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I. Introduction

Our goal in this Article is to clarify the role of deferral in income taxation by introducing a distinction between pure deferral and counterparty deferral. We begin by illustrating the distinction with two canonical examples (expensing and deferred compensation) and then suggest a broader array of possibilities. Much of what we say below can be found in the tax policy literature, but many of the points are not as well understood as they should be, producing misleading statements and erroneous conclusions. For example, it is sometimes said that capital gain property will suffer a tax disadvantage if placed in a qualified retirement account because the gain will be subject to full ordinary rates on withdrawal.[1] Similarly, deferral of the employer's deduction is frequently said to eliminate the benefit of deferring an employee's inclusion of nonqualified deferred compensation.[2] The analysis below shows that both of these statements are erroneous under standard assumptions.

II. Pure Deferral

A. *The Standard Analysis*

By pure deferral we mean any legal rule (whether in the Code, regulatory materials, or judicial decisions) that defers inclusion of an item of income, relative to economic accrual of the item. An equivalent means of accomplishing deferral of income is acceleration of a deduction. A canonical example of such acceleration is immediate deduction of a capital investment.[3] As illustrated in the example below, it has long been understood that such expensing is equivalent to exemp-

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[1] Richard L. Kaplan, Reforming the Taxation of Retirement Income, 32 Va. Tax. Rev. 327, 346-48 (2012).

[2] Joseph Bankman, Daniel N. Shaviro & Kirk J. Stark, Federal Income Taxation 268 (16th ed. 2012); Michael J. Graetz & Deborah H. Schenk, Federal Income Taxation, Principles and Policies 751–52 (6th ed. 2009) (corrected in the 7th edition).

[3] See, e.g., IRC § 174 (research and experimental expenditures), § 179 (certain depreciable assets), § 263(c) (intangible drilling costs).

tion of the income produced by the amount that would have been invested in the absence of expensing, assuming a single rate of return for the taxpayer's assets, a constant tax rate, and enough taxable income to absorb the deduction.[4] As we are interested in isolating the effects of deferral from those of rate changes and other events, our discussion includes those assumptions, unless otherwise indicated.[5] The general algebraic expressions underlying our examples are set forth in the notes.

> *Example 1*: In Year 0, taxpayer *T*, whose tax rate is 20%, receives wages of $125. *T* invests the entire amount in unimproved land. With expensing, *T* owes no taxes in Year 0. The land triples in value to $375 by Year 3, when it is sold. *T* owes taxes of $75 in Year 3 as his basis is zero, leaving $300 after taxes. The same result could be obtained without expensing by taxing the wages immediately and then exempting the return on the investment. Under this alternative, *T* owes $25 in taxes in Year 0 and purchases $100 of land with his remaining funds. The land appreciates to $300 in Year 3, when it is sold. *T* again has $300 after taxes, because the investment return is exempt. If neither expensing nor exemption were available, *T* would pay taxes of $25 in Year 0 and $40 in Year 3 (20% of a gain of $200), leaving $260 after taxes.[6]

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[4] See E. Cary Brown, Business Income Taxation and Investment Incentives, in Income, Employment and Public Policy: Essays in Honor of Alvin H. Hansen 300, 309-10 (Lloyd A. Metzler ed., 1948). In the interests of simplicity, our examples involve nondepreciable assets, whereas the original Brown analysis included depreciable assets. For a simple numerical example of expensing of a depreciable asset, see Alvin C. Warren, Jr., Accelerated Capital Recovery, Debt, and Tax Arbitrage, 38 Tax Law. 549, 552-53 (1985).

[5] Consistent with those assumptions, we do not here consider the possibility of portfolio shifting between risky and riskless assets. For commentary considering this possibility, see, e.g., Evsey D. Domar & Richard A. Musgrave, Proportional Income Taxation and Risk-Taking, 58 Q.J. Econ. 388 (1944); Louis Kaplow, Taxation and Risk Taking: A General Equilibrium Perspective, 47 Nat'l Tax J. 789 (1994); Alvin C. Warren, Jr., How Much Capital Income Taxed Under an Income Tax Is Exempt Under a Cash Flow Tax?, 52 Tax L. Rev. 1 (1996).

[6] The result in Example 1 can be stated more generally with a simple two-period algebraic model, where investment in Period 1 earns a pretax rate of return of r in Period 2. Under an income tax at rate t, a capital investment of $1 of after-tax income in Period 1 will produce $1 + r(1 - t)$ in Period 2. Expensing will generate tax savings of $t/(1 - t)$ in Period 1. The original investment will be worth $1 + r$ in Period 2 before taxes and $(1 + r)(1 - t)$ after taxes. The tax savings will be worth $[t/(1 - t)](1 + r)$ in Period 2 before taxes and $t(1 + r)$ after taxes, leaving the investor with an after-tax total of $1 + r$. The entire pre-tax rate of return r is accordingly exempt in the sense that it is not reduced by the tax rate. See Warren, note 5, at 3, for a previous statement of this result.

Under the standard assumptions described above, the additional $40 retained by the investor under expensing in Example 1 can be thought of as the forgone 20% tax on the investment return of $200 that would have been earned in the absence of expensing. From this perspective, the Year 0 wages of $125 remain fully taxable in spite of the deferral, because the $75 in Year 3 taxes is the compounded value of the $25 in taxes not paid on salary in Year 0. If § 1014 applied to step-up the basis at death to $375 before the investment was sold, the deferred tax would never be collected, so that the original wages would be exempt in addition to the investment return. This way of looking at the matter indicates that step-up in basis at death can be thought of as exempting labor income in some cases.[7] Finally, these results would also obtain if the deferral in Example 1 were accomplished by exclusion of a receipt (such as land worth $125 received as compensation) until disposition of that receipt.

