Taxation and Regulation in Decentralized Exchanges

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This article examines current regulatory models, which tend to apply enforcement at the level of "custody" and "control" over financial transactions. However, with the rise of decentralized exchanges, the author asks what might happen to these models if financial transactions take place without custodians. Using the example of the IRS's definition of "withholding agent," he examines arguments the IRS might use to require withholding on decentralized exchanges. In response to the rise of decentralized exchanges, the IRS and other agencies could update their regulatory approaches and apply enforcement at the level of "profit" rather than control, using the Controlled Substances Act as a model. However, such an approach might stifle decentralized exchange technology in its infancy.

Introduction: Centralized vs. Decentralized Exchanges

A key feature of financial regulation in the 20th century has been the custodian. For example, if a company wants to buy or sell stock, it often does so through a broker, who may also act as custodian (if self-clearing) or through a clearing broker. The broker takes custody of its client's funds and executes the trade through a centralized (and regulated) exchange, which is also often a custodian itself. On the other side of the trade there is often another broker, acting as custodian as it executes the trade for *its* client. And of course both brokers charge fees. Nice work if you can get it.

Pros and Cons of the Centralized System. This centralized system has advantages for both market participants and regulators. Market participants don't have to worry about execution details or counterparty default risk, and they benefit from liquidity provided by market makers on the exchange. Regulators are able to lean on custodians for rules enforcement, accountability, and information reporting.

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For example, the IRS obtains reports from centralized exchange transactions that it can compare to individual tax returns.[1] If a stock pays a dividend, the custodian may be required to notify the IRS, which will surely come knocking if the recipient does not report the dividend on its tax return.[2] Depending on the nature of the centralized exchange, the SEC, CFTC, and other agencies are able to monitor activities by market participants, broker-dealers, and financial intermediaries. Centralized exchanges generally must register as "money service businesses" with FinCEN, verify customers' identities, and report suspicious activities.[3] Traditional banks and clearing broker dealers, by contrast, are exempt from the definition of "money service businesses."[4]

But the custodial system in centralized exchanges also has some disadvantages. One obvious disadvantage is the expense, as fees to custodians quickly add up from both buying *and* selling. In a decentralized exchange, buyer and seller can come together directly, and avoid these multiple layers of fees.[5] Furthermore, regulation itself can impose hidden costs, and it is worth asking whether the benefits of financial market regulation are worth the costs.[6] Some national regulators themselves have

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[1] Leandra Lederman, "Reducing Information Gaps to Reduce the Tax Gap: When Is Information Reporting Warranted," 78 Fordham L. Rev. 1733, 1737 (2010) (noting that the Economic Stabilization Act of 2008, which required brokers to report basis in securities, "should prove very valuable" for regulators). See also Prop. Treas. Reg. 1.6045A-1(a)(3) (Dec. 17, 2009) (providing that the definition of "brokers" who are required to report includes "any person that acts as a custodian of securities in the ordinary course of a trade or business, any issuer of securities, and any agent of these persons.").

[2] Lederman notes that voluntary compliance with respect to dividends is approximately 94 percent, whereas voluntary compliance with respect to self-employment income, which is not subject to information reporting, is estimated at approximately 42 percent of taxes due. Leandra Lederman, "Tax Compliance and the Reformed IRS," 51 U. Kan. L. Rev. 971, 976 (2003).

[3] See, e.g., U.S. Dep't of the Treasury, Financial Crimes Enforcement Network, "Request for Administrative Ruling on the Application of FinCEN's Regulations to a Virtual Currency Trading Platform," FIN-2014-R011, at 6–7 (Oct. 27, 2014), available at https://www.fincen.gov/resources/statutes-regulations/administrative-rulings/request-administrative-ruling-application-0 ("When engaging in convertible virtual currency transactions as an exchanger, a person must register with FinCEN as a money transmitter, assess the money laundering risk involved in its non-exempt transactions, and implement an anti-money laundering program to mitigate such risk. In addition, the Company must comply with the recordkeeping, reporting, and transaction monitoring requirements under FinCEN regulations.").

