loss realized in sale of cryptocurrency, the IRS allows use of the specific ID method where the taxpayer can use the specific cost basis for the unique crypto that was sold. *Frequently Asked Questions on Virtual Currency Transactions*, IRS, <https://www.irs.gov/individuals/international-taxpayers/frequently-asked-questions-on-virtual-currency-transactions> (last visited Mar. 19, 2024) [<https://perma.cc/QZR3-LU9A>] (See questions 39–41 stating a taxpayer can choose which units of virtual currency are deemed sold if he can specifically identify which units are involved and substantiate his basis in the units (e.g., documenting the private key, public key, and address)). If a taxpayer cannot identify specific units of virtual currency, then units are deemed to have been sold in chronological order (first-in, first-out method of accounting), which is the default for stock transactions. *Id.*

159. *See* Ishan Shahzad, *What Are Token Swaps & How Do They Work?*, MEDIUM (Mar. 11, 2022), <https://medium.com/coinmonks/what-are-token-swaps-how-do-they-work-3af70a04ec7c> [<https://perma.cc/P9E5-RSMQ>] (“A token swap is the transfer of digital tokens from one blockchain to another. It frequently occurs when a project raises funds on one blockchain and then migrates its tokens to a separate proprietary blockchain after the main net is released.”); Sayantani Sanyal, *What Are Token Swaps? How Can It Help Crypto Investors?*, ANALYTICS INSIGHT (Nov. 14, 2021), <https://www.analyticsinsight.net/what-are-token-swaps-how-can-it-help-crypto-investors/> [<https://perma.cc/HGC5-CXZU>]. In addition, there are many different examples of crypto trading. Investors can see the history of a particular token and its value expressed in USDT. *See FDT to USDT Chart—Historical Price of FIAT DAO Token Expressed in USDT*, COINCODEX, <https://coincodex.com/convert/fiat-dao/tether/> (last visited Mar. 19, 2024) [<https://perma.cc/TYH4-63P2>]. Recently, there are cross-chain bridges that facilitate the ease of sending and using coins outside its blockchain. *See* Eric Rosenberg, *What Are Cross-Chain Bridges?*, INVESTOPEDIA (Feb. 28, 2023), <https://www.investopedia.com/what-are-cross-chain-bridges-6750848> [<https://perma.cc/F2YX-4B5Y>] (“For example, if you have \$1,000 in USD Coin in your Ethereum (ETH) wallet and need to use it for a purchase with your Polygon (MATIC) wallet, a cross-chain bridge could help you send the USD Coin from your Ethereum wallet to your Polygon wallet.”). Likewise, if an investor wants to send their BTC outside the Bitcoin blockchain, the investor must swap the BTC to Wrapped Bitcoin tokens or WBTC so the investor can use the new tokens on the Ethereum network. *Id.*

\$200 loss in that year—the year of exchange.¹⁶⁰ Again, the measure of the loss in this identifiable event is the difference between the amount realized (the \$300 fair market value of Safecoin received) and the taxpayer's adjusted basis of the Fakecoin exchanged (\$500 original cost).¹⁶¹ Professor Avi-Yonah and Mohanad Salaimi question the soundness of this result; they propose waiting until crypto is exchanged for real-world items (fiat currency, goods, or services) like in the prior example before saying a realization has occurred.¹⁶²

Another barter-type transaction involves the use of crypto to purchase goods.¹⁶³ The purchase of goods for cash is not a realization event that produces gain or loss for the purchaser. Therefore, paying less for an item than its fair market value does not create taxable gain, and paying more for an item than its value does not create a potentially deductible loss.¹⁶⁴ But, if the purchaser uses cryptocurrency instead of cash to purchase property, then a different result occurs. That is because the IRS has taken the position that cryptocurrency is property, not currency, for purposes of gain and loss recognition under the Code.¹⁶⁵ Thus, the purchase of property with cryptocurrency is really viewed as a barter transaction in which one property (cryptocurrency) is exchanged for other property.¹⁶⁶ As with crypto-for-crypto exchanges discussed above, gain or loss is based on whether the cryptocurrency used to buy the property is appreciated or

160. Prior to 2018, Section 1031 of the Code provided *non-recognition* treatment of exchanges of like-kind property other than real property. If trading one crypto for another was a like-kind exchange, then no gain or loss would be recognized despite the exchange being an identifiable event. See I.R.C. § 1031. But see I.R.S. Gen. Couns. Mem. 202124008 (June 8, 2021) (determining that an exchange involving Bitcoin and Ethereum did not fall within the like-kind exchange definition because Bitcoin and Ethereum played fundamentally different roles compared to other cryptocurrencies).

161. I.R.S. Notice 2014-21, 2014-16 I.R.B. 938–39 (Apr. 14, 2014):

For U.S. tax purposes, transactions using virtual currency must be reported in U.S. dollars. Therefore, taxpayers will be required to determine the fair market value of virtual currency in U.S. dollars as of the date of payment or receipt. If a virtual currency is listed on an exchange and the exchange rate is established by market supply and demand, the fair market value of the virtual currency is determined by converting the virtual currency into U.S. dollars (or into another real currency which in turn can be converted into U.S. dollars) at the exchange rate, in a reasonable manner that is consistently applied.

162. See Avi-Yonah & Salaimi, *supra* note 32, at 1392 (proposing crypto be taxed only when exchanged for real-world fiat money or goods and services because of the volatility of crypto and administrative difficulty in measuring gain or loss: “Because it is very volatile, it is hard to measure gain or loss when crypto is exchanged for other crypto. The basis is hard to determine, and any gain may be illusory and disappear the next minute because the token’s value plummets.”).

163. For example, since the launch of Bitcoin in 2009, people have used cryptocurrency to buy coffee, computers, luxury goods, and apartments, in addition to purchases at Shopify and Rakuten, e-commerce giants. See Rakesh Sharma, *What Can You Buy With Bitcoin?*, INVESTOPEDIA (Feb. 5, 2024), <https://www.investopedia.com/what-can-you-buy-with-bitcoin-5179592> [<https://perma.cc/2EM4-G7XD>] (reporting the institutions that accept bitcoin and other cryptos and the use of crypto debit cards).

164. See generally *Florida Publ’g Co. v. Comm’r*, 64 T.C. 269 (1975); *Grigsby v. Comm’r*, 87 F.2d 96 (7th Cir. 1937); *Perkins v. United States*, 701 F.2d 771 (9th Cir. 1983).

165. I.R.S. Notice 2014-21, 2014-16 I.R.B. 938 (Apr. 14, 2014) (“Under currently applicable law, virtual currency is not treated as currency that could generate foreign currency gain or loss for U.S. federal tax purposes.”).

166. See generally K.M. Jennings, *Virtual Currency Taxation in Individual Real Estate Transactions*, 177 TAX NOTES FED. 709 (2022) (exploring the tax ramifications for individuals purchasing a home with cryptocurrencies). A bill has been introduced that would exempt from taxation the use of cryptocurrency in small transactions like buying a cup of coffee. See Virtual Currency Tax Fairness Act, S. 4608, 117th Cong. § 2 (2022).

depreciated in the hands of the buyer.¹⁶⁷ If the taxpayer buys Fakecoin in Year 1 for \$500 and uses it in Year 3 to buy a \$300 nonfungible token (“NFT”), he or she would sustain a \$200 loss in Year 3.¹⁶⁸

Even if the taxpayer were to transfer Fakecoin to a creditor to satisfy a \$300 debt owed, the taxpayer would sustain a \$200 loss. Under general tax principles, the transfer of property to a third party to satisfy an obligation owed to that party is a realization event. The amount realized in the example is the amount of liabilities from which the taxpayer is discharged (\$300). With an adjusted basis of \$500, the loss realized is \$200. Note that this is the same result as if the taxpayer sold Fakecoin for \$300 to an unrelated third party and then used the sales proceeds to satisfy the obligation.

Each of the transactions described above produced a quid pro quo for the taxpayer—either cash, different crypto, an NFT, or debt relief. That material alternation of the taxpayer’s original investment in Fakecoin justified treating the transaction as an identifiable event for tax purposes. Of course, the actual deductibility of the \$200 sustained loss in each example is a separate matter that will be addressed later.¹⁶⁹

While third-party, quid pro quo transactions can result in “sustained” losses for tax deduction purposes, it is less certain whether other crypto events—those in which the taxpayer does not receive anything in return—can produce “sustained” losses. Below we consider the realization requirement in the context of three events that are occurring with increased frequency as outlined in Part II: (1) the theft of crypto; (2) the lost possession of crypto; and (3) the worthlessness of crypto. As will be seen, whether realization occurs is more difficult in those cases where the taxpayer still owns the crypto.

2. *Thefts of Cryptocurrency*

In recent years, billions of dollars of crypto have been taken from owners by various scandals and scams.¹⁷⁰ And the question arises whether these owners can claim tax loss deductions. The initial inquiry is whether these scams are realization events that fix a loss.

It is well established that a *casualty* is considered a realization (or, identifiable) event, regardless of whether property is partially damaged or completely destroyed.¹⁷¹ Under the traditional understanding, casualty losses arise when

167. I.R.S. Notice 2014-21, 2014-16 I.R.B. 938 (Apr. 14, 2014) (noting that upon an exchange of virtual currency for other property, the taxpayer will have a gain if the value of the property received in the exchange exceeds the taxpayer’s adjusted basis of the virtual currency, and the taxpayer will have a loss if the value of the property received is less than the adjusted basis of the virtual currency).

168. NFTs are typically purchased using cryptocurrency, not cash. Because crypto is considered property by the IRS, the “purchase” of an NFT is considered to be a barter transaction in which loss may result (if the crypto used to buy the NFT depreciated in the hands of the taxpayer/buyer).

169. See *infra* Section III.B.

170. See *supra* Part II.

171. See, e.g., *Hubinger v. Comm’r*, 36 F.2d 724, 726 (2d Cir. 1929) (describing a casualty as “a closed transaction pro tanto”).

there is damage or destruction of property by sudden, unexpected, or unusual events.¹⁷² Difficulties may arise when the damages are the indirect result of a casualty or when the loss may be temporary. Courts generally require physical damage to property (a hurdle for cryptocurrency victims); further, temporary declines in market value due to a casualty event do not qualify as casualty losses.¹⁷³ The measure of loss is generally determined by reference to either the property's adjusted basis (usually original cost) or the property's decline in fair market value, whichever is less.¹⁷⁴

A *theft*, like a casualty, is also considered an identifiable event for tax gain or loss purposes. But, for a theft loss to be realized, the taxpayer must suffer "a criminal taking of his property as defined by the law of the jurisdiction."¹⁷⁵ That is, the taxpayer must prove that the loss resulted from a taking of property that is illegal under state law, and that the taking was done with criminal intent.¹⁷⁶ The measure of loss is determined consistently with the manner for determining casualty losses.¹⁷⁷ The year of realization is the year in which the theft was discovered.¹⁷⁸ But, a theft loss is not deductible in the year of discovery to the extent that the victim has a reasonable prospect of recovery.¹⁷⁹

The ability of cryptocurrency owners to claim theft losses is far from certain and will likely vary based upon the facts.¹⁸⁰ If cryptocurrency is stolen by

172. *Ruecker v. Comm'r*, 41 T.C.M. (CCH) 1587, 1588 (1981); *see also* John C. McCoy, *Loss Deductions*, 527-4th TAX MGMT. PORTFOLIO (BNA) V.C.1.a (citing Gen. Couns. Mem. 33130 (1965) and I.R.S. Pub. 547, *Casualties, Disasters, and Thefts*).

173. *See Chamales v. Comm'r*, 79 T.C.M. (CCH) 1428, 1431 (2000). *But see* *Finkbohner v. United States*, 788 F.2d 723, 727 (11th Cir. 1986) (permitting a deduction based on permanent buyer resistance in absence of physical damage).

174. *See* I.R.C. § 1.165(b); Treas. Reg. § 1.165-7(b)(1) (noting an exception for business and investment property totally destroyed by casualty; in such case the loss is the adjusted basis of the property). Of course, the amount of the taxpayer's loss is reduced by any reimbursements received on account of the loss. Treas. Reg. § 1.165-1(c)(4) (1960). Similarly, the amount of loss is reduced by any claim for reimbursement for which there is a reasonable prospect of recovery. Treas. Reg. § 1.165-1(d)(2)(i) (1960).

175. *Riederich v. Comm'r*, 985 F.2d 574, 574 (9th Cir. 1993); *Edwards v. Bromberg*, 232 F.2d 107, 110 (5th Cir. 1956); Rev. Rul. 72-112, 1972-1 C.B. 60 ("[T]o qualify as a 'theft' loss . . . the taxpayer needs only to prove that his loss resulted from a taking of property that is illegal under the law of the state where it occurred and that the taking was done with criminal intent.").

176. Rev. Rul. 72-112, 1972-1 C.B. 60; *see also Bromberg*, 232 F.2d at 111 ("[T]he exact nature of the crime, whether larceny or embezzlement, of obtaining money under false pretenses, swindling or other wrongful deprivations of property of another, is of little importance so long as it amounts to theft.").

177. Treas. Reg. § 1.165-8(c) (1960).

178. I.R.C. § 165(e); Treas. Reg. § 1.165-8(a)(2) (1960).

179. If in the year of discovery there exists a claim for reimbursement with respect to which there is a realistic prospect of recovery, the loss is not realized at that time to the extent of the claim. Treas. Reg. § 1.165-8(a)(2) (1960) (citing Treas. Reg. § 1.165-1(d) (1960)); *see* Treas. Reg. § 1.165-1(d)(2)(i) (1960) (providing whether a reasonable prospect of recovery exists is determined by an examination of all facts and circumstances).

180. A potential roadblock is that one cannot claim a theft loss if one cannot prove ownership of the stolen property. *See Silverman v. Comm'r*, 34 T.C.M. (CCH) 1094 (1975), *aff'd*, 538 F.2d 319 (3d Cir. 1976). Some commentators argue that owning cryptocurrencies through an exchange is not technically owning the currency because the exchange owns it—i.e., because the crypto is owned and sold within the exchange, the exchange is the owner rather than the account holders. *Compare* Jim Probasco, *What to Know About Investing in Crypto Exchanges*, INVESTOPEDIA (Sept. 13, 2022), <https://www.investopedia.com/crypto-exchange-interview-5209280> [<https://perma.cc/CVA6-MX3Y>] ("Today, most buying and selling of cryptocurrency takes place through a cryptocurrency exchange, much like a stock exchange for securities. An exchange is an intermediary between a buyer

hackers, for example, exploiting security flaws within cross-chain bridge transaction protocols,¹⁸¹ a theft loss is seemingly sustained for tax deduction purposes. A theft loss is likely sustained upon the theft of private keys (or other credentials such as the private keys and redeem script required for a PS2SH multisig address) to cryptocurrency.¹⁸²

A more difficult question, however, is whether cryptocurrency owners can claim theft losses relating to the decline in the value of crypto caused by bad acts of crypto managers (fraudulent representations, criminal violations of securities laws, etc.). In the context of open market stock transactions, shareholders have not had much success. In *Electric Picture Solutions, Inc. v. Commissioner*,¹⁸³ for example, the taxpayer purchased stock on the open market for investment. When the stock became worthless due to the fraudulent actions of the company's officers, the taxpayer claimed a theft loss deduction. The Tax Court denied the deduction because the taxpayer did not provide evidence of the stockbroker's guilty knowledge or intent to deceive.¹⁸⁴

Applying case law involving open market stock transactions, we learn that it is insufficient to show that a cryptocurrency owner suffered a loss as a result of an act that constituted a crime (e.g., fraudulent representations of corporate officers); criminal intent to deceive on the part of the seller must be shown for a theft loss.¹⁸⁵ We also learn it is insufficient for a crypto owner to show a criminal

and a seller of Bitcoin, the most well-known cryptocurrency, or any other type of cryptocurrency.”), with Jake Wengroff, *Can You Prove That You Own Your Crypto Assets?* TRANSITNET, <https://transitnet.io/blog/can-you-prove-that-you-own-your-crypto-assets/> (last visited Mar. 19, 2024) [<https://perma.cc/49EW-48BB>] and Keegan Francis, *Do You Own Your Cryptocurrency on WealthSimple and PayPal?*, CRYPTOVANTAGE (Nov. 26, 2020), <https://www.cryptovantage.com/news/do-you-own-your-cryptocurrency-on-wealthsimple-and-paypal/> [<https://perma.cc/V9TM-QJDC>];

At the end of the day, the private key allows you to access, and move your cryptocurrency. Every exchange aside from Decentralized Exchanges (DEXs) do not give you access to your private keys. This is because transactions that take place on the blockchain “on-chain” are too slow, to handle the high volume required to operate a cryptocurrency exchange. Exchanges . . . however, allow you to withdraw your cryptocurrency, and move it into a wallet where you control the keys. So while exchanges don’t allow you to own your crypto directly, they give you the ability to do so by taking your assets off their platform.”