The analysis is somewhat more complex when the tax savings from expensing cannot be invested at the same rate of return as the original investment. In this case, expensing effectively exempts the lower rate of return, applied to the amount of investment in the absence of expensing.

> *Example 2*: As in Example 1, *T* faces a tax rate of 20% and receives wages of $125 in Year 0. In this example, however, *T* has the opportunity only to invest $100 in land that triples in value in three years. Additional investment will produce a 10% return, compounded annually.
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> With expensing, *T* invests a total of $125 in Year 0: $100 in the land and the $25 in tax savings from expensing in the alternative investment. In Year 3, the $100 in land has again tripled to $300, but the $25 in tax savings has compounded only to $33.28. When *T* disinvests in that year, the taxpayer owes $66.66 in tax (20% of amount received of $333.28 minus basis of zero), leaving $266.62.
>
> Without expensing, *T* pays $25 in Year 0 taxes. In Year 3, *T*'s gain on the land is $200 (amount realized of $300 minus basis of $100). Suppose, however, that $33.10 (10% compounded return on his investment of $100) of this gain were exempt. *T*'s taxable amount would then be $166.90 ($200 - $33.10), producing a tax of $33.38, again leaving the taxpayer with $266.62 ($300 - $33.38) after taxes.

[7] Cf. IRC § 691 (requiring inclusion of items of gross income not taxed prior to a decedent's death). A similar result could be obtained under § 1014 by not increasing the basis of items that benefit from expensing.

> If neither expensing nor partial exemption were available, *T* would pay taxes of $25 in Year 0 and $40 in Year 3 (20% of a gain of $200), leaving $260 after taxes. The additional $6.62 available under deferral or partial exemption is the forgone tax on the lower 10% investment return of $33.10 on an investment of $100.[8]

The result illustrated in Example 2 is often captured by the statement that the normal rate of return is not taxed under expensing,[9] when "normal" refers to the rate of return that can be earned by investment of the tax savings from expensing. Since that rate of return applies to the next available, or marginal, investment, it sometimes is also called the marginal rate of return.[10]

The standard analysis illustrated in these two examples is often deployed in the tax policy literature to argue, for example, that a consumption tax can have effects equivalent to those of a wage tax because capital income is exempt,[11] or that the only difference between consumption and income taxes is taxation of the normal rate of return.[12] Our goal here is not to enter into those policy debates, but to emphasize that the standard analysis of expensing correctly characterizes the benefit of pure deferral in these cases as effective exemption of capital income or a component thereof.

B. Other Explanations of Deferral

Some readers may find the equivalence of pure deferral with exemption of capital income clarified by two additional relationships

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[8] In terms of the simple two-period algebraic model in note 6, the taxpayer invests $1 in Period 1 in an asset with a rate of return r, again leaving the taxpayer with $(1 + r)(1 - t)$ after taxes in Period 2. If the tax savings from expensing, $t/(1 - t)$, could be invested only at some lower (or "normal") rate of return r_n, the investor would be left with the following amount in Period 2, which is the sum of the after-tax value of the original investment and the after-tax value of the invested tax savings: $(1 + r)(1 - t) + [t/(1 - t)](1 + r_n)(1 - t)$. That amount simplifies to $1 + r - t(r - r_n)$, indicating that only r_n, the rate of return available on investment of the tax savings, is exempt from the tax. If r_n equals r, as in Example 1, the entire return would be exempt. See Warren, note 5, at 5, for a previous statement of this result.

[9] See, e.g., Richard A. Musgrave, Clarifying Tax Reform, 70 Tax Notes 731, 736 (Feb. 5, 1996).

[10] See, e.g., David A. Weisbach, Ironing Out the Flat Tax, 52 Stan. L. Rev. 599, 605 (2000).

[11] See, e.g., Alvin C. Warren, Jr., Fairness and a Consumption-Type or Cash Flow Personal Income Tax, 88 Harv. L. Rev. 931, 946 (1975).

[12] See, e.g., Joseph Bankman & Thomas Griffith, Is the Debate Between an Income Tax and a Consumption Tax a Debate About Risk? Does It Matter?, 47 Tax L. Rev. 377-79 (1992).

that are often used to elucidate deferral.[13] The first is that the initial tax savings due to expensing ($25 in the previous examples) fully or partially funds the tax collected on later disinvestment.[14] This equivalence is obvious in Example 1, when the tax savings of $25 invested in the land in Year 0 triples in value to $75, the amount of the tax due in Year 3, reducing the net burden to the taxpayer of the tax due in that year to zero. Of the $125 invested in land in Year 0, $100 is effectively invested for the taxpayer's account, while $25 is effectively invested to fund future taxes.[15] Although less obvious, the equivalence also obtains in Example 2, where the $25 tax savings in Year 0 compounds at 10% to $33.28 in Year 3, thereby reducing the net burden of the tax due in the later year to $33.38 ($66.66 - $33.28). That net amount is equivalent to a 20% tax on only the above-normal return of $166.90 ($200 - $33.10).