[4] See 31 CFR § 1010.100(ff).

[5] See Balazs Deme, "Decentralized vs. Centralized Exchanges" (Medium, Jan. 24, 2018), available at https://medium.com/herdius/decentralized-vs-centralized-exchanges-bdcda191f767.

[6] See, e.g., Luigi Zingales, "The Costs and Benefits of Financial Market Regulation" (European Corporate Governance Institute, Apr. 2004), at 2–3, available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=536682 (noting that "[d]isclosure requirements are almost unequivocally good," but that the case for external monitoring "is weaker and requires more price estimates of costs and benefits").

even admitted that a decentralized exchange model may have advantages for certain market participants.[7]

Rise of Decentralization and Related Problems for Taxing Authorities. Another advantage of decentralization is protection against system outages and hacks. For example, the cryptocurrency world has experienced a number of high-value hacks of centralized exchanges,[8] so it's not surprisingly leading the charge toward decentralization.[9] Through smart contracts, akin to a software-based escrow, it is now possible for two parties to swap one cryptocurrency for another without going through a centralized exchange, and without having to first deposit funds or cryptocurrency with a custodian or with the exchange.[10]

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[7] See, e.g., "Review of the Recognised Market Operators Regime" (Monetary Authority of Singapore, May 2018), at 5, available at http://www.mas.gov.sg/~/media/MAS/News%20and%20Publications/Consultation%20Papers/2018%20May%2022%20RMO%203P/Consultation%20Paper%20on%20RMO%20Regime.pdf:

> MAS believes that a risk-based approach for the regulation and supervision of market operators remains appropriate. Nevertheless, we have observed an increase in the diversity of business models of trading facilities in the last few years. For example, exchanges and centralised trading platforms have traditionally been set up by well-capitalised institutions with the financial resources and track record to build the necessary infrastructure and support systems required for the operation of an organised market. However, entities seeking to become market operators now include private companies and start-ups seeking to operate private markets, alternative trading platforms using blockchain technology, or peer-to-peer trading platforms that allow end-investors to participate directly without going through intermediaries. This is, in part, due to technological advancements which have lowered the cost of entry for new market operators.

[8] See, e.g., Saheli Roy Choudhury, "South Korean Cryptocurrency Exchange Bithumb Says it Was Hacked and $30 Million in Coins Was Stolen" (CNBC, June 19, 2018), available at https://www.cnbc.com/2018/06/19/south-korea-crypto-exchange-bithumb-says-it-was-hacked-coins-stolen.html; "Tokyo-Based Cryptocurrency Exchange Hacked, Losing $530 Million: NHK" (Reuters, Jan. 26, 2018), available at https://www.reuters.com/article/us-japan-cryptocurrency/tokyo-based-cryptocurrency-exchange-hacked-losing-530-million-nhk-idUSKBN1FF29C; "More Than 10 Percent of $3.7 Billion Raised in ICOs Has Been Stolen: Ernst & Young" (Reuters, Jan. 22, 2018), available at https://www.reuters.com/article/us-ico-ernst-young/more-than-10-percent-of-3-7-billion-raised-in-icos-has-been-stolen-ernst-young-idUSKBN1FB1MZ.

[9] David Azaraf, "Decentralized Exchanges: 0X, IDEX and Why Crypto Needs DEXs" (Cryptoglobe, July 4, 2018), available at https://www.cryptoglobe.com/latest/2018/07/decentralized-exchanges-0x-idex-and-why-crypto-needs-dexs/ ("Although Bitcoin, Ethereum and other 'blue-chip' cryptocurrencies have shown resilience against malicious actors and government intervention, the exchanges on which they are traded provide a single point of failure, contributing to the uncertainty surrounding the space.").

[10] Aaron Wright & Primavera De Filippi, "Decentralized Blockchain Technology and the Rise of Lex Cryptographia," at 12 (Mar. 20, 2015) ("Complicated securitizations could, similarly, be transformed into a smart contract, eliminating the technical need for trustees and servicers."), available at https://ssrn.com/abstract=2580664.