Moreover, when an investor buys and sells cryptocurrencies on an exchange, the investor must report their gains or losses to the IRS. Nicolas Vega, *If You Traded Crypto Last Year, You Need to Report It on Your Tax Return: ‘One of the Misconceptions of Crypto Is That It’s Anonymous’*, CNBC (Apr. 6, 2022, 5:21 PM), <https://www.cnbc.com/2022/03/31/if-you-bought-and-sold-cryptocurrencies-in-2021-you-might-owe-taxes.html> [<https://perma.cc/ZK3S-UGJ5>].

181. As an example, Crypto.com reported in January 2022 that hackers managed to bypass its two-factor authentication system and withdraw funds from 483 accounts. Brooks, *supra* note 116.

182. See Jim Calvin, *Taxation of Cryptocurrency*, 190-1st TAX MGMT. PORTFOLIO (BNA) 87; see also Andy Greenberg, *A ‘Blockchain Bandit’ Is Guessing Private Keys and Scoring Millions*, WIRED (Apr. 23, 2019, 7:00 AM), <https://www.wired.com/story/blockchain-bandit-ethereum-weak-private-keys/> [<https://perma.cc/4WVK-XTX>] (reporting that crypto owners store “their digital money with a private key—the unguessable, 78-digit string of numbers that protects the currency stashed at a certain address” and “the odds of guessing a randomly generated Ethereum private key is 1 in 115 quattuorvigintillion”). Some crypto owners, unfortunately, use a “dead-simple key” with “a value of 1” or 2, 3, or 4 or “memorable words” for their private keys! *Id.*

183. 96 T.C.M. (CCH) 146 (2008).

184. *Id.*

185. See *Bellis v. Comm’r*, 61 T.C. 354, 358 (1973), *aff’d*, 540 F.2d 448 (9th Cir. 1974) (holding taxpayer did not sustain a theft loss when he purchased stock from an unlicensed seller, even though selling stock without a permit was a state criminal act).

violation of federal law (e.g., criminal violations of federal securities laws); the act must be a criminal act under state law.¹⁸⁶ State criminal statutes often require a degree of privity between the victim and the alleged perpetrator—i.e., a specific intent on the part of the alleged perpetrator to deprive the victim of his property.¹⁸⁷ Thus, a “buyer-seller relationship linking the taxpayers and the defrauders” might be enough to sustain a theft loss, whereas “[m]ere reliance on the fraudulent representations of a corporate officer to make or maintain an investment” would not.¹⁸⁸

In the context of crypto losses, it may be difficult for victims of cryptocurrency schemes to prove requisite privity with the alleged perpetrator. Crypto owners typically invest through third parties (as shareholders invest through stock brokers and fund managers in the open market, publicly traded stock situations), who are not usually the defrauders who acted with guilty knowledge or criminal intent.¹⁸⁹ Crypto owners do not typically deal directly with crypto exchange leaders or managers (just as shareholders do not typically deal with corporate officers).¹⁹⁰

An argument might be made, however, that crypto transactions are unlike open market stock transactions wherein the taxpayer’s property “end[s] up in the hands of the parties on the other side of the market transaction, not within the scheme itself.”¹⁹¹ In crypto cases, it could be argued, the taxpayer’s money ends up in the scheme and at the disposal of the perpetrator. Crypto investors do deal with various third parties and registered broker-dealers, such as Robinhood as an example, to acquire crypto assets. But there is no intermediate step where Robinhood invests in the crypto scheme—they are not market intermediaries that stand ready to buy and sell. More aptly viewed, crypto owners invest directly in the vehicles that perpetrators use to operate their schemes. As the argument might

186. See *Crowell v. Comm’r*, 51 T.C.M. (CCH) 1556, 1558 (1986). The perception that alleged perpetrators are fraudsters:

[I]sn’t enough to establish the fact, timing, and amount of a loss in court. Theft loss includes a taking by fraud or misrepresentation. Theft requires a taking in violation of applicable state criminal law. There is no general federal law of theft governing tax cases. The taking need not have been criminally adjusted in the year claimed; the civil court need only find as a fact that a theft occurred.

Lee A. Sheppard, *When Can Hodlers Recognize FTX Losses?*, 177 TAX NOTES FED. 1323, 1327 (2022) (citations omitted).

187. See *Marr v. Comm’r*, 69 T.C.M. (CCH) 2837 (1995) (holding investor was not entitled to a theft loss for decline in value of his shares because there was no appropriation of the taxpayer’s property by the alleged defrauders).

188. See McCoy, *supra* note 172, at V.H.2.a (citing *Stoltz v. United States*, 410 F. Supp. 2d 734 (S.D. Ind. 2006); *MTS Int’l, Inc. v. Comm’r*, 169 F.3d 1018, 1021 (6th Cir. 1999)); see also *Paine v. Comm’r*, 63 T.C. 736, 743 (1975), *aff’d without opinion*, 523 F.2d 1053 (5th Cir. 1975) (holding no theft under state law because the taxpayer bought penny shares on the open market and not directly from the fraudsters).

189. *Marr*, 69 T.C.M. (CCH), at *5 (holding taxpaying was not entitled to a theft loss for decline in value of his stock because there was no appropriation of the taxpayer’s property by the alleged defrauders; stock was acquired by sellers); *Crowell*, 51 T.C.M. (CCH) at 1556 (holding no theft loss because there was no specific intent by corporate officers and directors to deprive the taxpayer of his shares); see also Rev. Rul. 77-17, 1977-1 C.B. 44 (1977) (ruling that taxpayers who had purchased stock in the open market and suffered loss due to corporate insider fraudulent activity did not show specific intent to deprive them of their property).

190. See *De Fusco v. Comm’r*, T.C.M. (CCH) 920 (1979); *Barry v. Comm’r*, 37 T.C.M. (CCH) 925 (1978).

191. I.R.S. Chief Couns. Mem. 201213022 (Dec. 18, 2011).

go, Robinhood's role in facilitating the transaction that funneled money into the scheme should not deprive taxpayers of privity with the perpetrator. As such, their losses might be viewed as "theft" losses under the tax system.¹⁹²

In addition to *lack of privity* being a potential roadblock to a theft loss claim, the *possibility of recovery* in cryptocurrency and blockchain litigation is another significant hurdle to a current theft loss deduction. As noted earlier, a theft loss is not sustained (nor, thus, deductible) in the discovery year to the extent the victim has a reasonable prospect of recovery.¹⁹³ This approach is consistent with the requirement that a claimed loss be evidenced by a closed and completed transaction. Many crypto owners involved in litigation (e.g., lawsuits alleging false advertising, misinformation, Ponzi schemes, or the like) have potential claims. It could take many years to resolve these claims. And, even if recovery is possible, the dollar amounts are difficult if not impossible to estimate. This would foreclose any current loss deduction. As one commentator succinctly put, customers of FTX may not be able to claim theft losses on their 2022 tax returns because those losses are not "final and crystallized."¹⁹⁴

It should be noted, however, that the IRS has the discretion to bend the rules somewhat, paving a path toward theft loss deduction in such cases. A recent example is what the IRS did in the aftermath of the 2008 financial crisis when thousands of investors lost billions of dollars in fraudulent Ponzi schemes, such as those operated by Bernie Madoff. Many of these victims were technically unable to deduct losses from the Ponzi schemes because many of them had potential claims against the promoter, advisor, and others. In 2009, however, the IRS issued guidance on the tax treatment of Ponzi schemes—in essence permitting theft loss deductions for victims.¹⁹⁵ This guidance clarified: (1) that loss from a Ponzi scheme—one in which the promoter specifically intended to deprive the victim of money by criminal acts—is a theft loss;¹⁹⁶ (2) that if a victim entered

192. *Id.* (relying on *Jensen v. Comm'r*, 66 T.C.M. (CCH) 543 (1993), *aff'd on other grounds*, 72 F.3d 135 (9th Cir. 1995)). In *Jensen*, the Tax Court held that the taxpayers were in privity with a Ponzi scheme's perpetrators because the figure through whom they invested was merely a conduit to the scheme; direct contact between the investor and entity was not necessary. *Jensen*, 66 T.C.M. (CCH), at *5.

193. See *supra* note 179 and accompanying text; *Jeppsen v. Comm'r*, 128 F.3d 1410, 1419 (10th Cir. 1997), *cert. denied*, 524 U.S. 916 (1998) (noting theft loss is allowed if there is a remote prospect of recovery); *Ramsay Scarlett & Co. v. Comm'r*, 61 T.C. 795, 811 (1974), *aff'd*, 521 F.2d 786 (4th Cir. 1975) ("A reasonable prospect of recovery exists when the taxpayer has bona fide claims for recoupment from third parties or otherwise, and when there is a substantial possibility that such claims will be decided in his favor.").

194. Sheppard, *supra* note 186, at 1323.

195. Rev. Rul. 2009-9, 2009-14 I.R.B. 735; Rev. Proc. 2009-20, 2009-14 I.R.B. 749. Although the IRS was reacting to the Madoff scheme, the guidance has general application to "specified fraudulent arrangements." *Id.* (defining a specified fraudulent arrangement as an arrangement "in which a party (the lead figure) receives cash or property from investors; purports to earn income for the investors; reports income amounts to the investors that are partially or wholly fictitious; makes payments, if any, of purported income or principal to some investors from amounts that other investors invested in the fraudulent arrangement; and appropriates some or all of the investors' cash or property"). See James Beavers, *IRS Issues Guidance on Losses from Ponzi Schemes*, TAX ADVISOR (May 1, 2009), <https://www.thetaxadviser.com/issues/2009/may/irsissuesguidanceonlossesfromponzischemes.html> [<https://perma.cc/F73W-F4XE>] (noting this "definition would apply to most typical Ponzi schemes").

196. Rev. Rul. 2009-9, 2009-14 I.R.B. 735, Issue 1. As explained *infra* Subsection III.B.2, a theft loss is an ordinary loss, not a capital loss. This is a good thing from the standpoint of their deductibility.

into the transaction for profit, the theft loss was an investment loss not subject to the limitations imposed on personal casualty and theft losses;¹⁹⁷ and (3) that the amount of the loss is the amount of money the victim had invested, with certain adjustments.¹⁹⁸ Additionally, this guidance offered a safe harbor permitting eligible victims to deduct a substantial portion of the loss in the “discovery year” rather than wait until the year potential claims are resolved.¹⁹⁹

One can criticize the government’s 2009 ad-hoc approach to taxpayer losses sustained in the Bernie Madoff Ponzi schemes. Nevertheless, recent cryptocurrency schemes, such as those used by Sam Bankman-Fried in the FTX scandal, are now raising questions about the 2009 guidance’s relevance. According to some commentators, FTX was not a Ponzi scheme and the 2009 rulings are a “legal stretch.”²⁰⁰ One hurdle, for instance, is that the 2009 guidance requires money to have been deposited in an account; crypto investments, in contrast, are often viewed as asset purchases and not account deposits.²⁰¹ Nevertheless, one couldn’t be surprised if the IRS decides to take a similar stance for certain cryptocurrency losses.²⁰² If so, the potential revenue loss for the government would be great.

In sum, absent some 2009-like guidance specific to crypto losses, it will be difficult for many investors to show a “theft” event for tax purposes. The lack of privity with alleged perpetrators and the possibility of recovery by victims will be substantial hurdles to overcome.

3. *Lost Possessions and Abandonments of Crypto*

Many cryptocurrency investors have lost their crypto forever by misplacing their private keys, or by sending their crypto to the wrong wallet, or by losing or damaging their cold storage devices.²⁰³ The initial tax question, again, is whether a loss has been sustained for tax purposes in these cases.

Some practitioner advisors suggest that losing access to a wallet or sending crypto to the wrong wallet is a *casualty* loss.²⁰⁴ It seems unlikely, however, that lost or misplaced cryptocurrency would give rise to a casualty loss since the

197. Rev. Rul. 2009-9, 2009-14 I.R.B. 735, Issue 2. For the limitations imposed on personal casualty and theft losses, see *infra* Subsection III.B.2.

198. Rev. Rul. 2009-9, 2009-14 I.R.B. 735, Issue 4 (noting an upward adjustment for amounts the victim had reported as taxable income and a downward adjustment for amounts the victim had withdrawn). For taxpayers who are Ponzi scheme victims but who are ineligible or decide not to elect the safe harbor provided in Rev. Proc. 2009-20, see Legal Advice to Program Managers, PMTA 2013-03.

199. Rev. Proc. 2009-20, 2009-14 I.R.B. 749 § 5.01.

200. See Sheppard, *supra* note 31, at 632.

201. See William Stromsem, *A Tax Glimmer of Hope for FTX Crypto-Fraud Victims*, TXCPA FED. TAX POL’Y (Dec. 19, 2022), <https://tscpafederal.typepad.com/blog/2022/12/a-tax-glimmer-of-hope-for-ftx-crypto-fraud-victims.html> [<https://perma.cc/7MAQ-F6VJ>] (“[I]t may take years for courts to decide whether Bankman-Fried had the requisite intent to defraud or was just over his head and incompetent.”).

202. Sheppard, *supra* note 186, at 1323 (suggesting the IRS might have to make another round of Madoff rulings for crypto hodlers to allow loss deduction in the year of discovery).

