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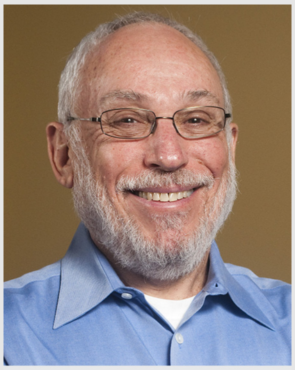

Henry Ordower

Henry Ordower is a professor of law at Saint Louis University School of Law. The author would like to thank Abraham Sutherland for introducing him to this emerging area of tax law, as well as his students for asking engaging questions during a recent blockchain and cryptocurrency seminar.

In this article, Ordower contextualizes block rewards litigation with historical failures to tax compensation income paid in kind. Tax fairness principles demand current taxation of the noneconomically diluting block rewards' market value.



*Noncash Compensation.* Taxing noncash compensation often has proven challenging for the tax collector in the United States.[1] Some challenges, in the face of losses in court[2] and strong taxpayer opposition to current inclusion, have led the IRS to relinquish the opportunity to tax significant amounts of compensation income. Government concessions allowed deferral of ordinary compensation income and conversion of that income into long-term capital gain for private equity fund managers.[3] Congress similarly followed taxpayer victories[4] and enacted legislation clarifying rules for exclusion of in-kind compensation income of meals and lodging.[5] And when the IRS began to reevaluate its historical failure to tax noncash fringe benefits compensation, Congress stopped it from taxing the compensation by imposing a moratorium on those rules and later created gross income exclusions for many fringe benefits.[6]

Failures to tax limited classes of compensation income violate horizontal equity principles, but issues of value and timing complicate some in-kind compensation inclusions and may account for historical failures to tax.[7] The general rule of inclusion is straightforward: "Gross income includes all income from whatever source derived," whether received in cash or in kind.[8] For noncash compensation, a special rule of inclusion clarifies the measure of the inclusion and permits deferral of inclusion under limited circumstances.[9] No express rule exists for payments received in services, but the principle long has been accepted that compensation in services is includable in the absence of an express exclusion.[10]

Application of the general inclusion principle is conceptually simple. If, for example, A repairs

[1] *Benaglia v. Commissioner*, 36 B.T.A. 838 (1937).

[2] *Campbell v. Commissioner*, 943 F.2d 815 (8th Cir. 1991).

[3] Carried interests under Rev. Proc. 93-27, 1993-2 C.B. 343.

[4] *Benaglia*, 36 B.T.A. at 838.

[5] IRC section 119.

[6] Fringe benefit regulation moratorium followed by enactment of IRC section 132.

[7] Rev. Proc. 93-27, *supra* note 3, at section 3.

[8] IRC section 61.

[9] IRC section 83. *Cf.* the similar rule of inclusion in the amount realized for payments in kind under section 1001(b).

[10] IRC section 132 excludes no additional cost services under specific conditions, otherwise includable. *Cf.* service barter funds revenue ruling. Rev. Rul. 79-24, 1979-1 C.B. 60.



[redacted]

B's car and B transfers a bushel of tomatoes to A in exchange, A is taxable on the fair market value of the tomatoes, and B is deemed to have sold the tomatoes to A for the value of A's services. Similarly, if A repairs B's car and B drafts legal documents for A and neither charges the other, A and B have exchanged services, and each is taxable on the value of the services the other performed as payment for the services rendered. In both instances, determining the value of the services may be difficult, but if A and B are dealing at arm's length, the doctrine of exchange equivalency[11] equates the values so that it is only necessary to determine the value of A's services or B's tomatoes or services, as the case may be, to be able to tax both.

Public policy may preclude taxation when familial or other close relationship reciprocity, for example, is involved or the service provider also benefits from the service performed. Accordingly, imputed income from services generally has remained free from taxation.[12] The IRS has not sought to tax housework,[13] home repairs, improvements, and similar services individuals perform even when the services primarily benefit a co-occupant or co-owner, whether or not the service provider and the service recipient are related.[14] The IRS, however, has sought to tax purported cash gifts a service recipient has made to a cohabitant to whom the donor is not married when the cohabitant has performed services characteristic of those a participant in a marital relationship customarily performs.[15] Reciprocal gifts support the no income tax outcome, although reciprocal rendition of services may become subject to a gift tax, but not in the context of normal familial-type renditions of services, such as grandparents caring for grandchildren whom the grandchildren's parents have an obligation to care for and support.

*Block Rewards.* Against the backdrop of historical failures to identify and fully tax income from services comes the current dilemma that cryptocurrency presents. This paper addresses whether cryptocurrency block rewards will become another instance in which compensation income will escape taxation. Recently, the government sought dismissal of a pending case, *Jarrett v. United States*,[16] on grounds of mootness because the government refunded the taxpayers their claimed overpayment amount. The taxpayers have resisted dismissal, asserting that the issue in the case is not moot insofar as they continue to engage in the activity and may be assessed tax in the future for the same reason even though the government refunded the claimed amount in this instance. The taxpayers claim that they do not intend to negotiate the refund check.[17] The primary issue in the case is the correct taxation of cryptocurrency tokens received from the activity of maintaining the cryptocurrency network. The tokens received for this activity are block rewards. Under the *Jarrett* facts, the taxpayers validated transactions on the network, assembling them into blocks to add to the blockchain, and staked part of their interest in the tezos cryptocurrency involved under the network's operational rules.[18]

Limited guidance exists on taxation of virtual currency a taxpayer receives as a block reward. IRS Notice 2014-21,[19] Q&A 8-11 concludes that mining cryptocurrency[20] results in ordinary income from services equal to the FMV of the tokens the taxpayer receives for that activity. If the

[11] *Philadelphia Park Amusement Co. v. United States*, 126 F. Supp. 184 (Ct. Cl. 1954).

[12] As has imputed income from the use of an owner-occupied dwelling. Henry Ordower, "Income Imputation: Toward Equal Treatment of Renters and Owners," in Anthony C. Infanti, *Controversies in Tax Law: A Matter of Perspective* (2015) (favoring taxation of imputed income from use of an owner-occupied dwelling).

[13] *See* Nancy C. Staudt, "Taxing Housework," 84 *Geo. L.J.* 1571 (1996).