A second relationship that is often used to elucidate deferral is that the tax benefit of expensing is equivalent to an interest-free loan from the government. In Example 1, the treasury could have collected $25 in Year 0 taxes and then lent the taxpayer $25 interest-free for investment in the land. Disinvestment in Year 3 would yield a tax of $50 on $250 of gain (amount realized of $375 minus basis of $125). That tax plus repayment of the interest-free loan of $25 would constitute the remittance to the treasury of $75 in Year 3, again leaving *T* with $300, which is $40 more than *T* would have without expensing, exemption, or an interest-free loan. The $40 tax advantage in Example 1 was analyzed above as the saved 20% tax on the investment gain of $200. From the perspective of an interest-free loan, the $40 tax advantage is the after-tax benefit of not paying deductible interest on a loan of $25 when the implicit rate of interest over the period was 200% percent (80% × 200% × $25), which is the single rate of return assumed in Example 1.

Example 2 more realistically assumes multiple rates of return. In that example, an interest-free loan of $25 would result in a remittance of $66.66 to the treasury in Year 3: the interest-free loan repayment of $25 plus taxes of $41.66 on income in the amount of $208.28. That

[13] See, e.g., Michael J. Graetz & Deborah H. Schenk, Federal Income Taxation: Principles and Policies 278 (7th ed. 2013).

[14] In the single-return case (Example 1), the tax savings from expensing, $t/(1 - t)$, grows to $t(1 + r)/(1 - t)$, which is also the entire tax due in the year of disinvestment. In the multiple-return case (Example 2), the tax savings $t/(1 - t)$ grows to $t(1 + r_n)/(1 - t)$, which reduces the tax due on disinvestment, $t[(1 + r) + t(1 + r_n)/(1 - t)]$, to $t(r - r_n)$, the tax on the above-normal return.

[15] See Daniel I. Halperin, Interest in Disguise: Taxing the "Time Value of Money," 95 Yale L.J. 506, 522 (1986); see also Staff of the Joint Comm. on Tax'n, 110th Cong., Present Law and Analysis Relating to Tax Treatment of Partnership Carried Interests and Related Issues, Part II, at 6-7 (Comm. Print 1987).

latter amount is the sum of the $200 of gain on the land plus $8.28 earned on investing the $25 loan proceeds at 10% compounded for three years ($25 × 1.331 = $33.28). The $66.66 remittance to the treasury is the same as the amount labeled as taxes under expensing in Example 2. The $6.62 tax advantage in that example was analyzed as the 20% saved tax on the normal return of $33.10. From the perspective of an interest-free loan, the $6.62 advantage is the after-tax benefit of not paying deductible interest on the loan of $25, when the implicit rate of interest is 10% compounded for three years (80% × $25 × 0.331).

The first of these two relationships (the equivalence in present value of earlier tax savings and later tax payments) is clearly consonant with the idea that pure deferral effectively exempts intervening investment income from taxation. Although the connection between deferral and an interest-free loan is well-known, the conceptual link between deferral as a tax exemption and deferral as an interest-free loan may be less evident. The link is the tax rate, which determines both the benefit of a tax exemption and the amount of the interest-free loan.[16]

C. *Pure Deferral Equivalent to an Interest-Free Loan, but Not to Exemption*

So far, we have discussed the sense in which deferral of income accomplished by a current deduction for a capital expenditure (expensing) is equivalent to full or partial exemption of capital income in two standard cases: (1) investment (and deduction) of the tax savings from expensing at the rate of return on the original capital expenditure and (2) investment (and deduction) of those tax savings at a lower rate of return. Before ending our discussion of pure deferral, it may be helpful to note that there are cases in which pure deferral is equivalent to an interest-free loan, but not to exemption of investment income in the sense we have discussed. Consider a legal rule that allowed a taxpayer to defer taxation of a receipt, when the receipt was invested in an asset that produced income subject to current taxation during the period of deferral. This situation is different from Examples 1 and 2, where all income was deferred.

[16] Given an annual rate of return r and a tax rate t, the benefit of exempting the investment return on an investment of $1 of after-tax income for one year would be rt. The amount of the equivalent interest-free loan equals the tax savings from expensing, $t/(1 - t)$. If the interest rate is also r, the after-tax benefit of not paying interest on that amount is $t/(1 - t) \times r(1 - t)$, or rt.

Example 3: As in the previous examples, *T* faces a tax rate of 20% and receives wages of $125 in Year 0, but now the legal regime provides that only the amount of those wages can be deferred until Year 3. *T* invests the $125 at a pretax return of 10% and an after-tax return of 8%. At the end of three years, *T* has $157.46 ($125 × 1.08^3) and owes $25 in taxes, leaving $132.46. The same result would obtain if *T* paid $25 in taxes in Year 0 and received an interest-free loan of $25 from Treasury, if *T* again invested $125 at an after-tax return of 8% and repaid the loan in Year 3. That is not, however, the same result as inclusion of the wages in Year 0 and exemption of capital income on the investment, which would produce $133.10 ($100 × 1.1^3). Deferral of just the wages is, of course, advantageous when compared to current taxation, which would produce $125.97 in three years ($100 × 1.08^3).[17]

The key difference between Example 3 and the preceding examples is that here a fixed amount of income is deferred, whereas the amount deferred in the previous examples increases over the period of deferral.[18] As an example of the deferral of a fixed amount, consider a foreign subsidiary of a U.S. multinational with after-tax business earnings that invests those earnings in foreign passive assets. The foreign business income would not be taxed by the United States until repatriated, but the foreign passive investment income would be subject to current U.S. taxation as earned.[19] The foregoing examples are necessarily illustrative, rather than comprehensive, as there are many differ-

[17] More generally, given a pretax return of r and a tax rate of t, the deferral of $1 of pretax wages for n years (but current taxation of the intervening capital income) produces after-tax value of $[1 + r(1 - t)]^n - t$, rather than $(1 - t)(1 + r)^n$ (current taxation of wages and exemption of capital income) or $(1 - t)[1 + r(1 - t)]^n$ (current taxation of both wages and capital income). In the special case of n equals 1 (no compounding), the first two expressions produce the same results.

