Balance in the Taxation of Derivative Securities:

An Agenda for Reform

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By now, it is well understood that aggressive tax planning among high-income individuals and corporations represents a grave threat to the U.S. tax system, and that derivatives are staples of this planning.[2] As a result, less revenue is collected, and the system becomes less efficient and less equitable in familiar ways. In response, there have been many proposals to reform the taxation of derivatives. The usual recommendation is consistency. This means that the same tax treatment should apply to economically comparable bets, regardless of what form is used. Thus, the same timing rule and rate (whose combined effect is called the "effective tax rate") should govern any bet on the value of IBM stock, whether it is an option,[3] forward contract,[4] swap,[5] or contingent bond.[6] In theory, we could achieve consistency through various fundamental reforms,

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[2] A derivative is a contract in which two parties (or so-called "counterparties") place a bet about a particular stock price, interest rates, or some other financial fact. See generally John C. Hull, Options, Futures and Other Derivative Securities (2d ed. 1993). Like insurance, derivatives facilitate the spreading of risk, offering an efficient means of hedging or speculating about a specific contingency. In addition to this risk-spreading function, derivatives are commonly used in tax planning. See, e.g., Reed Shuldiner, *A General Approach to the Taxation of Financial Instruments,* 71 Tex. L. Rev. 243, 245 (1992) ("The tax law has struggled to keep up with the development of new financial instruments. . . . Unfortunately, the lack of a uniform theory . . . has led to rules that are often haphazard, incomplete and inconsistent."); Jeff Strnad, *Taxing New Financial Products: A Conceptual Framework*, 46 Stan. L. Rev. 569, 569 (1994) ("A recent wave of innovation in the financial markets has raised difficult tax policy questions.'); Alvin C. Warren, Jr., *Financial Contract Innovation and Income Tax Policy*, 107 Harv. L. Rev. 460 461 (1993) ("Continuous disaggregation, recombination, and risk reallocation have produced a changing array of new financial contracts that pose a serious challenge for the income tax.").

[3] An option gives the holder the right, but not the obligation, either to buy or to sell the underlying property for a specified price during a specified period. A "call" is an option to buy and a "put" is an option to sell. For example, a call option might entitle the holder to buy the underlying property for $100 at any time during the next two years.

[4] Unlike an option, a forward contract is an obligation. It commits the parties either to buy or to sell the underlying property for a specified price during a specified period. For example, the buyer (known as the "long") commits to buy the underlying property from the seller (known as the "short") for $110.25 in two years.

[5] A swap is in effect a series of cash-settled forward contracts. In some swaps, differences in the value of the underlying property are settled up every period. For example, assume that the underlying property is $100 when the swap begins. In the first year, if the property declines to $60, the long pays the short $40. In the second year, if the property appreciates to $110, the short pays the long $50. In other swaps, in contrast, these changes in value are not taken into account until a final "nonperiodic" payment when the swap matures. In both types of swaps, the long pays the short a finance charge, usually every period.

[6] In a contingent debt instrument, the borrower pays interest (and sometimes a portion of the principal) based on some financial fact. As an economic matter, contingent debt is sometimes viewed as the synthesis of a standard loan with a derivative such as an option.

ranging from a properly structured consumption tax, on one hand, to universal use of mark-to-market accounting[7] or a more administrable proxy,[8] on the other.[9] Yet although these fundamental reforms are appealing, familiar political and administrative barriers stand in the way, rendering consistency unattainable for now.

So what is the alternative? Even good ideas are unhelpful if we cannot make use of them. Instead, policymakers need a new theory for grappling with this seemingly intractable problem. To fill this gap, this Article develops a reform agenda for derivatives that does not require the holy grail of consistency. Policymakers should strive instead for a new goal, which this Article calls "balance." This means that *for each risky position*, the treatment of gains should match the treatment of losses. For example, if the government bears 15% of losses, it has to share in 15% of gains. On a different derivative, if the government bears 35% of losses, it should share in 35% of gains. As long as this matching is achieved across the board for all risky bets, the admittedly counterintuitive reality is that taxpayers need not prefer, or engage in planning to attain, a

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[7] Under mark-to-market, positions are valued at the beginning and end of the year, and the difference is taxable gain or deductible loss. See, e.g., Daniel Halperin, Saving the Income Tax: An Agenda for Research, 77 Tax Notes 967 (1997); David J. Shakow, Taxing Without Realization: A Proposal for Accrual Taxation, 134 U. Pa. L. Rev. 1111 (1986); David A. Weisbach: A Partial Mark-to-Market Tax System, 53 Tax L. Rev. 95 (1999).

[8] One possibility is to charge interest on tax deferral. See, e.g., Alan J. Auerbach, Retrospective Capital Gains Taxation, 81 Am. Econ. Rev. 167 (1991); Cynthia Blum, New Role for the Treasury: Charging Interest on Tax Deferral Loans, 25 Harv. J. on Legis. 1 (1988); see also Alvin C. Warren, Jr. Financial Contract Innovation and Income Tax Policy, 107 Harv. L. Rev. 460 (1993) ("Serious consideration should therefore be given to . . . taxing at least some contingent returns in accordance with a formula, such as the retrospective allocation of gain or the imputation of interest at a standard rate."). Another possibility is to impute interest on time-value returns, while using realization accounting for risk-based returns. See Shuldiner, supra note 2. Following Professor Shuldiner and others, this Article distinguishes between time-value returns and risk-based returns. Time-value returns reward an investors for parting with the use of their money; in return, they receive the risk-free rate of return. In addition, investors earn a return for taking risk, which could be positive or negative. Investors also are compensated for inflation. Because inflation is at very low levels, this Article generally does not consider its implications.

[9] Acknowledging that consistency is not possible, Professor Weisbach has argued for what might be called a limited form of consistency: applying the same treatment to transactions that are sufficiently similar, based on cross-elasticity of taxpayer demand. See David A. Weisbach, Line Drawing, Doctrine, and Efficiency in the Tax Law, 84 Cornell L. Rev. 1627 (1999).

low effective rate. A low rate obviously is appealing for gains, but it is correspondingly unappealing for losses (i.e., since deducting the loss is less valuable). Moreover, as David Bradford has emphasized, even if a low rate is desired, taxpayers can get the same aftertax return by increasing the size of their bet.[10] For instance, to cancel out a 50% tax, the taxpayer can bet on the value of two shares, instead of one. An important caveat is that this analysis works only for risk-based returns, but not for wages or time-value returns. As a result, consistent timing and character rules are still needed for these returns.[11]

This reform proposal can claim a distinguished lineage, since it follows logically from an old idea in public finance economics. Over half a century ago, Evsey Domar and Richard Musgrave showed that a heavy tax burden does not discourage risk-taking – and, more fundamentally, that the tax rate on risk-based returns is unimportant – as long as two assumptions hold. First, the government's share of gains must match its share of losses. Second, taxpayers must be able to adjust the size of their risky bets costlessly.[12] Although the Domar and Musgrave theory has had some influence in the legal academy – most notably in showing that, on certain assumptions, income and consumption taxes are

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[10]See David F. Bradford, *Fixing Realization Accounting: Symmetry, Consistency and Correctness in the Taxation of Financial Instruments*, 50 Tax L. Rev. 731 (1995).

[11] This Article focuses on domestic tax issues such as timing and character. Although this Article's "matching" agenda also has application to cross-border tax issues such as source, international issues are not considered here.

[12]See Evsey Domar & Richard Musgrave, *Proportional Income Taxation and Risk-Taking*, 58 Q. J. E. 388 (1944). Their idea is elaborated in an extensive literature. See, e.g., Anthony B. Atkinson & Joseph E. Stiglitz, Lectors on Public Economics 97 (1980); Jeremy I . Bulow & Lawrence H. Summers, *Taxation of Risky Assets*, 92 J. Pol. Econ. 20 (1984); Louis Kaplow, Taxation and Risk Taking: A General Equilibrium Perspective, 47 Nat. Tax. J. 789 (1994); Jan Mossin, *Taxation and Risk-Taking: An Expected Utility Approach*, 35 Economica 74 (1968); Agnar Sandmo, *The Effects of Taxation on Savings and Risk Taking, in* 1 Handbook of Public Economics (1985 Alan J. Auerbach & Martin Feldstein, eds.); Joseph E. Stiglitz, *The Effects of Income, Wealth, and Capital Gains Taxation on Risk-Taking*, 83 Q.J.E. 263 (1969); David A. Weisbach, *Taxation and Risk-Taking with Multiple Tax Rates*, Chicago John M. Olin Law & Economics Working Paper No. 172 (2002).

surprisingly similar[13] – the theory has inspired little by way of concrete reform proposals. The reason is that its core assumptions are commonly dismissed as far-fetched.[14] After all, isn't it inherently costly to enlarge an investment? A core contribution of this Article is to emphasize a context in which cheap scaling up is plausible: derivatives. Indeed, an important motivation of this Article is to "tame" the Domar and Musgrave theory, showing that it is capable of offering level-headed applications.

Even more importantly, the objective here is to provide policymakers with an agenda for incremental reform, as well as a critical analysis of the strategy's strengths and weaknesses. The main advantage is flexibility. Although policymakers have to match the treatment of gains and losses, they are free to pursue this goal in various ways, depending upon the context. To prove this point, this Article outlines three ways to match gains and losses on derivatives: mark-to-market accounting; a novel reform called the "stated-term approach," in which gains and losses are deferred until the scheduled maturity date of the derivative, even if the contract is terminated earlier; and a zero tax rate. The provocative conclusion is that these thoroughly inconsistent approaches can coexist for economically comparable derivatives, without prompting planning. By eliminating planning waste and making the rules more administrable, this agenda enhances the tax system's efficiency and equity.

Yet this appealing outcome is not free. If gains and losses are matched successfully in some sectors, but not others, wasteful planning continues as taxpayers shift in and out

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[13]See 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 (1992); 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); Noel B. Cunningham, *The Taxation of Capital Income and The Choice of Tax Base*, 52 Tax L. Rev. 17 (1996). An ex ante wealth tax should also yield the same result. See Kaplow, supra note 12; see also Deborah H. Schenk, Saving the Income Tax with a Wealth Tax, 53 Tax L. Rev. 423 (2000).
[14]For a summary of difficulties with these assumptions, see Bankman & Griffith, supra note 13, at 397.

of particular sectors. In addition, this Article's proposal does not allow policymakers to apply progressive rates to risk-based returns on derivatives. Although this is a significant limitation, it represents a (surprisingly) modest departure from current law, which already applies a flat rate to vast pools of risk-based returns. If greater progressivity in the system is desired, distributional goals can be pursued through the rate structure for wages and time-value returns.

While this reform agenda has broad application, this Article focuses on five cutting edge issues in the taxation of derivatives. First, Alvin Warren has warned that corporations can engage in arbitrage because Section 1032 applies a zero rate to some transactions relating to their stock, but not others.[15] Yet this Article shows why such arbitrage is not as attractive as Professor Warren suggests, and why other aspects of Section 1032 are more problematic. Second, how should we tax derivatives and life insurance that are based on the value of a hedge fund?[16] While the constructive ownership rule of Section 1260 addresses hedge fund derivatives, this Article suggests improvements in this 1999 reform, while also giving guidance about life insurance, an investment that Section 1260 does not expressly cover. Third, this Article identifies reforms that are needed in the character of swap payments. A fourth "hot" topic is the timing rule for so-called contingent nonperiodic payments on swaps,[17] which are the subject of proposed regulations issued in February 2004. Applying the agenda developed here, this Article critiques the government's approach and offers simpler alternatives. Finally, this Article outlines a reform strategy for the wash sale rules.

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[15] Alvin C. Warren, Jr., Taxation of Options on the Issuer's Stock, Taxes (forthcoming 2004).
[16] A hedge fund is a private investment fund that is open only to wealthy investors.
[17] For a definition, see supra note 5.

Part I begins with the ideals of symmetry and consistency, which constitute the conventional, but unattainable, reform agenda for derivatives. As an alternative, Part II sketches the broad outlines of an agenda based on balance. Part III lays out the advantages of this agenda, while Part IV analyzes its limitations. Part V offers concrete applications.

I.   The Unattainable Goals of Symmetry and Consistency

In the abstract, the goals of our tax system are well understood. We want the system to raise revenue efficiently and fairly. Ideally, the rules would be easy to understand and apply, and there would be little to gain from tax-motivated restructurings. Unfortunately, the tax rules for derivatives come nowhere close to achieving these goals.

A. The Familiar Failings of Our Tax Rules for Derivatives

Although at times mind-numbingly complex, the relevant provisions offer little in return for this complexity. Important issues remain unresolved, and the rules fail to stop many aggressive strategies. Tax-motivated restructuring is common. Billing rates for top tax advisors rise, while government revenues fall. At the same time, there are distortions in taxpayer incentives to take risks. In short, these rules are a model of inefficiency.

For the same reasons, the rules have unappealing distributional implications. It is hard to picture a clearer example of the maxim that there are two tax Codes – one for the well advised, the other for everyone else. Wealthy investors zero out tax on their investments, and sometimes even shelter their salaries.[18] Needless to say, these strategies are not available to less sophisticated taxpayers.