[14] *But see Hort v. Commissioner*, 313 U.S. 28 (1941), in which a tenant forfeited a lease after building a new building on the leased premises and the court held the lessor taxable of the value of the building at lease forfeiture. Congress later allowed similarly situated lessors to defer the inclusion of income by adding IRC sections 109 and 1019 to the code, excluding the value of the improvements from both the lessor's gross income and adjusted basis in the property.

[15] *Jue-Ya Yang v. Commissioner*, T.C. Summ. Op. 2008-156.

[16] No. 3:21-cv-00419 (M.D. Tenn. 2021).

[17] Memorandum of Law in Opposition to Defendant's Motion to Dismiss, *Jarrett v. United States.*

[18] *Generally* Abraham Sutherland, "Cryptocurrency Economics and the Taxation of Block Rewards," *Tax Notes Federal*, Nov. 4, 2019, p. 749; and "Cryptocurrency Economics and the Taxation of Block Rewards, Part 2," *Tax Notes Federal*, Nov. 11, 2019, p. 953.

[19] 2014-16 IRB 938.

[20] Mining involves validating network transactions, assembling a transaction block to add to the chain, and solving a complex mathematical problem only possible with a substantial dedication of computing power so that miners compete with other miners to add the block by correctly solving the problem first.



[redacted]

taxpayer is in the trade or business of mining cryptocurrency, the income is subject to self-employment taxes, or if received as an employee, Social Security tax. The government has not revised this guidance. Initially, the taxpayers in *Jarrett* applied the ruling to staking and validation (called "baking" in the tezos instance) of tezos tokens[21] before amending their return, claiming a refund, and suing in federal district court for a refund when the government did not grant it within the six-month statutory time frame. After the taxpayer filed suit for refund, the government granted the refund and issued a refund check. One might speculate that as a matter of strategy, the government evaluated the hazards of litigation and concluded that granting the refund was preferable to the risk of losing and creating an unfavorable precedent before the government had completed a full analysis and issued revised guidance on block rewards.

All owners of tezos tokens[22] may perform network maintenance and validate transactions in proportion to their existing tezos stakes. By staking part of their share of outstanding tokens and performing minimal, automated services in maintaining the tezos network by validating transactions and creating blocks to add to the tezos blockchain, each tezos validator[23] receives additional, new tokens from the created block as compensation for that network maintenance service. If tezos tokens in the aggregate had a fixed value, the creation of new tokens not only would dilute the percentage ownership of all token holders, including the baker, but would diminish the value of each historical token. The sum of the values of old and new tokens together would equal that fixed total value. In that instance, the block rewards would shift ownership and value from historical owners to increase the ownership and value of the baker. However, the value of the aggregate tends to be volatile, thereby rendering it difficult to view the dilutive effect of new tokens as necessarily shifting value from existing token holders to the bakers. Moreover, value dilution is not readily observable in the recurrent process of adding blocks to the blockchain and producing block rewards.[24] The leading commentator on this structure has (in my view, erroneously) analogized block rewards to self-created property that should await sale before it becomes subject to tax.[25]

This article will proceed as follows. Section I will review the role that compensation for services plays in maintaining horizontal equity in the income tax system. Section II will examine failures to tax compensation income, consider each in the context of its potential impact on differing groups of taxpayers, and suggest alternative treatments for the taxpayers involved in those failures that might better suit an equitable tax system. Section III will evaluate block rewards in the context of compensation income and propose analogies more closely approximating the characteristics of block rewards than self-created property. Section IV concludes that cryptocurrency block rewards are straightforward to value, should be includable in income when received, and provide no compelling justification for departure from the horizontal equity principle of taxing all compensation alike.

## I. Compensation and Horizontal Equity

Historically, the code did not distinguish among varieties of services to tax the compensation from some services at lower rates than other services, even if some services might seem more valuable to the society than others. The services the president of the United States renders are taxable at the same general rate schedules applicable to the services an assassin performs, even though we would view the president's services as a positive contribution to the society and the assassin's most likely as a negative one. If the president and the assassin earn equal amounts, they will pay equal amounts of income tax. While we accept rate differentials based on income amounts generally,[26] taxing income from

[21] Tezos tokens are tez, and the validation process is referred to as baking, with validators being bakers. Sutherland, *supra* note 18, at 755.

[22] Owners of fewer than 8,000 tokens, however, may not participate in validation. Sutherland, *supra* note 18, at 755.

[23] Sutherland, *supra* note 18.

[24] *See infra* Section III.B.

[25] Sutherland, *supra* note 18.

[26] IRC section 1 (graduated tax rates).



[redacted]

differing types of services differently violates the fundamental principle of treating taxpayers alike. Services are services, and the tax system is neutral as to the type of services, although the form of compensation and association with some types of services frequently result in taxability distinctions as we observe in the next part (for example, fringe benefits and exclusions for meals and lodging).

Nevertheless, the principle of equal taxation of services income long has tolerated some differences to encourage specific activities. Exclusion of combat zone compensation for commissioned officers in the armed forces is an example of the preferential tax treatment of specific types of employees.[27] Exempting foreign-source income from services for U.S. persons working and residing outside the United States draws a distinction based upon where services are performed and not on the type of services.[28] This exclusion lacks firm continuing policy support insofar as the foreign tax credit[29] would prevent the double taxation of the foreign earned income in any event. Its original enactment may have been designed to encourage U.S. individuals to accept employment away from the United States where their services were essential.[30] The exclusion of cancellation of indebtedness income from discharge of student loan indebtedness for workers in public-service-type activities[31] was enacted to encourage employment in needed, but often low-wage, activities associated with public service. Only in 2018 did the code begin to distinguish among differing types of services in allowing a significant deduction for qualified business income.[32]

## II. Failures to Protect Horizontal Equity in Taxing Income From Services

### A. The Supreme Court Gets Compensation Right

The U.S. Supreme Court correctly protected horizontal equity in taxing services income in *Old Colony*.[33] The taxpayer sought to exclude from his gross income his employer's direct payment of his income tax liability. The individual's employment contract required a payment amount net of income tax. The taxpayer and the employer computed the tax payable on that net payment, and the employer paid the tax. The Court held that the tax payment also was gross income to the employee and additional income tax was payable on that amount. The employer would have to pay that additional income tax under the contract, but that amount also would be gross income to the employee subject to further income tax — an iterative computation. While the outcome of the case seems obvious today, it was certainly less so in the 1920s.