The increased use of decentralized exchanges is opening up a world of possibilities for financial transactions, including loans,[11] equity investments,[12] and even financial derivatives.[13] It's quite possible that as the 21st century progresses we will see a broad rise of decentralized exchanges and the diminished power of custodians.

However, decentralization also raises a number of puzzling regulatory issues. Are decentralized exchanges even exchanges at all, and do their operators need to register as broker dealers or "alternative trading systems"?[14] There is an argument to be made that decentralized exchanges are not subject to many of these requirements, as the exchanges themselves do not hold funds or property of market participants, and do not match orders in the traditional sense. Regulators are sure to look for legal hooks that will allow them to retain dominion over decentralized exchanges, but they may not be easy to find.[15]

For example, the IRS may have trouble tracking financial transactions without the convenient information reporting by custodians operating on centralized exchanges. The IRS has already bristled at the lack of reporting of cryptocurrency transactions, and in 2017 the IRS enforced a summons to Coinbase, a centralized exchange for buying and selling Bitcoin, Litecoin, and Ethereum.[16] And the IRS is looking into other ways to gather information on cryptocurrency transactions.[17]

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[11] Sherman Lee, "Decentralized Lending Promises Easy and Global Access to Credit, But Is it Too Good to Be True?" (Forbes, Mar. 22, 2018), available at https://www.forbes.com/sites/shermanlee/2018/05/22/decentralized-lending-promises-easy-and-global-access-to-credit-but-is-it-too-good-to-be-true/#5d5b2334c378.

[12] "Orderbook Launches its First Full Scale ICO via Decentralized Token Exchange" (BitcoinPRBuzz, Aug. 31, 2017), available at https://bitcoinprbuzz.com/press-release-order book-token-exchange-2/.

[13] See Antonio Juliano, "Introducing dYdX, the Protocol for Decentralized Derivatives" (Sept. 26, 2017), available at https://medium.com/dydxderivatives/introducing-dydx-2d0f0f326fd.

[14] See 29 CFR 240.3b-16 (Exchange Act Rule 3b-16(a)). See also Securities & Exchange Comm'n, Release No. 34-39884, "Regulation of Exchanges and Alternative Trading Systems Proposed Rules" (1998), available at https://www.sec.gov/rules/proposed/34-39884.pdf.

[15] Decentralized exchanges can refer to orderbook hosters (e.g., Ambisafe's Orderbook, Radar Relay), smart contracts (e.g., Bancor/0x), or even user interfaces for on-chain order books/settlement/execution (e.g., StellarX). The regulatory analysis will be slightly different for each type of decentralized exchange. For purposes of this article, the discussion is limited to orderbook hosters. The further a decentralized exchange's activities are from exchange management, and the more limited they are to mere programming, the more difficult the argument for regulatory intervention may become based on traditional principles of "custody" or "control."

[16] See Joel Rosenblatt, "Coinbase Loses Bid to Block U.S. Tax Probe of Bitcoin Gains" (Bloomberg, Nov. 29, 2017), available at https://www.bloomberg.com/news/articles/2017-11-29/coinbase-loses-bid-to-block-irs-probe-of-bitcoin-gains.

[17] See Annie Nova, "'Wild West' Days Are Over for Cryptocurrencies, as IRS Steps up Enforcement" (CNBC, Jan. 17, 2018), available at https://www.cnbc.com/2018/01/17/irs-steps-up-tax-enforcement-for-cryptocurrencies.html.