As a result, these tax rules also raise concerns about the political process. Although planning reduces the tax of high-income taxpayers, sometimes substantially,

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[18] For empirical support, see the text accompanying supra note 36 and infra note 143.

these tax cuts are beneath the political radar. As *New York Times* reporter David Cay

Johnston has observed, "Just as there is an underground economy of gardeners and

handymen and petty merchants who get paid in cash and pay little or no tax, there is also

an underground economy among the super rich that lets them understate their true income

and overstate their tax deductions."[19] The relevant rules and strategies are so complex

that only experts understand them. But experts develop their expertise in the service of

clients who do not want the details of their planning publicized. Confidentiality

obligations, coupled with economic self interest, discourage advisors from sharing

information with government officials or the media. Thus, wealthy taxpayers secure tax

reductions without the blessing – or knowledge – of the voting public.

B. *Symmetry*

What can we do to solve these problems? Reed Shuldiner has shown that, in theory,

symmetry provides a response for derivatives.[20] Symmetry means that both sides of a

transaction are taxed under the same timing rule and rate. This condition makes a

policymaker's job easier in two ways.

First, revenue is no longer an issue for derivatives. On a net basis, the government

does not collect or lose any revenue. The reason is that derivatives are "zero sum" bets:

one side's winnings equal the other side's losses. By imposing a tax, the government

collects revenue from the winner; but by allowing a deduction, the government shares in

the loser's losses. If the tax rate and timing rule is the same for winner and loser – that is,

if symmetry applies – the government's share of gains perfectly cancels out its share of

losses, leaving net revenue of zero.

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[19] David Cay Johnston, Perfectly Legal (2003).
[20] See generally Shuldiner, supra note 2.

In addition, symmetry means that any tax advantage to one side of a derivative (such as deferral of gains or acceleration of losses) is matched by an offsetting tax cost to the other side (such as deferral of losses or acceleration of gains). For example, assume that Ann and Bob place a three-year bet on the price of gold, and the market immediately moves against Ann. The standard tax advice is for her to deduct this loss right away. Reducing her tax burden now, instead of in three years, erodes the present value of her overall tax burden. Yet what if she needs Bob's permission to claim the deduction now, for instance, because she needs to terminate the bet early? Bob will refuse if the rules are symmetrical – that is, if the same rate and timing rules govern Bob as well as Ann. Symmetry implies that Ann cannot accelerate her deduction *without also accelerating Bob's income*. In reducing her own taxes, she increases Bob's by the same amount. He will demand compensation for his increased tax bill. But it is not worth Ann's while to pay him this compensation, since she needs to pay over the full amount of her tax savings.

In theory, then, symmetry gives competing incentives to the parties to a derivative, allowing the system to police itself. But the reality is much messier. The problem is that symmetry is unattainable. Tax exempt organizations and foreigners pay no U.S. tax, and thus should be willing to accommodate the tax planning of counterparties. Securities dealers usually are equally ingratiating. Although they aren't tax exempt, dealers are subject to different timing and character rules than their clients. Generally, dealers mark securities to market, and gains and loss are ordinary in character. As a result, if a client wants to accelerate a deduction by terminating a contract early, this step will not accelerate a dealer's income; rather, as a mark-to-market taxpayer, the dealer already is

taxed currently on this income, whether the derivative is terminated or maintained.[21] It is standard practice, then, for tax indifferent parties such as dealers or foreign banks to facilitate the tax planning of taxable counterparties. In short, symmetry is rarely a constraint.

C. Consistency

Since symmetry is unattainable, the conventional wisdom is that we should strive instead for consistency.[22] As noted earlier, a system is consistent if all economically comparable transactions are taxed the same way, regardless of what form the taxpayer chooses. The revenue loss, inequities and inefficiencies associated with inconsistency are easy to see. For example, assume that Ann wants to bet about the price of gold, and there are two ways to do it. The "zero tax form" imposes no tax on gains, while the "50% tax form" imposes a 50% tax. Assume that her counterparty, Bob, is a securities dealer. Free of the pressures of symmetry, Ann can choose the form that is most likely to reduce her tax bill. This leads to revenue losses (e.g., as Bob claims deductions while Ann's inclusions are not taxed). Good tax advice becomes more valuable, as advisors are needed to show clients how to exploit the inconsistency. Taxpayers adopt investment forms that otherwise don't make sense, adding to the tax system's inefficiency.

These problems evaporate, though, if policymakers square the treatment of the zero and 50% forms. When the rules are consistent, Ann no longer needs an advisor to tell her how to tweak her deal. Thus, it is well understood that consistency puts tax planners out of business, even in the absence of symmetry. Needless to say, it would be appealing to have a truly consistent tax system (assuming it was administrable). But as noted earlier,

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[21] For a discussion, see David M. Schizer, Sticks and Snakes: Derivatives and Curtailing Aggressive Tax Planning, 73 S. Cal. L. Rev. 1339 (2000).

[22] See supra notes 7 through 9 and accompanying text.

we would need fundamental tax reform to achieve this dream and, for any number of familiar reasons, we should not hold our breath for it.

Instead, we are left with a seemingly intractable mess. The tax rules for financial transactions are profoundly inconsistent. For example, in structuring a derivative, taxpayers can choose among five different classes of tax rates: ordinary; short-term capital; a 60-40 blend of long- and short-term capital; long-term capital; and a zero rate. The return is capital on forward contracts and ordinary on contingent debt and on certain swaps.[23] Meanwhile, the 60-40 blend applies to certain publicly traded derivatives, known as Section 1256 contracts. A zero rate governs life insurance (e.g., in which the death benefit is based on some financial fact, such as the value of a hedge fund)[24] and certain derivative transactions by a corporation in its own stock.[25]

Timing rules are, if anything, even more inconsistent. They include mark-to-market, two types of interest imputation regimes, and variations of realization accounting. Section 1256 contracts are marked to market, as are all derivatives of securities dealers and electing securities and commodities traders.[26] On contingent debt instruments, interest is imputed based on an assumed yield, and adjustments are made upon realization.[27] A similar regime now applies to certain swaps,[28] and the government has invited comments on extending it to prepaid forward contracts and certain options.[29] Meanwhile, a different imputation system applies to so-called constructive ownership transactions; tax consequences are deferred until realization, and an interest charge is

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[23]See 1234A and Treas. Reg. 1.1275-4, respectively.
[24]See Section 101.
[25]See Section 1032.
[26]See Section 475.
[27]See Treas. Reg. 1.1275-4.
[28] Prop. Treas. Reg. 1.446-3(g)(6).
[29]See T.D. 8491, 58 Fed. Reg. 53125, 53127 (Oct. 14, 1993) (initiating regulatory project on prepaid forwards and options). For a discussion of Notice 2001-44, see infra Part V.D.

added to the tax.[30] In contrast, traditional realization accounting generally applies to other instruments, including forward contracts, securities futures, and options that are not Section 1256 contracts.

Out of this welter of inconsistencies, it is worth flagging two that have attracted particular attention of late, and thus are discussed in more detail below. First, as Alvin Warren has emphasized, Section 1032 applies a zero rate when corporations trade options on their own stock, but the rule does not expressly govern swaps. Second, when taxpayers invest directly in a hedge fund, gains are usually taxed currently at short-term rates (i.e., because hedge funds engage in frequent trading). In contrast, before a 1999 reform, derivatives based on the fund's value offered deferral and long-term rates. Even today, life insurance based on the hedge fund's value is taxed at a zero rate.[31] What, if anything, should be done about these inconsistencies?

More fundamentally, if symmetry and consistency are unattainable in the foreseeable future, what should we do? After all, a new regime for a particular type of derivative can never be symmetrical, given the presence of tax indifferent parties. Likewise, a new rule cannot be consistent with the rules for other types of derivatives, since these precedents are themselves inconsistent. So how do we determine whether an incremental reform is advisable? Policymakers need a new criterion for evaluating them. The next Part offers such a criterion, known as balance, and uses it as the centerpiece of an agenda for reform.

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[30]See Section 1260. A constructive ownership transaction is a derivative that replicates the return on particular types of underlying property, including hedge funds.
[31] The assumption here is that Section 1260 does not reach life insurance, and that other requirements are satisfied. For a discussion, see David M. Schizer, *Frictions as a Constraint on Tax Planning*, 101 Colum. L. Rev. 1312 (2001).

II. A Reform Agenda Based on Balance

This Article proposes a three-pronged reform strategy. In theory, this agenda can be applied to the entire economy, or at least to all financial transactions, although the focus of this Article is on derivatives. First, and most importantly, policymakers should ensure that the treatment of risky bets is balanced: This means that, for each derivative, the timing and character of gains must match the timing and character of losses. Once this goal is achieved, the (perhaps surprising) reality is that inconsistencies become much less important.

A caveat is that this reform strategy works only for risk-based returns, and not for time-value returns and wages. If these are taxed inconsistently, taxpayers still have strong incentives to plan. The second prong of this reform strategy, then, is to wall off these returns and tax them consistently with separate rules.

Third, in some cases, special rules are needed to coordinate the treatment of derivatives with taxation of other economically related investments. For example, we still need the hedging rules of current law, which coordinate the tax on an active business, on one hand, with the tax on derivatives that hedge aspects of this business, on the other.[32]

A. *Balance and the Unimportance of Inconsistencies*

This Section shows that as long as policymakers match the treatment of gains and losses on *each type of derivative security,* they do not need the further step of consistent treatment *for all derivative securities*. To assess whether gains and losses match in this way, this Article introduces the term "gain-loss ratio" to compare the government's share of potential gains from a given position with its share of potential losses:

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[32] Treas. Reg. 1.1221-2.

Gain-loss ratio = Government's Share of Gain / Government's Share of Loss

Tax planners obviously want the gain-loss ratio to be below one (i.e., so that the government's share of losses exceeds its share of gains). Meanwhile, a gain-loss ratio of one means that the rule is balanced, such that the treatment of losses perfectly matches the treatment of gains.

How does balance constrain planning, even in the absence of symmetry and consistency? To see the point, consider a coin toss in which the taxpayer receives $100 if she wins but must pay $100 if she loses. Due to an inconsistency, two different effective tax rates could apply. If a quarter is tossed, the tax rate is zero (and losses are not deductible). If instead a nickel is flipped, a 50% rate applies (and the government bears 50% of losses). Assume further that the taxpayer's counterparty is tax exempt (i.e., so that there is no symmetry here). At first blush, we might expect taxpayers to prefer the zero tax rate. Nevertheless, there are two reasons why this is not the case.

1. Market Uncertainty

First, although a low rate is better for gains (and so, for that matter, is deferred timing), a high rate obviously is better for losses (as is accelerated timing). The reason is that, with a higher effective rate, the taxpayer's ability to deduct losses becomes more valuable. A deduction obviously allows a taxpayer to avoid tax on other income, and the deduction's economic value depends on the effective tax rate that otherwise would apply to this sheltered income. The higher this rate, the sweeter the deduction. If a 50% effective rate would otherwise apply, every dollar of deduction is worth 50 cents, which means the government bears half of the losses. But if the zero rate would otherwise apply, the deduction has no value, which means the government bears none of the losses.

Either way, the expected value of the bet in our example is zero. In fact, as long as the gain-loss ratio is one, the 50% tax affects only the bet's volatility. Instead of either winning or losing $100, the taxpayer now has only $50 at stake.

The analysis is the same even if the risky bet has a positive expected value. In the above coin toss, assume that the taxpayer still pays $100 if she loses, but now earns $104 if she wins. The expected value of the new bet is $2, which represents the premium rewarding the taxpayer for bearing a 50% risk of losing $100. What happens if a 50% tax is introduced? Admittedly, the aftertax expected value of the bet falls from $2 to $1. But at the same time, the bet also becomes half as risky (i.e., since the most the taxpayer can lose is $50, instead of $100). In effect, the government is earning its share of the risk premium for bearing risk. As a result, a risk-averse taxpayer will not necessarily mind this deal.

Of course, there are various reasons why a taxpayer may not want the government to siphon away a portion of the bet in this way. If the expected value is positive, a risk neutral taxpayer may want to take more risk as a way to earn a larger return. Even if the expected value is zero, moreover, the taxpayer may be more optimistic, for instance, due to special information or cognitive biases.

2. *Scaling Up*

But even then, the tax is still unimportant for a second reason: As Professors Domar and Musgrave showed over half a century ago, if the taxpayer wants to replace the risk siphoned off by the tax, she can increase her bet. Instead of wagering $100, she can make the pretax bet $200, leaving a $100 bet after taxes.[33] More generally, the bet needs

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[33] If she wins, she keeps 50% of $200 (or $100). If she loses, she pays 50% of $200 (or $100).

to increase by $1 / (1 - T)$, where T is the tax rate. This is easy to see for a bet with a zero

expected value.