[18] In *Example 3*, deferral of only the original receipt of $125 produces the same result as would a tax system that (1) taxed that original receipt, (2) exempted the $10 annual return on the resulting after-tax investment of $100, and (3) taxed currently the compounding return on the reinvestment of each year's $10. Given a pretax receipt of $1, a pretax investment return of r and deferral for three years, such a system would leave the taxpayer with $(1 - t)[1 + r + r(1 + r(1 - t)) + r(1 + r(1 - t))^2]$, which would produce $132.46 in *Example 3*.

[19] See IRC §§ 951-954 (establishing the subpart F taxation rules, which generally defer taxation of foreign business income but subject foreign passive investment income to immediate taxation). For a review of when such deferral is advantageous, see Alvin C. Warren, Jr., Deferral and Exemption of the Income of Foreign Subsidiaries: A Review of the Basic Analytics 2-7 (2014), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2390021.

ent possibilities for investment and taxation during a period of deferral.[20]

Having explored the advantages of pure deferral, we now turn to what we call, for want of a better term, counterparty deferral, where the analysis of a possible tax advantage is somewhat different.

III. Counterparty Deferral

By counterparty deferral, we mean a transaction that permits a taxpayer to defer inclusion of an item of income relative to economic accrual by shifting taxation of the item in the interim to another party or to an account with different tax characteristics.

A. *Qualified Retirement Savings*

A canonical example of counterparty deferral is deferred compensation. The key difference between pure deferral and counterparty deferral is that in the former, inclusion of an item is deferred relative to economic accrual by a legal rule (such as expensing the cost of a machine, rather than depreciating it), whereas in the latter, the taxpayer must also transfer funds to another party or account (as by contributing to a qualified retirement account). In pure deferral, there are no tax consequences for another party. In counterparty deferral, the treatment of the other party is central to understanding the potential tax advantages.

The difference is often overlooked because legal rules permitting counterparty deferral are often similar to those authorizing pure deferral. For example, contributions to qualified retirement accounts can be deducted by an employee (or excluded if made by the taxpayer's employer), just as expensed amounts are deducted, so the effect of deferral through a qualified account can be explained as exemption of the investment return.

> *Example 4*: Taxpayer *T*, whose tax rate is 20%, receives wages in Year 0. If *T* contributes $100 of those wages to a tax-exempt qualified account, no taxes are due until an amount is withdrawn during retirement. Assuming that the contribution compounds at 10% annually for twenty years and that *T*'s tax rate does not change, *T* will withdraw $673

[20] See, e.g., Stephen M. Horan & Jeffrey H. Peterson, A Reexamination of Tax-Deductible IRAs, Roth IRAs, and 401(k) Investments, 10 Fin. Serv. Rev. 87, 92-95 (2001) (solving for tax rates that would produce equivalent results for traditional and Roth IRAs, depending on how the tax savings from traditional IRAs were invested); V. Sivarama Krishnan & Shari Lawrence, Analysis of Investment Choices for Retirement: A New Approach and Perspective, 10 Fin. Serv. Rev. 75, 78-83 (2001) (same).

($100 × 1.1^{20}), pay $135 in taxes, and retain $538. Alternatively, *T* could have paid $20 in taxes in Year 0 and invested the remaining $80 in a tax-exempt account, which would again produce $538 ($80 x 1.1^{20}) in twenty years if compounded at 10%.

Example 4 illustrates the familiar conclusion that traditional and Roth IRAs produce equivalent results if tax rates do not change.[21] Traditional IRAs and qualified pension plans are versions of expensing,[22] while the Roth IRA is a straightforward example of tax exemption.[23]

While entirely accurate, this view can obscure a necessary condition for the conclusion that deferral through qualified retirement accounts is equivalent to exemption of investment income: The qualified account itself must be tax-exempt. Moreover, as Example 4 illustrates, that condition is not only necessary, it is sufficient to achieve exemption of investment income under our assumptions. The current exclusion/later inclusion apparatus of qualified accounts could be repealed without affecting the outcome if tax rates remained constant. Traditional IRAs would then be Roth IRAs. Deferral of inclusion does not add any benefit beyond exemption for the qualified account if the applicable tax rate does not change, because the deferred amount is equal in present value to the earlier exclusion. This way of looking at the matter leads to the conclusion that the original compensation for labor services is fully taxed to the employee, whereas the subsequent investment income is exempt under our system of qualified accounts.[24]

B. Possible Confusions

The key role of the account's tax exemption is not always appreciated, as illustrated by statements that tax-advantaged investments, such as those producing capital gains, should not be placed in qualified retirement accounts because they will be subject to full ordinary

[21] E.g. Graetz & Schenk, note 13, at 696; Terry L. Crain & Jeffrey R. Austin, An Analysis of the Tradeoff Between Tax Deferred Earnings in IRAs and Preferential Capital Gains, 6 Fin. Serv. Rev. 227, 231-33 (1997). Identical dollar limitations on contributions to traditional and Roth IRAs are not equivalent because contributions to the former are in pretax dollars, while contributions to the latter are in after-tax dollars.

[22] See IRC §§ 219, 408 (establishing a deduction for qualified contributions, while subjecting distributions to tax).

[23] See IRC § 408A (disallowing a deduction for a contribution to a Roth IRA, while explicitly exempting qualified Roth IRA distributions from gross income.)