The government will likely win any battle for oversight and information reporting on *centralized* exchanges. But it remains to be seen just how much control the IRS and other agencies can exercise over a decentralized exchange. For example, governments have proven unable to stop decentralized file-sharing with BitTorrent.[18]

For some, the power to thwart regulators is a promising feature of decentralized exchanges. Con Duncan writes in *CryptoInsider*:

> Tax is the topic of 2018, and regulation is the facilitator. But a decentralized exchange would pivot the community in such a manner as to side step the trajectory of the regulator's missile. This miss would lead regulators back to the drawing board. It would set them back, quite literally, years. A decentralized exchange would be the market's answer to the government's current drive for exchange driven reporting to target users.[19]

Needless to say, regulators are not likely to see it the same way. The IRS has historically used the concept of "withholding agent" to effectively deputize custodians to act as private tax collectors, and is used to relying on custodians to do much of the tax collection and reporting work in the economy. The IRS is not likely to give up this tool without a fight.

But without the custodial system, can the IRS and other agencies still build a legal case for control over decentralized markets? And even if such a case can be made, would this be beneficial for market participants and society at large? This article examines the legal authorities the IRS might cite in order to attempt to retain control over decentralized markets, and suggests that, regardless of the legal case for control, regulators ought to consider alternatives to direct regulation of decentralized exchanges. Instead, regulators should endeavor to work with decentralized exchanges in promoting transparent system design.

Who Is a Withholding Agent?

More than 100 years ago, the United States enacted a tax on the net income of U.S. citizens and introduced a requirement to withhold tax at source on all payments of "fixed and determinable, annual or periodical gains, profits and

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[18] Jia You, "A Peek Inside the Internet's Favorite File-Sharing Network" (Science, Oct. 6, 2014), available at http://www.sciencemag.org/news/2014/10/peek-inside-internets-favorite-file-sharing-network (noting that a quarter of all internet traffic belongs to BitTorrent); Marie Huillet, "Confirmed: TRON Acquires Major P2P Platform Operator BitTorrent" (Cointelegraph, July 24, 2018), available at https://cointelegraph.com/news/confirmed-tron-acquires-major-p2p-platform-operator-bittorrent.

[19] Con Duncan, "Decentralized Exchanges: A Major Development for the Future of Crypto Trading" (Cryptoinsider, n.d.), available at https://cryptoinsider.21mil.com/decentralized-exchanges-a-major-development-future-crypto-trading/.

income," commonly called "FDAP."[20] To enforce this tax, the IRS delineated a category of "withholding agents," private tax collectors, in a sense, who must withhold tax at source on payments to U.S. persons.[21]

The system largely proved to be a success, and its basic structure remains in place. However, as we've seen, the emergence of decentralized exchanges begs the question: is there a withholding agent when parties execute a transaction on a decentralized exchange, and without the use of custodians or financial intermediaries?

The longstanding definition of a withholding agent is "all persons, in whatever capacity acting, having the control, receipt, custody, disposal, or payment of any withholdable payment."[22] Congress has noted that the definition is written "broadly" to include "any U.S. or foreign person that has the control, receipt, custody, disposal, or payment of an item of income of a foreign person subject to withholding."[23]

But who has control over "an item of income" in a decentralized system? We can gain a peek into the legal issues that may arise by looking at past cases where the IRS sparred with taxpayers over the definition of withholding agent.

***Tonopah:* Formalism and Control.** For example, in *Tonopah & T.R. Co. v. Commissioner*,[24] the alleged withholding agent was a New Jersey corporation that had issued bonds guaranteed by its British parent. Some of the bondholders were nonresident aliens, and Tonopah ultimately was unable to meet its interest obligation on the bonds. Its British parent company paid the interest out of funds on deposit in England. The IRS looked to Tonopah for the withholding taxes, arguing that it was a withholding agent under the law. But Tonopah countered that it never had the requisite "control, receipt, custody, disposal, or payment" of the interest, so it could not be required to withhold.[25]

In 1940, the case made its way to the Ninth Circuit Court of Appeals, where the IRS argued that the payments were made pursuant to Tonopah's original obligation, and tried to characterize the payments by the parent company as funds that it had lent to Tonopah. The crux of the IRS's argument was that the payments were being paid on behalf of Tonopah, which was not

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[20] 1 F. Martin Belmore, *United States Withholding Tax on Swap Payments*, 564 PLI/Corp 499 (1987) (citing to Revenue Act of 1913, §§ II.A, II.D, 38 Stat. 166, 169).