203. See *supra* Section II.D.

204. See Michelle Legge, *Do You Pay Tax on Lost, Stolen or Hacked Crypto?*, KOINLY (Feb. 2, 2024), <https://koinly.io/blog/tax-on-lost-stolen-or-hacked-crypto/> [<https://perma.cc/B8XS-HUAX>].

requirements for a casualty loss, discussed earlier, would be difficult to meet—namely an event that is “(1) identifiable, (2) damaging to property, and (3) sudden, unexpected, and unusual in nature.”²⁰⁵

Regardless of whether lost possession of crypto fits within the tax framework for casualties, it is well established that *abandonment* of property is a realization (*i.e.*, identifiable) event for tax purposes. In general, there must be an intent to immediately and permanently cease using property, and the intention must be evidenced by the actions of the taxpayer and/or affirmative acts of abandonment.²⁰⁶

In non-cryptocurrency abandonment cases, courts have established various acts that constitute abandonment²⁰⁷ and various acts that do not constitute abandonment.²⁰⁸ Relinquishment of possession or legal title is not required,²⁰⁹ but the taxpayer must establish his intent that the abandoned property will not be used again by him and will not be retrieved by him for sale or other disposition.²¹⁰ The measure of an abandonment loss is the property’s adjusted basis. The loss is realized in the year sustained (*i.e.*, when the taxpayer has ceased to make productive use of the property and has determined that he will never realize value from the property through sale, exchange, or future use).²¹¹

Some advisors conclude that “[i]f an owner misplaces a cryptocurrency key or password or it is otherwise compromised, the taxpayer may be able to establish abandonment by making an effort to locate or retrieve such key or password and then determining that future efforts would be futile.”²¹² This conclusion can be supported by case law holding that an act of abandonment includes simply deciding that litigation to recover possession of an asset would be futile.²¹³

Aside from the lost possession scenario just described, the more difficult question is whether an abandonment loss could be sustained on the significant

205. Rev. Rul. 72-592, 1972-2 C.B. 101.

206. Treas. Reg. § 1.165-2(a) (2014) (nondepreciable property); Treas. Reg. § 1.168(i)-8(e) (2020) (depreciable property); *see* Massey-Ferguson, Inc. v. Comm’r, 59 T.C. 220, 225 (1972); *Beus v. Comm’r*, 261 F.2d 176, 180 (9th Cir. 1958), *aff’d* 28 T.C. 1133 (1957). As noted later, the taxpayer must have held the property for use in a trade or business or in a transaction entered into for profit to be entitled to a deduction. For case law, *see*, e.g., *Franklin v. Comm’r*, T.C.M. (CCH) 183 (2020) (noting a taxpayer sustains a loss for the obsolescence or loss of usefulness of nondepreciable property if: “(1) the loss is incurred in a business or a transaction entered for profit; (2) the loss arises from the sudden termination of usefulness in the business or transaction; and (3) the property is permanently discarded from use, or the transaction is discontinued”); *CRST, Inc. v. Comm’r*, 92 T.C. 1249, 1257 (1989), *aff’d*, 909 F.2d 1146 (8th Cir. 1990).

207. *Levine Bros. Co. v. Comm’r*, 5 B.T.A. 689, 693 (1926) (failed attempts to sell property); *Hopkins v. Comm’r*, 15 T.C. 160, 173 (1950) (notice to broker to stop offering property for sale); *Hoffman v. Comm’r*, 40 B.T.A. 459, 463 (1939), *aff’d per curiam*, 117 F.2d 987 (2d Cir. 1941) (failure to make necessary payments with respect to real estate).

208. *Haskell v. Comm’r*, 7 B.T.A. 697, 701 (1927) (mere decline in property value).

209. *See Echols v. Comm’r*, 935 F.2d 703, 706 (5th Cir. 1991).

210. *Burke v. Comm’r*, 32 T.C. 775, 779 (1959), *aff’d*, 283 F.2d 487 (9th Cir. 1960) (noting when taxpayer does not relinquish possession, he must show property’s loss of useful value and intent to abandon).

211. *Id.* at 779–80.

212. Brandon Keim, *How Should You Report Your Lost or Stolen Cryptocurrency for Tax Purposes?*, BRANDON A. KEIM TAX ATT’Y (June 10, 2020), <https://www.keimtaxlaw.com/how-should-you-report-your-lost-or-stolen-cryptocurrency-for-tax-purposes> [https://perma.cc/ZV5U-6R8S].

213. *Allen v. Comm’r*, 67 T.C.M. (CCH) 2696 (1994).

decline in the value of crypto. In stock cases, abandonment does not require worthlessness of stock.²¹⁴ But affirmative acts of abandonment—like surrendering shares of stock back to the company—are needed. Specifically, “a taxpayer must permanently surrender and relinquish all rights in the security and receive no consideration in exchange for it.”²¹⁵ To abandon crypto, then, it would seem necessary to take some steps, such as sending the crypto to a null address (also known as a burn address) where the crypto will be taken out of circulation and never used by any person in the future.²¹⁶

This is consistent with IRS guidance issued in January 2023. In Chief Counsel Advice Memorandum 202302011, the IRS concluded that taxpayers do not sustain abandonment losses when crypto has substantially declined in value if the crypto continues to be traded on at least one crypto exchange and has a value greater than zero.²¹⁷ In the non-taxpayer-specific guidance, each crypto unit was valued at less than one cent.²¹⁸ The taxpayer, however, retained the ability to sell, exchange, or otherwise dispose of it.²¹⁹ The taxpayer continued to exert dominion and control over it and did not take any affirmative steps to abandon the crypto.²²⁰

Abandonment does require steps to abandon or permanently dispose of property. In the IRS non-taxpayer-specific advice, the IRS raised the possibility of an abandonment loss deduction if necessary steps have been taken.²²¹ But the IRS did not indicate what actions would qualify as abandonment. Some advisors suggest the fact that the IRS did not address actions that would qualify as abandonment suggests that the IRS was “trying to imply there’s really not.”²²² According to Miles Fuller, the memo “raises this threshold issue: Is it really ever

214. *Pilgrim’s Pride Corp. v. Comm’r*, 779 F.3d 311, 315 (5th Cir. 2015), *rev’g* 141 T.C. 17 (2013) (finding abandonment of securities, which were not worthless).

215. See McCoy, *supra* note 172.

216. There are websites and protocols that hold themselves out as places to abandon cryptocurrency. See *Top Dormant for 5 Years Bitcoin Addresses*, BITINFOCHARTS, https://bitinfocharts.com/top-100-dormant_5y-bitcoin-addresses.html (last visited Mar. 19, 2024) [<https://perma.cc/XZY9-6M5M>]; Chris Jones, *Millions of Dollars in ETH Lie Unclaimed in PreSale Wallets—But There’s a Way to Get Them Back*, COINTELEGRAPH (Aug. 26, 2022), <https://cointelegraph.com/news/millions-of-dollars-in-eth-lie-unclaimed-in-presale-wallets-but-theres-a-way-to-get-them-back> [<https://perma.cc/BM7D-RHD3>]; Brian Nibley, *Tracking Down Lost Bitcoins and Other Cryptos*, SOFI (Sept. 13, 2022), <https://www.sofi.com/learn/content/how-to-find-lost-bitcoin/> [<https://perma.cc/6HEY-UMCQ>].

217. I.R.S. Chief Couns. Mem. 202302011 (Jan. 13, 2023) (providing “non-taxpayer specific advice regarding the applicability of Section 165 of the Internal Revenue Code (‘Code’) to cryptocurrency that has substantially declined in value”).

218. *Id.* at 2.

219. *Id.*

220. Because the taxpayer did not take any action to abandon and permanently discard the crypto, the IRS did not address the other requirements for an abandonment loss deduction listed in Treas. Reg. § 1.165-2(a)—the loss is incurred in a business or a transaction entered for profit; and the loss arises from the sudden termination of usefulness in the business or transaction. *Id.* at 5 n.4.

221. *Id.* at 5.

222. Chandra Wallace, *No Loss Deduction for Decline in Crypto Value*, TAXNOTES (Jan. 18, 2023), <https://www.taxnotes.com/featured-news/no-loss-deduction-decline-crypto-values/2023/01/17/7fw30> [<https://perma.cc/MM7L-UAZP>] (quoting Miles Fuller).

possible that you could abandon crypto?”²²³ As we concluded earlier, we believe there are steps that could be taken to abandon crypto, such as the utilization of one of the protocols or websites held out as a place to abandon cryptocurrency.²²⁴ But we recognize steps could not be taken if a crypto owner does not have access to the cryptocurrency to dispose of them.²²⁵ Often when cryptocurrency is worthless, the platform is in trouble too and the gate might be up—the first step towards bankruptcy.²²⁶ If the platform is already in bankruptcy administration, “abandonment might not be easy.”²²⁷

4. Worthlessness of Crypto

In stolen cases, lost possession cases, and abandonment cases, the taxpayer no longer has possession of the cryptocurrency. In contrast, what if the taxpayer retains possession of the crypto, but the crypto has dropped significantly in value? Assume, for example, that a taxpayer purchases Fakecoin early in the year for \$1 per unit and that by the end of the year, each unit of the crypto is valued at less than one cent. Does the significant decline in value that occurred during the year, absent a sale or other taxable disposition, trigger a deductible loss?

Recall from earlier that in order to deduct losses, they must be realized in a taxable event. Abandonment requires some overt act or concrete step as noted above. Interestingly, “worthlessness can support a loss deduction without a finding of abandonment.”²²⁸ The two concepts—abandonment and worthlessness—

223. *Id.*

224. *But see id.* (quoting Miles Fuller) (taking the position that these steps “can be interpreted as transfers and not as abandonment. Under that interpretation . . . [i]t ‘really can’t be abandonment; it’s more of a disposition or a transfer, even if [the taxpayer gets] \$0 in return”).

225. Sheppard, *supra* note 186, at 1327 (“Abandonment for an ordinary loss doesn’t seem like a promising avenue because the burden of proof is on the taxpayer to prove a loss. How could a holder abandon an account that he does not control?”).

226. *See* Sheppard, *supra* note 31, at 627 (“For this taxpayer to have retained the ability to transact, the cryptoasset would have to have been held in cold storage which is atypical and inconsistent with purchase on the platform.”). Investors cannot get their crypto out from their accounts with platforms that are facing financial trouble. *See* Megan Leonhardt, *With FTX on the Verge of Collapse, Customers Are Wondering What Happens to Their Crypto. Here’s What to Do If You Have an Account There*, FORTUNE (Nov. 10, 2022, 3:55 PM), <https://fortune.com/crypto/2022/11/10/with-ftx-on-the-verge-of-collapse-customers-are-wondering-what-happens-to-their-crypto-heres-what-to-do-if-you-have-an-account-there/> [<https://perma.cc/HP4H-GZ7Y>]; Emma Newbery, *Had Money in FTX? Is It Possible to Get Your Money Back?*, ASCENT (Nov. 21, 2022), <https://www.fool.com/the-ascent/cryptocurrency/articles/had-money-in-ftx-is-it-possible-to-get-your-money-back> [<https://perma.cc/ZD9V-GJEU>]; Sirin Kale, *‘They Couldn’t Even Scream Any More. They Were Just Sobbing’: The Amateur Investors Ruined by the Crypto Crash*, GUARDIAN (July 12, 2022, 1:00 PM), <https://www.theguardian.com/technology/2022/jul/12/they-couldnt-even-scream-any-more-they-were-just-sobbing-the-amateur-investors-ruined-by-the-crypto-crash> [<https://perma.cc/K5U6-BHAJ>].

227. *See* Sheppard, *supra* note 31, at 628–29.

228. Taxpayer must manifest his subjective determination that his interest is worthless. *Helvering v. Gordon*, 134 F.2d 685, 689 (4th Cir. 1943), *aff’d* 46 B.T.A. 1201 (1942); *Echols v. Comm’r*, 935 F.2d 703, 707 (5th Cir. 1991) (making an alternative holding that, even if the taxpayer had not overtly abandoned the property, he was entitled to a loss deduction for worthlessness); *Tejon Ranch Co. v. Comm’r*, 49 T.C.M. (CCH) 1357 (1985); *see* Rev. Rul. 54-581, 1954-2 C.B. 112.

are often conflated.²²⁹ Worthlessness could be treated as abandonment if there was some overt act manifesting an intent to abandon. Absent such act, worthlessness alone could be enough to sustain a loss. The measure of the loss is the property's adjusted basis.²³⁰ The year sustained is the year in which the taxpayer subjectively determined the property was worthless.²³¹

Worthlessness of property is a question of fact.²³² There must be a subjective determination of worthless in a given year.²³³ In addition, that determination must be coupled with a showing that the property is in fact essentially valueless in that year.²³⁴ Courts have said an asset is valueless if it has no current liquidation value and no continuing, future value.²³⁵ Stock, as an example, is not considered worthless, even when having no current liquidating value, if there is a "reasonable hope and expectation" that it will become valuable at some future time through foreseeable operations of the corporation.²³⁶ In essence, both factors of value—current value and future value—must be wiped out before a loss can be fixed.²³⁷ The lack of future value typically "requires an identifiable event."²³⁸

Applying general tax principles to cryptocurrency, a crypto owner must subjectively determine that the crypto is worthless and show objective indicia of worthlessness—that the crypto had no liquidation value or any potential future value. These may be difficult hurdles in light of recent IRS guidance.

In early 2023, the IRS issued non-taxpayer-specific legal advice on the decline in crypto values.²³⁹ It addressed the simple question: "If Taxpayer A owns cryptocurrency that has substantially declined in value, has Taxpayer A sustained a loss . . . due to worthlessness or abandonment of the cryptocurrency?"²⁴⁰ The

229. See McCoy, *supra* note 172, at III.B ("[T]he two concepts are usually intertwined with worthlessness being cited as evidence of the taxpayer's decision to abandon the property, or an act indicative of the taxpayer's determination to no longer make productive use of the property being cited as evidence that the taxpayer deemed the property worthless.").

230. I.R.C. § 165(b).

231. See Echols v. Comm'r, 935 F.2d 703, 705 (5th Cir. 1991). For worthless securities, the taxpayer must generally show that the security has value at the beginning of the year in which the loss is claimed and was not worthless in a prior year. See G.E. Emps. Sec. Corp. v. Manning, 137 F.2d 637, 641 (3d Cir. 1943).

232. Boehm v. Comm'r, 326 U.S. 287, 293 (1945).

233. Echols, 935 F.2d at 708.

234. *Id.*

235. In essence, liabilities exceed assets and there is no chance of having value in the future. Morton v. Comm'r, 38 B.T.A. 1270, 1278–79 (1938), *aff'd*, 112 F.2d 320 (7th Cir. 1940); Austin Co. v. Comm'r, 71 T.C. 955, 969–70 (1979).

236. Morton, 38 B.T.A. at 1277 (noting the happening of certain events such as the bankruptcy, cessation from doing business, or liquidation of the corporation, or the appointment of a receiver for it are "identifiable" and "important for tax purposes because they limit or destroy the potential value of stock").

237. *Id.* at 1278; see McCoy, *supra* note 172, at III.E.1.c ("[T]he taxpayer must show both balance sheet insolvency and a complete lack of future potential value.").

238. See McCoy, *supra* note 172, at III.E.1.c.

239. I.R.S. Chief Couns. Mem. 202302011 (Jan. 13, 2023). The advice is not binding on the government and is subject to change without notice per the Internal Revenue Manual. "This type of legal advice does not set out official rulings or positions of the Service and may not be referenced in other documents as precedent." IRM 33.1.2.2.3.5(9) (Apr. 12, 2013).

240. See I.R.S. Chief Couns. Mem. 202302011 (Jan. 13, 2023).

IRS advised that crypto “that continues to trade on an exchange—even if just for a fraction of a penny per unit—isn’t worthless for purposes of triggering a deductible loss.”²⁴¹ The IRS advised that in such case, the crypto still has “liquidating value,” and since it continues to be traded on an exchange, it is possible that it may increase in value in the future.²⁴² And its owner maintains dominion and control over the crypto as evidenced by his ability to sell, exchange, or transfer units.

The 2023 administrative guidance posited one obvious scenario but did not address possible other scenarios.²⁴³ For example, what happens when a blockchain network takes an extreme measure, like going offline—as the Terra LUNA network did in May 2022.²⁴⁴ Validators for the Terra blockchain officially halted network activity to prevent governance attacks following the severe devaluation of the networks’ token (LUNA’s price had collapsed more than 99.99% over a week).²⁴⁵ It was trading for 1 cent—down from over \$80 a week earlier.²⁴⁶ It is unlikely the IRS would find worthlessness in this scenario even though the coin no longer continued to be traded on an exchange. Soon after the rapid decline in value, Terra announced recovery plans—applying a patch to avoid potential attacks.²⁴⁷

In another scenario for which no guidance has been issued, what if crypto is listed on an exchange, but there is no willing buyer for it? According to some advisors, “[i]f a taxpayer can show unsuccessful attempts to sell the cryptocurrency over a period of time, those facts should be relevant to whether the

241. Wallace, *supra* note 222; see Sheppard, *supra* note 31 (“[T]he IRS seems to have wanted to act quickly to cut off holders wanting to take instant deductions.”).