[24] Halperin, note 15, at 519-24; Daniel Halperin, Rethinking the Advantage of Tax Deferral, Erwin N. Griswold Lecture Before the American College of Tax Counsel (2009), in Tax Law., Spring 2009, at 535, 538-39 [hereinafter Tax Deferral].

rates on withdrawal. The equivalence with Roth IRAs should, however, make it clear that qualified accounts can be advantageous even for tax-preferred investments if those investments would be taxed at a rate higher than zero outside if not held in qualified accounts. Concluding that capital gain assets should not be placed in qualified accounts because they will be subject to ordinary income taxation on withdrawal is erroneous because it fails to take into account the tax benefit of deducting (at ordinary income rates) contributions to such accounts. Assuming that the applicable tax rate does not change, that benefit will be equal in present value to the burden of ordinary income taxation on withdrawal.

Although the conclusion that there is no tax advantage (or even a disadvantage) from placing tax-preferred assets in a qualified account is mistaken, the relative advantage of qualified accounts (exemption of investment income) does depend on how the income would be treated outside such accounts. Reducing the tax burden to zero on ordinary income taxed at, say, 35% is obviously a greater advantage than reducing to zero the burden on capital gains taxed at, say, 15%. These relative advantages are important when limitations preclude placing all of a taxpayer's investment assets in qualified accounts.[25] The resulting tax "pecking order" for assets to be held in qualified accounts is often violated by investors, who, of course, may be subject to other constraints.[26]

Finally, as illustrated in Example 1 regarding pure deferral, equivalence of counterparty deferral in a qualified account with complete exemption of investment return requires the tax savings from expensing to be invested in the qualified account at the same rate of return as the expensed investment. If that condition is not satisfied, the exemption only applies to the rate of return applicable to investment of the tax savings, as in Example 2. In that case, a preferential capital gains rate could produce a higher after-tax return for an investment outside

[25] See IRC § 219(b) (capping the yearly deduction for contributions into qualified accounts at $5000, adjusted for the cost of living and increased for individuals who are fifty years or older).

[26] See, e.g., Lorenzo Garlappi & Jennifer Huang, Are Stocks Desirable in Tax-Deferred Accounts?, 90 J. Pub. Econ. 2257, 2266-74 (2006) (showing that violations of the tax "pecking order" can be optimal for risk-averse investors who face portfolio constraints); John B. Shoven & Clemens Sialm, Asset Location in Tax-Deferred and Conventional Savings Accounts, 88 J. Pub. Econ. 23, 25-27, 32-35 (2003) (showing general conditions under which taxable bonds have a preferred location in a tax-deferred account, tax-exempt bonds have a preferred location in a taxable account, tax-efficient stock portfolios (for example, passively managed mutual funds) should be held in a taxable account, and tax-inefficient stock portfolios (for example, actively managed mutual funds) should be held in a tax-deferred account).

a qualified account, depending on the length of the investment and the exact rates.

One also sometimes sees statements that qualified accounts are beneficial because they combine employee deferral with a current employer deduction.[27] However, as illustrated in the following example, acceleration of the employer's deduction relative to the employee's inclusion provides no tax benefit if the employer's tax rate remains constant.

> *Example 5*: Suppose employer *ER*, whose tax rate is 20%, contributes $100,000 to a qualified retirement account, which compounds at 10% annually after taxes to $259,374 in ten years. A distribution to employee *E*, whose tax rate is 30%, in that year would produce $181,562 after taxes under current law. Now assume that the employer's deduction was deferred until distribution. *ER* could then contribute only $80,000 to such an account, which would compound to only $207,499. That reduced amount, however, would permit an identical distribution of $259,374 to *E*, given the tax savings ($51,875) attributable to *ER*'s deduction of the distribution.[28]

Deferral of the employer's deduction in Example 5 would not be detrimental, because the deferred deduction is equal in present value to deduction in the earlier year.

C. *Nonqualified Deferred Compensation*

Potential confusion regarding these relationships can be further illustrated by considering nonqualified deferred compensation, which does not satisfy the statutory requirements (vesting, wide availability to the work force, and so on) for the deferral and exemption results illustrated in Example 4. If an employer agrees to make a future payment to an employee, the employee is generally not taxed currently on the deferred amount, unless the employee has enough control of that amount to constitute a constructive receipt or economic benefit.[29] Outside of qualified accounts, the employer's compensation deduction

[27] James J. Freeland, Daniel J. Lathrope, Stephen A. Lind & Richard B. Stephens, Fundamentals of Federal Income Taxation, Cases and Materials 627 (17th ed. 2013).

[28] Given cash of $1, an employer subject to a tax rate of t_{er} can contribute $1/(1 - t_{er})$ if the contribution is currently deductible. If the contribution compounded at the after-tax rate of return r_a, that contribution would grow to $(1 + r_a)^n/(1 - t_{er})$ after n years, when it would be distributed and taxed to the employee. If, on the other hand, the deduction were delayed, the employer could only contribute $1, which would compound to $(1 + r_a)^n$, again permitting a distribution of $(1 + r_a)^n/(1 - t_{er})$ once the later deduction is taken into account.

[29] See Rev. Rul. 60-31, 1960-1 C.B. 174.

is deferred until future payment if the employee is not taxed currently.[30] Deferral of the employer's deduction (often called matching) is sometimes said to eliminate the benefit of deferring the employee's inclusion.[31]

The following example illustrates, however, that under our usual assumptions any benefit from nonqualified deferred compensation is due entirely to the difference between the employer's and the employee's after-tax rate of return on income earned by investing the deferred amount.