Table 1: Scaling Up a Bet With Zero Expected Value

Size of Bet	Tax Rate	Aftertax Gain (50% likely)	Aftertax Loss (50% likely)	Aftertax Expected Value
100	0	100	(100)	0
100	50%	50	(50)	0
200	50%	100	(100)	0

The same analysis holds for a bet with positive expected value. To cancel out a

50% tax, the taxpayer can simply double the bet. By wagering $200, she replicates the

same cash flows, risk, and expected return that she would earn with a $100 bet and a zero

tax rate.

Table 2: Scaling Up a Bet With Positive Expected Value

Size of Bet	Tax Rate	Aftertax Gain (50% likely)	Aftertax Loss (50% likely)	Aftertax Expected Value
100	0	104	(100)	2
100	50%	52	(50)	1
200	50%	104	(100)	2

3. *Reality Check*

When we move from the fanciful world of coin tosses to the realities of the

derivatives market, does this analysis still hold? For instance, will a corporate taxpayer

truly be indifferent between trading in its own stock (taxed at a zero rate) and trading in swaps based on its stock (taxed at a 35% rate)? Likewise, will a taxpayer really be indifferent between life insurance based on a hedge fund's value (taxed at a zero rate) or a direct investment in the fund (taxed at a 35% rate)?

Although it seems counterintuitive, the answer should be "yes" as long as two preconditions hold. First, the gain-loss ratio must be set at one (i.e., so that losses are not deductible on the zero rate transaction and are fully deductible on the 35% transaction). In this case, although the low effective tax rate would be appealing for gains (in providing a higher return), it would be correspondingly unappealing for losses (in leaving the taxpayer with greater risk). Thus, market uncertainty would impose a powerful constraint on tax planning – assuming, of course, that the taxpayer would have to choose her rate and timing before knowing whether she has gains or losses. In this case, it would not be not worth jockeying for a lower effective tax rate since, at the end of the day, it could hurt the taxpayer as easily as it could help her.

Of course, what if the taxpayer is willing to bear greater risk in order to earn a higher return? Or what if the taxpayer believes – perhaps due to unique information or cognitive biases – that she is more likely to have gains than losses? In these cases, the low effective tax rate would seem initially to be more appealing. Yet as noted above, the taxpayer can earn the same aftertax return by increasing her bet. For instance, a forward contract to purchase one thousand shares that is taxed at a zero tax rate should be comparable, from the taxpayer's perspective, as a forward contract to purchase *two*

thousand shares that is taxed a *50%* tax rate. This brings us to the second precondition: it must be easy for taxpayers to scale up.[34]

Even so, some readers may be skeptical. After all, it is counterintuitive for taxpayers *not* to prefer a low tax rate. But skeptics should remember an important rule under current law that enables taxpayers *to choose a highe*r effective tax rate: Under the hedging rules of Treas. Reg. 1.1221-2, individual taxpayers expressly opt for ordinary character.[35] Since taxpayers are forced to choose their character in advance (i.e., on the date on which they enter into the position), they do not know whether ordinary character will be better (i.e., if they have losses) or worse (i.e., if they have gains). My sense, moreover, is that taxpayers do not try to cherrypick with hedging elections – or, for that matter, with analogous elections that allow taxpayers to choose capital character under the rules for securities dealers and foreign currency. In general, the choice of ordinary character does not reflect a prediction that losses are more likely. Usually, taxpayers are not able to make this prediction with confidence, so that market uncertainty represents a potent constraint on tax planning. In a sense, this Article applies a similar approach to derivatives across the board, matching the treatment of gains and losses so that market uncertainty becomes a more significant friction.

B. *Setting the Gain-Loss Ratio at One: A Survey of Key Issues*

The first prong of the reform agenda, then, is to set the gain-loss ratio at one for all derivatives, so that taxpayers will have little incentive to game inconsistencies in the taxation of risky bets. Yet what must policymakers do in order to set the gain-loss ratio at

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[34] Put another way, this approach does not work for so-called infra-marginal returns, which cannot be scaled up costlessly. See generally Warren, supra note 13.

[35] For corporations, there obviously is no difference in tax rates since capital gain is taxed at the regular corporate rate.

one? This Section makes the task more concrete by identifying salient imbalances in the

taxation of derivatives.

1.Timing

Obviously, timing rules can cause the gain-loss ratio to diverge from one. Perhaps

the most important imbalance is the so-called "timing option." Under the realization rule,

taxpayers control the timing of their tax. By keeping appreciated investments, they can

defer gains (thereby reducing the present value of the tax). By selling depreciated

property, they can accelerate losses (thereby preserving the present value of deductions).

The essential point is that administratively cheap and nondistortive solutions to the timing

option are extremely valuable.

Yet the problem can be challenging, especially with derivatives. There is empirical

evidence that taxpayers who use derivatives make particularly effective use of the timing

option. As Alan Auerbach, Leonard Berman and Jonathan Siegel have shown, a growing

core of wealthy taxpayers are able to zero out all of their capital gains; indeed, taxpayers

who engage in derivatives transactions are more than twice as likely to shelter all their

capital gain.[36] For strategic traders, derivatives offer unique advantages. Holders of

derivatives can claim a loss without even finding a buyer for the depreciated investment.

Instead, they can simply settle up with their counterparty in a "cash settlement."[37] To

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[36] See Alan J. Auerbach et al, *Capital Gains Taxation and Tax Avoidance: New Evidence From Panel Data, in* Does Atlas Shrug? 355 (Joel Slemrod ed. 2000). For further discussion of this study, see the text accompanying note 143.

[37] For example, assume that a taxpayer has entered into a contract to purchase stock, which is currently trading at $100, for $110.25 in two years. If the stock price has declined to $60, she can terminate the contract early by making a cash payment to her counterparty of approximately $50, thereby triggering a loss under current law.

defer gain, the taxpayer can simply keep the derivative or, if it is an option or forward

contract, the taxpayer can accept delivery in a "physical settlement."[38]

Of course, the tax system has some constraints on the timing option, which tend to

push the gain-loss ratio back up towards one, and possibly higher. The most important,

the capital loss limitation, prevents taxpayers from deducting losses except to the extent

that they recognize gains.[39] Yet this constraint's effectiveness depends upon the

taxpayer's entire portfolio. A low-income taxpayer with relatively few investments is

less likely to have gain, but these taxpayers do not use derivatives.[40] The core derivatives

clientele, sophisticated high-income taxpayers, are much more likely to have gain that

they otherwise want to recognize, including hedge fund investments that throw off short-

term capital gain or large appreciated positions in firms they have founded. Given these

gains, the capital loss limitations have no effect on the timing option inherent in *other*

positions.

The system has other constraints on the timing option as well.[41] One that features

prominently in this Article is the wash sale regime of Section 1091, which defers a loss if

the taxpayer immediately replaces the depreciated investment. Although Section 1091

represents a genuine constraint on low-income taxpayers, the sophisticated taxpayers who

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[38] If the stock price has increased to $200, she can defer her gain by accepting physical delivery of the stock. In this case, her basis in the stock is $110.25, and she pays no tax on the appreciation until she sells the stock.
[39] See Section 1211. Individuals can deduct only $3000 of capital loss per year against ordinary income.
[40] Indeed, the commodities laws prevent them from entering into over-the-counter derivatives. For a discussion, see infra Part IV.A.2.
[41]These include the passive loss rules, see Section 469, the straddle rules, see Section 1092, and the fact that corporations cannot deduct net losses. See Section 382. This last problem looms especially large for an undiversified corporations, such as a high-tech startups. See generally Alan J. Auerbach & Rosanne Altshuler, *Significance of Tax Law Asymmetries: An Empirical Investigation*, 105 Q. J. Econ. 61 (1990); Joseph Bankman, *The Structure of Silicon Valley Start-ups*, 41 U.C.L.A. L. Rev. 1737 (1994).

use derivatives find the rule easy to circumvent.[42] In response, the final Part of this Article outlines ways to make the wash sale regime more effective.

2. *Rates*

In addition to timing, the rate structure obviously affects the gain-loss ratio. Most notably, in order for this ratio to be one, flat rates must govern risk-based returns. In contrast, progressive rates push the gain-loss ratio above one. As Alvin Warren has shown, gains can shift taxpayers into a higher bracket (increasing the government's share) while losses can shift taxpayers into a lower bracket (reducing the government's share).[43]

Similarly, the nonrefundable nature of our system can also push the gain-loss ratio above one.[44] Taxpayers with incomes just above the zero bracket level pay tax on gains without securing a meaningful deduction for losses. While low-income taxpayers might seem to be most at risk here, since a smaller loss shifts them into the zero bracket,[45] these taxpayers are not active investors – and certainly do not invest in the derivatives market. Their main investment, residential real property, already is taxed at a zero rate. In any

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[42] For a discussion of seven strategies that aggressive taxpayers use to circumvent the wash sale rules, see David M. Schizer, Scrubbing the Wash Sale Rules, Taxes (forthcoming 2004).

[43] Alvin C. Warren, Jr., *The Deductibility by Individuals of Capital Losses Under the Federal Income Tax*, 40 U. Chi. L. Rev. 291 (1973). For example, consider a coin toss in which the taxpayer either pays or receives $10,000. Assume that the first $5,000 of income is taxed at 25%, and the rest at 75%; likewise, the first $5,000 of losses are refunded at 25%, and the rest at 75%. Assume the taxpayer has $5,000 of salary income. Any profits on the bet will be taxed at 75%, since salary income has already put the taxpayer into the higher bracket. But the first $10,000 of losses are deducted *at only the 25% rate*: the taxpayer must cancel out $5,000 of salary income and then have another $5,000 of losses before attaining a net loss of $5,000, and thus reaching the point where losses are refunded at 75%. The government is thus claiming a substantially higher share of gains (75%) than losses (25%).

[44] A system is "nonrefundable" if taxpayers who have net losses in a given year pay zero tax, instead of a negative tax – that is, they do not receive a check from the government covering a portion of these net losses. Put another way, in a nonrefundable system deductions can only shelter income, but cannot give rise to additional relief from the government.

[45] High income taxpayers are less likely to face this problem if they can deduct investment losses from their (high) salaries. Obviously, this is not permissible now, given the capital loss limitations. But if the timing option is addressed in other ways, rendering the capital loss limitations unnecessary, this problem should be uncommon for high-income taxpayers. For a discussion of three alternatives to the capital loss limitations, see infra Part III.D.

event, allowing losses to carryover to other years is a familiar way to mitigate the issue.[46]

The "takeaway" point is that the agenda proposed here requires a flat rate structure for

derivatives.

3. Special Problems with Swaps

In setting the gain-loss ratio at one, policymakers should pay particular attention to

swaps. Under current law, these instruments involve imbalances of both character and

timing. To begin with character, taxpayers can ensure that losses are ordinary, while

gains are capital. Ordinary losses obviously are especially appealing to taxpayers, since

they are not subject to the capital loss limitations and can shelter salary income (although

they may be subject to other limitations).[47] Capital gains, meanwhile, are eligible for a

reduced rate. This rate imbalance arises because swap payments generally are ordinary,[48]

but taxpayers can convert them to capital (i.e., once they know they have gains) by

settling the swap prior to maturity.[49]

Turning to timing, in the absence of special rules, swaps offer three potential

problems. First, like other derivatives, they can offer a timing option (i.e., if taxpayers

can accelerate losses by selling or terminating the swap). Indeed, the timing option is

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[46] Carryovers are especially effective if they grow at an appropriate rate of interest to compensate the taxpayer for deferring the loss.

[47] For individuals, swap deductions probably are classified as miscellaneous itemized deductions under Section 67 unless they are incurred in connection with a trade or business, such as trading in securities. In general, miscellaneous itemized deductions are subject to a 2% floor and are not deductible under the alternative minimum tax.

[48] The character of swap payments is ordinary if the underlying bet is settled with periodic payments. See Priv. Rul. 9730007. In contrast, if the bet is settled only at maturity, the character of this payment has been unclear, but recent proposed regulations take the position that it also is ordinary. See Prop. Treas. Reg. 1.1234A—1(a).

[49] See Section 1234A. Once again, symmetry is not a constraint here because the usual counterparty, a securities dealer, is unaffected by early termination. The dealer marks to market and its character is ordinary. See Section 475.

even more potent because certain swaps are thought not to be subject to the wash sale rules.[50]

Second, taxpayers do not have to sell or terminate the swap in order to trigger a deduction; instead, they can use a formula that backloads income. In a notorious example, which has become a listed transaction,[51] the taxpayer makes annual periodic payments and, in return, receives their capitalized value at maturity. In effect, the taxpayer is lending money. Nevertheless, there used to be a technical argument that the taxpayer could deduct these payments currently, while deferring inclusion of the offsetting income until the swap matured.[52] It is easy to imagine other ways of front-loading deductions. For example, what if the long pays an interest charge every year, but the bet on the underlying property is not settled until maturity? Can taxpayers deduct the periodic payments currently? Can they defer any inclusions on the contingent payment until maturity (even though, on average, the taxpayer should earn back at maturity at least as much as she has paid)?[53]

The third problem follows from the second. Since a swap that front-loads payments is akin to lending money, taxpayers who pursue this strategy earn a time-value return. If this return is not taxed as interest (i.e., with accelerated timing at ordinary rates), the taxpayer reaps a third tax benefit. In response to these three problems, the government

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[50] The relevant class of swaps are those in which the bet is settled only through periodic payments, and not through a single payment at maturity. The argument is that these swaps are not "contracts to acquire." For a discussion, see Schizer, supra note 42.