242. I.R.S. Chief Couns. Mem. 202302011 (Jan. 13, 2023):

In this case, each unit of Cryptocurrency B had liquidating value, though it was valued at less than one cent at the end of 2022. Cryptocurrency B continued to be traded on at least one cryptocurrency exchange, allowing for the possibility that it may increase in value in the future. Accordingly, Cryptocurrency B was not wholly worthless during 2022 as a result of its decline in value, and Taxpayer A did not sustain a bona fide loss under Section 165(a) in 2022 due to its worthlessness.

In a footnote, the IRS noted data as of January 1, 2023: “Fifteen cryptocurrencies valued at less than one cent per unit were actively traded with market caps ranging from approximately \$77 million to over \$4.4 billion along with 24-hour trading volume ranging from \$833,000 to \$92 million.” *Id.* at 4 n.3.

243. For criticism of the guidance, see Sheppard, *supra* note 31, at 625–27:

The IRS memo is premature and may even be counterproductive. The assumed facts—there is no live taxpayer—are highly unrealistic, so it doesn’t help anyone with a real case . . . What is the nature of [the crypto] holding? Is it a wallet? What entity is the issuer of the cryptoasset? We aren’t told what the taxpayer’s legal relationship with the platform was. The IRS doesn’t seem to have thought it through.

244. Shiraz Jagati, *What Happened? Terra Debacle Exposes Flaws Plaguing the Crypto Industry*, COINTELEGRAPH (May 13, 2022), <https://cointelegraph.com/news/what-happened-terra-debacle-exposes-flaws-plaguing-the-crypto-industry> [<https://perma.cc/8LLB-KBEC>].

245. Sam Bourgi, *Breaking: Terra Blockchain Officially Halted Following LUNA Price Collapse*, COINTELEGRAPH (May 12, 2022), <https://cointelegraph.com/news/breaking-terra-blockchain-officially-halted-following-luna-price-collapse> [<https://perma.cc/Z6FF-H6S4>].

246. See *id.*; Andrew Hayward, *Terra Temporarily Halts Blockchain to Prevent Attacks as LUNA Goes to Zero*, DECRYPT (May 12, 2022), <https://decrypt.co/100228/terra-halts-blockchain-prevent-attacks-luna-zero> [<https://perma.cc/VV9D-ZPXB>].

247. Bourgi, *supra* note 245.

cryptocurrency is worthless.”²⁴⁸ Crypto could be listed on an exchange and could conceivably be in existence forever, but that doesn’t mean it has any sort of value or any way to market it.²⁴⁹ Additional guidance is needed in this area.

In sum, there are some limited scenarios in which it could be argued that crypto has no current liquidation value or any potential future value, and, thus, is worthless. Platforms that are insolvent and have filed for bankruptcy might be examples.²⁵⁰ If so, a loss would be sustained, or fixed, for tax purposes upon resolution of the bankruptcy (*i.e.*, completion of the platform’s bankruptcy administration). Unfortunately, “[t]here is unlikely to be any significant customer recovery in bankruptcy,” since every platform that is gating is insolvent.²⁵¹

To accelerate loss for tax purposes—the current year or year of discovery—it would be a safer bet if a crypto owner took steps to abandon or permanently dispose of the cryptocurrency. Again, however, if crypto has substantially declined in value and the platform is in trouble, abandonment steps and dispositions may be impossible.²⁵² Some acts to crystalize the loss, like a sale to a liquidator, might be difficult. Many cryptocurrencies are frozen on an exchange that has filed for bankruptcy.²⁵³

B. “Deductibility” of Crypto Losses

As noted at the outset, tax deductions are a matter of legislative grace.²⁵⁴ This means that one must find a statutory provision that specifically allows the deduction to be claimed. In other words, just because a taxpayer may have “sustained” a loss from a crypto transaction does not necessarily mean the taxpayer can claim a tax deduction for that loss. Congress must have authorized the deduction.

1. General Allowance Rules

The deductibility of uncompensated losses is governed, in major part, by Section 165 of the Internal Revenue Code (“Code”). This provision authorizes tax deductions for sustained losses arising from *business* and *investment*

248. Wallace, *supra* note 222 (quoting Joshua D. Smeltzer) (“Some cryptocurrency could conceivably exist forever, without any sort of value or any way to market it.”).

249. *Id.*

250. *But see* Estate of Mann v. Comm’r, 731 F.2d 267, 276 (5th Cir. 1984) (bankruptcy filing is not proof of worthlessness). Filing of bankruptcy alone (which is an identifiable event) is not necessarily proof of worthlessness. A taxpayer must generally wait for resolution of the bankruptcy proceeding. Sheppard, *supra* note 31, at 628.

251. *See* Lee A. Sheppard, *FTX Hodler Losses as Capital Losses*, 177 TAX NOTES FED. 1487, 1495 (“FTX customers are unlikely to recover anything in the bankruptcy case.”).

252. Even if possible, “[t]ransaction fees could eat the proceeds” Sheppard, *supra* note 31, at 628 (noting that whether it is worth triggering a loss, a practical issue is transaction fees).

253. *See* Ryan Browne, *Looking to Get Your Funds Out of a Collapsed Crypto Platform? Don’t Get Your Hopes Up*, CNBC (July 19, 2022, 1:20 AM), <https://www.cnbc.com/2022/07/19/what-happens-to-my-funds-if-a-crypto-exchange-goes-bankrupt.html> [https://perma.cc/56U4-EQEA].

254. *See supra* note 143 and accompanying text.

activities.²⁵⁵ Thus, if a business or investment property is sold for less than its cost, the loss sustained is generally deductible. Likewise, if business or investment property is stolen or abandoned, any uncompensated loss is generally deductible.

The deductibility of business and investment *losses* is consistent with the Code's treatment of business and investment *expenses*—also generally deductible.²⁵⁶ The scheme makes sense as the income tax is ostensibly a tax on net income.²⁵⁷ That is, it only attempts to tax the net increase in wealth generated by money-making (*i.e.*, business and investment) activities. This implies we should be entitled to deduct the money we spend (and losses sustained) from the money we make (and gains realized) before we apply the tax rates to the remainder.

Generally speaking, taxpayers are not allowed to deduct losses that arise from *personal* concerns.²⁵⁸ The rationale is that those losses are deemed to arise from personal consumption. Disallowance of most personal *losses* is consistent with the Code's treatment of personal *expenses*—also generally disallowed.²⁵⁹

The law does provide, however, limited relief for a category of personal losses classified as casualty and theft losses. Specifically, Section 165 authorizes the deduction of personal losses “if such losses arise from fire, storm, shipwreck, or other casualty, or from theft.”²⁶⁰ The rationale for the existence of a personal casualty and theft loss deduction probably rests in the realm of compassion rather than in the realm of tax theory. One can argue that the suddenness and unexpectedness of such losses are likely to create liquidity problems for taxpayers that deserve some countenance in the tax law.

The lack of a strong tax theory justification for the personal casualty and theft loss deduction probably explains in part why Congress has set up restrictions on its availability. (These restrictions on personal casualty and theft losses do not apply to transactions entered into for profit, *i.e.*, investment losses.) A longstanding restriction on the deductibility of the personal casualty and theft losses is a high-income threshold. Specifically, net personal casualty and theft losses are deductible only to the extent they exceed 10% of a taxpayer's adjusted

255. With respect to individuals, see I.R.C. § 165(a), (c)(1) (“losses incurred in a trade or business”), (c)(2) (“losses incurred in any transaction entered into for profit, though not connected with a trade or business”). Note that if a taxpayer claims a loss under Section 165 in excess of certain thresholds, the taxpayer must file IRS Form 8886, *Reportable Transaction Disclosure Statement*. Treas. Reg. § 1.6011-4(b)(5), (d). *But see* Rev. Proc. 2013-11, 2013-2 I.R.B. 269 (exempting from reporting requirements losses from sale or exchange of property with a qualifying basis).

256. I.R.C. § 162 (addressing trade or business expenses); I.R.C. § 212 (addressing expenses related to investment activities).

257. I.R.C. § 63(a) (defining “taxable income” as gross income minus deductions allowed by the Code).

258. I.R.C. § 262(a).

259. *Id.* (“Except as otherwise expressly provided in this chapter, no deduction shall be allowed for personal, living, or family expenses.”). There are several personal expenses that can be deducted, including home mortgage interest, state and local taxes, charitable gifts, and medical expenses—each is subject, however, to limitations. I.R.C. §§ 162, 163(a), 164(a), 170(a)(1), 213.

260. I.R.C. § 165(c)(3).

gross income.²⁶¹ This income floor ensures that only large and uninsured personal casualty and theft losses are deductible.

An even greater restriction on the availability of the deduction for personal casualty and theft losses is a temporary restriction enacted by the Tax Cuts and Jobs Act of 2017. Effective for 2018 through 2025, Congress has further narrowed the deduction to apply only to losses from a “federally declared disaster.”²⁶² A federally declared disaster is an event that has been declared a “major disaster” by the President.²⁶³ In short, through 2025, personal theft losses are disallowed along with personal casualty losses that do not arise from presidentially declared major disasters. It is hard to imagine a crypto loss due to a presidentially declared disaster. Even so, most courts require a showing of physical damage to property. Temporary declines in market value due to a disaster do not qualify as casualty losses.²⁶⁴ Beginning in 2026, such losses will be allowed subject to the longstanding 10% income threshold.²⁶⁵ As discussed earlier, casualty losses arise when there is damage or destruction of property by sudden, unexpected, or unusual events.²⁶⁶ Theft losses, separately authorized by the Code, arise when the taxpayer suffers a criminal taking of his property as defined by the law of the jurisdiction.²⁶⁷

The statutory framework for the deductibility of sustained losses, as outlined above, is seemingly straightforward and easily applied to sustained cryptocurrency losses. In the case of individuals, only three types of sustained losses are currently allowed: (1) losses that are connected with a trade or business under Section 165(c)(1); (2) losses that are incurred in a transaction entered into for profit under Section 165(c)(2); and (3) personal casualty and theft losses arising from presidentially declared disasters under Section 165(c)(3). Because it is unlikely that a crypto loss would be realized as a result of a presidentially declared major disaster, deductibility of such losses would depend on the existence of a “trade or business” (business losses) or “transaction entered into for profit” (investment losses).

Surprisingly, neither the Code nor the Treasury Regulations define a trade or business.²⁶⁸ Courts considering the meaning of the term have generally concluded that to be engaged in a trade or business, (1) “the taxpayer must be involved in the activity with continuity and regularity,” and (2) “the taxpayer’s primary purpose for engaging in the activity must be for income or profit.”²⁶⁹ In

261. Basically, a taxpayer must net together all of her personal casualty losses and personal casualty gains for the taxable year. If the losses exceed the gains, the taxpayer has a “net casualty loss” which is then only deductible to the extent it exceeds 10% of her adjusted gross income. I.R.C. § 165(h)(2)(A). For the definition of adjusted gross income, see I.R.C. § 62. In applying the income threshold, adjusted gross income is computed as though there were no personal casualty gains or losses for the year. *See id.*

262. I.R.C. § 165(h)(5).

263. 42 U.S.C. § 5170(a); *see also* 42 U.S.C. § 5122(2) (defining major disaster).

264. *See* I.R.C. § 165(h)(5)(B).

265. *See* I.R.C. §§ 62, 165(h)(2)(A); *supra* note 261 and accompanying text.

266. *See supra* note 171 and accompanying text.

267. *See supra* note 175 and accompanying text.

268. *See* F. Ladson Boyle, *What Is a Trade or Business?*, 39 TAX LAW. 737, 738 (1986).

269. *Comm’r v. Groetzinger*, 480 U.S. 23, 35 (1987).

the seminal case *Commissioner v. Groetzinger*, the Supreme Court held that an individual's gambling activities constituted a trade or business because they were pursued full-time, in good faith, and with regularity, for the production of income as a livelihood.²⁷⁰ Whether a taxpayer has engaged in the requisite scope of activities and has demonstrated the requisite profit motive are questions to be determined by an examination of all the facts in each case.²⁷¹

Some crypto owners may be deemed engaged in a trade or business. A crypto miner, as one example, might be engaged in the requisite scope of activities and have demonstrated the requisite profit motive. Such owners may be entitled to deduct their ordinary and necessary business expenses, as well as their sustained losses connected with the business. Crypto investors and day traders, by contrast, would not be considered engaged in a trade or business for loss deduction purposes. The Supreme Court long ago held that management of one's own securities, even on a big enough scale to require office and staff, was not a trade or business.²⁷² Fortunately, however, losses incurred in a "transaction entered into for profit" are separately authorized under Section 165(c)(2).²⁷³

As with the phrase "trade or business," there is no statutory definition of "transaction entered into for profit." "Generally speaking, however, the phrase undoubtedly includes any undertaking designed to result in a 'profit,' i.e., 'all returns—e.g., dividends, rents, interest, *surplus from sales*, etc.'"²⁷⁴ Crypto owners may have various motives (e.g., both personal and profit motives) in acquiring crypto, but it would seem that the primary motivation of many would be to realize surplus from sales in the future.²⁷⁵ One could envision exceptions, however, where personal—or other—motivation was paramount. For example, if a crypto owner originally purchased crypto with a view to lending it to a charitable organization rent-free, then any loss sustained on the sale would be viewed as a nondeductible personal loss.²⁷⁶ Likewise, if a crypto owner purchased crypto with a view to using it for personal consumption, such as buying personal goods or services, the government would have a strong argument that the personal motive was primary and the profit motive was secondary. In many cases, however, the profit motive would probably be the primary or substantial motivating factor.²⁷⁷

270. *Id.*

271. *See Higgins v. Comm'r*, 312 U.S. 212, 217 (1941).

272. *Id.* at 214, 218.

273. *See* I.R.C. § 165(c)(2).

274. McCoy, *supra* note 172, at 75–83 (citations omitted) (emphasis added) (outlining cases that "have developed some rules which serve as basic guidelines"). Courts will look not merely to intentions at the time of sale, but also to the initial motive in acquiring property and behavior during the holding period. *See Dawson v. Comm'r*, 31 T.C.M. (CCH) 5 (1972).

275. For cases involving investments in stocks wherein the shareholder had mixed motives (both personal and profit), see *Tyler v. Comm'r*, 6 T.C.M. (CCH) 275 (1947) (holding profit motive was primary); *Lavin v. Comm'r*, 3 T.C.M. (CCH) 228 (1944) (same).

276. For a case involving real estate, see *Mitchell v. United States*, 37-2 U.S. Tax Cas. (CCH) ¶ 9457 (S.D.N.Y. 1937).

277. *See Stein v. United States*, 240 F. Supp. 818, 820 (S.D. Iowa 1964), *aff'd per curiam*, 346 F.2d 569 (8th Cir. 1965).

One may question how any crypto owner could be viewed as entering into a crypto transaction for profit in light of the historic losses recorded by many cryptocurrencies in recent years. But in non-cryptocurrency cases, courts have said that actual profits are unnecessary if the requisite profit motive exists.²⁷⁸ Moreover, that profit motive does not even have to be reasonable, provided the taxpayer genuinely sought to make a profit.²⁷⁹

2. *Limitations on Deductions*

Categorizing crypto losses as either business losses under the rule of Section 165(c)(1) or investment losses under the rule of Section 165(c)(2) would seemingly be unnecessary. After all, both business losses and investment losses are authorized by statute as noted above. But categorization as one or the other becomes important due to various limitations imposed by Congress.