[21] See generally Treas. Reg. § 1.1441-7.

[22] IRC § 1473(4).

[23] Staff of Jt. Comm. on Tax'n, "Destination-Based Taxation and Border Adjustments," at 16, n. 71 (JCX-20-17, May 22, 2017). See also Treas. Reg. § 1.1441-7(a).

[24] 112 F2d 970 (9th Cir. 1940).

[25] Id. at 971.

far from the truth. However, it was also abundantly evident that Tonopah lacked formal control or custody over the payments in question. The circuit court focused on the language of the statute, and noted that Tonopah never possessed the interest money in question.[26] There was nothing they could withhold, according to the Ninth Circuit.

Under the *Tonopah* decision's logic, the IRS should have a very difficult time enforcing withholding on decentralized exchanges. It is quite difficult to see how decentralized exchange operators have "custody" or "control" over payments that are being exchanged using their software platform, especially where the cryptocurrencies in question are never held by anyone but the parties to particular transactions. However, the IRS could try to argue for a broader concept of "withholding agent" that goes beyond *Tonopah*'s traditional notions of control.

***Morgan Pacific:* Debits or Credits May Be Sufficient.** Whereas *Tonopah* took a formalistic approach to the definition of a withholding agent, there are other precedents which might support a more expansive reading. Specifically, courts and the IRS have held that withholding taxes may be imposed even where there are no direct transfers of funds, but rather only indirect payments or offsetting book entries. If the IRS wanted to adopt an aggressive stance that tax withholding is required on decentralized exchanges, it might very well look to these cases. After all, if merely recording debits and credits to various accounts can make someone a withholding agent, perhaps decentralized exchanges or traders that use them can be required to pay over withholding taxes. However, as we will see, advancing this argument will be tricky indeed.

For example, in *Morgan Pacific Corp. v. Commissioner*,[27] the Tax Court noted in a 1995 memorandum opinion that debits and credits made to a client's accounts were not "merely book entries," as the petitioner had claimed.[28] Morgan Pacific had made book entries to its own accounts, as well as to those of two other entities, one of which was CABC, a Nauru banking corporation controlled by Mr. David Thorpe, who also happened to control Morgan Pacific. While the IRS viewed the payments as part of a "conduit financing" transaction seeking to improperly claim treaty benefits, Morgan Pacific insisted that it had merely made book entries, rather than transferring payments, and was therefore not a withholding agent.

The Tax Court did not agree with Morgan Pacific. The court noted that while "there is nothing in the record explaining what rules and procedures

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[26] Id. at 972.

[27] TC Memo. 1995-418.

[28] Id., slip op. at 18–21.

Nauru banking corporations must follow, based on the record before us, we are not willing to find that CABC had no obligation to pay deposits to its depositors."[29] The court also noted that the debit and credit adjustments effectively discharged Morgan Pacific's obligation to pay interest.

Morgan Pacific finally argued that it did not have sufficient cash to pay the $455,000 obligation noted in the book entries, and showed bank account statements with a cash position ranging between $2,141 and $40,054 during the period in question. However, the IRS pointed out that the taxpayer's Form 1120 for the fiscal year showed cash of $742,678 at the end of the year. The court said, "[E]ven if we assume, as petitioner appears to contend, that petitioner's ability to satisfy its obligations must be determined solely by reference to the amount of cash it had available on September 30, 1986, we are not convinced that petitioner did not have sufficient cash to meet its obligations."[30]

It's not hard to see what bothered the court in *Morgan Pacific*. The conduit financing arrangement, common ownership of CABC and Morgan Pacific, and contradictory documentation put forward by Morgan Pacific all had a bad smell. These facts ultimately undercut Morgan Pacific's case that it was not a withholding agent.