[51] A "listed" transaction is one that the government designates, usually in a notice, as subject to special disclosure requirements and penalties.

[52] If the payment at maturity is fixed in advance, a portion of it has to be included every year, in effect offsetting the deduction of the periodic payment; but as long as the maturity payment is contingent, the regulations in effect at the time did not require this accelerated inclusion. In the listed transaction, there is a lump sum payment that is subject to a very modest contingency. See Rev. Rul. 2002-30; Notice 2002-35.

[53] The reason is that on average the underlying should appreciate as much as the risk-free interest rate, which in essence is the amount the long pays in periodic payments.

issued proposed regulations in February 2004. But these regulations solve the problems only to an extent, and in an unnecessarily complicated way, as discussed below.[54]

To sum up, setting the gain-loss ratio at one is not an easy task. Policymakers have to police the timing option, while also enforcing a flat rate structure. This Article offers concrete guidance about how to achieve these goals. But before doing so, it is important to flesh out the rest of the reform agenda. In addition to setting the gain-loss ratio at one, what else do policymakers have to do?

C. Balance is Not Sufficient for Time Value and Wages

While the first goal is set the gain-loss ratio at one for risky bets, a caveat should be emphasized: This reform strategy is not effective for time-value returns or wages. Because these returns cannot be scaled up costlessly, inconsistencies in the treatment of these sources of income would still inspire planning, even if the gain-loss ratio is set at one. As a result, time value and wages must be taxed separately with consistent rules.

1. Time Value

It is well understood that scaling up cannot cancel out tax on the risk-free return. Taxpayers would have to put up more money, which imposes either interest expense (if they borrow) or opportunity cost (if they put up their own capital).[55] Thus, taxpayers will prefer a low effective tax rate on time-value returns – and might engage in planning to attain a low rate – since scaling up cannot undo the effects of a higher tax. Of course,

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[54] For a discussion, see infra Part V.D.

[55] As an illustration of the point, imagine that a taxpayer no longer simply tosses the coin and then makes or receives a $100 payment. Instead, the taxpayer makes an up-front payment of $100, earning what is, in effect, $5 of interest income. If the taxpayer later wins a coin toss, she receives $110 instead of $100 – that is, a gross payment of $210. If she loses, she receives nothing. Assume that the tax payer has a 50% chance of winning. If the tax rate is zero, the expected return is $5 (i.e., deriving solely from the time value). With a 50% tax rate, in contrast, the expected return falls to $2.50. Scaling up the bet to $200 does not solve the problem. Although the expected aftertax value increases to $5, the taxpayer has to put up more capital, and so the yield remains 2.5%.

their incentive to engage in such planning will depend on the size of the time-value return. If it is sufficiently modest, such tax planning may not be worth the trouble.[56]

Yet if time-value returns are robust enough, they need to be taxed consistently under separate rules. Such an imputation regime, as it is called here, can take various forms. It can resemble the original issue discount rules, so that a taxpayer's basis grows each year by a prescribed interest rate.[57] Alternatively, an interest charge can be imposed at realization.[58] These various imputation regimes pose familiar administrability and political problems that are not analyzed here.[59] The point is that time-value returns represent a complication in any reform effort that offers balance but not consistency.[60] Happily, though, it is well understood that consistency is needed only for the risk-free return, and is not also needed for risk-based returns.[61] For these, balance is sufficient.

2. Wages

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[56] The risk-free return has been modest in the last century but has risen substantially in recent years. According to Bankman & Griffith, the risk-free return averaged .5% between 1926 and 1989. See Bankman & Griffith, supra note 13. In contrast, the annual yield on 10-year inflation-adjusted U.S. Treasury securities was 2.06% on July 26, 2003, and 2.73% on July 26, 2002. Dow Hits a Five-Week High on Strong Economic Report, N.Y. Times, July 26, 2003, at C4. More recent studies suggest, moreover, that the *expected* risk-free return was higher in early years, but turned out to be unexpectedly low due to unanticipated inflation. See Jeremy J. Siegel, *The Shrinking Equity Premium: Historical Facts and Future Forecasts*, 26 J. Portfolio Management 10 (1999).

[57] For example, assume that a taxpayer bets $100 in the coin toss example in n. 55. The taxpayer is treated as earning $5 of interest income in the first year. If she wins the bet, she gets an additional $105 of risk-based return; if she loses, her risk-based loss is $105.

[58] For instance, sale proceeds can be treated as having accrued at a specified interest rate. This "retrospective" approach, developed in some detail by Alan Auerbach and David Bradford, has two advantages. It does not promote lock-in as assets appreciate and it does not require potentially illiquid taxpayers to pay tax prior to realization. See Alan J. Auerbach, *Retrospective Capital Gains Taxation*, 81 Am. Econ. Rev. 167 (1991); Bradford, supra note 10. However, as Michael Knoll has shown, this approach gives taxpayers the incentive to shift income to assets with shorter holding periods (and, in some cases, to wages). Michael S. Knoll, *Tax Planning, Effective Marginal Tax Rates, and the Structure of the Income Tax*, 54 Tax L. Rev. 555 (2001).

[59] See e.g., Auerbach, supra note 58; Bradford, supra note 10; Knoll, supra note 58; Shuldiner, supra note 2.

[60] Relatedly, it may become more important to index the tax system for inflation, but this topic is beyond this Article's scope. See Cunningham, supra note 13, at 41.

[61] Bradford, supra note 10; Weisbach, supra note 12.

Just as consistency is needed for time-value returns, it also is needed for wages. Inconsistencies in the taxation of human capital *do* matter because scaling up wage income is costly; taxpayers presumably would have to do more work.[62] Balance alone is not enough for wages, since taxpayers would still prefer a low rate or deferred timing. As a result, this reform agenda needs to exclude equity compensation, as well as wages that are disguised as risky bets. While the treatment of human capital is beyond this Article's scope, it is worth noting that there are administrable ways for the system to distinguish returns to risk from returns to effort. For instance, Section 83 already contains a distinction between exchanges of property for services and other bets.[63] Likewise, the swap rules under current law exclude bets relating to events or information that are under the taxpayer's control.[64]

D. Hedging and Other Integration Rules

This reform proposal focuses on the tax treatment of derivatives themselves. Yet if the agenda is not applied to the rest of the economy, additional rules are needed when a derivative is economically linked to some other position. Business hedging is an important example. For instance, assume that a jeweler wishes to hedge her exposure to gold by entering into a derivative. This step is socially valuable in transferring a risk (fluctuations in the price of gold) to the economic actor who is best suited to bear it (e.g.,

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[62]Or choose a different occupation. See Sandmo, supra note 12, at 304; J. Eaton & H.S. Rosen, *Taxation, Human Capital, and Uncertainty*, 70 Am. Econ. Rev. 705 (1980).

[63]If the effective tax rate for risk is substantially lower than that for wages, taxpayers generally should not be allowed to elect risk-based treatment for their compensation. This would require significant changes in Section 83(b), which currently allows taxpayers to pay tax on compensatory property at ordinary rates and to earn capital gain or loss on subsequent returns. As I have written elsewhere, a common planning strategy is to undervalue the property their receive, thereby transforming ordinary income into capital gain. See generally Ronald J. Gilson & David M. Schizer, *Understanding Venture Capital Structure: A Tax Explanation for Convertible Preferred Stock*, 116 Harv. L. Rev. (2003).

[64]See Treas. Reg. 1.446-3. Cf. David Bradford, Blueprints of Basic Tax Reform (1984) (distinguishing between financial and nonfinancial business assets because "it is sometimes difficult to distinguish between the profits and wages of individual businessmen").

a speculator, instead of the jeweler). But what if the derivative and the underlying business are subject to different timing and character rules? This makes it more difficult for the jeweler to construct the perfect hedge.[65] In response, current law offers a hedging regime that allows the jeweler to treat income and loss from the derivative as if they were earned in her active business.[66] This regime should be retained.

In other cases, the economic interaction between the derivative and some other position will be tax-motivated.[67] For example, taxpayers might use a derivative to simulate the sale of the underlying without triggering tax. Under current law, this step could trigger a constructive sale of the underlying.[68] Similarly, a taxpayer might purchase property and simultaneously enter into a forward contract to sell it, so that the combined positions are economically equivalent to a bond, and current law thus treats profits as ordinary income.[69] These games involving the underlying remain viable even if the reform agenda is applied to derivatives, so effective responses are still needed, though the details are beyond this Article's scope.

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[65] To see the point, assume that the business is taxed at a 50% rate while the derivatives is taxed at a zero rate (as suggested in Part III.D, infra). Assume also that a jeweler keeps an inventory of gold worth $10,000.   If the price of gold is stable, the business yields $4,000, taxable at 50%. But this profit suffers as the price of gold declines. If the inventory depreciates more than $4000, the taxpayer has a net loss. A crucial assumption here is that this net loss is not deductible. Without a hedge, then, the taxpayer bears 50% of the first $4000 of inventory loss, since the government bears the other 50% in the form of lost tax revenue. Yet the taxpayer bears 100% of declines beyond this point, since net losses are nondeductible. It is impossible for a static hedge to cover both potential losses (though the taxpayer might hedge dynamically, at much greater cost). To hedge the first $4000 of losses, the derivative should yield 50 (nontaxable) cents for every dollar of inventory loss. But once the inventory declines by *more than* $4000, this hedge needs to be twice as large. Otherwise, if the inventory declines by $8000, for example, the taxpayer has a $6000 aftertax loss on the business, and only $4000 of (nontaxable) gain on the hedge.

[66] See Treas. Reg. 1.1221—2. Then the taxpayer can scale up the derivative so that, for every dollar of pretax loss (or gain) in the business, the derivative yields a pretax dollar of gain (or loss). Thus, if the inventory declines by $6000, the derivative pays $6000 (which is taxable at 50%), leaving the firm's taxable income at $4000.

[67] Or, I should say, more obviously tax motivated. Mike Knoll has argued that business hedging is tax motivated, in a sense. By smoothing out a taxpayer's earnings, it blunts the adverse effects of progressivity.

[68] See Section 1259. For a discussion, see Schizer, supra note 31.

[69] See Section 1258.

III.Normative Assessment: Advantages of the Agenda for Reform

Part II has offered an incremental reform strategy for derivatives: Policymakers should ensure balance in the taxation of risk-based returns, while taxing time-value returns and wages consistently with separate rules. This Part considers the advantages of this reform agenda, while Part IV considers the disadvantages.

A. Risk-Taking Is Not Discouraged

A familiar advantage of setting the gain-loss ratio at one, instead of higher, is that risk-taking is not discouraged. Indeed, this was the motivation for Professor Domar and Professor Musgrave's analysis. Responding to the popular notion that tax discourages risk-taking, they showed that this was not the case – and, indeed, that the opposite might well be true – if losses were fully deductible. Nurturing the willingness of taxpayers to take risks is especially important when risky ventures yield positive externalities, as is the case with research and development, entrepreneurship,[70] and financial arbitrage that makes market prices more accurate.[71] Also, if risk-taking is particularly tax sensitive, as some evidence suggests, it is likely to be more efficient to tax other sources of revenue.[72]

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[70]See, e.g., Atkinson & Stiglitz, supra note 12, at 97 ("Even in advanced economies, . . . the rate at which new products and new techniques are developed still depends crucially on the taking of risks and the availability of finance for risky ventures. This has led in turn to concern that the tax system may discourage risk-taking and the supply of funds to finance it."); Roger H. Gordon, *Can High Personal Tax Rates Encourage Entrepreneurial Activity*, 45 IMF Staff Papers 49 (1998) ("Entrepreneurial activity is commonly viewed to be a key ingredient generating economic growth.").

[71]Arbitrage can improve the accuracy of market prices, and thus the allocation of resources, but various market imperfections can discourage traders from engaging in arbitrage, including liquidity constraints, the presence of noise traders, and various regulatory limitations. See generally Andrei Shleifer & Robert W. Vishny, *Limits of Arbitrage*, 52 J. Finance 1 (1997). For a survey of the theoretical and empirical literature on this point, see Michael Powers, David Schizer & Martin Shubik, *Market Bubbles and Costly Avoidance: Tax and Regulatory Constraints on Short Sales*, 57 Tax Law Rev. (forthcoming 2004).