What Congress giveth, Congress can take away. More specifically, what may look like an otherwise deductible loss under Section 165 may be denied, limited, or deferred under another overriding Code provision.²⁸⁰ Some limitation provisions apply regardless of whether the property at issue was used in business or held for investment. For instance, Section 267 of the Code disallows deduction of a taxpayer's loss (whether business or investment) on the sale or exchange of property to a *related person*.²⁸¹ Some limitations, however, apply only to business losses;²⁸² some apply only to investment losses.²⁸³

a. Capital Loss Limitation Rules

An important loss limitation rule applicable to *investment losses* is the capital loss limitation rule of Section 1211.²⁸⁴ Generally speaking, ordinary business losses are deductible in full whereas capital losses are subject to a statutory limitation. In the case of individuals, capital losses can only be used to offset capital gains (plus up to \$3,000 of ordinary income) in any given year.²⁸⁵ The main reason for the limitation on capital losses is to prevent taxpayers from using

278. See *King v. United States*, 545 F.2d 700, 708 (10th Cir. 1976).

279. See *Maximoff v. Comm'r*, 53 T.C.M. (CCH) 423 (1987).

280. See *McCoy*, *supra* note 172, at II.E (summarizing these provisions); see also I.R.C. § 261 (“In computing taxable income no deduction shall in any case be allowed in respect of the items specified in this part.”).

281. I.R.C. § 267(a). Generally speaking, related persons are family members of the taxpayer or business entities controlled directly or indirectly by the taxpayer. I.R.C. § 267(b). Attribution rules apply. I.R.C. § 267(c). The rationale for disallowing this loss is the belief that the taxpayer's actual economic circumstances have not been sufficiently changed. The property is still within his deemed control. In essence the related parties are viewed as a single economic unit. *MILLER & MAINE*, *supra* note 22, at 386.

282. See, e.g., I.R.C. §§ 461(l), 469, and discussion *infra* Section IV.B; see also I.R.C. § 163(j) (limiting deduction of business interest).

283. See, e.g., I.R.C. § 1211 and discussion *infra* Subsection III.B.2; see also I.R.C. § 163(d) (limiting deduction of investment interest).

284. I.R.C. § 165(f) (“Losses from sales or exchanges of capital assets shall be allowed only to the extent allowed in Sections 1211 and 1212.”).

285. I.R.C. § 1211(b). For a similar limitation applicable to corporations, see I.R.C. § 1211(a).

capital losses from property transactions to wipe out or shelter ordinary income from other sources.²⁸⁶

The capital loss limitation applies only if a taxpayer's interest in property is terminated in a special way—a *sale or exchange*.²⁸⁷ Thus, if a crypto investor sustains a loss on the *sale* of crypto for cash or the *exchange* of crypto for different crypto, the otherwise deductible investment loss will be characterized as a capital loss and will be allowed only if the taxpayer has capital gains for the year of sale. Although Congress intended the phrase “sale or exchange” to have a broad meaning, it is not as broad as the meaning of a “sale or other disposition” (the realization requirement discussed in Section III.A.).²⁸⁸ Assume that crypto purchased and held for investment is later *stolen* by hackers or *abandoned* by the taxpayer. These events are realization events (“sales or other dispositions”) that result in a deductible loss, but they are not sales or exchanges under the characterization rules now being discussed. As a result, the loss would be characterized as an ordinary loss deductible in full and not subject to the capital loss limitation. As can be seen from these examples, crypto investors who are subject to hacks or who choose to abandon their crypto receive better treatment under the current tax scheme (*i.e.*, ordinary loss deductions) than crypto investors who voluntarily sell or exchange their cryptocurrencies at a loss (*i.e.*, capital loss treatment). On occasion, Congress has tried to fix results like these and impose a “sale or exchange” in the absence of one to trigger the capital loss limitation. For example, in Section 165(g), Congress treats the worthlessness of securities—clearly not a sale or exchange—as a sale or exchange, thus precluding more favorable ordinary loss treatment.²⁸⁹ Interestingly, this rule does not apply to worthless crypto due to the Code's narrow definition of “security”—a share of stock in a corporation.²⁹⁰ In sum, the capital loss limitation rules apply only to sale or exchange transactions, and not to thefts, abandonments, and worthlessness.

In addition, the capital loss limitation applies only if a sale or exchange transaction involves a so-called “capital asset.”²⁹¹ The Code defines the term capital asset as all property held by the taxpayer whether or not connected with a trade or business, subject to certain exceptions.²⁹² The exceptions cover many

286. MILLER & MAINE, *supra* note 22, at 276.

287. I.R.C. § 1222.

288. An oft-cited case is *Helvering v. William Flaccus Oak Leather Co.*, 313 U.S. 247 (1941) (holding that the conversion of a business plant into cash after fire was an “other disposition” within the meaning of Section 1001, but it did not constitute a “sale or exchange” within the meaning of Section 1222).

289. I.R.C. § 165(g)(1). For another example, see I.R.C. § 166(d) (treating worthlessness of nonbusiness debt as loss from the sale or exchange).

290. I.R.C. § 165(g)(2). The statute defines a security narrowly as a share of stock in a corporation; a right to subscribe for, or to receive, a share of stock in a corporation; or a bond, debenture, note, or certificate, or other evidence of indebtedness, issued by a corporation or a government or political subdivision thereof, with interest coupons or in registered form. *Id.*

291. I.R.C. § 1222; I.R.S. Notice 2014-21, 2014-16 I.R.B. 938 (April 14, 2014) (“The character of the gain or loss generally depends on whether the virtual currency is a capital asset in the hands of the taxpayer.”).

292. I.R.C. § 1221.

types of property, such as inventory and inventory-like property,²⁹³ depreciable or real property used in a trade or business,²⁹⁴ and self-created property.²⁹⁵ Thus, a taxpayer who is in the trade or business of dealing in cryptocurrency will generally recognize ordinary loss on the sale or exchange of a cryptocurrency (the first exception). Likewise, a creator of crypto will recognize ordinary loss on crypto transactions (the third exception). It is not commonplace, though, for crypto owners to be holding their crypto for sale to customers in their ordinary course of business (not a capital asset). And it is not commonplace for crypto owners to have minted their own crypto (likewise, not a capital asset). The more common scenarios involve crypto owners who hold their cryptocurrencies for investment (a capital asset). This means that their sustained losses are deductible under Section 165 but characterized as capital losses subject to the capital loss limitation rule.

In sum, the current deductibility of investment losses of crypto owners depends on the nature of the transaction. Investment losses from sales or exchanges are capital losses (allowed only to the extent of capital gains). Losses from stolen, abandoned, or worthless crypto, however, are ordinary losses (not subject to the capital loss limitation).

b. Deduction Hierarchy Rules

There is an additional catch, as investment losses may be subject to further limitation under the deduction hierarchy rules in the Code. The deduction hierarchy rules do not create any tax deductions. Instead, they merely establish the point in the tax calculation process at which deductions authorized by other Code Sections may be taken. Where crypto losses fall within the hierarchy, such losses can have a significant impact on their actual deductibility.

Under these rules, *business* losses of an individual (which are ordinary losses) are so-called “above-the-line” deductions: that is, they are deductible from gross income in arriving at adjusted gross income.²⁹⁶ This means they are deductible regardless of whether the taxpayer itemizes other allowable deductions (*i.e.*, “below-the-line” deductions)²⁹⁷ or chooses instead to take the

293. *Id.* § 1221(a)(1) (excluding from the capital asset definition “property of a kind which would properly be included in the inventory of the taxpayer if on hand at the close of the taxable year, or property held by the taxpayer primarily for sale to customers in the ordinary course of his trade or business”).

294. *Id.* § 1221(a)(2) (excluding “property, used in his trade or business, of a character which is subject to the allowance for depreciation provided in Section 167, or real property used in his trade or business”).

295. *Id.* § 1221(a)(3) (excluding “a patent, invention, model or design (whether or not patented), a secret formula or process, a copyright, a literary, musical, or artistic composition, a letter or memorandum, or similar property, held by . . . a taxpayer whose personal efforts created such property”).

296. *Id.* § 62(a)(1); Treas. Reg. § 1.62-1T(c)(1) (1988). Section 62 authorizes certain deductions to be subtracted from gross income to arrive at “adjusted gross income.” These are often referred to as “above-the-line” deductions. Treas. Reg. § 1.62-1T(a)(iv) (1988). Looking at the list in Section 62, one will see that the largest category includes expenses attributable to a trade or business. I.R.C. § 62(a)(1). Other above-the-line deductions include business and investment losses from the sale or exchange of property. *Id.* § 62(a)(3).

297. Section 63 authorizes other deductions to be taken from adjusted gross income to arrive at taxable income. These are referred to as “below-the-line” deductions. Treas. Reg. § 1.67-1T (1960). Below-the-line deductions are also known as “itemized” deductions. I.R.C. § 63(b), (d). It is easy to identify itemized deductions.

“standard deduction.”²⁹⁸ Thus, a crypto miner or anyone else engaged in a crypto trade or business is in pretty good shape in terms of deductibility of crypto losses; the losses are not subject to the capital loss limitation rules and they are preferred above-the-line deductions.

The treatment of *investment* losses is a bit trickier. Investment losses are above-the-line deductions only if they result from a “sale or exchange of property” (and certain other transactions).²⁹⁹ All other investment losses—from theft, abandonment, or worthlessness—are less favored below-the-line itemized deductions and will be taken if the taxpayer’s itemized deductions for the year exceed the standard deduction. The standard deduction is adjusted annually for inflation; in 2023 it was \$13,850 for single taxpayers and \$27,700 for married couples filing jointly.³⁰⁰

Some itemized deductions are known as “miscellaneous itemized deductions.”³⁰¹ This is not a good thing from the standpoint of their deductibility. Prior to 2018, miscellaneous itemized deductions were deductible only to the extent that they exceeded 2% of the taxpayer’s adjusted gross income.³⁰² For tax years 2018 through 2025, however, no deduction is allowed for miscellaneous itemized deductions.³⁰³

So, what type of investment losses fall within the category of deductible itemized deductions and what type fall within the category of miscellaneous itemized deductions? Investment losses, such as investment casualty and theft losses which do not involve a sale or exchange, are itemized deductions and can be taken only if the taxpayer itemizes.³⁰⁴ Investment losses that do not involve a sale or exchange or casualty or theft (*i.e.*, investment losses from abandonment or worthlessness) are miscellaneous itemized deductions—disallowed through 2025 and allowed beginning in 2026 but subject to the two-percent-of-adjusted gross income limitation.

These deduction hierarchy rules established in the Code create an interesting result for cryptocurrency investment losses. While investment losses from sales or exchanges of cryptocurrency are limited by the capital, they are not then subject to further limitation under the deduction hierarchy rules: they are above-

If they are not listed in Section 62 as above-the-line deductions, then they automatically fall into the category of itemized deductions (with the exception of the Section 199A deduction). *Id.* § 63(b).

298. In lieu of listing all below-the-line or itemized deductions, the Code permits a taxpayer to take a deduction in the amount of the standard deduction. I.R.C. § 63. The amount of the standard deduction is determined by reference to the taxpayer’s filing status, and it is adjusted annually for inflation.

299. I.R.C. § 62(a)(3); Treas. Reg. § 1.62-1T(c)(4) (1988).

300. Rev. Proc. 2022-38, 2022-45 I.R.B. 1.

301. I.R.C. § 67(b).

302. *Id.* § 67(a).

303. Tax Cuts & Jobs Act (“TCJA”), Pub. L. No. 115–97, 131 Stat. 2054 (2017) (codified as amended at I.R.C. § 67(g)). The suspension of miscellaneous itemized deductions is temporary as with most individual tax changes made by the TCJA. *Id.*

304. They are not considered miscellaneous itemized deductions subject to further limitation. *See* I.R.C. § 67(a), (b)(3) (excluding from the definition of miscellaneous itemized deductions “the deduction under Section 165(a) for casualty or theft losses described in paragraph (2) or (3) of Section 165(c) or for losses described in Section 165(d)”).

the-line deductions. Investment losses from thefts are favorable ordinary losses not subject to the capital loss limitation rule but are treated as less favorable itemized deductions which will be taken only if, in a given year, total itemized deductions exceed the standard deduction. Investment losses from abandonment or worthlessness, although treated as more favorable ordinary losses, are then classified as miscellaneous itemized deductions, temporarily suspended.

IV. TOWARD A NEW TAX FRAMEWORK

Scant guidance exists on the application of general tax principles to cryptocurrency losses. This was of no particular consequence when the crypto world was awash in high value; after all, no one questioned whether gain on the sale of crypto was taxable or not, and most controversies between taxpayers and the government centered on how to compute and report gain. But with the recent massive losses seen in the crypto contagion of platform collapses, important questions are now being raised as to loss deductibility.

As demonstrated in Part III, much of the current uncertainty over crypto loss deductibility relates to the “realization” requirement—specifically, what is required for a crypto loss to be considered “realized” or “sustained” or “fixed” under general tax principles? Under a “theft” theory, the potential *lack of privity* and the *possibility of recovery* in cryptocurrency and blockchain litigation are significant hurdles. In other words, misrepresentations and securities violations by bad actors are generally not enough to sustain a theft loss; even if so, prospects of recovery in litigation delay the timing of a theft loss well beyond the discovery year. As it did in 2009 in response to the Madoff Ponzi schemes, the government should provide guidance on the effect of “theft” losses resulting from fraudulent crypto investment schemes.

An “abandonment” theory has its hurdles. While the government has raised the possibility of an abandonment loss deduction if necessary steps have been taken, it did not indicate what actions would qualify as abandonment.³⁰⁵ The government should clarify what steps could be taken to abandon crypto, such as the utilization of one of the protocols or websites held out as a place to abandon cryptocurrency. It should be noted that even with such guidance, abandonment will be impossible if a crypto owner cannot gain access to cryptocurrency to dispose of it—a likely scenario when the platform is in bankruptcy administration. In such case, a “worthlessness” theory may be the only option to support a crypto loss deduction.

As with “theft” and “abandonment” theories for deductibility, a “worthlessness” theory also faces obstacles. The government has taken the position that if a crypto is worth just a fraction of a penny per unit and continues to be traded on an exchange, it is not worthless for loss deduction purposes.³⁰⁶ This bright line approach seems overly harsh, especially for crypto that might be listed on some exchange but that lacks a true market. Under the government’s theory, a loss

305. See *supra* notes 223–28 and accompanying text.

306. See *supra* notes 240–50 and accompanying text.

would be sustained or fixed for tax purposes upon completion of a platform's bankruptcy administration. So what is really at issue is the proper year of the taxpayer's loss, and whether the loss dates to (1) when the platform crashes and the crypto is trading at a fraction of a penny or (2) when bankruptcy administration is completed. In light of the unique nature of the crypto contagion, the government could consider adopting some type of safe harbor adopting the former timing rule. Commentators have explored such an approach for worthless stock and securities—for example, permitting taxpayers to claim worthless loss deductions when a recession started rather than waiting until a later year when the business ultimately failed:

Aside from providing some certainty, a safe harbor approach . . . could provide relief to inexperienced investors. In the era of Robinhood and Reddit day traders, many market participants have piled into stocks that the broader market viewed as inevitably doomed These investors could be partially redeemed by a safe harbor allowing them to claim losses based on the President's declaration that a particular event, such as a measure of market volatility or unfair manipulation, has occurred. Perhaps most obviously, it could reduce the complexity for investors (and possibly IRS auditors) attempting to determine when a stock becomes worthless.³⁰⁷

General tax principles require not only a realization event fixing the claimed loss, but also specific statutory authorization for the claimed loss deduction. As revealed in Part III, the current statutory authorization scheme produces questionable tax distinctions. Consider just the capital loss limitation rule. If a crypto investor sells crypto that has significantly declined in value, the investor will be subject to the capital loss limitation rule; he or she will be able to use the crypto losses sustained to offset any capital gain income he or she might have, but not any noncapital income. But, if that crypto investor can successfully take the requisite steps to abandon the crypto, the investor will not be subject to the capital loss limitation rule; he or she will be able to use those losses to offset unrelated, noncapital income. Likewise, if that investor can wait until the crypto becomes worthless (with no current or future value), he or she will benefit from ordinary loss treatment and will be able to shelter unrelated income with those losses.³⁰⁸

Distinctions like these raise obvious questions. Why should the tax law treat a crypto owner who abandons his crypto more favorably than a crypto owner who sells his crypto for what little consideration he can? Both events involve affirmative acts on the part of the crypto owner. Is the distinction justified on the bases that a crypto owner who abandons receives no consideration whereas a crypto owner who sells does? That distinction is unsound as consideration received in a transaction—whether sales proceeds in a crypto sale or insurance proceeds in a crypto theft situation—sets the amount of loss, and does control

307. Lawson & Foster, *supra* note 19, at 331–32.

308. These losses would be miscellaneous itemized deductions, which, beginning in 2026, are allowed to the extent they exceed 2% of adjusted gross income. See *supra* notes 303–04 and accompanying text.

whether statutory loss limitation rules should apply or not.³⁰⁹ But Congress chose this route when it imposed capital loss limitations only on “sales or exchanges,”³¹⁰ which are voluntary transactions that ipso facto involve consideration. Congress does have the power to treat other events as “sales or exchanges” implicating the capital loss limitation. It has done so in the context of certain non-crypto events³¹¹ and could similarly do so in the context of certain crypto events.