But Morgan Pacific's failures actually make it more difficult for the IRS to use this case to pursue decentralized exchanges. Decentralized exchange operators are typically not related to the parties in any given transaction, and do not have any obligations to make payment for transactions that are executed on the exchange. Still, if the IRS wanted to aggressively interpret authority that would allow it to require withholding on decentralized exchanges, *Morgan Pacific* might be a starting point.[31]

There are IRS Revenue Rulings that reach similar conclusions as *Morgan Pacific*, but all would be difficult to apply in the context of decentralized exchanges. In Revenue Ruling 70-251,[32] the IRS explained that a parent corporation that maintains open accounts with its subsidiaries and then at the end of the year debits or credits the accounts with interest payable or receivable must withhold tax on any amount credited.

In Revenue Ruling 71-142,[33] the IRS required a resident alien to withhold tax on interest paid on a margin account maintained with a nonresident

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[29] Id. at 18.

[30] Id. at 22–23.

[31] Casa de la Jolla Park, Inc. v. Comm'r, 94 TC 384 (1990) (distinguishing *Tonopah* and holding that the use of a bank as an agent, to make an indirect payment, still constituted payment for purposes of the withholding statute). See also R.T. French Co. v. Comm'r, 60 TC 836, 856 (1973) (noting that the issue of whether the obligation to withhold attached to a constructive dividend was "tantalizing," but not deciding the issue).

[32] 1970-1 CB 182.

[33] 1971-1 CB 265.

brokerage firm, even if the interest was not paid directly but only constructively. However, the ruling notes that the resident alien is a withholding agent because he "had control over the margin account and the payment of interest thereon to the broker."[34] So control may still be the key determinant of whether withholding is imposed, and control is what decentralized exchanges generally lack. The IRS and other regulators are sure to have a difficult time trying to fit decentralized exchanges into existing regulatory frameworks.

Regulation of Profit: A Controlled Substances Act Approach

Existing regulatory frameworks generally authorize regulators to enforce rules against parties with custody or control of financial transactions. Yet in a world without custodians, how can regulators justify intervening? One option might be to focus laws and regulations on profit rather than control.

With limited legal tools at their disposal to address decentralized exchanges, governments may consider aggressively enacting new laws or rules providing that any *profit* derived from a decentralized exchange is *per se* illegal, or perhaps subject to substantial information reporting and regulatory burdens. The IRS, for example, could take the position that receiving any profit from a decentralized exchange makes someone a withholding agent, although, again, the definition of withholding agent would likely need to be updated for this to work.

A model for such an aggressive approach is the Controlled Substances Act (CSA). There, Congress has made it illegal to participate in the "importation, manufacture, distribution and possession and improper use of controlled substances."[35] But the CSA takes it a step further and has a "catch-all" provision for "investment of illicit drug profits."[36] The CSA provides that:

> It shall be unlawful for any person who has received any income derived, directly or indirectly, from a violation of this subchapter or subchapter II of this chapter punishable by imprisonment for more than one year in which such person has participated as a principal within the mean-

[34] Id. at 266. Furthermore,

> [t]he obligation to pay interest on the margin account was that of *B* [the non-resident alien]. The fact that the interest was paid, on occasion, by offset from amounts due *B* from others is immaterial. In such case the brokerage firm, acting as agent for *B*, received income and deducted interest on the margin account.
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> Accordingly, *B* had the necessary control, receipt, custody, disposal, or payment of the interest to the broker required by section 1441(a) of the Code, whether payment of the interest was made directly or constructively by him, and *B* is liable as a withholding agent for the taxes at the rate of 30 percent pursuant to section 1441(a) of the Code.

Id.

[35] 21 U.S.C. § 801.

[36] 21 U.S.C. § 854(a).