[72]A number of studies have shown that entrepreneurship is tax-sensitive. See, e.g., Robert Carroll et al, *Entrepreneurs, Income Taxes, and Investment, in* Does Atlas Shrug? (Joel Slemrod ed. 2000) (using schedule C data of sole proprietors to show that "taxes exert a statistically and quantitatively significant influence on the probability that an entrepreneur invests"; showing that a five-percentage point rise in marginal tax rates would reduce the proportion of entrepreneurs who make new capital investments by 10.4% and would lower mean capital outlays by 9.9%); William M. Gentry & R. Glenn Hubbard, *Tax Policy and Entrepreneurial Entry*, 90 Am Econ. Rev. 283 (2000) (showing that a high *level* of tax does not

B. *Inconsistency Without Planning*

Even so, the principle motivation for this proposal is not to encourage risk-taking, but to give policymakers flexibility in taxing derivatives. Although current law is riddled with both inconsistencies and imbalances, Part II has shown that policymakers do not have to worry as much about inconsistencies once they remedy imbalances. As David Bradford has shown, taxpayers will forgo tax-motivated restructuring if scaling up is cheaper.[73]

C. *Freedom to Focus on Administrability*

Even so, why not target inconsistencies as well? Why settle for targeting only imbalances? Political constraints are one reason, as noted above, but there is a more satisfying one as well: This incremental strategy is more administrable, in two senses. First, our policymaking institutions are capable of proceeding only in small steps. Statutory and regulatory projects typically focus on a particular derivative, rather than on all possible ways of placing a given bet. One project deals with the character of swaps, another with the scope of Section 1032. If we wait for a single bold stroke to reform the taxation of all derivatives – and, indeed, all financial instruments – we will wait a long time.

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necessarily discourage taxpayers from becoming entrepreneurs instead of wage earners, but progressivity in the rate schedule can have this effect since the taxpayer's share of losses from this risky occupational decision is less than their share of gains; using the Panel Study of Income Dynamics for 1978-1993 to show, for instance, that the 1993 increase in top marginal tax rates lowered the probability of entry into self employment for upper-middle-income households by about 20%); Gordon, supra note 70 (showing that taxpayers are more likely to become entrepreneurs when corporate tax rate is lower than personal tax rate, such that self-employment offers the opportunity to shift income to lower-taxed corporation); James Poterba, *Venture Capital and Capital Gains Taxation*, *in* 3 Tax Policy and the Economy 47, 48-56 (Lawrence H. Summers ed., 1989) (arguing that reductions in the capital gains rate can increase the level of venture capital activity by encouraging entrepreneurs to join startups).

[73] Bradford, supra note 10.

To an extent, this is an argument for incremental application, rather than for tolerating inconsistencies over the long term. This brings us to the second administrability justification: A solution that is administrable for one type of derivative may not be administrable for another. For example, it is a familiar point that mark-to-market accounting is easier for publicly-traded investments than for private ones. Consistency creates a "lowest common denominator" problem. We can choose only from the (possibly inelegant) subset of rules that can be applied across the board. In contrast, the reform agenda in this Article facilitates context-specific choices. Policymakers have to set the gain-loss ratio at one across the board, but they do not have to do it the same way each time. In some cases, surgical and wholly effective solutions will ensure a gain-loss match without overbreadth or heavy administrative costs. In other cases, blunter methods will be needed, but their scope can be limited to contexts in which they are absolutely necessary.

While the reform strategy described here presents opportunities for creative administration, it is important to emphasize that administrative challenges remain. Three are worth emphasizing. First, taxpayers always want to shift losses to the government while keeping their gains, so policymakers have to police the gain-loss ratio.[74] Second, if the gain-loss ratio is lower in some sectors of the economy than in others (e.g., in private businesses as opposed to publicly traded ones), taxpayers might exploit these "sectoral inconsistencies," as they are called here.[75] Third, if risk is taxed at a low effective rate, the line between risk and other sources of return (such as wages and time value) has to be monitored with care.

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[74] See infra Part IV.B.
[75] See infra Part IV.C.

D. An Illustration: Three Alternative Approaches for Derivatives

To illustrate the range of options open to policymakers, this Part describes three different approaches for taxing derivative securities. Each has the necessary features to keep the gain-loss ratio at one: finely tailored constraints on the timing option, a flat rate structure for risk, and (if necessary) separate treatment of time-value returns and wages. What is striking, though, is how very different they are. Notwithstanding these differences, it should be possible to apply one or the other in different contexts – even to very similar transactions – without prompting planning.

Policymakers thus have the luxury of choosing the most administrable rule for each situation. To illuminate the strengths and weaknesses of each alternative, three questions are considered. First, how effectively does the regime eliminate the timing option and related planning? Second, how much pressure does the regime impose on the distinction between risk, on one hand, and wages and time-value returns, on the other? Third, how difficult is it for taxpayers to comply with the rule and for the government to monitor compliance?

1. Mark-to-Market Accounting for Derivatives

The best way to cure the timing option for derivatives – and, more generally, to set the gain-loss ratio at one – is to mark these securities to market, even if the underlying property is left under current law. Since there is an extensive literature on mark-to-market accounting,[76] the discussion here is brief and focuses on points that other commentators have not made.

a. Eliminating the Timing Option and Related Planning

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[76]See, e.g., Daniel Halperin, Saving the Income Tax: An Agenda for Research, 77 Tax Notes 967 (1997); David J. Shakow, Taxing Without Realization: A Proposal for Accrual Taxation, 134 U. Pa. L. Rev. 1111 (1986); David Weisbach: A Partial Mark-to-Market Tax System, 53 Tax L. Rev. 95 (1999).

Under mark-to-market, positions are valued at the beginning and end of the year, and the difference is taxable gain or deductible loss. As a result, taxpayers no longer have a timing option, since they don't control the timing of their tax. They are not locked in to appreciated derivative positions, and have no tax incentive to sell depreciated positions. Likewise, the wash sale and straddle rules generally aren't necessary if all the relevant positions are marked to market.[77] The capital loss limitations also aren't needed.[78]

A common objection to mark-to-market accounting is that, if it applies to only a subset of positions, taxpayers will gravitate to substitutes that are taxed under realization.[79] For instance, Professor Weisbach has proposed a lower tax rate for mark-to-market positions to offset this effect.[80] Yet an important contribution of this Article is to show why a lower tax rate is not needed and, more generally, why taxpayers will not necessarily avoid mark-to-market. First, given the generous treatment of losses under mark-to-market, it is not obvious that taxpayers will shy away. Indeed, if the gain-loss ratio is above one for other instruments, mark-to-market – and the gain-loss ratio of one – will seem favorable. Second (and relatedly), rather than avoiding derivatives, taxpayers may instead scale up their positions to cancel out the extra tax burden from marking to market.

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[77]A mixed straddle regime will still be needed, though, when a position subject to realization accounting is offset by a position that is marked to market. Similarly, special rules may be needed when a taxpayer sells the underlying at a loss on November 1 and immediately invests in a derivative (that is marked to market) to recognize a loss at the end of the year.

[78]If derivative profits are taxed at the same rate as other income, a dollar-for-dollar deduction is appropriate; otherwise, a credit could be awarded, equaling the loss times the tax rate on derivative profits. Warren, supra note 43.

[79]See, e.g., Edward A. Zelinsky, For Realization: Income Taxation, Sectoral Accretionism, and the Virtue of Attainable Virtues, 19 Cardozo L. Rev. 861 (1997).

[80] David Weisbach, A Partial Mark-to-Market Tax System, 53 Tax L. Rev. 95 (1999).

Another virtue of mark-to-market accounting is that it provides symmetry in timing rules for over-the-counter derivative transactions, though not necessarily symmetry in rates. Both derivatives dealers (under current law) and their clients (under this proposal) would mark derivatives to market. As noted above, symmetry itself can constrain certain types of tax planning.[81]

b. Pressure on the Boundary with Wages and Time-Value Returns

Perhaps the most significant advantage of mark-to-market accounting is that separate rules are less necessary for time-value returns and wages. In general, the accelerated timing under mark-to-market accounting should approximate the taxation of wages and interest.[82] To prevent taxpayers from gaming this line, it is necessary to apply the same tax rate to derivatives as would apply to these sources of income. Of course, the rate for wages and interest is likely to be progressive, while the rate for derivatives should not be (i.e., in order to keep the gain-loss ratio at one). To align the two, the rate for derivatives should be the taxpayer's marginal rate computed *without* regard to derivative gains and losses; the return on derivatives must be excluded so that it doesn't shift the taxpayer's bracket (leading to a gain-loss ratio that is greater than one).[83]

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[81] See supra Part I.B.

[82] These two regimes are probably close enough, although the match is not perfect. Cf. Joseph Bankman & William A. Klein, Accurate Taxation of Long-Term Debt: Taking into Account the Term Structure of Interest, 44 Tax L. Rev. 335 (1989); Theodore S. Sims, Long-Term Debt, The Term Structure of Interest and the Case for Accrual Taxation, 47 Tax L. Rev. 313 (1992).

[83] Even with mark-to-market accounting, though, it can still be important to distinguish interest from other income for certain purposes, including foreign tax credits, Section 956, and the like. In response, interest can be imputed separately each year, and the rest of the economic return can be marked to market. The government has proposed this sort of approach when dealers mark debt securities to market, see Prop. Treas. Reg. 1.475(a)-1, and when taxpayers elect mark to market treatment for notional principal contracts with contingent nonperiodic payments. See Prop. Treas. Reg. 1.446-3(i). If it is necessary to defend these distinctions between interest and other income, such a hybrid approach is needed, though it obviously adds computational complexity to the system.

It is worth pausing to emphasize an irony here. An important reason to use mark-to-market accounting for derivatives is not so much to tax derivatives themselves but, rather, to be sure that we continue to tax *something else.* Specifically, we need to tax wages and time-value returns, and we want to be sure that taxpayers can't escape this tax by, in effect, disguising wages and time-value returns as risk-based returns on derivatives.

<div align="center">c. Compliance and Monitoring Burdens</div>

Notwithstanding these significant advantages of mark-to-market accounting, a common objection is that valuing positions periodically is administratively costly, and the government may be hard-pressed to monitor self-serving valuations. In addition, taxpayers may not be liquid enough to pay tax before selling the investment. For a forward contract to sell a house or stock in a private firm, these objections have considerable force.

However, these objections are much weaker for derivatives that are based on publicly-traded assets, which are the kind that are most commonly used in tax planning. Some of these derivatives are themselves are publicly traded, so price quotes are easy to get.[84] Most other derivatives are acquired from a securities dealer, which already is marking its positions to market under current law.[85] The dealer could be required to share its valuation with counterparties. As a further backstop for corporate taxpayers, the financial accounting rules require them to mark certain derivatives to market for GAAP

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[84]Indeed, some of these already are marked to market. See Section 1256.
[85]See Section 475.

purposes.[86] Finally, users of derivatives have strong credits, and thus are less susceptible

to liquidity constraints.

My recommendation, therefore, is that policymakers make as much use as

possible of mark-to-market accounting for derivatives. Even so, other regimes will be

needed when valuation is particularly difficult. Two alternatives are discussed below.

2. Stated-Term Approach

A second method of eliminating the timing option for derivatives is for taxpayers

to precommit, in advance, to a date on which they will recognize their gains and losses.[87]

While David Bradford has offered a similar proposal,[88] which he intended to apply to *all*

financial assets, the contribution here is to show that this approach works particularly

well for derivatives.

a. Eliminating the Timing Option and Related Planning

Under this proposal, then, gains and losses are deferred to the scheduled maturity

date of the derivative, even if the parties terminate the derivative ahead of schedule. For

example, if a swap is scheduled to mature in five years, all tax consequences – whether

they are inclusions or deductions – are irrevocably deferred for five years.

A long deferral period is desirable for gains but not losses, and taxpayers have to

choose before knowing which they have. As a result, the timing option is gone. Capital

loss limitations,[89] the wash sale rules,[90] and the straddle rules generally are unnecessary.[91]

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[86] Note that these arguments hold even for derivatives based on property that is not publicly-traded, although such derivatives are much less common.

[87] In a sense, this approach resembles mark-to-market, except that valuation occurs only once and taxpayers get to choose how long to wait before it occurs. I am indebted to Ted Sims for this observation.

[88] See Bradford, supra note 10.

[89] This is not to say that derivative losses should be fully deductible against ordinary income. Rather, we need to account for differences in tax rates, if any. As with mark-to-market, a credit should be allowed equal to the product of the loss and the tax rate applicable to profits.

Taxpayers also will not be able to take advantage of rate changes by terminating early (e.g., before the rate on profits increases), since the relevant tax rate is the one in force in the year that the contract was originally scheduled to mature, and not in the year it actually terminates.[92] Even though different positions (and taxpayers) are subject to different effective tax rates (i.e., depending upon the term of the derivative), taxpayers can adjust the size of the derivative to compensate for this effect. For similar reasons, if some derivatives are subject to mark-to-market accounting, while others are subject to the stated-term approach, taxpayers should not have a tax-based preference for one regime over another.

b. Pressure on the Boundary with Wages and Time-Value Returns

Another administrability challenge, as noted above, is to keep taxpayers from stuffing wages and time-value returns into derivatives. In response, as with mark-to-market, the stated-term approach should use the rate that would otherwise apply to the taxpayer's wages and time-value returns (and, to keep the rate structure flat for derivatives, the rate should be computed without regard to gains and losses on derivatives).