The current tax framework also produces questionable tax distinctions between stock and securities on the one hand and cryptocurrency as an intangible asset on the other. As one example, Section 165(g) provides that “[i]f any security which is a capital asset becomes *worthless* during the taxable year, the loss resulting therefrom shall . . . be treated as a loss from the *sale or exchange* . . . of a capital asset.”³¹² The worthlessness of a security is not a sale or exchange event, but Congress chose to treat it as one, triggering the capital loss limitation rule. Interestingly, this rule applies to stock but not to cryptocurrency since the statute defines a “security” narrowly—as a share of stock in a corporation; a right to subscribe for, or to receive, a share of stock in a corporation; or a bond, debenture, note, or certificate, or other evidence of indebtedness, issued by a corporation or a government or political subdivision thereof, with interest couples or in registered form.³¹³ The IRS has suggested in administrative guidance that cryptocurrency is none of these items and that Section 165(g) does not apply.³¹⁴

As another example, Section 1091 denies losses on sales of “stock or securities” when substantially identical stock or securities is acquired by the taxpayer within thirty days before or after the sale.³¹⁵ The purpose of Section 1091 (the so-called “wash sale” rule) is to prevent loss recognition when the taxpayer has not changed her economic circumstance: that is, when she has not cashed in her investment.³¹⁶ But, again, this provision applies only to stocks and securities, and not to cryptocurrency.³¹⁷ Thus loss recognition is possible if a taxpayer sells

309. I.R.C. § 165(a) (stating losses are allowed to the extent not compensated by insurance or otherwise).

310. *Id.* § 1211.

311. *See, e.g.*, I.R.C. §§ 165(g) (treating worthlessness of stock as the sale or exchange of stock), 166(d) (treating worthlessness of debt as the sale or exchange of debt), 1231 (treating involuntary conversions of certain property as the sale or exchange of property).

312. *Id.* § 165(g)(1) (emphasis added).

313. *Id.* § 165(g)(2).

314. I.R.S. Chief Couns. Mem. 202302011 (Jan. 13, 2023).

315. I.R.C. § 1091.

316. *See* MILLER & MAINE, *supra* note 22, at 386; Adam Chodorow, *Lost in Translation*, 97 TAXES 171, 178 (2019).

317. *See* Calvin, *supra* note 182, at III (noting bitcoin “has none of the characteristics of financial contracts which are treated as securities for federal income tax purposes”; rather “it seems likely that bitcoin is treated as a commodity for purposes of §1091. As a result, bitcoin appears to be excluded from §1091.”). Neither Section 1091 nor the regulations thereunder define “stock or securities.” *See* Horne v. Comm’r, 5 T.C. 250, 253 (1945) (“Since the revenue statutes carry no definition of either the term ‘shares of stock’ or ‘securities’ as used in [I.R.C. § 1091], the terms must be given their ordinary meaning.”). *But see* Gantner v. Comm’r, 91 T.C. 713, 724–25 (1988), *aff’d*, 905 F.2d 241 (8th Cir. 1990) (holding before later amendments to Section 1091 that Section 1091 did not apply to options to acquire or sell stock based on the plain meaning of the statute and legislative intent).

crypto at a loss but then turns around and repurchases the same or similar cryptocurrency.

There is no sound justification for treating worthless crypto (ordinary loss) more favorably than worthless stock (capital loss), even though a plain reading of the statutes produces that result. Likewise, there is no rational reason for allowing deduction of losses from wash sales of cryptocurrency but disallowing deduction of losses from wash sales of stock. Indeed, it could be argued that cryptocurrency should be treated no better. Both Section 165(g) and Section 1091 were enacted long before the birth of cryptocurrency. Amendments should be made to specifically incorporate cryptocurrency, so these rules apply to stock, securities, and cryptocurrency.³¹⁸ Treating cryptocurrency as stock or securities for purposes of Section 165(g) and 1091 would seemingly reflect the purpose of the statutes and policy considerations.³¹⁹

Aside from Code fixes here and there to better align the tax treatment of stock losses and crypto losses, the government should take a more holistic approach to the taxation of cryptocurrency—specifically the deductibility of cryptocurrency. To date, the government’s approach has been to call cryptocurrency “property” and then, in a handful of ad hoc administrative guidance, attempt to fit crypto into the tax framework applicable to other property such as realty.³²⁰ A more conceptual approach would be to ask important questions, such as: Should the tax system subsidize cryptocurrency losses when the government has decided not to regulate cryptocurrency? If so, are loss limitations in the current tax framework sufficient, or should consideration be given to imposing additional loss restrictions for cryptocurrency? Each of these questions is addressed below.

A. *Exploring Expansion or Disallowance of Crypto Loss Deductions*

An approach the government could take would be to make it easier for crypto owners to deduct their claimed losses. For example, the IRS could administratively clarify that certain fraudulent crypto schemes qualify as “thefts” under general tax principles. As a further example, the IRS could provide a list of specific steps that qualify as abandonment acts. Similarly, Congress could introduce a safe harbor for allowing partially worthless crypto deductions based on a

318. See Katelyn E. Towe, *Washing Losses Away: Why Cryptocurrencies Need a Wash Sale Rule*, 169 TAX NOTES FED. 77, 78 (2020) (arguing that a wash sale rule should apply to cryptocurrency transactions to prevent abuse of the Code’s realization requirement). See also Calvin, *supra* note 182, at III (noting that for many Code Sections, the term “security” is limited to stock and debt, but that other Code Sections have broader definitions or depend on the determination of the SEC).

319. See Reuven Avi-Yonah, *Beware of Crypto Wash Sales*, 177 TAX NOTES FED. 1562, 1563 (2022): A court is . . . likely to interpret “securities” in Section 1091 as similar to “positions” in Section 1092 [which he believes encompass cryptocurrencies] precisely because not applying the wash sale rule to crypto would defeat the purpose of the rule, namely to prevent taxpayers from harvesting losses while maintaining their economic interest in the property being sold and repurchased within 30 days. To fill statutory gaps, the IRS has applied a statutory purpose doctrine in the past. See Calvin, *supra* note 182, at III (citing I.R.S. Gen. Couns. Mem. 38,285 (Feb. 22, 1980); Gen. Couns. Mem. 39,551 (June 30, 1986); Gen. Couns. Mem. 38,369 (May 9, 1980)).

320. See *supra* notes 23–28 and accompanying text.

discretionary determination by the President,³²¹ similar to the current approach for personal casualty losses and personal thefts.³²² These legislative and administrative approaches would bring certainty to this area—avoiding questions about the degree of privity between investors and alleged perpetrators needed under a “theft” theory, questions about the types of action steps need under an “abandonment” theory, and questions about whether a crypto exchange has a current and potential future value which needs to be addressed under a “worthless” theory. These approaches would also provide relief to many inexperienced crypto investors who got caught up in the crypto frenzy and now risk losing their homes or retirement accounts. The benefits of such an approach, however, would have to be weighed against potential drawbacks. Expanding crypto loss deductions could create incentives “for investors to engage in irresponsible or market-destabilizing behavior.”³²³ And it would obviously “pose risks for the fisc.”³²⁴ To the extent the tax system permits a tax deduction for crypto losses, the government is essentially sharing in the risk created by the investors’ activities.³²⁵

An alternative approach would be to completely disallow deduction of losses associated with cryptocurrency. Lest there be any doubt, Congress has the power to do so. The Code is replete with examples of Congress disallowing deductions for various types of expenditures and losses. No deduction is allowed, for example, for certain illegal bribes,³²⁶ lobbying expenditures,³²⁷ fines and penalties,³²⁸ and anti-trust triple damages.³²⁹ No deduction is allowed for business expenses of drug traffickers, including marijuana businesses that operate legally in their respective states.³³⁰ Recently, Congress denied deductions for payments

321. See Lawson & Foster, *supra* note 19, at 331–32 (proposing something similar for partially worthless stock and securities). “This discretionary standard could take various forms. For example, Congress could allow any taxpayer to elect to mark losses to market for any taxable year in which the President determines that the U.S. economy . . . entered into a recession or suffered another detrimental economic event.” *Id.* “Congress could also take a narrower approach, such as allowing the President to dispense with one part of the test for worthless stock deductions if the President determines that the economy entered a recession (or some other triggering event occurred).” *Id.* at 332.

322. See *supra* notes 263–68 and accompanying text.

323. Lawson & Foster, *supra* note 19, at 332 (noting this drawback if worthless stock deductions were easier to claim).

324. *Id.* at 333 (noting this additional drawback if worthless stock deductions were easier to claim):

The potential revenue loss would likely be far larger than in the disaster context. Aside from the prevalence of stock ownership among the U.S. population, the role of insurance in stock investments is far smaller than in the context of personal residences. If a person’s home burns in a fire or is destroyed in a tornado, insurance often steps in to provide compensation to the owner. But if a stock’s value falls, the investor is generally left holding the bag. Allowing taxpayers to claim losses for these often cyclical declines in value would pose risks for the fisc.

325. See Herzfeld, *supra* note 18, at 1077.

326. I.R.C. § 162(c); Treas. Reg. § 1.162-18 (1975).

327. I.R.C. § 162(e); Treas. Reg. § 1.162-20 (as amended in 1995).

328. I.R.C. § 162(f); Treas. Reg. § 1.162-21 (as amended in 1975); Treas. Reg. § 162-29 (2006).

329. I.R.C. § 162(g).

330. *Id.* § 280E. Over the past few years, a number of states have legalized sales of marijuana for recreational or medical use. At the time of writing, marijuana remains a Schedule 1 controlled substance under federal law, and, thus, marijuana businesses that operate legally in their respective states are still unable to take advantage of Section 162. Michael J. Lopez, Charles V. Preuss & Prasanna Tadi, *Drug Enforcement Administration Drug*

to settle sexual harassment or abuse cases where the settlement agreement is made confidential—to encourage making such settlements public, and to perhaps protect victims from serial harassers.³³¹

A stated policy justification for disallowance would have to be articulated. The government could make the argument that cryptocurrency losses are inherently personal losses that, along with other personal consumption expenditures, should not be allowed.³³²

Alternatively, the government could attempt to make some moralistic argument that cryptocurrency is bad; that unregulated crypto trading is an economically and socially unproductive activity more akin to illegal gambling which need not be subsidized—like gambling, crypto is often seen as a “zero-sum” activity with no redeeming social or economic value.³³³ Economist Paul Krugman and others have equated crypto to one big Ponzi scheme.³³⁴

A government argument could swing both ways. By allowing a deduction for crypto losses, the government is basically sharing in the risk created by cryptocurrency activity and encouraging investment in cryptocurrency and away from other investments activities of economic significance, such as stock, that produce value benefits to the economy. Alternatively, by allowing a deduction for crypto losses, more and more investors are encouraged to get out, which only harms the exchanges and those investors who invested legitimately in the industry. Notwithstanding possible arguments, complete disallowance of crypto loss deductions is unlikely due to probable political backlash. Complete disallowance would also be inconsistent with current efforts underway to better understand the future of cryptocurrency and its role in the payments system, as well as efforts to regulate it.³³⁵

Absent congressional action, the IRS and courts could attempt measures to disallow crypto loss deductions. Early in our tax history, “the IRS had asserted, and the courts had adopted, the doctrine that where the allowance of a deduction (whether for an expense or a loss) would frustrate a sharply defined state or national public policy, the deduction would be disallowed.”³³⁶ According to the

Scheduling, NAT'L LIBR. OF MED., <https://www.ncbi.nlm.nih.gov/books/NBK557426/> (July 30, 2023) [<https://perma.cc/Y5TQ-D3KX>].

331. I.R.C. § 162(q). The attorney's fees in such cases are also non-deductible. *Id.*

332. Generally speaking, taxpayers are not allowed to deduct losses or expenses that arise from personal concerns. *See id.* § 262. The rationale for disallowing all but a few personal losses is that those losses are deemed to arise from personal consumption. A potential point of ambiguity inherent to this area is distinguishing between investment property and personal use property. For example, most people might contend that their purchase of a home had a substantial investment component. It is well settled, however, that personal residences are not treated as investment property for tax loss purposes. *Gevirtz v. Comm'r*, 123 F.2d 707, 708 (2d Cir. 1941).

333. Stephen A. Zorn, *The Federal Income Tax Treatment of Gambling: Fairness or Obsolete Moralism?*, 49 TAX LAW. 1, 3–4 (1995).

334. Paul Krugman, *Crashing Crypto: Is This Time Different?*, N.Y. TIMES (May 17, 2022) <https://www.nytimes.com/2022/05/17/opinion/crypto-crash-bitcoin.html> [<https://perma.cc/Y76C-MBRC>]. *But see* Avi-Yonah & Salaimi, *supra* note 32, at 1391 (“We have no view on whether the rise of crypto is a positive or negative phenomenon. The same could be said about the internet, which has proven to have both pros and cons.”).

335. In March 2022, President Biden signed an executive order, which requires the Treasury Department to submit a report on these issues. Exec. Order No. 14067, 87 Fed. Reg. 14143 (March 9, 2022).

336. McCoy, *supra* note 172, at II (citing *Appeal of Columbus Bread Co.*, 4 B.T.A. 1126 (1926)).

Supreme Court, “the test of nondeductibility always is the severity and immediacy of the frustration [of public policy] resulting from the disallowance of the deduction.”³³⁷ In examining the facts of each case, courts have examined both the taxpayer’s conduct and the policy his conduct is said to frustrate.³³⁸

With respect to business *expenses*, this public policy principle has been codified—Congress has specifically disallowed deductions for certain categories of payments, like bribes and kickbacks, fines and penalties, which were previously disallowed under the common law principle.³³⁹

With respect to losses, however, Congress has not codified the public policy principle of the common law.³⁴⁰ Thus, courts may disallow a deduction under Section 165 on the grounds of public policy.

Most likely, however, public policy considerations would be insufficient for courts to deny crypto owners a deduction for their sustained losses. Cryptocurrency is currently not regulated by the government.³⁴¹ In commonplace crypto trading by investors, there are no laws the purpose of which would be defeated or frustrated by the allowance of a deduction. Taxpayers who have sustained economic harm from crypto activity have merely made bad investment judgments.

Aside from public policy arguments, courts would deny a deduction from casualty if the taxpayer intentionally caused the casualty or acted with gross negligence.³⁴² Negligence of the taxpayer is not a bar to the allowance of a casualty loss deduction.³⁴³ Assessing a crypto owner’s investment strategy or decision-making as negligent, grossly negligent, or worse would be difficult. Regardless, the casualty loss deduction is generally allowed only upon showing physical damage to property from sudden, unusual or unexpected events.