> *Example 6*: Employee *E* has the opportunity to receive $100,000 in current compensation from employer *ER*, when *E*'s tax rate is 30% and *ER*'s is 20%. If *E* invested the after-tax amount ($70,000) at an annual pretax return of 10%, *E* would have $137,701 in ten years ($70,000 × 1.07^{10}).
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> Now suppose that *E* agreed to forgo $100,000 in current compensation in exchange for a payment in ten years. Assuming first that *ER* could nonetheless currently deduct $100,000 in compensation, *ER* could invest that amount at a pretax return of 10%, which would compound to a payment of $215,892 ($100,000 × 1.08^{10}) to *E*, who would retain $151,124 after taxes. Now assume that *ER*'s deduction is deferred as required by current law.[32] *ER* could then only set aside $80,000 in Year 0, which would compound to $172,714 ($80,000 × 1.08^{10}) in ten years. That amount would again permit *ER* to pay *E* a deferred amount of $215,892 after taking into account the tax benefit ($43,178) of the compensation deduction. Deferral of *ER*'s deduction does not reduce the benefit of deferral for *E*.
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> The advantage to *E* from deferral in both cases is $13,423 (that is, $151,124 - $137,701), which is due to the investment compounding at the employer's after-tax rate, rather than the employee's after-tax rate (that is, 1 × (1.08^{10} - 1.07^{10} × $70,000 = $13,423).[33]

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30 See IRC §§ 83(h), 404(a)(5).

31 See note 2.

32 See IRC § 404(a)(5).

33 Given cash of $1 and a tax rate of t_{er}, an employer can set aside $1/(1 - t_{er})$ for deferred compensation if the amount is currently deductible. If the employer's annual pretax rate of return is r_{er}, that amount will grow to $[1 + r_{er}(1 - t_{er})]^n/(1 - t_{er})$ after n years. If, on the other hand, the deduction is delayed, the employer can only set aside $1, which will compound to $[1 + r_{er}(1 - t_{er})]^n$, again permitting a deductible distribution of $[1 + r_{er}(1 - t_{er})]^n/(1 - t_{er})$. That distribution would yield $(1 - t_e)[1 + r_{er}(1 - t_{er})]^n/(1 - t_{er})$ to an employee whose ordinary income tax rate is t_e. If the employee had received current compensation of $1/(1 - t_{er})$ and invested it at an annual pretax rate of return of r_e, that compensation would com-

As would be true of qualified accounts (Example 5), deferral of the employer's deduction to match the employee's inclusion does not reduce the benefit of nonqualified deferred compensation (Example 6), because once again the deferred amount is equal in present value to the earlier deduction. The deferred amount received by the employee and deducted by the employer ($215,892) in Example 6 is the Year 10 value of the Year 1 compensation ($100,000), compounded at the employer's after-tax rate.

This way of looking at the matter leads to the conclusion that nonqualified deferred compensation is fully taxed to the employee and deducted by the employer, but that the investment income benefitting the employee is taxed only to the employer.[34] Deferral of nonqualified compensation is thus advantageous under our assumptions only if the employer earns an after-tax return on the deferred compensation that is higher than that available to the employee.[35] If, for example, the employer invests the deferred compensation in tax-exempt bonds that could have been purchased by the employee, there is no advantage to the deferral. On the other hand, pure deferral equivalent to an interest-free loan is advantageous if the taxpayer invests in any asset producing a positive return, including tax-exempt bonds.

> *Example 7*: As in *Example 3*, *T* faces a tax rate of 20% and receives wages of $125 in Year 0, which need not be included in taxable income until Year 3. *T* invests the $125 in tax-exempt bonds paying 7% annually. At the end of three years, *T* has $153.13 ($125 × 1.073) and owes $25 in taxes, leaving him with $128.13. Without the deferral, he would

pound to $(1 - t_e)[1 + r_e(1 - t_i)]^n/(1 - t_{er})$ if the employee's tax rate on investment income is t_i. If r_e equals r_{er}, nonqualified deferral will be beneficial as long as t_{er} is lower than t_i. (In the interest of simplicity, *Example 6* assumes that t_e equals t_i.)

[34] See Halperin, note 15, at 519-24; Halperin, Tax Deferral, note 24, at 536-39.

[35] One possibility would be for a corporate employer effectively to invest in its own stock, because such an investment of deferred compensation would not produce additional taxable income to the corporation. See Halperin, Tax Deferral, note 24, at 540. One of the authors has argued more generally that equity-based compensation is tax-advantaged even if the employer and the employee face the same marginal tax rate, because an equity-based return is normally taxed to both the corporation and the shareholder. Id. at 541. As shown in the text, the employee is not taxed on the investment income earned on deferred compensation, so there is only a single tax on this income. See id. For other views, see James R. Brown, Equity-Based Compensation and Its Mischaracterization, 137 Tax Notes 629, 642-57 (Nov. 5, 2012) (providing examples of equity compensation that avoids the corporate-level tax); Michael S. Knoll, The Tax Efficiency of Stock-Based Compensation, 103 Tax Notes 203, 210-12 (Apr. 12, 2004) (arguing that whether there is an advantage depends on the alternative investment the employee would have chosen if compensation were not deferred); David I. Walker, Is Equity Compensation Tax Advantaged?, 84 B.U. L. Rev. 695, 708–26 (2004) (arguing that there is only an advantage if the deferral results in an equivalent reduction of outstanding stock).

have only $122.50 ($100 x 1.073), assuming the same investment.[36]

In addition to postponing employer deductions, Congress has restricted the availability of nonqualified deferred compensation by currently taxing employees on some compensation deferred by tax-exempt employers.[37] It has also recently extended the circumstances in which employees of taxable employers will be considered to have constructively received compensation.[38] As the key benefit of nonqualified deferred compensation is shifting of investment income to a counterparty with a higher after-tax rate of return, one of the authors has argued that a more appropriate solution would be a special tax on that investment income, preferably at the employee's rate.[39]

We can now summarize the basic point of this Article. Under certain assumptions, the benefit of pure deferral can be conceptualized as effective exemption of some or all capital income produced in the interim, whereas the benefit of counterparty deferral is taxation of capital income earned in the interim at a counterparty's tax rate. Failure to understand these relationships can lead to erroneous conclusions, such as finding a tax disadvantage in placing assets subject to favorable capital gains taxation in qualified accounts or in concluding that deferral of a counterparty's deduction compensates for the benefits of nonqualified deferred compensation.