But there is a further problem here that does not arise with mark-to-market. If the stated-term approach allows taxpayers to choose very long deferral (e.g., fifty years),

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[90]For instance, assume that a taxpayer loses $1000 on a three-year contract that expires on March 1, 2006. Under the stated-term approach, the loss is recognized in 2006, even if she terminates the contract on March 2, 2003. This loss should be deductible even if the taxpayer enters into a substantially identical contract within thirty days of the termination (March 2, 2003) or the recognition date (March 1, 2006).
[91]The traditional straddle strategy is to enter into two offsetting positions, terminating the loser on December 31 while terminating the winner on January 1. This strategy no longer works if both legs of the transaction are derivative securities because terminating a contract early does not accelerate tax liability. However, the straddle rules are still needed if one leg is a derivative and the other is not (and thus is subject to realization accounting). Otherwise, a loss on the underlying could be accelerated.
[92]One problem with this approach is that, if a flat rate structure is used to keep the gain-loss ratio at one, taxpayers will have to believe that this rate structure will remain in force until their derivatives mature. This problem can be solved by using the rate structure in force on the date when the parties enter into the contract – not when the contract matures – but then a record must be kept of this rate.

the effective tax rate becomes very low. In this case, the "stuffing" problem endures. To

mitigate it, deferral can be limited to a fixed term such as five years with mark-to-market

required in the sixth year and thereafter. Likewise, an interest factor can be applied so

that, as the term becomes longer, the nominal amount of gains or losses grows.[93]

<p align="center">c. Compliance and Monitoring Burdens</p>

In one important way, the stated-term approach is easier to administer than mark-

to-market accounting, while in other ways it is harder. The important advantage over

mark-to-market, obviously, is that this approach does not require annual valuations or tax

payments prior to realization.

However, the stated-term approach is more difficult to administer than mark-to-

market in four ways, some of which are more daunting than others. First, taxpayers must

designate a recognition date in advance. This is not hard for derivatives, though, because

a term must be set for these contracts anyway. Indeed, the fact that derivatives terminate

by a particular date has an important advantage: by definition, the transaction has to be

over by the time taxpayers recognizes gain or loss.[94] As a result, derivatives avoid a

problem that burdens Professor Bradford's analogous proposal for other types of assets.

What if a painting hasn't been sold by the designated date? In this circumstance, either it

has to be valued on the recognition date, which Professor Bradford assumes is not

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[93]Since it may be hard to set the interest factor at exactly the right level, this remedy should be imperfect.
But since the interest charge could prove to be either too high or too low, it adds another element of
uncertainty about whether a long term or a short term will prove to be tax reducing. This uncertainty,
combined with market uncertainty about the underlying bet, should help discourage planning, ex ante.

[94]If the derivative is cash settled, the gain or loss is easy to compute (and, indeed, there already is a
realization event under current law). Yet matters are more complicated if the derivative is physically
settled (i.e., so that the underlying property changes hands). The buyer would not be treated as having a
realization event under current law. This rule should be changed if the stated-term approach is adopted. As
suggested below in connection with the zero rate approach, physical settlement should be treated as two
transactions: cash settlement of the derivative and transfer of the property for fair market value. This
means the underlying property needs to be valued on the recognition date; in this respect, the stated-term
approach faces the same administrability hurdle with derivatives as it would with the underlying.

feasible, or tax consequences have to be deferred until realization and an interest charge has to be used, as he suggests. Fortunately, derivatives do not present this issue.

A second administrability challenge of the stated-term approach is to keep taxpayers from gaming the process of selecting a maturity date, for instance, by omitting the term or making it conditional. If a taxpayer bets that the price of IBM will go up, he should not be allowed to make the maturity date depend on the value of IBM or a related index; otherwise, the parties could provide that, if the taxpayer has a built-in profit above a certain level, the contact never matures.[95] To discourage taxpayers from gaming the definition of maturity, mark-to-market should govern any derivatives that are not "plain vanilla."

Third, although the stated-term approach does not require taxpayers to continuously value the asset, it imposes a different sort of record-keeping burden. If the parties terminate their contract prior to maturity, they need to remember their gain or loss since it is not currently recognized. In addition, taxpayers obviously must not lie about the derivative's term. To keep taxpayers honest, the amount of gain and loss (and possibly also the term of the derivative) should be disclosed contemporaneously, and special penalties may also be needed.[96]

Fourth, the stated-term approach sometimes requires the government to bear the taxpayer's credit risk for a long period of time. For example, if a taxpayer sells a five-year derivative at a gain after one year, tax is not due for four years.[97] Obviously, mark-to-market does not present this issue, since the tax bill is settled each year. Even so,

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[95] In theory, symmetry would discourage this strategy, but symmetry would not hold if dealers remain on mark-to-market accounting.

[96] By analogy, the straddle rules provide special disclosure obligations. See Section 1091(a)(3)(B).

[97] A parallel issue is that potentially cash-strapped taxpayers must wait for their deduction, but the availability of other sources of credit mitigates this issue.

forcing the government to take credit risk should not be a fatal problem for the stated-term approach. For one thing, derivatives are available only to taxpayers with strong credits. Also, a similar credit issue already exists under current law – for a broader pool of taxpayers, including weaker credits – and, to my knowledge, it is manageable. Taxpayers already can borrow against appreciated assets, siphoning away value that includes the government's built-in tax liability. If they spend this money or invest it unsuccessfully, the government may be unable to collect the tax when it comes due. In response, current law provides the government with tax liens and other rights in bankruptcy. If these mechanisms are adequate under current law, they should be adequate for the stated-term approach.[98]

In any event, if the credit and record-keeping burdens are too onerous, a modification in the proposal eliminates them: Instead of deferring gains and losses, we could reduce their size. In other words, gains and losses would be taxed immediately – eliminating the credit and record keeping issues – but the amount included or deducted would be the *present value* of what they would have included or deducted at maturity.[99] For example, assume that a taxpayer sells a derivative for a $108 loss one year prior to maturity. If the taxpayer's borrowing cost is eight percent, the taxpayer would be allowed to deduct $100 this year. An obvious challenge here is to measure the discount

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[98] Another administrability issue is how gifts should be treated under this system. Should tax-sensitive donors be allowed to transfer derivatives with built-in gains to tax-indifferent donees? Should tax-indifferent donors be allowed to transfer derivatives with built-in losses to tax-sensitive donors? These issues already exist under current law, and our current system (allowing transfer of gains but not losses) could be retained. One point to keep in mind, though, is that a reform alternative – treating a gift as a realization event – would have to be implemented with care. We would not want a gift to trigger an immediate deduction for a loss, since this would restore the taxpayer's timing option. Instead, the gift could be treated as a sale, which under the stated-term approach means that the loss would be deferred until the derivative's stated maturity date. I thank David Shakow for raising this issue.

[99] I thank Reed Shuldiner for this idea.

rate correctly, but other tax rules already face this challenge and standard presumptions can be used as a backstop.[100]

3. Zero Tax Rate for Derivatives

Another way to set the gain-loss ratio at one is a zero rate. In ways, this is the simplest and most radical approach. Like life insurance,[101] residential real property[102] and a corporation's transactions in its own stock,[103] derivatives could be removed from the tax base. No tax would be due on risk-based gains, and no deduction would be offered for risk-based losses.

a. Eliminating the Timing Option and Related Planning

By allowing no deduction for losses, this proposal obviously eliminates the timing option. There is less need for loss limitations such as the wash sale and straddle rules.[104] Some costs of mark-to-market and the stated-term approach are avoided as well. For example, taxpayers are spared the trouble of scaling up (which probably isn't costless, even if it is cheap). In addition, the fact that the tax system is nonrefundable does not discourage taxpayers from using derivatives (i.e., since taxpayers will *always* be subject to a zero rate on derivatives, regardless of their other income).

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[100] See, e.g., Treas. Reg. 1.1275-4 (relying on issuer's "comparable yield," and using the applicable federal rate as a backstop). One disadvantage of this regime is that some form of the straddle rules becomes necessary. Otherwise, taxpayers could enter into a straddle, terminate their loss position early, and then replace this loss leg with a similar position (which has to be slightly larger in order to match the growing present value of the built-in gain on the other leg). While the present value of the currently deducted loss is the same as that of the deferred gain, taxpayers may be able to keep sheltering gains (i.e., by continuously enlarging the bet). I thank Dale Collinson for this observation. This problem is not presented by the unmodified stated-term approach, since losses on one leg of a straddle are irrevocably deferred until maturity (at which point the gain on the other leg also will be recognized).

[101] Section 101.

[102] To be precise, losses are not deductible, imputed income is not includible, and the first $250,000 of capital gain is excluded (or $500,000 per couple).

[103] See Section 1032.

[104] See Section 121. To be precise, these rules no longer have to apply when *both* of the relevant positions are derivatives. However, special rules are needed, for instance, if one leg of the straddle is the underlying property and the other is a derivative.

b. Pressure on the Boundary with Wages and Time-Value Returns

However, a severe disadvantage of this approach is that it will motivate taxpayers to disguise time-value returns and wages as (zero-taxed) returns to risk. In response, an imputation rule is needed for derivatives that involve prepayments, such as prepaid forwards, options, and contingent debt. Otherwise, the zero tax rate would tempt taxpayers to construct positions that are nominally derivatives but, in substance, are loans.[105] Relatedly, the zero tax rate should not apply to wages, including compensatory stock options.

Walling off these instruments will introduce complexity, and the zero rate will give taxpayers added incentive to game this distinction. To my mind, this is the most significant problem with a zero tax rate. Once again, there is an irony here. Why do we need a positive tax rate on risky bets? Not necessarily to collect revenue on these bets themselves; rather, we need to be sure that we collect revenue from *other things* that otherwise would be repackaged to look like risky bets. Given the importance of this problem, I would use the zero rate sparingly.

c. Compliance and Monitoring Burdens

In general, a zero rate imposes few compliance or monitoring burdens. There is no need to value derivatives each year, as under mark-to-market. Likewise, there is no need to keep track of the term of the contract and related information, as under the stated-term approach. These are distinct advantages.

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[105]For example, a taxpayer could enter into a prepaid forward to buy something and, at the same time, a nonprepaid forward to sell it. The net (hedged) position would be a fixed-rate loan. For a discussion of this strategy in the context of Section 1032, see infra Part V.A.

Even so, some burdens remain. Walling off time-value returns and wages will introduce complexity, as noted above.[106] In addition, assuming the zero rate does not also apply to the underlying property, physical settlement of a derivative (i.e., delivery of the underlying property to settle the contract) has to be treated as a realization event. This departure from current law is needed to keep taxpayers from converting (nondeductible) losses on a derivative into deductible losses on the underlying.[107] To foreclose this strategy, physical settlement has to be taxed as two transactions: cash settlement of a derivative (on which no gain or loss is recognized), followed by transfer of the underlying property for fair market value.[108]

E. Summary of Advantages

To sum up, by setting the gain-loss ratio at one for risk-based returns, policymakers reap three advantages. First, they keep the tax system from discouraging risk-taking. Second, and more importantly, they eliminate a substantial volume of planning and the inequity and social waste that it entails. Third, they retain significant administrative flexibility. Indeed, rules that seem very different at first blush – mark-to-market

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[106] Just as the zero rate undertaxes interest and wages, it also overtaxes derivatives in one respect: taxpayers typically pay their dealer a fee for arranging the contract, and it seems inappropriate to deny a deduction for this fee.

[107] For example, assume that a buyer on a forward contract commits to pay $103 in one year for stock currently worth $100 and, after one year, the stock price has declined to $63. If the parties "cash settle" the derivative – so that the loser pays the winner the difference between the forward price and fair market value – the buyer pays $40 to the seller and, under the zero tax approach, can't deduct this loss. But what if instead the buyer takes delivery of the underlying stock? Under current law, the buyer does not have a realization event and, instead, is treated as acquiring the stock for the (above-market) price of $103. With this inflated basis, the buyer can immediately sell the stock at a $40 deductible loss (since the loss, technically, is on the *stock* and not the derivative). Correspondingly, the seller would have inflated her taxable income by the same amount. A $40 nontaxable profit on a derivative is converted into a $40 taxable gain on the underlying (i.e., since she is treated as selling the underlying stock for $103, but could have sold it for only $63 in the market). But the seller would not suffer this tax cost if she is a foreigner or tax exempt or, more likely, a securities dealer subject to market to market accounting (i.e., for whom cash and physical settlement are taxed the same way).

[108] In this example, the buyer has a $40 (nondeductible) loss on the derivative and has a $63 basis in the stock. Congress took a similar tack in the constructive ownership rule of Section 1260.

accounting, the fixed term approach, and a zero tax rate – all set the gain-loss ratio at one. As long as derivatives can be scaled up cheaply and time-value returns and wages are effectively walled off, taxpayers have little incentive to prefer (and thus to plan their way into) one of these rules, as opposed to another. Thus, policymakers have the luxury of choosing based solely on administrability.