Had the taxpayer won in *Old Colony*, those individuals with the necessary bargaining power — top executives primarily — would have negotiated similar contracts with their employers and paid tax only on their after-tax earnings. Rank-and-file employees who had no such bargaining power would pay their own taxes from their gross wages before arriving at after-tax income. Employers might have recognized and seized the opportunity to reduce payroll cost by paying all employees net of tax amounts (at a reduced salary on which the taxes were computed) and possibly even extending the direct payment to include the employee's otherwise nondeductible housing costs, groceries, and so forth.[34] That favorable taxpayer outcome was likely to inure primarily to the benefit of employers, not employees, diminishing overall payroll cost at the expense of the Treasury. Employees not employed under those contracts would pay tax out of their full salaries, so employees with substantially equivalent salaries would be subject to different effective rates of tax.

Self-employed individuals would lack a like opportunity to diminish their tax base and taxes payable. Eventually, self-employed individuals would have found it necessary to interpose a controlled entity employer — a personal service corporation, for example — so that they might capture a similar net of tax benefit, and Congress

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[27] IRC section 112.

[28] IRC section 911.

[29] IRC section 901.

[30] Robert J. Peroni, Karen B. Brown, and J. Clifton Fleming Jr., *Taxation of International Transactions: Materials, Text, and Problems* 447-450 (2021).

[31] IRC section 108(f).

[32] IRC section 199A.

[33] *Old Colony Trust Co. v. Commissioner*, 279 U.S. 716 (1929).

[34] IRC section 262.



[redacted]

would have had to adjust rates to reclaim the lost revenue and make income tax payment an adjustment to gross income.[35] In the end, equilibrium and substantial horizontal equity would reestablish themselves,[36] but only with added complexity as closely held employer entities would proliferate for the otherwise self-employed.[37]

### B. The Tax Court Gets In-Kind Compensation Wrong — Down the Slippery Slope

Despite neutrality in treatment of service income, the tax law gradually drew distinctions that favored some service providers receiving compensation in kind over cash recipients in violation of that fundamental principle of treating taxpayers alike. Not so long after *Old Colony*, Arthur Benaglia claimed that he should not have to include the value of the meals and lodging he and his family received from the Royal Hawaiian Resort in his gross income as the government claimed.[38] Benaglia contracted with Royal Hawaiian to serve as the resort manager and be on call all the time. In exchange, he would receive a cash salary, live in the hotel, and take meals for his family and himself from the resort's kitchens. The Board of Tax Appeals concluded that the resort furnished the meals and lodging in kind for its own convenience of always having a manager on location and available. The board made the leap to exclusion of the meals and lodging from the employee's gross income.

That logical leap from employer convenience to exclusion from the income of the employee is difficult to follow. Gross income measures what the taxpayer receives, not what someone else gets from the taxpayer or what the payer relinquishes. Admittedly, the employer gains a greater benefit from the employee's services than the cost of providing salary and in-kind benefits to the employee. But is that not always the case? An employer would not remain in business long if the employer lost money on each employee by paying the employee more than the value the employee adds. Receiving meals and lodging in kind certainly had a value to the recipient that was greater than zero. Undoubtedly, the employee would have demanded a higher salary if he had had to provide his own housing and meals. Determining the value of the meals and lodging to the employee might prove challenging, but it would seem to be what tax administrators and courts must do.[39]

Two possibilities for the logic of exclusion present themselves. One is that because it is difficult to measure the value to the employee, excluding the in-kind benefits from gross income relieves the administrator or court from having to make that determination. In *Benaglia*, the government claimed the amount to be the full retail value of the meals and lodging, an amount that certainly overstated the value to the recipient and may have encouraged the board to avoid the value issue. The second possibility is that the board wished to subsidize the hospitality industry — a far less likely possibility, although one that might have been in play when Congress decided that it was pleased to exclude meals and lodging from the gross income of employees, codified the outcome of that and other cases in 1954,[40] and laid out simple rules for taxpayers to follow if they wished to secure the exclusion.[41] When an employer can comply with the rules, providing the benefit makes good sense. The employer may deduct the cost of providing the benefit,[42] even though the employee need include nothing. The deduction might be greater if the employee must include the benefit in income

[35] IRC section 62.

[36] *Cf.* Ronald Coase, *The Cost of Accidents*, for similar analysis in allocating the loss from accidents and concluding that the allocation is a matter of indifference as long as the rule is consistent so that everyone may adjust their expectations and possibly insure against the risk.

[37] *Cf.* the enactment of general income splitting through the joint return equalizing the benefit of spousal income splitting following the decisions in *Lucas v. Earl*, 281 U.S. 111 (1930), and *Poe v. Seaborn*, 282 U.S. 101 (1930), that provided income-splitting treatment for married individuals resident in community property states, but not non-community property states and leading state legislatures to enact various community property regimes to enable their state residents to capture the income-splitting benefit.

[38] *Benaglia v. Commissioner*, 36 B.T.A. 838 (1937).

[39] *Cf. Turner v. Commissioner*, T.C. Memo. 1954-38 (in which the court does its job of determining value to the recipient of steamship tickets by taking the average of the amounts proposed by the taxpayer and commissioner).

[40] IRC section 119 was added by enactment of the IRC of 1954.

[41] IRC section 119.

[42] IRC section 162.

because the employer's deduction would equal the amount of the employee's inclusion,[43] but when balanced against the cost of determining the value to the employee, fitting into the statutory exclusion seems the better choice.

As slippery as the gross income exclusion slope may be, not all in-kind compensation was excludable. The Supreme Court required a taxpayer to include in his income the value of a purported gift of a Cadillac when objective indicia of a gift were lacking.[44] The Court in *Duberstein* left the determination of whether something was a gift to the trier of fact, as long as the trier of fact weighed the facts and circumstances appropriately. But the issue of determining value was absent. Had the value of the Cadillac been at issue, perhaps the trier of fact would have reached a different conclusion.