IV. EXTENSIONS

In the interest of simplicity, we have so far used the term "pure deferral" to refer to both deferral of an inclusion and acceleration of a

[36] Given a tax rate of t, $1 of pretax wages would permit investment of $(1 - t)$ in tax-exempt bonds compounding at the rate of r_b to produce $(1 - t)(1 + r_b)^n$ after n years. Deferral of inclusion of the $1 of wages for n years would instead produce the larger amount $(1 + r_b)^n - t$ if the tax savings were also invested in tax-exempt bonds. See text accompanying notes 11–12.

[37] See IRC §§ 457, 457A.

[38] See IRC § 409A (enacted as part of the American Jobs Creation Act of 2004, Pub. L. No. 108-357, § 885, 118 Stat. 1634).

[39] See Halperin, note 15, at 539-50 (proposing a special tax on investment income produced by nonqualified deferred compensation); Halperin, Tax Deferral, note 24, at 536-37 (same); see also Karen C. Burke, Fuzzy Math and Carried Interests: Making Two and Twenty Equal 710, 127 Tax Notes 885, 888-96 (May 24, 2010) (proposing a special tax on the compensatory portion of the returns to a service partner's interest in an investment partnership in order to eliminate the benefits of deferral); Eric D. Chason, Executive Compensation and Tax Neutrality: Taxing the Investment Component of Deferred Compensation, 31 Cardozo L. Rev. 1667, 1699-705 (2010) (proposing a special tax on the employer on payment of deferred compensation); Daniel Halperin & Ethan Yale, Deferred Compensation Revisited, 114 Tax Notes 939, 940-44 (Mar. 5, 2007) (discussing questions to be resolved in designing such a tax); Ethan Yale & Gregg D. Polsky, Reforming the Taxation of Deferred Compensation, 85 N.C. L. Rev. 571, 599-620 (2007) (developing such a tax).

deduction, relative to economic accrual. This made sense because the benefits of these two possibilities can be identical, even if the relevant legal rules are different. In the interest of extending the discussion to include a fuller array of the possibilities, we now want to distinguish between pure deferral (of either an inclusion or a deduction) and pure acceleration (of either an inclusion or a deduction). Similarly, an inclusion or a deduction could be subject to either counterparty deferral (as described above) or counterparty acceleration, creating a total of eight possibilities, some of which are potentially detrimental, rather than beneficial, to taxpayers. The table below provides examples for each category, including those already discussed.

TABLE 1
SOME EXAMPLES OF DEFERRAL AND ACCELERATION

	Inclusion	*Deduction*
Pure Deferral (inclusion or deduction deferred relative to economic accrual by a legal rule)	(1) Deferred gains (due to nonrealization or nonrecognition)	(2) Deferred recovery of basis, as in *ACM Partnership v. Commissioner*;[40] nonqualified nuclear decommissioning expenses[41]
Pure Acceleration (inclusion or deduction accelerated relative to economic accrual by a legal rule)	(3) PFIC gain in the absence of an election[42]	(4) Expensing of a capital expenditure;[43] depreciation accelerated relative to economic depreciation[44]

[40] 157 F.3d 231, 250-51 (3d Cir. 1998). The taxpayer argued that basis was recovered ratably when a stated maximum selling price could not be determined. Id. at 238. As a result, depreciation deductions would have been deferred, resulting in the acceleration of gain, which was allocated to a foreign entity not subject to U.S. taxation. Id.

[41] The operator of a nuclear power plant has two choices with regard to the considerable funds it must spend in the future on its decommissioning: (1) deferral of the deduction until expenditure (nonqualified expenses), or (2) a current deduction for monies set aside in a fund for future expenditure taxed at a lower than normal rate (qualified expenses). IRC §§ 461(h), 468A. For a review of the arguments for and against current law, see Halperin, note 15, at 528-30.

[42] IRC § 1291 provides that income attributable to certain distributions from a passive foreign investment company (PFIC), and gain realized on certain dispositions of PFIC stock, is allocated over the holding period ratably (rather than on a yield-to-maturity basis) and subject to an interest charge for deferral unless the taxpayer elects current taxation or mark-to-market treatment. IRC §§ 1291(a), 1293, 1296.

[43] See IRC §§ 179, 263(c).

[44] See, e.g., § 168 (k).

Counterparty Deferral (inclusion or deduction deferred, with taxation of investment income shifted to counterparty in the interim)	(5) Traditional IRA; nonqualified deferred compensation; deferral of foreign earnings;[45] deferral of corporate dividends[46]	(6) Deferred deductible payment
Counterparty Acceleration (inclusion or deduction accelerated, with taxation of investment income shifted to counterparty in the interim)	(7) Accelerated taxable payment; pre-1982 inclusion of original issue discount[47]	(8) Accelerated deductible payment

The results obtained in Panels 1 and 4 are generally beneficial to taxpayers, while those in Panels 2 and 3 are generally detrimental. Whether the shifting results in Panels 5 to 8 are beneficial or not depends on the relative tax rates of the parties to the transaction. These examples are obviously only illustrative, as the possibilities for deferral and acceleration are vast, and we encourage readers to think of other potential entries for each category.