IV. Normative Assessment: Limitations of the Agenda for Reform

While the agenda proposed here has distinct advantages, it has limitations as well. One that is likely to come to mind is that, if it is costly to scale up derivatives, inconsistencies become more problematic. Happily, though, scaling up is relatively easy for derivatives. Indeed, a core contribution of this Article is to emphasize this difference between derivatives and, say, tangible assets such as factories and real property.

After showing the feasibility of scaling up derivatives, this Part turns to four more significant concerns: First, in order for taxpayers to view inconsistencies with indifference, they have to choose their treatment before learning whether they have gains or losses; an important administrability challenge, then, is to keep taxpayers from reclassifying bets ex post. Second, even if it is relatively easy to set the gain-loss ratio at one for derivatives, it may be harder to do for other investments; as a result, taxpayers may have an incentive either to prefer or to avoid derivatives, depending upon what the gain-loss ratio is in other sectors. Third, the agenda here does not allow policymakers to use progressive rates for risk-based returns. Fourth, the agenda does not collect revenue from these returns, at least on a risk-adjusted basis; in other words, the government earns no more than it would by borrowing money and investing in a market portfolio of risky positions. For many, the benefits offered by this agenda will justify these various costs.

For those who view these costs as too high, though, suggestions are offered about how to accommodate these concerns.

A. *Derivatives and the Feasibility of Scaling Up to Cancel Out the Tax*

The argument so far is that, as long as the gain-loss ratio is set at one, taxpayers will not care about differences in the effective tax rate. An important premise is that taxpayers can cancel out inconsistencies in timing and rates by adjusting the size of their investments. Yet is this premise realistic? Some commentators have questioned whether portfolio adjustments really can cancel out the tax on risk-based returns.[109] In response, this Section addresses these concerns, showing that they have considerably less force in the derivatives market. In other words, even though the Domar and Musgrave theory is sometimes dismissed as pie in the sky, it finds a home in the sophisticated world of financial engineering. This Section considers two separate classes of objections. First, does scaling up actually cancel out the tax? Second, even if it does, is it economically feasible to scale up?

1. *Does Scaling Up Actually Cancel Out the Tax?*

a. Nonprepaid Derivatives Offer No Time-Value Returns

As noted above, although the tax on risk can be negated through scaling up, the tax on time value cannot. A potential problem, though, is that both types of returns are often found *in the same investment*. If both types of returns are intertwined in this way, won't taxpayers prefer a low effective tax rate? If so, inconsistencies could prompt planning, since taxpayers cannot use scaling up to cancel out a high effective tax on the time-value return.

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[109]For a summary of difficulties with these assumptions, see Bankman & Griffith, supra note 13, at 397.

Happily, this problem is much less daunting for an important class of financial instruments: "nonprepaid" derivatives such as swaps, futures, and forward contracts. The reason is that returns on these instruments derive solely from risk, as time-value returns are stripped out. In these nonprepaid instruments, parties bet that a particular asset will outperform (or underperform) the risk-free return.

For instance, instead of buying ABC stock for its current price of $100, the would-be-buyer (called the "long") commits to buy it at a specified date in the future, which is assumed here to be two years. The price on the forward contract (the so-called "forward price") is the current price of the underlying property (here $100), increased by an amount based on the risk-free return, which is assumed here to be three percent. The reason for this extra charge is that the long gets the economic return on the underlying property today, but does not have to pay until a year from now; in effect, the long is borrowing the purchase price from the counterparty (called the "short"), and must pay interest.[110] With a forward price of $106.09, the long makes money if ABC is worth more than this amount after two years, and the short makes money if ABC stock is worth less. In other words, the parties bet whether the underlying property will outperform the risk-free rate. The key point is that the parties to a standard forward contract do not part with the use of any money upon entering into the contract – whether they are long or short – and thus do not earn a return for time value.[111] The same is essentially true for a

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[110]If the underlying property pays a periodic return such as a dividend, the forward price is reduced by the expected value of the dividend. In the above example, ABC stock is assumed not to pay a dividend.
[111]Of course, if the short hedges by owning the underlying property, she will earn a time-value return *on the underlying*. The two positions effectively net to a bond. If time-value returns on the underlying are not subject to an imputation system, a special "integration" rule is needed. See supra Part II.D. The closest analogy under current law is the conversion transaction rule of Section 1258.

standard swap.[112] As a result, these bets are based on pure risk alone. This feature

ensures that taxpayers actually can cancel out the tax by scaling up; assuming such

scaling up is not itself costly – a point that is addressed below – inconsistencies in the

taxation of these nonprepaid instruments should not prompt planning.

Of course, not all derivatives share this advantage. Some require up-front or

intermediate payments and thus offer time-value returns. This group includes prepaid

forwards, contingent debt, and, to an extent, options[113] (as well as more conventional

financial instruments such as stocks, bonds, and commodities). For these instruments,

inconsistencies in the treatment of time-value returns can indeed prompt planning,

assuming the time-value return is large enough. If so, imputation regimes are needed to

ensure consistent treatment of time-value returns on these various instruments but, as

David Bradford has shown, risk-based returns can still be taxed inconsistently.[114]

<div style="text-align:center">b. <u>Nonprepaid Derivatives Can Be Scaled Up Without a Separate</u></div>

<u>Borrowing: The Solution to Professor Weisbach's Mismatch</u>

The last subsection has shown one reason why the agenda in this Article is especially

plausible for derivatives – or, at least, nonprepaid ones: Because these instruments do not

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[112] One difference is that the long on a swap pays the interest charge currently, so this charge does not compound. For a discussion, see supra Part II.B.2 and infra Part IV.D.

[113]The buyer of an option typically pays a premium and, on average, should expect to earn at least the risk-free rate on this payment. Yet with the typical option, this return should be quite small because the premium is only a fraction of the underlying asset's value. For example, consider a one-year option to pay $110 for the underlying, which is currently worth $100 and has an average volatility. This option costs about $17.50. If the risk-free rate is 3%, the annual risk-free return on this premium is approximately 51 cents, or less than half of one percent of the underlying's value. In contrast, time value is more important in options that require a much larger premium – for instance, because they have very long terms or are deep in the money.

[114]See Bradford, supra note 10. I have written elsewhere about the mechanics of imputation for prepaid forwards and options. See *Timing and Character Rules for Prepaid Forwards and Options: A Report of the New York State Bar Association Tax Section*, New York State Bar Association Report # 990 (March 2001), reprinted in 91 Tax Notes 815 (April 30, 2001).

offer time-value returns, it becomes easier to cancel out a tax by scaling up. Fortunately, nonprepaid derivatives also avoid another problem, which David Weisbach has flagged.

He has warned that taxpayers can face a mismatch in tax rates, rendering it impossible to cancel out the tax on risk. In identifying this mismatch, Professor Weisbach assumes that taxpayers have to borrow money in order to scale up. When purchasing assets with borrowed funds, taxpayers have two offsetting returns: the interest expense, on one hand, and the time-value return embedded in the purchased asset, on the other. But what if these offsetting returns are subject to different effective tax rates? For instance, assume that the time-value return that he is earning is taxed at 20%, but the interest is nondeductible (e.g., due to the investment interest limitation)?[115] In this case, the taxpayer faces a negative spread, since his aftertax interest expense exceeds the aftertax time-value return. As a result, it is no longer possible to cancel out the tax on risk by scaling up the position.[116]

However, Professor Weisbach overlooks a solution to this concern: Nonprepaid derivatives avoid the tax-rate mismatch. For this problem to arise, there must be two offsetting cash flows – the time-value return embedded in the risky position and the interest expense – and they must be taxed at different effective rates. Fortunately, this problem does not burden a forward contract or swap because the tax law does not treat it as two offsetting cash flows, but as a single investment. As a result, a single effective tax rate applies to the entire net return. In other words, even though a forward contract or

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[115] See Section 163(d).
[116] See Weisbach, supra note 12 ("[I]f the tax rates are different, the risk-free borrowing and the risk-free component of the risky position will not exactly offset. The difference, which can be viewed as pure, riskless arbitrage profit or loss, is the cost or benefit of eliminating the tax on the risky position.").

swap is economically equivalent to a leveraged purchase, the interest component is not taxed separately.[117]

Given the well developed derivatives market, Professor Weisbach's concern turns out to be unimportant. Obviously, taxpayers can scale up their nonprepaid derivatives without confronting the tax mismatch. In addition, taxpayers can even avoid this concern *for other investments*, such as stocks or prepaid forwards. Instead of borrowing money (and thus facing the mismatch), taxpayers can scale up these positions by entering into nonprepaid derivatives. In short, the derivatives market solves Professor Weisbach's concern.

2. Is it Economically Feasible to Scale Up?

Assuming that taxpayers actually can scale up their risky positions, the previous discussion shows that such scaling up can in fact cancel out the tax. But how feasible is it to scale up? A premise of the agenda proposed here is that taxpayers actually can scale up derivative positions, instead of engaging in planning. Is this plausible?

<u>a. Elastic Supply of Derivatives</u>

Some commentators suggest that it is not realistic for taxpayers to scale up. If the risky bet is a factory or trademark, can taxpayers simply build another one? More generally, if taxpayers need to increase their risky positions, will this increased demand

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[117]The point is easiest to see for a forward contract. In the above example, the taxpayer commits to pay $106.09 in two years. If the stock price rises to $116.09, the tax law does not treat the taxpayer as having $16.09 of capital gain and $6.09 of interest expense (which could be deductible at a different effective rate). Instead, the tax law treats the taxpayer as having $10.00 of capital gain. In general, swaps also are subject to a single tax rate – the one for ordinary income. As noted above, however, there is some potential for a taxpayer-favorable mismatch in the fact that taxpayers can earn capital gain by terminating the swap early.

increase the price of placing risky bets? If so, this increased cost would prevent

taxpayers from completely canceling out the tax.[118]

Of course, it is difficult to generalize about this dynamic effect. As Louis Kaplow

has shown, the government can blunt any price increase by returning its share of risky

assets to the private markets.[119] Even if the government does not do this explicitly,[120] it

may do so implicitly by raising taxes or cutting services when the market is down, while

cutting taxes or expanding services when the market is up. To an extent, moreover,

taxpayers may insure on their own against these fiscal effects. For instance, if they

expect taxes to rise when the market falls – so that they are exposed to market risk in

their "public" portfolio – taxpayers may not scale up their "private" portfolio (i.e., their

personal investments) quite as much. This response obviously tempers any price

increase.[121]

In any event, even if the price of risky investments would otherwise rise, this Article

offers a reason why an increase is less likely for derivatives: Unlike the supply of

physical assets, which ultimately is finite, the supply of derivatives is theoretically

unlimited – and can vastly exceed the supply of underlying property, a process that this

Article calls "financial multiplication."

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[118]Bankman & Griffith, supra note 13, at 398 ("A price increase is plausible because the tax would increase demand for risky assets."). For the sake of simplicity, the term "price increase" is used to describe this phenomenon , but a more general formulation is a decline in the yield.
[119]See Kaplow, supra note 12.
[120]Cf. Kaplow, supra note 12, at 794 ("It does not appear that the government adjusts its portfolio in a conscious manner to offset the effects of taxation or particular tax reforms on investors' risk-taking behavior. Perhaps it should."); Weisbach, supra note 12 ("[C]asual observation suggests the government does not adjust its portfolio . . . .").
[121]See Roger H. Gordon, *Taxation of Corporate Capital Income: Tax Revenues Versus Tax Distortions*, 100 Q. J. Econ. 1, 5 (1985).

To enter into a derivative, the principal requirement is a willing counterparty. A "long" needs to find a "short," and vice versa.[122] If the tax law affects both parties to the derivative equally – giving them the same incentive to scale up – neither should charge extra for doing so. For example, assume that Larry and Sally wish to enter into a cash-settled forward contract based on the value of one share of ABC stock.[123] If the government imposes a 50% tax on both of them, they have the same incentive to double the bet, so neither can extract more favorable terms (such as a higher fee) for doing so.[124] (At the same time, the government obviously collects no revenue, since any gains to Sally are deductible losses to Larry, and vice versa.) In the derivatives market, therefore, scaling up should induce price effects only (1) to the extent that counterparties are subject to different effective tax rates (e.g., because some are foreign or tax exempt) and, even then, only (2) to the extent that these tax insensitive counterparties are not evenly distributed among shorts and longs.[125] Generally, it seems reasonable to assume an even distribution.[126]

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[122]As noted above, a "long" is a bet that the underlying property will appreciate, and thus resembles ownership of the underlying asset. In contrast, a "short" is a bet that the underlying property will depreciate.

[123]Assume that ABC is currently trading at $100 and the risk-free rate is 3%. Under this contract, if ABC appreciates above $106.09, Larry "wins" and Sally must pay him the difference; but if the stock price is worth less than $106.09, Larry must pay the difference. For instance, if ABC is trading at $206.09, Sally pays Larry $100. But if the stock is trading at $90, Larry must pay Sally $16.09.

[124]The relevant price here is the price of entering into the derivative, and not necessarily the price of the underlying, which could be unaffected by an extra tax on derivative securities.