### C. IRC Section 83 and In-Kind Payments for Services

Enactment of IRC section 83 as part of the Tax Reform Act of 1969[45] clarified that payments for services with property other than cash were nevertheless includable in the recipient's gross income as if the recipient received the FMV of the property in cash.[46] The statute generally does not address the difficulties of determining the FMV of the underlying property, except regarding options that are not subject to the inclusion rule of the statute unless they have a readily ascertainable FMV.[47] The statute includes special valuation rules for the effect of non-lapsing restrictions on value.[48]

Taxpayers wishing to defer including payments in kind in income must receive the property subject to a risk of forfeiture. The value of the property is measured and included in the taxpayer's income as ordinary compensation income when the risk of forfeiture lapses, even if the property otherwise is a capital asset and appreciates substantially in value from the moment of payment subject to the risk of forfeiture to the moment that risk lapses.[49] Taxpayers may convert the future ordinary income from property appreciation into capital gain by electing to include the value of the property received despite the risk of forfeiture when the payer first transfers the property, but if they later forfeit the property, they may not recover the tax paid because of the election.[50]

The statute is of general application to all transfers of property as compensation whether the recipient is an employee of the payer or an independent service provider. Taxpayers may avoid the statute by leaving the property with the payer, as they may with cash compensation, until the taxpayer is ready to receive the property and include its value in income. That compensation deferral is customary in many industries and appears frequently in contracts for the services of highly compensated professional athletes and corporate executives. The employer may not deduct the payment until the employee includes it as income.

A common form of this deferral technique is the so-called rabbi trust[51] whereby the payment or property is transferred to a trust but remains subject to the claims of the service recipient's creditors so that, for purposes of IRC section 83, no transfer to the service provider takes place until the transfer to or for the benefit of the service provider becomes free from the creditors' possible claims.

Neither the risk of forfeiture rule nor the avoidance of inclusion under IRC section 83 permits the conversion of compensation income or the growth in the value of the transferred property before inclusion in income to become capital gain. Even if the service provider's claim to the property transfers by reason of death to another, the income remains taxable as ordinary income to the transferee as income in respect of a decedent[52] when the forfeiture risk lapses, or the property becomes free from the claims of the service recipient's creditors.

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[43] IRC section 83(h).

[44] *Commissioner v. Duberstein*, 363 U.S. 278 (1960).

[45] P.L. 91-172, title III, section 321(a) (Dec. 30, 1969); 83 Stat. 588.

[46] IRC section 83(a).

[47] IRC section 83(e)(3).

[48] IRC section 83(d)(1).

[49] IRC section 83(a)(1).

[50] IRC section 83(b).

[51] Ordower, "A Theorem for Compensation Deferral: Doubling Your Blessings by Taking Your Rabbi Abroad," 47 *Tax Law.* 301 (1994) (explaining rabbi trusts).

[52] IRC section 691.



[redacted]

### D. Fringe Benefits — From Christmas Turkeys to Luxury Travel, On Down the Slope

Despite the general and seemingly strong principle that income from services, whether paid in cash or in kind, is taxable to the recipient as ordinary income, considerable slippage in the principle manifests itself in both decisional and statutory law. When statutory, presumably Congress has reflected on the matter and considered it justifiable to provide a tax preference to some taxpayers that is not available to all taxpayers. Determining a compelling rationale for the tax benefit may prove elusive, as it inures indirectly to the service recipient and becomes a tax subsidy to the industry in which the service recipient participates. Air travel passes in the airline and related industries may be a good example of an industry subsidy.[53]

Excluding meals and lodging from gross income is an attractive, nontaxable benefit, but the policy rationale remains elusive, although the exclusion is firmly embedded in the tax law.[54] Those expenses, unless duplicative because one is away from home on business,[55] are personal living and family expenses for which taxpayers are denied a deduction.[56]

Despite the broad rule of inclusion in IRC sections 61 and 83, employers frequently provide a range of noncash, and some cash, fringe benefits to employees that enhance the employees' wages but remain free from taxation. The government has permitted taxpayers to exclude from gross income railroad travel passes for railroad employees and their families, Christmas turkeys, group life insurance, discounted utility services, and some cash meal allowances[57] and even luxury trips.[58]

In 1975 the IRS sought to rationalize the taxation of a growing array of fringe benefits by requiring employees to include their values in gross income. Rather than employers competing to provide employees with nontaxable benefits that would supplement the compensation package without tax cost to the employee, as cash compensation does, the proposed fringe benefit regulations[59] would have prevented employers from distinguishing themselves from other employers with nontaxable benefit packages.

Fearing voter backlash, Congress prohibited the IRS from promulgating the regulation with a series of moratoriums.[60] Legislation providing rules to enable employers to structure fringe benefits that would be excludable from employees' gross incomes and to provide continuing opportunities for employers to capture employees at reduced wages by offering benefits like employee air travel passes in the airline and related service industries, purchase discounts in retail industries, and various working condition fringe benefits without tax cost to employees.[61] Universities could offer nontaxable tuition relief for employees and their families,[62] often a sufficient reason for university employees to stay in otherwise undercompensated positions, relative to other markets for the employees' services. Nontaxable fringe benefits enhance compensation so that employees receiving nontaxable benefits are treated more favorably by the tax system than similarly situated workers who do not have access to those benefits.

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[53] IRC section 132(a)(1).

[54] IRC section 119 and *supra* Section II.B.

[55] IRC section 162, Treas. reg. section 1.162-2.

[56] IRC section 262.

[57] These examples provided by Jay A. Soled and Kathleen DeLaney Thomas, "Revisiting the Taxation of Fringe Benefits," 91 *Wash. L. Rev.* 761, 766-768 (2016).

[58] *United States v. Gotcher*, 401 F.2d 118 (5th Cir. 1968) (holding that a trip to Germany was not includable to a husband who worked for the trip provider when the trip was business, but his wife's expenses were includable in his income).

[59] Prop. Treas. reg. section 1.61-16.