We began this Article by reviewing the standard analysis of expensing—pure acceleration of a deduction (Panel 4)—as exemption of capital income. We close by considering the comparable characterization of pure deferral of a deduction, such as the nuclear decommissioning expenses in Panel 2.

> *Example 8*: In Year 0, taxpayer *T* discovers that it will have to pay $133 in three years to remedy a structural problem in a factory. Given a pretax interest rate of 10%, this obliga-

[45] The seminal article analyzing deferral of foreign earnings is David Hartman, Tax Policy and Foreign Direct Investment, 26 J. Pub. Econ. 107 (1985), which spawned an extensive literature. See, e.g., Halperin, Tax Deferral, note 24, at 544 (suggesting that the advantage is higher after-tax investment return on foreign earnings).

[46] The seminal article analyzing deferred distribution of corporate earnings is David Bradford, The Incidence and Allocation Effects of a Tax on Corporate Distributions, 15 J. Pub. Econ. 1 (1981), which spawned an extensive literature. See, e.g., Halperin, Tax Deferral, note 24, at 546 (suggesting that the advantage is higher after-tax corporate return on retained corporate earnings).

[47] Under prior law, the holder of a corporate bond was taxed on a pro rata portion of original issue discount over the term of the bond, rather than on a yield-to-maturity basis. See Staff of Joint Comm. on Tax'n, 98th Cong., General Explanation of the Revenue Provisions of the Tax Equity and Fiscal Responsibility Act of 1982, at 158-63 (Comm. Print 1983).

tion reduces the present value of the factory by $100. If *T*'s deduction is nonetheless deferred until payment in Year 3, the $133.10 expenditure will produce an after-tax burden in that year of $106.48, given a tax rate of 20%.

Example 8 (pure deferral of a deduction) is the opposite of Example 1 (pure acceleration of a deduction), so the detriment to the taxpayer in the former should be the negative of the benefit in the latter. As shown above, the latter benefit can be characterized as an interest-free loan from the treasury, and a deferred deduction can certainly be characterized as an interest-free loan to the treasury, which would be $20 in Example 8.

As we have discussed throughout this Article, the benefit for pure deferral of an inclusion (or acceleration of a deduction), in appropriate circumstances, can also be characterized as exemption of income on the amount that would be invested in the absence of deferral. The appropriate characterization of the correlative detriment in Example 8 is less evident. The thought experiment that leads to the exemption characterization in Example 1 is to assume that the deferred income had been taxed currently, but that the income produced by investment of the after-tax proceeds would not subsequently be taxable. A parallel thought experiment would be to assume that the loss in Example 8 had been currently deducted, but that interest compounding on the after-tax obligation would not subsequently be deductible. On this hypothesis, *T* would deduct $100 in Year 0, producing an after-tax burden of $80. If *T* received no tax deduction for interest compounding on the obligation, the burden in Year 3 value would be $106.48, just as it is for the deferred deduction in the example ($\$80 \times (1.1)^3 = \$106.48$). This way of looking at the matter suggests that deferral of a deduction (or acceleration of income) can be analyzed as denial of an interest deduction in a manner parallel to the standard analysis of deferral of income (or acceleration of a deduction) as exemption of capital income.

This perspective is also relevant to Panel 6 and our previous characterization of the employer's treatment for nonqualified deferred compensation. The employer has both an asset (the funds held for the employee) and a liability (the future pension payments), which would produce no net income in the case of a single rate of return. Recognizing that deferral of the employer's deduction effectively denies a deduction for interest compounding on the obligation helps explain how income on the employee's funds is shifted to the employer.

V. Summary and Conclusions

The principal point of this Article is that deferral of income is not a unitary phenomenon under income taxation. Indeed, if we were writing on a blank slate, we would prefer to limit the term "deferral" to what we have called pure deferral and to use "shifting" for what we call counterparty deferral, but both phenomena have long been described by the same term.

The key difference is that, under standard assumptions, pure deferral results in the effective exemption of some amount of capital income, whereas counterparty deferral shifts income to a different taxpayer or account, which may or may not be taxable. Pure deferral is also equivalent to an interest-free loan, even when it is not equivalent to an exemption in the sense discussed here because the amount deferred is fixed.

We hope that the distinction between pure and counterparty deferral helps to elucidate some conclusions that might not be obvious, such as the following: The step-up in asset basis at death can effectively exempt labor income; there can be a tax advantage to placing assets subject to preferential capital gains taxation in qualified retirement accounts (but that advantage is not as great as for more heavily taxed investments); deferral of the employer's deduction does not offset the advantage to the employee of nonqualified deferred compensation; pure deferral can produce a tax advantage even if the tax savings are invested in tax-exempt bonds; while deferred compensation (whether in qualified accounts or not) does not produce a tax advantage if the deferred compensation in invested in tax-exempt bonds.

Finally, it is worth recalling that in order to isolate the effects of deferral from other events, such as changes in tax rates, the foregoing analysis has generally assumed that the taxpayer has enough income to absorb relevant deductions and that a particular taxpayer's tax rate remains constant. Our examples have necessarily been illustrative, rather than comprehensive, so interested readers are encouraged to pursue the analysis of other cases of deferral.