Complete disallowance of a deduction for crypto losses would seem overreaching and inconsistent with a normal income tax. Under a “normal” income tax, net accession to wealth should be taxed.³⁴⁴ The income tax is ostensibly a tax on net income. That is, it only attempts to tax the net increase in wealth

337. *Tank Truck Rentals, Inc. v. Comm’r*, 356 U.S. 30, 35 (1958).

338. See, e.g., *Comm’r v. Heininger*, 320 U.S. 467, 474–75 (1943); *Tank Truck Rentals*, 356 U.S. at 35; *Holt v. Comm’r*, 69 T.C. 75, 81 (1977), *aff’d per curiam*, 611 F.2d 1160 (5th Cir. 1980).

339. See I.R.C. § 162(c), (e), (f); S. REP. NO. 91-552, at 274 (1969); see also Treas. Reg. § 1.162-1(a) (1975) (providing that expenses otherwise deductible under Section 162 shall not be disallowed because they would frustrate public policy).

340. See Rev. Rul. 82-74, 1982-1 C.B. 110; Rev. Rul. 77-126, 1977-1 C.B. 47 (holding that although Congress codified and limited the public policy doctrine in the case of ordinary and necessary business expenses by amending Section 162, the rules for disallowing a deduction under Section 165 on the grounds of public policy were not so limited).

341. *Does the Federal Reserve Regulate Cryptocurrency?*, FORBES (Sept. 26, 2022, 10:15 AM), <https://www.forbes.com/sites/qai/2022/09/26/does-the-federal-reserve-regulate-cryptocurrency/?sh=55dc889b29ca> [<https://perma.cc/M9L2-5KHQ>].

342. See *Blackman v. Comm’r*, 88 T.C. 677, 683 (1987) (citing *Heyn v. Comm’r*, 46 T.C. 302, 308 (1986)); *White v. Comm’r*, 48 T.C. 430, 435 (1967) (“Needless to say, the taxpayer may not knowingly or willfully sit back and allow himself to be damaged in his property or willfully damage the property himself.”).

343. *Anderson v. Comm’r*, 81 F.2d 457, 460 (10th Cir. 1936); *Shearer v. Anderson*, 16 F.2d 995, 997 (2d Cir. 1927).

344. See *supra* note 143 and accompanying text.

generated by money-making activities. This implies that, at a minimum, taxpayers should be able to deduct losses sustained from gains realized before we apply the tax rates to the remainder.³⁴⁵ In general, this is what the tax rules try to do.³⁴⁶ And the nature of the money-making endeavors should be irrelevant for deduction purposes. The Supreme Court long ago ruled that if a wrongdoer included illegal receipts in income and subsequently gave restitution to his victim, he would be entitled to a deduction in the year of repayment.³⁴⁷ Thus, a refund of insurance proceeds when arson is discovered is deductible.³⁴⁸ Repayment of embezzled funds is likewise deductible.³⁴⁹ Even a gambler engaged in illegal wagering transactions can deduct wagering losses to offset wagering income.³⁵⁰

Nevertheless, complete disallowance is justified in limited situations. For example, if a crypto sale is a sham—for example, if the taxpayer sells crypto for loss and then shortly thereafter repurchases the property—no deduction should be allowed.³⁵¹ In such a scenario, the crypto owner wants to create a loss for tax purposes without significant change in economic position. Even if a taxpayer sells crypto for a loss and then shortly thereafter replaces the crypto with economically equivalent crypto, no deduction should be allowed. As we have suggested, Section 1091, designed to address “wash sales” like this, should be expanded to cover cryptocurrency.

B. Exploring Appropriate Loss Limitations

While we do not advocate for wholesale disallowance of crypto loss deductions, since no rational policy arguments could be offered for such a position, we do believe clarification is needed over when crypto losses are deemed “realized” or “sustained.” We recognize that by allowing a deduction for crypto losses, the government “essentially shares in the risk created by crypto activities.”³⁵² Thus, it seems fair that appropriate restrictions should be placed on crypto loss deductions. We explore here the proposition that crypto owners should not be able to

345. See *Hantzis v. Comm’r*, 638 F.2d, 248, 249 (1st Cir. 1981) (noting a fundamental principle of taxation is that the cost of producing income is deductible from a person’s taxable income).

346. In contrast, the Code generally prohibits the deduction of personal, living, or family expenses from income. I.R.C. § 262. There are exceptions: for example, personal casualty losses, home mortgage interest, state and local taxes, charitable gifts, and medical expenses.

347. *James v. United States*, 366 U.S. 213 (1961) (holding embezzled funds are taxable but observing that if a wrongdoer included illegal receipts in income and subsequently gave restitution to his victim, he would be entitled to a deduction in the year of repayment).

348. Rev. Rul. 82-74, 1982-1 C.B. 110.

349. Rev. Rul. 65-254, 1965-2 C.B. 50.

350. *Skeeles v. United States*, 95 F. Supp. 242, 244 (Ct. Cl. 1951). See *Zorn*, *supra* note 333, at 21 (“The scant legislative history [to Section 165(d)] shows a congressional intent both to eliminate the difference in treatment between legal and illegal gambling and to prohibit the deduction against other income of net losses from either kind of gambling.”).

351. See, e.g., *Russell Box Co. v. Comm’r*, 208 F.2d 452, 457 (1st Cir. 1953); *Paccar, Inc. v. Comm’r*, 85 T.C. 754, 777–84 (1985), *aff’d*, 849 F.2d 393 (9th Cir. 1988).

352. See *Herzfeld*, *supra* note 18, at 1077 (citing Noel Cunningham, *The Taxation of Capital Income and the Choice of Tax Base*, 52 TAX L. REV. 17 (1996)).

use their losses from crypto activities to shelter income or gains from other activities.

Our income tax system currently adopts a “basket approach” with respect to various types of losses.³⁵³ That is, it puts a taxpayer’s losses, with respect to a certain category of activity, in a basket, and prevents them from being intermingled with income from another category of activity. This is a time-honored rule-making technique in tax law. For example, the loss limitation rule for capital losses, which was discussed earlier, applies this same principle: capital losses are deductible only against capital gains and not against labor or other positive income.³⁵⁴ This limitation prevents taxpayers from using capital losses from property transactions to wipe out or shelter ordinary income from other sources.

Some basket approaches utilize large baskets. The capital loss limitation rule in Section 1211, just mentioned, is one example. Loss from the sale or exchange of any capital asset can offset gain from the sale or exchange of any other capital asset. Thus, a loss from the sale of stock in a company can offset a gain from the sale of a painting held for investment, a gain from the sale of a rental building, or a substantial gain from the sale of a house.³⁵⁵ And, in these examples, it does not matter how long any of the assets were held; in other words loss from the sale of stock held just a few months can offset gain from the sale of the painting, building, or house even if those assets were held many years.³⁵⁶

Another example of a large basket approach can be found in Section 469, the passive loss provision, which was enacted in 1986 as part of the most extensive overhaul of our income tax system of the past half-century.³⁵⁷ The provision’s plain purpose was to attack tax shelters, although the attack was somewhat indirect. It separates out a certain class of business activities as “passive activities.”³⁵⁸ Gain and loss from these activities are separately aggregated. A net loss from such activities is not permitted to offset income from non-passive activities.³⁵⁹ It is important to note that portfolio income, such as stock dividends, which seems passive, is not deemed passive for purposes of Section 469.³⁶⁰ Thus, passive losses cannot offset portfolio income.

353. See, e.g., I.R.C. §§ 165(d) (wagering losses), 183 (hobby losses), 461(l) (excess business losses), 469 (passive losses); see also I.R.C. §§ 163(d) (investment interest), 163(j) (business interest).

354. *Id.* § 1211.

355. All these assets are “capital assets.” *Id.* § 1221. So gains and losses from their sales or exchanges produce capital gains and losses subject to the basket approach.

356. *Id.* § 1211(b) (providing that capital losses (whether long-term or short-term) may be deducted to the extent of capital gains (whether long-term or short-term)).

357. *Id.* § 469. Even if a taxpayer can get past Section 469, another loss limitation may apply. In 2018, Congress enacted Section 461(l), which disallows any “excess business loss” of a taxpayer. *Id.* § 461(l)(1)(B). An excess business loss exists when a taxpayer’s aggregate deductions from all trades or businesses exceed the taxpayer’s aggregate gross income from such trades or businesses by more than \$250,000. *Id.* § 461(l)(3)(A).

358. *Id.* § 469(c).

359. *Id.* § 469(a)(1). A passive activity is a trade or business in which the taxpayer does not “materially participate.” *Id.* § 469(c)(1). Material participation is participation in the activity on a “regular,” “continuous,” and “substantial” basis. *Id.* § 469(h)(1). The regulations set out detailed criteria for meeting the material participation standard. Temp. Treas. Reg. § 1.469-5T (as amended in 1996). Rental activity is automatically deemed passive. I.R.C. § 469(c)(2), (4). There are exceptions to this rule. See I.R.C. § 469(c)(7), (i).

360. *Id.* § 469(e)(1).

Even if a taxpayer can get past Section 469 by showing that an activity is not passive, another loss limitation (or basket) rule may apply.³⁶¹ In 2018, Congress enacted Section 461(l), which disallows any “excess business loss” of a taxpayer.³⁶² An excess business loss exists when a taxpayer’s aggregate deductions from all trades or businesses exceed the taxpayer’s aggregate gross income from such trades or businesses by more than \$250,000.³⁶³ As one can see, this limitation applies a broad basket approach—placing all deductions and all income from all trades or businesses into a basket and netting to test for allowance in a given year.³⁶⁴

In other cases, Congress has chosen to adopt a narrow basket approach to limit the deduction of losses sustained. One example relates to the deductibility of *wagering losses*. Section 165(d) permits a deduction for “[l]osses from wagering transactions” but “only to the extent of the gains from such transactions.”³⁶⁵ Wagering losses, whether sustained by a professional or casual gambler, cannot be used to offset any other type of income.³⁶⁶ But, if a wagering activity produces reportable income, then expenses and losses incurred to produce that income should be allowed to offset that income.³⁶⁷ There is little or no legislative history on the limitation of wagering losses. This restriction on gambling deductions perhaps is based on administrative feasibility, or may be based on moral disapproval of gambling as compared to other speculation activities—that is, it reflects a “moralistic anti-gambling bias.”³⁶⁸

Another example of a narrow basket approach in our tax system relates to the deductibility of so-called *hobby losses*—losses attributable to activities *not engaged in for profit*. Specifically, Section 183 permits deductions attributable to a hobby, but only to the extent of income attributable to the hobby.³⁶⁹ As with wagering losses, losses from personal hobby activities should not be allowed to

361. See, e.g., *id.* § 461(l) (limitation on excess business losses). The passive activity loss rules of Section 469 are applied before applying the rules for excess business losses. *Id.* § 461(l)(6).

362. *Id.* § 461(l)(1)(B).

363. *Id.* § 461(l)(1)(3)(A).

364. Sometimes the government creates additional mini baskets within a largest basket. For example, Section 163(j) limits the deduction of business interest for any taxable year to the sum of the taxpayer’s business interest income for the year and 30% of the taxpayer’s adjusted taxable income for the year. *Id.* § 163(j)(1). An exception to the limitation is provided for small businesses. *Id.* § 163(j)(3).

365. *Id.* § 165(d); see also Treas. Reg. § 1.165-10 (1960). For years 2018 through 2025, “losses from wagering transactions” include not only the actual costs of wagers, but also otherwise deductible expenses incurred in the gambling activity. *Id.* (as amended by the Tax Cuts and Jobs Act of 2017, Pub. L. No. 115-97, § 11050). Note that some states do not permit taxpayers to deduct gambling losses at all.

366. See *Presley v. Comm’r*, 38 T.C.M. (CCH) 1301 (1979); *Humphrey v. Comm’r*, 5 T.C. 21, 30 (1946), *aff’d in part, rev’d in part*, 162 F.2d 853 (5th Cir. 1947).

367. Note that wagering losses incurred in a trade or business are above-the-line deductions in arriving at adjusted gross income. I.R.C. § 62. Other wagering losses are below-the-line itemized deductions, but not miscellaneous itemized deductions. *Id.* § 67(b)(3).

368. See Zorn, *supra* note 333, at 2.

369. I.R.C. § 183(b). Section 183(c) defines an activity not engaged in for profit by incorporating the standards applied by Sections 162 and 212. Fortunately, the regulations under Section 183 provide an independent set of principles to help determine whether activity is or is not engaged in for profit. Treas. Reg. § 1.183-2(b) (1972) (providing nine relevant factors that should be taken into account).

shelter income from other sources.³⁷⁰ But if a personal hobby activity produces reportable income, then expenses and losses incurred to produce that income should be allowed to offset that income.³⁷¹

It should be noted that some loss limitation rules—usually those that adopt broad basket approaches—have favorable carryover rules. For example, capital losses not allowed because of the capital loss limitation may be carried over into subsequent years.³⁷² These carryover losses are treated as though they arose in the carryover year and will be allowed in that year if there are capital gains in that year. Similarly, passive losses that cannot be deducted against non-passive income carry over as a deduction for the next year where it can be used to offset passive income in that year.³⁷³ And excess business losses disallowed under Section 461(l) likewise carry over to the following tax year.³⁷⁴ These carryover rules in essence make the limitation rule more of a timing rule: any disallowed loss is suspended for possible future enjoyment.

Other loss limitation rules, typically those that adopt a narrow basket approach, lack any carryover provision and are thus more restrictive. For example, wagering losses disallowed under Section 165(d) cannot be carried forward to a future tax year, even to offset wagering gains in that year.³⁷⁵ Likewise, hobby losses disallowed under Section 183 are treated as personal losses and cannot be carried forward to the next tax year.³⁷⁶

370. See S. REP. NO. 91-552, 337 (1969) (noting concern that “[w]ealthy individuals [had] invested in certain aspects of farm operations solely to obtain ‘tax losses’—largely bookkeeping losses—for use to reduce their tax on other income”); see also *Jasionowski v. Comm’r*, 66 T.C. 312, 321 (1976) (citing S. REP. NO. 91-552 (1969)):

The legislative history surrounding Section 183 indicates that one of the prime motivating factors behind its passage was Congress’ desire to create an objective standard to determine whether a taxpayer was carrying on a business for the purpose of realizing a profit or was instead merely attempting to create and utilize losses to offset other income.

371. There is a major “gotcha” in all this that must be noted. Hobby expenses are classified as miscellaneous itemized deductions. Treas. Reg. § 1.67-1T(a)(1)(iv) (1960). Prior to 2018 that meant they were deductible only if, and to the extent, they exceeded 2% of the taxpayer’s adjusted gross income. I.R.C. § 67(b). Starting in 2018 and continuing through 2025, the TCJA completely eliminated miscellaneous itemized deductions. *Id.* § 67(g). This means that, at least temporarily, taxpayers will not be able to deduct expenses from their hobbies but will still have to report any income they earn from their hobbies. Clearly, the TCJA raised the stakes for would-be business owners by making the basic question of whether an activity is a business or a hobby crucial to getting nearly any deduction.

372. *Id.* § 1212(b)(1).

373. *Id.* § 469(b), (d)(1). Dispositions of passive activities by sale can serve to release some or all of the previously disallowed losses for deduction against non-passive income. In the case of an outright sale of a passive activity to an unrelated person, the carried losses are first used for offsetting income from the activity in the year of sale, then against all other passive income for the year, and then are released for use against the gain on the sale or even against non-passive income. *Id.* § 469(g)(1)(A).

374. Any excess business loss that is disallowed is treated as a net operating loss (“NOL”) carryover to the following tax year under Section 172. *Id.* § 461(l)(2). Although NOLs may be carried forward indefinitely, an NOL may only reduce 80% of taxable income in a carry-forward tax year. *Id.* § 172(a).