[60] Footnote 33 in Julia Kalmus, "The Moratorium Is Over: Fringe Benefits Under the Tax Reform Act of 1984," 5 *Pace L. Rev.* 309 (1985), identifies the moratoriums: "[t]he moratoriums were enacted in the following statutes: (1) Tax Treatment Extension Act of 1977, Pub. L. No. 95-615, section 3, 92 Stat. 3097 (1978) (codified as amended at 26 U.S.C. section 61 (1978)); (2) Act of October 7, 1978, Pub. L. No. 95-427, section 1, 92 Stat. 996 (1978) (codified as amended at 26 U.S.C. section 61 (1978)), which prohibited the Treasury from issuing, prior to 1980, final regulations under section 61 relating to the income tax treatment of fringe benefits; and (3) Act of December 29, 1979, Pub. L. No. 96-167, section 1, 93 Stat. 1275 (1979) (codified as amended at 26 U.S.C. section 61 (1979) which extended the moratorium through June, 1981)." And footnote 34: "[u]nder the Economic Recovery Act of 1981 the Treasury was prohibited from issuing, prior to January 1, 1984, final regulations under section 61 relating to the income tax treatment of fringe benefits. *See* Economic Recovery Act of 1981, Pub. L. No. 97-34, section 801, 95 Stat. 172, 349."

[61] IRC section 132 added by the Deficit Reduction Act of 1984, P.L. No. 98-369, 98 Stat. 494.

[62] IRC section 117(d).



[redacted]

Many of the fringe benefit exclusions are items that are difficult to value. No-cost air travel, for example, structured consistently with the exclusionary statute, represents an item for which airlines generally do not set a price. Airfares tend to vary widely as airlines increasingly use dynamic pricing, but traveling without a confirmed seat and being granted passage only when space is unsold and otherwise available is a product for which no clear price point is available.[63] Similarly, tuition benefit values are difficult to pinpoint when universities widely offer tuition discounts through a variety of scholarship programs,[64] and the employee's choice to attend the university may depend upon the tuition remission program, absent which the employee or eligible family member might choose another school or no school.

### E. Carried Interests and the Valuation Conundrum

Perhaps the most controversial failure to tax compensation paid in difficult-to-value property is the partnership interest in profits, often referred to as a carried interest.[65] Along with deferral of inclusion in income of the value of the interest received, the interest in profits often enables the recipient to convert ordinary income from services into long-term capital gain. The issue of interests in profits remains a matter of controversy. Congress continues to seek a solution to this tax planning opportunity to defer ordinary income and convert it into long-term capital gain, but no satisfactory solution has emerged yet. The Tax Cuts and Jobs Act[66] adjusted the conversion opportunity by requiring the recipient of the interest in profits to hold the interest for a three-year period[67] before the gain would become long-term capital[68] when the general holding period is one year, even if the recipient made the current inclusion election under IRC section 83(b).[69]

Despite the government's concession that interests in profits have a zero value when the service provider receives them,[70] it remains difficult to imagine that a successful private equity fund manager would invest their human capital in a fund unless the interest received had substantial value to support the investment. Investors of capital in the fund certainly assume that the manager's labor will produce favorable results for them because the manager's services are valuable. The investors customarily are willing to dilute their interests by as much as 20 percent of their anticipated profit to secure those services.[71] The investors and the manager are dealing at arm's length so that a simple application of the exchange equivalency doctrine leads to a nonzero value for the services, and that value is transferred at the outset of the partnership project. Were a private equity fund manager to offer to sell the interest in profits, the sale price would be unlikely to be zero as long as the sale of the interest would not entail withdrawal of the manager's continuing services.

In *Diamond*,[72] a partnership promoter who received an interest in the partnership's profits for his services sold that interest in profits shortly following the partnership's formation. The court had little difficulty taxing the promoter on ordinary income from services equal to that sale price since the sale rendered the value of the interest easily measurable at the moment the promoter received it. In a later case not accompanied by a sale of the profits interest, the receipt of an interest in partnership profits for services escaped taxation because the value was speculative, and the court held it to be zero.[73]

The revenue procedure[74] follows the government's practice of determining value at an

[63] Of course, but for the exclusion, airlines probably would price the travel available for their employees.

[64] Excludable under IRC section 117.

[65] *See generally*, Victor Fleischer, "Two and Twenty: Taxing Partnership Profits in Private Equity Funds," 83 *N.Y.U. L. Rev.* (2008); Ordower, "Taxing Service Partners to Achieve Horizontal Equity," 46 *Tax Law.* 19 (1992).

[66] P.L. 115-97 (Nov. 2, 2017).

[67] IRC section 1061.

[68] IRC section 1222(3), (4).

[69] *Supra* Section II.C.

[70] Rev. Proc. 93-27, *supra* note 3.

[71] The profit percentage often is negotiated between the manager and the investor so that different investors in a fund relinquish differing percentages. *Generally*, Ordower, "Demystifying Hedge Funds: A Design Primer," 7 *U.C. Davis Bus. L.J.* 323 (2008).

[72] *Diamond v. Commissioner*, 492 F.2d 286 (7th Cir. 1974).

[73] *Campbell v. Commissioner*, 943 F.2d 815 (8th Cir. 1991).

[74] Rev. Proc. 93-27, *supra* note 3.



[redacted]

immediate liquidation. An interest in profits has no value if the partnership has no opportunity to earn profits because it liquidates. As clean as liquidation value analysis might be, one does not form a partnership anticipating immediate liquidation. The interest in profits under any continuing operation valuation is not zero. I argued earlier[75] and continue to believe that setting the value at zero for an interest in profits is unjustifiable. Deferral and conversion make no sense and afford selected taxpayers a significant tax benefit. If value is speculative and indeterminate, the transaction should remain open so that all measurable receipts remain ordinary compensation income until value becomes determinable with reasonable certainty, and the interest could then be taxed.[76]

Application of a liquidation value determination produces a similarly absurd result even if the service provider receives a capital interest.[77] Yet, taxpayers who receive capital interests for services have no reason to dispute that outcome. It does not alter their economic agreement with their partners and frequently provides capital gain treatment, rather than ordinary income, for part of their compensation income. If, for example, A, B, and C each contribute $100 to begin a partnership business and D contributes services to the partnership and becomes an equal partner, the parties dealing at arm's length would expect D's services to be equal in value to each of the cash contributors' contributions. A, B, and C are not paying D. D contributes services to the partnership. Those services add to the partnership's capital and either create a deferred asset, such as prepaid services, or substitute for services for which the partnership otherwise would pay from its, not its partners', assets.