> ing of section 2 of title 18, to use or invest, directly or indirectly, any part of such income, or the proceeds of such income, in acquisition of any interest in, or the establishment or operation of, any enterprise which is engaged in, or the activities of which affect interstate or foreign commerce.[37]

So not only is manufacturing of controlled substances illegal, but receiving "any income" from such manufacturing is also a violation of the CSA, and could lead to up to 10 years in prison.[38] It is because of this extraordinarily broad provision that there is so much confusion regarding private equity investment in state-legal cannabis businesses.[39]

The CSA certainly provides a *possible* model for regulation of decentralized exchanges, but not an ideal one for effective policy. A CSA-like approach that focuses on profit rather than control, even one that did not impose criminal sanctions, could strangle the decentralized exchange experiment in its infancy, and stifle much-needed financial technology innovations.

Smart Contracts: Smart Taxation?

At the other extreme, governments might let certain decentralized exchanges operate in a low- or no-regulation zone for the time being. There is actually much to be said for this approach, as it could allow financial technology innovations to flourish, while allowing regulators to gather critical information on possible interventions.

Regulators ideally would monitor the technological developments and work with decentralized exchanges to better understand the technology and see how it is being utilized, *before* developing a regulatory framework. Perhaps smart contract technology can eventually support automated tax withholding, information reporting, and know-your customer (KYC) verification, among other regulatory compliance functions.[40] Some of this is already being tested. For instance, Ambisafe's Orderbook.io announced a Regulatory

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[37] Id.

[38] 21 U.S.C. § 854(b).

[39] Adrian A. Ohmer, "Investing in Cannabis: Inconsistent Government Regulation and Constraints on Capital," 3 Mich. J. Private Equity & Venture Cap. L. 97, 108 (2013).

[40] See Wright & De Filippi, supra note 10, at 12:

> Using these programming languages, smart contracts could be used to enable employees to be paid on an hourly or daily basis with taxes remitted to a governmental body in real time. The technology could be employed to create smart contracts that automatically check state death registries and allocate assets from a testator's estate, send applicable taxes to governmental agencies without the need of administering the will through probate.

See also Giulio Prisco, "Bitcoin Governance 2.0: Let's Block-Chain Them" (Cryptocoins News, Oct. 13, 2014), available at https://www.ccn.com/bitcoin-governance-2-0-lets-block-chain/ (proposing a blockchain-based taxation system); see also BITWAGE, www.bitwage.

Aware Protocol token which checks for regulatory permissions and prohibits users from buying a token if they don't meet the compliance prerequisites.[41]

This kind of soft touch approach from the IRS and other agencies may make sense while decentralized exchange technology is still emerging. Also, if tax payments and information reports ultimately are going to become a feature of certain smart contracts, the IRS will need to participate in the system design so that it is ready to receive the funds and reports that are generated.

The ultimate question, though, is how much regulation—if any—decentralized exchanges should be subject to. An alternative to direct regulation of decentralized exchanges is to focus regulation on fiat currency "on-ramps" and "off-ramps," the centralized exchanges where market participants purchase cryptocurrency or sell it for fiat currencies. It may be better for regulators to continue to focus their efforts on regulating centralized exchanges, so that anyone coming in or out of the cryptocurrency economy is vetted upon entry and exit.

But under the IRS's current approach to taxing cryptocurrencies, where every swap of one token for another is a capital event that must be reported for tax purposes,[42] this hands-off approach is not likely to prevail. Still, regulators would do well to proceed thoughtfully and carefully, so as not to suffocate financial technology innovations that may bring substantial benefits to markets and to society at large.

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com (last accessed Aug. 3, 2018) (a Bitcoin-based payment system allowing employees to be paid in micro amounts over a pay period).

[41] See Ken Silva, "Ambisafe's Orderbook Launches Token to Ensure Regulatory Compliance" (Blockchain News, Mar. 13, 2018), available at https://www.the-blockchain.com/2018/03/13/ambisafes-orderbook-launches-token-to-ensure-regulatory-compliance/.

[42] Notice 2014-21, 2014-16 IRB 938. See also Robert W. Wood, "Paying Tax in Crypto Ironically Triggers More Taxes—Expert Take" (Cointelegraph.com, Feb. 14, 2018), available at https://cointelegraph.com/news/paying-tax-in-crypto-ironically-triggers-more-taxes-expert-take.