375. I.R.S. Chief Couns. Mem. AM2008-011 (Dec. 12, 2008) (noting a taxpayer cannot carry over excess wagering losses to offset wagering gains in another year). A so-called “net operating loss,” defined as the excess of deductions allowed over gross income, can be carried forward. *Id.* § 172(a), (b). But, because wagering losses in excess of wagering income are not allowed under Section 165(d), the excess losses produce no net operating loss carryover.

376. Robert W. Wood, *Hobby Losses*, 548-2d TAX MGMT. PORTFOLIO (BNA) 1, 7 (2023).

These loss limitation rules—or, basket approaches—just described are grounded in sound tax policy.³⁷⁷ In essence, they exist to curtail system abuse—namely, that losses should not be used to shelter unrelated sources of positive income like salary and portfolio income. Some, like the passive loss limitation, are designed to restrict tax shelters—ventures designed chiefly to produce tax benefits (deductions and not true economic income) without significant economic risk.

The loss limitation rules are practical in the context of a complex income tax structure. It is difficult to measure income, especially midstream.³⁷⁸ The basket approach often takes a wait-and-see attitude toward losses by saying, in effect, the deduction will be suspended in the basket until the full nature of a financial venture is revealed. For example, the passive loss rules of Section 469 suspend the deduction of loss on an investment until the interest in the activity is sold.³⁷⁹ At that point the true economic consequences of the investment are clear. Another practical utility of the basket approach is that it permits the rule maker to define the tax consequences of a transaction by reference to a single objectively identifiable trait. That trait, be it “passivity,” “wagering,” or “hobby,” stands as a surrogate for looking into the hearts and minds of taxpayers for motives.³⁸⁰

It is unlikely that taxpayers invest in crypto initially with tax shelter goals in mind—that is, with the *hope* that cryptocurrency will significantly decline in value, and that crypto losses will later be sustained and used to shelter unrelated sources of positive income. With that said, it seems inappropriate that a taxpayer could use a crypto loss to offset unrelated sources of positive income—or, put differently, to avoid taxation of income from sources unrelated to crypto investing. A basket approach like those described above seems appropriate.

One basket approach already applies to certain crypto losses.³⁸¹ Specifically, capital losses from sales or exchanges of crypto can only be used to wipe out capital gains a taxpayer might have.³⁸² Ordinary losses from thefts, abandonments, and worthlessness of cryptocurrency are not so limited and can be used against unrelated sources of positive income.³⁸³ If Section 165(g), which treats the worthlessness of securities as capital losses, were expanded to cover worthless crypto, the capital loss limitation rules would apply similarly to both stock and crypto.

377. For defense of these basket approaches, see MILLER & MAINE, *supra* note 22, at 419.

378. *Id.*

379. See *supra* notes 374–75 and accompanying text.

380. MILLER & MAINE, *supra* note 22, at 419 (“The use of surrogates runs the risk of being arbitrary and over inclusive. It may also be under inclusive.”).

381. The loss limitation rules applicable to business activities—the passive loss limitation of Section 469 and the excess business loss limitation of Section 461(l)—would not apply to most investors and their crypto losses. The Supreme Court ruled long ago that buying and selling stocks and other investment activities did not constitute a trade or business. *Higgins v. Comm’r*, 312 U.S. 212, 217 (1941).

382. See *supra* notes 372–73 and accompanying text.

383. See discussion *supra* Section IV.B.

The capital loss limitation, which adopts a broad basket approach, would allow capital losses from crypto events to offset any capital gains the taxpayer might have. This raises a policy question of whether a capital loss from a crypto transaction or event *should* be used to offset capital gain from the sale of a non-crypto asset—sale of stock, art, one’s house, or any other capital asset. Or is a narrower basket approach warranted—one that limits crypto losses to be used to offset only crypto gains—similar to the approaches taken for hobby losses and gambling losses?

The loss limitation rule applicable to hobby activities, under Section 183, would not apply to most crypto investors as such investors hold their crypto for profit.³⁸⁴ Section 183 only applies to activities *not* engaged in for profit.³⁸⁵ Crypto owners often pursue their crypto activities with serious profit motives—even if the short term to get rich overnight. They are not generally in it for the fun of it. One might argue that some casual crypto investors are in it solely for fun, with their investment viewed as equivalent to personal consumption. But that would seem to be the exception. Most crypto investors have genuine profit expectations and would not fall within the hobby loss limitation rule.

The applicability of the existing loss limitation rule for wagering transactions to crypto transactions, under Section 165(d), is less certain. It is true that cryptocurrency can be very risky. But does that mean the government will view crypto transactions as wagering transactions subject to Section 165(d), which limits wagering losses to offset only wagering gains? Neither the Code nor the Treasury regulations define the term “wagering transaction.”³⁸⁶ Much of the case law and administrative guidance under Section 165(d) focuses on transactions of suspect taxpayers—poker players;³⁸⁷ pari-mutuel betters;³⁸⁸ fantasy sports participants;³⁸⁹ casino players, managers and dealers;³⁹⁰ and the like. More relevant to crypto investors, at least one court has held that investing in capital assets is not a wagering transaction as contemplated under Section 165(d).³⁹¹ In *Jasinski v. Commissioner*, the taxpayer purchased high-risk debentures, which were

384. See discussion *supra* Section IV.B.

385. Section 183 defines a hobby—or, activity not engaged in for profit—by incorporating the standards applied by Sections 162 (business activities) and 212 (investment activities). I.R.C. § 183(c).

386. McCoy, *supra* note 172, at VII.B (citing BLACK’S LAW DICTIONARY (9th ed. 2009)):

Black’s Law Dictionary defines a wager as . . . “[m]oney or other consideration risked on an uncertain event; a bet or gamble,” [or] “[a] promise to pay money or other consideration on the occurrence of an uncertain event.” Under this definition, three elements must be present: (i) an uncertain event; (ii) a reward if the uncertainty is resolved in one’s favor; (iii) consideration lost if the uncertainty is not resolved in one’s favor.

387. See *Tschetschot v. Comm’r*, 93 T.C.M. (CCH) 914 (2007) (involving a professional tournament poker player); *Nitzberg v. Comm’r*, 34 T.C.M. (CCH) 707 (1975) (involving owners of a card club); see also I.R.S. Chief Couns. Mem. 20153601F (July 24, 2015) (involving players in a poker tournament with multiple buy-ins).

388. See generally *Lakhani v. Comm’r*, 142 T.C. 15 (2014), *aff’d*, 731 F. App’x 657 (9th Cir. 2018) (involving a professional gambler who bet on horses).

389. I.R.S. Chief Couns. Mem. 202042015 (Sept. 14, 2020) (involving participants in daily fantasy sports contests).

390. See *Estate of Chow v. Comm’r*, 107 T.C.M. 49 (2014) (involving one who gambled on slot machines at a casino); *Boyd v. United States*, 762 F.2d 1369, 1370 (9th Cir. 1985) (involving a casino manager); *Bevens v. Comm’r*, 26 T.C. 1218, 1218 (1956) (involving a casino dealer).

391. See *Jasinski v. Comm’r*, 37 T.C. 1 (1978).

actively traded on the American Stock Exchange.³⁹² When the debentures became worthless, they claimed an ordinary gambling loss “on the theory that in buying these low-priced high-yield debentures they were gambling.”³⁹³ The court disagreed.³⁹⁴

As with the investment in *Jasinski*, crypto investing could be viewed as different from gambling. Crypto investing or trading lacks many of the hallmarks of gambling or wagering. Gambling, such as purchasing lottery tickets or playing casino slot machines or betting on horses, is almost always up to chance, and the chances of winning it “big” or achieving long-term profitability are highly unlikely.³⁹⁵ Crypto investments, in contrast, can be researched and diversified and held pursuant to a long-term strategic investment strategy, much like stocks.³⁹⁶ Moreover, gambling activities, including online gambling, interstate gambling, and sports betting, are typically regulated at the state or federal level.³⁹⁷ Crypto investing, by contrast, is unregulated.³⁹⁸

But this begs the question of why gambling should be at a tax disadvantage compared to crypto trading when both are forms of speculative activity. According to Professor Zorn, “[w]hether . . . disfavored treatment for gamblers is justified is a question that has no intuitively correct answer; policy considerations often induce Congress to provide favorable treatment for certain activities while imposing restrictions or limitations on other activities.”³⁹⁹

Crypto investment by certain crypto traders does closely resemble wagering in the common sense of the term. European Central Bank board member Fabio Panetta says cryptocurrency investing is like betting on racehorses.⁴⁰⁰ New research shows a potential link between cryptocurrency trading and problem gambling.⁴⁰¹ Cryptocurrency, in general, is a highly speculative investment—indeed, no one can predict where it will go. Members of Congress have called upon banks to stop marketing bitcoin investment funds to 401(k) plans for participants’ retirement accounts, because the digital asset is volatile, illiquid, and

392. *Id.*

393. *Id.* at 3.

394. *Id.* According to the court, the appropriate loss limitation would be the capital loss limitation of Section 1211. *Id.* However, the court found that the petitions did not meet their burden of showing that their debentures became worthless (*i.e.*, were sustained) in the year claimed. *Id.*

395. David G. Schwartz, *How Casinos Use Math to Make Money When You Play the Slots*, FORBES (June 4, 2018, 9:33 AM), <https://www.forbes.com/sites/davidschwartz/2018/06/04/how-casinos-use-math-to-make-money-when-you-play-the-slots/?sh=6d60405694d0> [<https://perma.cc/X8Y5-PVL2>].

396. See *infra* notes 403–04 and accompanying text.

397. *Gaming Regulatory Overview*, SEC, <https://www.sec.gov/Archives/edgar/data/858339/000119312512115625/d268435dex993.htm> (last visited Mar. 19, 2024) [<https://perma.cc/5PWW-KNAR>].

398. Morgan Chittum, *Crypto Investing Is Like Gambling on Horse Races and the Market Was Caught in a ‘Bubble Doomed to Burst’*, ECB’s Panetta Says, BUS. INSIDER (Dec. 7, 2022, 12:15 PM), <https://markets.businessinsider.com/news/currencies/crypto-investing-bubble-gambling-horse-races-bust-ecb-panetta-2022-12> [<https://perma.cc/E5A8-PNPG>].

399. Zorn, *supra* note 333, at 2 (citations omitted) (arguing for the repeal of Section 165(d)).

400. Chittum, *supra* note 398.

401. See generally Fred Steinmetz, *The Interrelations of Cryptocurrency and Gambling: Results from a Representative Survey*, 138 COMPUTS. HUM. BEHAV. 107437 (2023).

speculative.⁴⁰² As advisors warn, “no matter how much you try to reduce your risk, there’s still a good chance you could lose money.”⁴⁰³ Unlike shareholders who buy stock, a large segment of crypto traders resemble gamblers.

On one hand, crypto is very volatile in the short term and many buyers who purchase for short-term holding, sometimes going all in with the hopes of getting rich overnight, do look more like gamblers than investors. On the other hand, many crypto traders invest in safer crypto options (like Bitcoin as opposed to lesser-known coins), take a long-term approach, make strategic investment decisions, and use crypto as a diversification tool to mitigate risk, with the hopes of achieving future long-term financial stability.⁴⁰⁴ Applying the gambling loss limitation rule to the former segment (crypto traders who invest in the short term in highly speculative crypto), but not to the latter (crypto traders who invest in safer coins for long-term growth) would be administratively difficult. For administrative feasibility, the government would necessarily have to decide whether to impose the gambling loss limitation rule on all crypto investors, or none. Whether to subject all or no crypto losses to the gambling loss limitation rule would seemingly require an assessment of approval or disapproval of crypto activity. Is crypto trading “a socially and economically unproductive activity,” like gambling, or does crypto trading fill “an important role in the economy as a whole by increasing economic efficiency?”⁴⁰⁵

Putting aside the gambling loss limitation rule and the moral debates that would undoubtedly ensue in deciding whether to include cryptocurrency losses, the government could consider adopting a new loss limitation rule specifically targeting crypto losses: losses from cryptocurrency can only offset gains from cryptocurrency. Such a rule would not be based on moral disapproval of crypto trading as opposed to other investment activity, but instead would be supported by the unified justification underlying most basket loss limitation approaches explained earlier—that is, that losses from one type of activity should not be used to offset or shelter income from another activity. The existing capital loss limitation seems inadequate in achieving that goal in light of the magnitude of crypto losses likely to be sustained under relaxed standards of theft, abandonment, and worthlessness. Losses from crypto thefts, abandonments, and worthlessness are not currently subject to the capital loss limitation rule, but are “ordinary” losses

402. Letter from Sens. Richard J. Durbin, D-Ill., Elizabeth Warren, D-Mass. & Tina Smith, D-Minn., to Abigail Johnson, Fidelity Investments CEO (Nov. 21, 2022), discussed in *Riverboat Gambling: Section 401(k), Cryptocurrency, Prudence, and FTX*, 177 TAX NOTES FED. 1412 (2022).

403. See Katie Brockman, *Is Cryptocurrency Investing or Gambling? 3 Things You Need to Know*, MOTLEY FOOL (June 15, 2021, 10:30 AM) <https://www.fool.com/investing/2021/06/15/is-cryptocurrency-investing-or-gambling-3-things-y/> [<https://perma.cc/VZR8-554T>].

404. See Peter Dunn, *Is Buying Cryptocurrency Investing or Gambling? Here’s How to Tell the Difference*, USA Today (June 9, 2021, 12:01 AM), <https://www.usatoday.com/story/money/personalfinance/2021/06/09/cryptocurrency-investing-vs-gambling/7606108002/> [<https://perma.cc/UDJ5-5PRH>].

405. Zorn, *supra* note 333, at 7 (noting this is the “most powerful argument for different treatment” between gambling and stock investing).

under the current tax regime and can be used to offset positive income, such as salary.⁴⁰⁶ The crypto-specific loss limitation approach would avoid that.

One drawback of a crypto-specific loss limitation rule is that it would hit those crypto owners not currently subject to the capital loss limitation rule—namely those crypto owners whose losses were sustained because of thefts, abandonments, and worthlessness. Many of these crypto owners are ordinary and unsophisticated investors who have no crypto gains to offset their losses. As such, their crypto losses would be disallowed under the new approach. This serious concern would have to be weighed against the potential benefits of such an approach. The crypto-specific loss limitation rule might encourage investors to engage in more responsible behavior, researching and diversifying crypto investments held pursuant to long-term strategic investment strategy. The approach would also be easier to administer than the capital loss limitation rule applicable to crypto owners who sell or exchange their crypto. With cryptocurrency being a recent phenomenon, uncertainty over the application of general capital gain and loss rules to various crypto transactions (specifically over the capital asset definition) is inevitable. A basket approach targeting crypto specifically, by contrast, would be easy for the government to administer. Finally, the proposed approach would have less potential revenue loss for the government as compared to the current approach, which allows many crypto losses to offset positive income.

V. CONCLUSION

The nature and extent of crypto losses raise many unsettling issues. Clarifying and expanding the list of crypto events that produce “sustained” losses for tax deduction purposes seems warranted. At the same time, appropriate limitations on the deductibility of crypto losses seem justified. Limiting the deductibility of crypto losses to crypto gains would not be based on moral disapproval of crypto trading as opposed to other capital investment activity, but instead would be supported by the unified justification underlying most basket loss limitation approaches in our tax system—losses from one type of activity should not be used to offset or shelter income from another activity.⁴⁰⁷ Such an approach for crypto losses, however, would prevent ordinary and unsophisticated investors who have very modest means and have already suffered many losses from looking to the tax regime for recovery, suggesting this topic warrants further investigation from both tax and non-tax perspectives.

406. The focus here is on the capital loss limitation rule. As noted earlier, investment losses from “thefts,” are itemized deductions. Investment losses from “abandonments” and “worthlessness,” however, are miscellaneous itemized deductions (disallowed through 2025). See *supra* notes 303–05 and accompanying text.

407. See discussion *supra* Section IV.B.