Nevertheless, the IRS uses liquidation analysis to set the value of D's services at $75, not $100, and treats the transaction of payment for services as occurring outside the partnership between the partners before formation. If A, B, or C contributes appreciated property to the partnership, the contributor will recognize gain as if they had transferred a share of that property to D in exchange for D's services. This characterization belies the true nature of the transaction. It is not what the partners did, but it generates a favorable outcome for D, so D does not complain, and A, B, and C probably do not report gain. The cash or property contributing partners' percentage interests are diluted, but not their economic interests owing to the value D adds.

## III. Block Rewards

*Jarrett* raises concerns that the IRS or the courts will permit service providers who validate transactions and create new blocks of transactions to add to a cryptocurrency's blockchain to seize an unjustified tax benefit when they receive block rewards. That advantage could consist of inclusion deferral — not of great concern in a low-interest-rate environment — deferral and conversion comparable to what private equity managers have captured for years with carried interests,[78] or even the possibility that the deferred income will escape taxation as it disappears into the cryptocurrency reporting morass. The refund to Joshua Jarrett is a single instance of allowing otherwise taxable income to escape current taxation and possibly convert the income to long-term capital gain or a nontaxable receipt if the cryptocurrency declines in value. If it becomes a general application because the emerging cryptocurrency industry is confusing and values uncertain, the outcome will enhance the attractiveness of cryptocurrency, increase its value, encourage taxpayers to use it to circumvent current taxation, and provide a tax advantage for the industry.

Congress[79] and the IRS[80] already have expressed concerns about underreporting of transactions in cryptocurrencies. If Congress wishes to subsidize the industry, as it has done for

[75] Ordower, *supra* note 65.

[76] *Id.*

[77] Treas. reg. section 1.721-1(b).

[78] *Supra* Section II.E.

[79] IRC section 6050I (requiring reporting by payers and recipients of cryptocurrency transactions, for example).

[80] Form 1040 now includes a cryptocurrency question immediately following the taxpayer information.



[redacted]

other industries,[81] that decision should have to work its way through the legislative process and aspire to becoming a principled decision. It would be unfortunate if the IRS and courts again create an unintended tax subsidy for an industry, as they did with carried interests.[82]

### A. Some Perspectives on Cryptocurrency

Cryptocurrency is intangible property and, like most other intangible property, has no intrinsic value. It differs from much other intangible property in that its value is not referential; that is, it fluctuates in value independently of the value of other property.[83] Cryptocurrency value instead depends on a public perception that it has value that the holder may exchange for money, services, tangible property, or other intangible property. That same observation could be made about much other property having no intrinsic value, for example, limited issue trading cards that have a physical manifestation of trivial value — cardstock.[84]

That the nature of the property or value is amorphous should not alter the tax outcome. Many financial products are amorphous,[85] but that does not prevent their taxation. If nothing more, cryptocurrencies are multiparty contractual relationships under which the holders of the cryptocurrency abide by a series of network rules. Those rules embedded in the network's computer code support a blockchain network. The network consists of individual computers that interconnect by running a computer program specific to the cryptocurrency.

Maintenance of the network involves memorializing a growing historical record of transactions in unalterable, interlinking blocks. The cryptocurrency record must exist in multiple identical, valid copies called a distributed ledger. The distributed ledger ensures the accuracy of the historical record, and that record reliability enables the cryptocurrency holder to exchange the cryptocurrency digital tokens for something else securely. This duplication of the ledger renders the historical record substantially immutable. Tampering with the record, while not impossible, is far more difficult than tampering with a central record common to the recordkeeping of most financial institutions and records because it would be necessary to alter the record in many locations simultaneously without disconnecting the altered record block from the blockchain. Cryptography underlying the distributed ledger poses a formidable barrier to manipulation of or interference with the ledger blocks.

Division of a cryptocurrency into convenient units having no physical manifestation is simply a convenience. The units or tokens represent a fluctuating fractional share of the network and access to the network. The total number of fractional shares is not fixed but grows under well-defined network rules. Those rules serve to maintain and increase the value of each token consistent with market demand for the tokens and in harmony with the public perception that they have value. Unlike self-created property, rules built into the network code prevent anyone from adding tokens or destroying tokens except as permitted or required by the network software under transparent rules known to all token owners. In this respect, baking (tez) and mining (bitcoin) are unlike self-creating property or extracting minerals from property the extractor owns unconstrained by external limitations on the process. Rather, block rewards are simply payment for services rendered in maintaining the network. Whether the payment amount is a correct measure of the underlying value of the services is of minor consequence but could lead to a limitation on deduction of the payment if the amount were not reasonable compensation.[86]

Creators of property, including farmers growing crops or raising livestock, are not limited by external rules embedded into the property itself. There may be physical limitations, such as

[81] *Supra* Section II.D for fringe benefits and percentage depletion for mineral production, for examples.

[82] *Supra* Section II.E.

[83] Corporate shares, for example, are intangible property that refer to the value and represent ownership in a corporation; futures and forward contracts settle in cash but fluctuate in value relative to a referent item — a commodity or a foreign currency, for example.

[84] Their value is somewhat dependent on their physical condition, but physical condition of sports memorabilia already is diminishing as a factor for some collectors as they transition to sports non-fungible tokens for their memorabilia.

[85] Weather derivatives, for example.

[86] IRC section 162.



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space to raise crops, or market limitations that prevent manufacturers from creating products for which there is insufficient demand, but there are no limitations defined by the consent of all participants in the property itself that enable the property to exist as there are with cryptocurrency. What resembles self-created property in the cryptocurrency world is that someone does something to create new tokens. There the resemblance ends. The act of creation of tokens is essentially a ministerial task under well-defined network rules designating who gets to produce tokens, when, and how many.[87] A better analogy than self-created property might be that of a securities dealer who places all or part of an offering of securities and receives a percentage of the value as a fee for those services — ordinary compensation income — although the network maintenance function for proof of stake cryptocurrencies may be far more routine and ministerial.

Finiteness of cryptocurrency tokens is essential to value. Unlimited issuance of tokens, just as unlimited issuance of fiat currencies, would cause them to lose their value quickly as the value of the token dilutes. The limited quantity of any item, tangible or intangible (gold, diamonds, corporate shares, pink pineapples, and so forth), when accompanied by demand for the item, gives the item a market value. If there is demand for an item and the item is or becomes scarce, its value increases. An artwork frequently increases materially in value when the creator dies because there will be no more artwork from that artist. Unique items frequently command high market values. In the world of distributed ledger technology, that also underlies cryptocurrency — non-fungible tokens have value because of their uniqueness. While it may be correct to observe that shutting all computers off that are running the software for a cryptocurrency would eliminate its value,[88] the observation would not seem to add to any tax analysis. The owners of tokens of the cryptocurrency cannot and will not allow the network to fail, lest they destroy their own investment.

Cryptocurrencies are investment products that fluctuate in value. In that, they are no different from precious gems or collectibles, except their storage medium is the cloud rather than a physical location and they may be exchanged more rapidly than other items as a function of computing speed. They have not replaced national currencies maintained through centralized ledgers to become a routine means of exchange. Several countries have experimented with their own cryptocurrencies that would be designed to have a stable value as the fiat currency of the country has. Only El Salvador has adopted an existing cryptocurrency, bitcoin, as a national currency. Bitcoin's volatility renders it of limited use as a regular means of exchange, although countries with hyperinflationary national currencies have had to depend on an alternative currency, the U.S. dollar, for example, for international and some domestic trade because of the national currency's volatility. Volatility of domestic currency value is part of everyday life, and residents of those countries try to work around that volatility.

A cryptocurrency token is an arbitrary recordkeeping unit built into the ledger; an artifice just as national currencies are customary units of exchange in the country in which they are in use. They have no immutable characteristics that determine their size and value.[89] The United States, Canada, Zimbabwe, and Hong Kong all name their currencies dollars, but they differ in value per unit. None of the currencies are backed by anything physical, like gold. Each is backed only by the consent of the national government that it may be used as legal tender and, generally, the full faith and credit of the issuing nation. While a national currency is a means of lawful exchange, that designation does not peg specific purchasing power to the dollar.

If the United States replaced existing dollars with new dollars in a 5 to 1 or 1 to 5 ratio, the value of each new dollar would remain a function of the U.S. dollar concept and a fractional share of all dollars outstanding. Purchasing power of the new

[87] Sutherland, *supra* note 18, at Section V.E. Crop shares are no different.

[88] Sutherland, *supra* note 18, at 962.

[89] Were this not the case, currencies, crypto or fiat, would all describe identical units and buying power.



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dollar is likely to approximate one-fifth or five times the purchasing power of the old dollar, depending on the ratio of exchange as 5 to 1 or 1 to 5. The blockchain for each cryptocurrency accommodates and records transfer of fractional shares of a token in the blockchain without permitting the holders to alter or redefine the tokens themselves. Only the network may change the number of tokens outstanding, either automatically as built into the network program or with the consent of token holders, as limited or permitted by the computer code rules controlling the cryptocurrency.

### B. Taxing Block Rewards: No Economic Dilution

On the simplest level, block rewards increase the number of tokens the recipient of a block reward owns and concomitantly the recipient's proportional share of that cryptocurrency. If tokens of a cryptocurrency do not decline in value because additional tokens are issued — that is, the value of each token is unaffected by the issuance of more tokens — the IRS's approach to taxing block rewards makes good sense.[90] New tokens a baker (tez) or miner (bitcoin) produces and retains in the validation process through which transactions are grouped into blocks and added to the cryptocurrency's blockchain are compensation for services paid by the network under its operational rules. The new tokens are currently taxable and, so long as the network continues to operate, the tokens are traded and have an ascertainable, but often rapidly fluctuating, FMV.[91]

For successful cryptocurrencies, there is no determinable dilution in value, as opposed to percentage ownership, of one stakeholder's interest in a cryptocurrency upon issuance of a block reward to another stakeholder.[92] That outcome seems reasonable insofar as the cryptocurrency baker or miner adds value to the whole by performing the network maintenance functions. Each owner's tokens do not change value, other than by reason of market fluctuation common to all investment assets. It is difficult to ascertain with certainty whether outstanding tokens would increase in value more if no additional tokens were issued as block rewards; although, each token holder might have to pay a network maintenance fee directly rather than through the block reward system. It is equally unknowable whether an increase in value of outstanding tokens might flow from the increasing supply evidencing a well-functioning network.[93] However, the carefully controlled growth in outstanding tokens through network maintenance block rewards suggests that block rewards are at least matched by value added through the performance of network maintenance services. Temporary restrictions on the transfer of new or old tokens of the recipient may constitute a risk of forfeiture deferring the miner's or baker's inclusion in income until the restrictions lapse but are more likely to constitute temporary restrictions that the taxing statute disregards in determining the value to include in income.[94]

As with cryptocurrencies, corporations commonly pay employees with their own newly issued shares. The issuance of additional shares generally does not affect the value of outstanding shares. The relative corporate ownership of each shareholder is diluted by issuance of new shares, but concomitantly with the issuance of compensatory shares, the corporation presumably increases in value because the employee's efforts add value. The added value offsets or exceeds any economic dilution that might accompany the ownership dilution,[95] so shares retain their value because it is in part a function of the value of the corporation. If the employee had been paid in cash, the employee's efforts similarly would have increased the value

[90] Notice 2014-16, *supra* note 19.

[91] Initially, the Jarretts acknowledged the ascertainable FMV and reported the block rewards as ordinary compensation income before amending their return.

[92] With proof of stake cryptocurrencies, the baker or validator may not engage in validation and may not receive additional tokens for validating unless the validator owns a position in the cryptocurrency. A miner or validator in proof of work cryptocurrencies need not own a position before receiving new tokens and gaining a position.

[93] *See*, however, the analysis of dilution in proof of stake rewards in Mattia Landoni and Sutherland, "Dilution and True Economic Gain From Cryptocurrency Block Rewards," *Tax Notes Federal*, Aug. 17, 2020, p. 1213. The analysis concludes that determining the economic effect of dilution by block rewarding is uncertain.

[94] IRC section 83(c).

[95] Not a simple application of exchange equivalency, *supra* note 11 and accompanying text, because in an employer-employee context, the value added by the employee's services should exceed the amount the employee is paid for them.



[redacted]

of the corporation, but that increase would have been offset, at least in part, by the cash payment.[96]

A cryptocurrency network is not a corporation, of course, but the resemblance is clear. A partnership analysis also recommends itself, but as noted above, the government has not done a good job with partnership interests as payment for services.[97] Nevertheless, the analogy holds with the issuance or increase in a service partner's proportional interest in the partnership. Value the partner adds generates an increase in the partnership's assets or decrease in the partnership's expenditures that offsets or exceeds the value of the compensatory additional interest, but not the percentage ownership in the partnership.[98]

On the deduction side, the inclusion in the baker's or miner's income[99] yields a deduction or capital expenditure on the payer's side.[100] In the case of a corporation, payment with shares gives the corporate payer the deduction or capital expenditure. A partnership, as an entity, should get the deduction or capital expenditure, and the partners and the partnership would allocate the deduction or capital expenditure among all the partners, including the service partner.[101]

It is unnecessary to ascertain the nature of the payer since many transactions involve inclusion in income to a service provider without an accompanying deduction, for example, housekeeping services in one's residence. Cryptocurrency networks provide a less certain answer to the deduction question because they are not obviously entities. Cryptocurrencies seem to be a common enterprise for profit analogous to a pool of capital, usually a partnership or limited liability company, but are lacking a centrally managed capital sum that is characteristic of the capital pool, so the partnership comparison may fall short. The deduction ought to belong to all owners of the cryptocurrency since they are co-owners in the enterprise represented by the network, perhaps most analogous to a tenancy in common. Unfortunately for most owners whose proportional interests in the cryptocurrency outstanding diminish from the issuance of new tokens, the deduction would be related to maintenance of their investment,[102] a miscellaneous itemized deduction for individuals, giving rise to no tax benefit under rules currently in effect.[103] Capitalization to the owner's cryptocurrency position for expenditures maintaining the network may be a supportable outcome, but network maintenance is recurrent and ongoing, making it seem more like a current expenditure, hence not capitalizable.

Whether the network rules allocate additional tokens to a baker or miner for their activity in baking or mining or cancel tokens of token holders who do not engage in baking or mining should be a matter of indifference.[104] The effect is reallocation of ownership of the network as compensation for the activity of the miner or baker, increasing the miner's or baker's proportional network share. The value transferred to the validators has the same effect as the issuance of new tokens as described in the preceding paragraphs, but shrinking the number of outstanding tokens might send the wrong public message and suggest a loss in the aggregate value of the cryptocurrency.

Staking complicates and obfuscates the simple characterization of tokens for services as compensation income but should not alter the compensation outcome. If, contrary to the actual operation of the tezos network, each token holder periodically must relinquish tokens to maintain the network so that the relinquished tokens transfer to the bakers, each token holder is deemed to have sold those tokens for their FMVs, a taxable event yielding capital gain or loss

[96] Contrast stock dividends that dilute value, not just ownership percentage — although public perception about corporate value when the corporation pays a stock dividend and price decreases, increasing demand under a supply-demand analysis, may counteract the full potential effect of dilution.

[97] *Supra* Section II.E.

[98] *Supra* text following note 78.

[99] IRC section 83(a).

[100] IRC section 83(h). *See supra* Section II.C.

[101] Subject to the limitation on shifting of cash-basis items if the service partner had no partnership interest before the receipt of the interest. IRC section 706(d).

[102] IRC section 212.

[103] IRC section 67(g).

[104] *See* Sutherland, *supra* note 18. *Cf.* IRC section 305(c) for treatment of alterations to outstanding shares that have the effect of an increase to one shareholder and decrease of proportional ownership to another. And see the discussion of the purchasing power of a new dollar, *supra*, text following note 90.



[redacted]

because the tokens are capital assets.[105] That FMV is a payment made for the baker's services, deductible or capitalizable under the applicable rule for in-kind payments for services.[106]

The value of the tokens received for baking or validation services is neither unknown nor ambiguous. Tokens have an ascertainable FMV when the baker receives them. Inclusion in income is immediate and measurable. That a baker participates in many transactions during the year is hardly a sufficient reason not to include the compensation income as ordinary income, even if inconvenient to track. Nor is volatility of the property reason to exclude the compensation income when received. Absent a contractual risk of forfeiture,[107] the operative statute governing compensation paid with property other than cash contains no exception for volatile property.[108] Post-receipt fluctuations in value yield realized gain or loss when the baker sells or exchanges the tokens received as compensation.[109]

## IV. Conclusion

The *Jarrett* litigation, however, threatens to create a new compensation income tax benefit administratively or judicially without a sound foundation for violating horizontal equity principles. Block rewards are compensation for network maintenance services and taxable immediately. Given the ongoing trading in each cryptocurrency's tokens, there is no uncertainty as to the value of the rewards when received. If the inconvenience of reporting the income suggests that immediate inclusion in income undermines the growth of an important and essential new technology industry, the remedy ought to be with Congress.

I do not believe the industry to be essential but rather view it as generating an investment product with some limited practical applications. Nevertheless, cryptocurrency proponents might persuade Congress to subsidize the industry with favorable tax treatment consistent with Congress's abandonment of horizontal equity principles in the enactment of the qualified business income deduction.[110] That deduction favors sole proprietorship income over income from the performance of services as an employee and further favors income from businesses that generate income only indirectly based on the reputation or skill of the owners over income from those directly based on the reputation of skill of the owners.[111] ■

[105] *Cf.* the discussion of partnership capital interests for services, *supra* Section II.E, where mischaracterization of the transaction as among the existing partners and service partner, rather than the partnership and the service partner, results in the non-service partners recognizing gain on the transfer of a portion of the property, which they otherwise contribute to the partnership, to the service partner.

[106] IRC section 83(h).

[107] *Id.*

[108] IRC section 83(a).

[109] Characterizing staking as analogous to gambling does little to change the outcome. Tokens exchanged for participation in a wager have been sold at their FMV, yielding capital gain or loss. Gambling gains are ordinary income if the staker ends up with more tokens of greater aggregate value, while gambling losses are deductible only to the extent of gambling gains. IRC section 165(d).

[110] IRC section 199A.

[111] IRC section 199A(d)(1).



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