[125]What if the counterparty is a dealer subject to different tax rules, as is typical on the over-the-counter market? Even then, the dealer still may not demand more favorable terms. Assume Larry enters into his contract with Danny, a dealer, instead of with Sally. Although Danny has no *tax* incentive to scale up if he is not subject to the relevant tax increase, he will still want to scale up if "short" customers such as Sally *also* want to scale up. The key assumptions here are that the dealer hedges each "long" derivative with a "short" derivative, and that all the dealer's counterparties are equally affected by the tax. These conditions do not hold if the dealer hedges with the underlying. This could happen if more clients want to be long than short, or vice versa.

[126] Currency markets could be an exception if foreigners tend to line up on one side. I thank Terry Chorvat for this observation.

An important assumption so far is that every party already is paired with a counterparty before the relevant tax increase, so there is no need to bid up the price to attract new counterparties. This generally should be true of derivatives transactions, which are zero net supply bets. In contrast, a price increase is more likely in a market with positive net supply (i.e., in which every trader does not already have a counterparty).[127] Instead of derivatives, then, consider the underlying property such as shares of stock. Assume that a firm's total capitalization is 200 shares, and Larry and Lucy each own 100. In response to a new 50% tax, both want to double their position to 200 shares, so the share price could rise until the one who values the firm more has all 200. Adding derivatives to this market *may* blunt any price increase in the underlying, but doesn't necessarily do so. Sally can keep the price from rising by taking the "short" side of a derivative with Larry and Lucy, [128] but she may be unwilling to do so. Unlike in the zero net supply case – where Sally *already* is a short counterparty when the tax is introduced – she is not already short, so there is no necessary reason that she wants to be.[129] The point of this stylized example is that financial multiplication is likely to be less effective at stabilizing the price of risky assets when a tax increase applies to the underlying property, and not just to derivatives.

b. Credit Constraints

The elastic supply of derivatives lends support to the idea that taxpayers can scale up these instruments cheaply, a precondition of this Article's reform agenda. Even so,

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[127]I am indebted to Martin Shubik and Bill Gentry for this insight.

[128]Even though there are still only 200 physical shares – and one firm, with a finite amount of physical assets – there are now, in effect, 400 notional shares (i.e., the 200 that Larry and Lucy own, and the 200 "notional" shares in the derivative contract), while Sally would have a "short" derivative based on the value of 200 shares. The price does not rise, since the increased demand is perfectly offset by an increase in (notional) supply.

[129]Her willingness depends, first, on her reservation price before the tax increase and, second, on whether she expects the tax increase to raise the price of risky assets.

Noel Cunningham has emphasized another potential constraint on scaling up: In order to cancel out the tax, the taxpayer has to borrow at the risk-free rate (i.e., so the risk-free return earned on the scaled up investment covers the interest expense).[130] In general, wealthy investors, who hold the vast majority of the risky financial investments, can borrow at low cost, if not at quite the risk-free rate.

This is especially true when they scale up with nonprepaid derivatives such as swaps or forward contracts. As an economic matter, these instruments resemble debt-financed investments, but the implicit interest charge is not much higher than the risk-free rate.[131] The spread is modest because derivatives are available only to strong credits.[132] Also, derivative counterparties receive special protection under the bankruptcy laws.[133] Indeed, some of the spread is a fee for the dealer's services, not compensation for credit risk.

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[130] Since low income taxpayers cannot borrow at such a low rate, given their weak credits, Professor Cunningham raises a vertical equity concern: taxpayers with strong credits are more adept at avoiding tax. See Cunningham, supra note 13. A problem with this argument, however, is that taxpayers with poor credits get something in return for paying higher interest rates. They are more likely to pass on risk of loss to creditors. Id.

[131]See, e.g., Roger Lowenstein, When Genius Failed: The Rise and Fall of Long-Term Capital Management (2000) ("Typically, swap rates . . . trade at a slight spread above the interest rate on the country's government debt."). For much of the 1990s, swap spreads were less than 35 basis points. In June 2003, the rate on a one-year interest rate swap was eight basis points higher than the rate on a one-year Treasury. See Fed. Res. Statistical Release (June 27, 2003) (quoting .94 as yield on one-year Treasury and 1.02 as yield on one-year interest rate swap). These spreads obviously are more favorable than many other methods of financing. For example, one website quotes an adjustable mortgage rate at 3.55% for a jumbo mortgage. See www.doctormortgage.com/rates.asp. Likewise, according to the Mortgage Bankers Ass'n of America, the spread between the Libor swap rate and mortgage rates generally ranges between 84 and 125 basis points. Letter from MBAA to FASB, March 31, 2000, posted on www.MBAA.org.

[132]For instance, investors must satisfy minimum wealth requirements for over-the-counter derivatives. For a discussion, see Schizer, supra note 31.

[133]Derivative counterparties are entitled to "net" two positions against each other. For example, if a counterparty has two derivatives with a bankrupt person – one with a profit, and the other with a loss – the counterparty can withhold payment on the lost bet as security for payment on the profitable bet. Put another way, the bankruptcy trustee is not allowed to cherrypick, honoring only contracts with a profit while avoiding those with a loss. These so-called "netting" agreements have become increasingly common. See Bank for International Settlement Quarterly Review 39 (June 2003) (noting that bilateral netting has risen as much as 81% in the fourth quarter of 2002).

Another credit-related cost is that, in some cases, taxpayers have to pledge collateral such as Treasury securities – though, notably, they pledge considerably less than the full value of the underlying property.[134] This step is costless for taxpayers who otherwise want to own Treasuries, for instance, to have a fixed income element in their portfolio; while taxpayers surrender *possession* of these securities, they keep the economic return.[135]

Admittedly, credit constraints are not insignificant, even for the creditworthy taxpayers who are eligible to enter into over-the-counter derivatives. Derivatives dealers monitor the size of the positions outstanding with a given counterparty and, at some point, they become nervous if those positions become too large. Yet taxpayers should be able to scale up a fair degree – enough to cancel out reasonably significant tax differentials – before this concern becomes serious. In sum, credit constraints should be a relatively minor issue in this high-end market.

c. Regulatory Constraints

Although credit constraints should not be severe for derivatives – a fact that lends plausibility to this Article's reform agenda – an offsetting factor is that derivatives carry unique regulatory burdens. For example, regulated financial institutions – most notably, derivatives dealers – face costs that increase with the size of their positions. They may face so-called "regulatory capital charges,' which means more equity capital must be

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[134]For example, 28% of exposure on over-the-counter equity derivatives is collateralized. See 2003 ISDA Margin Survey. It is worth pressing the assumption that taxpayers have to pledge additional collateral when scaling up. This is odd if the reason for scaling up is to cancel out the tax – in effect, to cover the government's share. In this case, the taxpayer does not undertake a larger (aftertax) bet *for herself*; rather, if the scaled up position leads to extra losses, the government will bear those extra losses. Since the taxpayer's *personal* exposure is not increasing, why might a counterparty want extra collateral? Because tax losses reduce *overall* tax liability, and the counterparty may have trouble getting a security interest in any tax refund arising from their contract.

[135]While all counterparties accept Treasuries as collateral, an increasingly common practice is to pledge cash instead. See 2003 ISDA Margin Survey. Good customers earn a rebate on this cash.

committed to the enterprise.[136] These charges may pass through to customers.[137] To a significant degree, though, derivatives dealers can reduce regulatory capital charges and other regulatory burdens by routing trades through offshore entities. It is not uncommon, for instance, for traders in New York to "book" a trade in London.

B. *Ex Post Reclassification*

The previous Section has shown that, at least for derivatives, it is plausible for taxpayers to scale up their positions at fairly low cost. As a result, if the gain-loss ratio is set at one for all derivatives, taxpayers will not have reason to favor one type over another, even if economically comparable derivatives are taxed very differently. For instance, forward contracts can be taxed at a zero rate, while swaps are marked to market.

An important caveat, though, is that taxpayers may well be indifferent between these two tax rules *at the moment they place their bet*, but the indifference will melt away as soon as they know how the bet has fared. For example, a taxpayer with a successful swap will have every incentive to pretend that it really was a forward contract (taxed at a zero rate). This is true even if the taxpayer had scaled up (i.e., because she intended the position to be a swap that was marked to market). Once she knows the bet has paid off, why wouldn't she want to keep all of the gain, instead of sharing some with the government?

Correspondingly, a taxpayer with an unsuccessful forward contract will have every incentive to pretend that it really was a swap (taxed under mark-to-market, so losses are

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[136]A financial institution obviously has market-based reasons to keep its credit strong; to an extent, then, these charges overlap with the credit constraints discussed above. Yet in some cases the relevant regulatory regimes do not accurately measure credit risk. According to ISDA, "if the New Basel Accord attains its objective of reducing if not eliminating inconsistencies between economic and regulatory capital, the regulatory motivation will fall in importance." 2003 ISDA Margin Survey.

[137] Position limits are another such constraint. For a discussion, see Schizer, supra note 31.

deductible). Again, this is true even if the taxpayer had reduced the size of her bet (i.e.,

because she intended the position to be a forward that was taxed at a zero rate). Once she

knows the bet has been unsuccessful, why wouldn't she want to transfer losses to the

government, instead of bearing them all herself?

   The lesson here is that inconsistencies do not prompt planning as long as taxpayers

precommit to their treatment. In other words, we need clear lines defining the kind of bet

that is subject to each sort of rule. In our example, a forward contract must be clearly

distinguishable from a swap. These lines need to be clear enough, or they will prove a

focal point for residual planning.

   At first blush, this may seem to be a daunting problem, given the economic similarity

of various derivatives. But the problem should not be insoluble. In fact, current law

already deals with this sort of line drawing problem (i.e., since current law already treats

these instruments inconsistently). Relatively formal conventions are used. For example,

how does the tax law distinguish a forward contract from a swap? Swaps provide for at

least one periodic payment every year. While my sense is that these classificatory lines

are relatively clear already, and thus are hard to game ex post, it is possible to clarify

them further. As an added backup, policymakers can adopt an identification system like

the one used for the hedging rules and other similar elections; in other words, taxpayers

can be required to identify in advance how they are treating an investment for tax

purposes.

C. Sectoral Inconsistency

   The claim so far is that inconsistencies in the tax treatment of different types of

derivatives will not prompt planning, as long as the gain-loss ratio is set at one for each

type. But what if we broaden our lens beyond derivatives? Obviously, the strategy proposed here – a gain-loss ratio of one and an imputation system for time-value returns – becomes all the more appealing if coordinated with comparable reforms for other assets, such as stocks, bonds, and real property.[138] On the other hand, the reform strategy will not discourage planning to the extent that in other parts of the economy (1) the gain-loss ratio for risk diverges from one or (2) time-value returns or wages are taxed differently. Needless to say, taxpayers will have tax-based reasons to shift in or out of derivatives, depending upon how their treatment compares to that of other investments.

This problem is significant because it is politically unrealistic to expect this reform proposal to be implemented across the board to investments other than derivatives. An important question, then, is how the proposal compares with current law for these investments. By setting the gain-loss ratio at one for derivatives, would policymakers be shutting down the derivatives market? Alternatively, would they be giving away the store? At first blush, readers might suspect that the proposal here is a boon for the derivatives market, on the assumption that gain-loss ratio is higher than one for other investments. However, the gain-loss ratio for derivatives *now* is probably lower than one, so raising it to one amounts to a tax increase.

Even so, it is still important to ask what the gain-loss ratio is for other investments under current law. To do so, this Section considers three issues: rates; timing rules; and the treatment of time-value returns. The bottom line is that the gain-loss ratio could well

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[138] Although it is beyond this Article's scope to explore the details of applying this agenda to other types of assets, it is worth mentioning two points. First, an important problem is that, with some of these assets, scaling up will be costly. For example, building two factories can, indeed, be more costly than building one. One response to this problem is that a low effective tax rate should be used for assets that are hard to scale up (i.e., so that less scaling up is needed to cancel out the tax). Yet this raises a second issue. Whenever a low tax rate is used, policymakers need to focus more rigorously on distinguishing risk from time-value returns and wages.

be close to one on average, but is likely to diverge in particular circumstances – a fact that will lead to some planning.

        1. *Tax Rates*

First, the tax rate for many risky investments is (perhaps surprisingly) flat under current law, especially for passive investments. The long-term capital gains rate generally is 15%,[139] and this rate applies to a sizable share of investment profits and losses, including dividends. Similarly, the corporate tax rate is fairly flat as well, as the 35% rate kicks in at a low threshold. Other investments are taxed at a zero (and thus flat) rate, such as IRAs, life insurance, and residential real property.

Of course, not all risk-based returns are taxed at a flat rate under current law. For one thing, the nonrefundability of losses can be important when undiversified bets represent a large proportion of a taxpayer's income, although carry forwards can mitigate this effect substantially. Another divergence from flat rates is that short-term capital gain is taxed at (progressive) ordinary income rates,[140] and some risk-based returns are taxed as ordinary income.[141] In addition, ordinary (progressive) rates apply to the active business income earned by individuals (e.g., through sole proprietorships and partnerships).[142] Yet a sizable share of this income is earned by taxpayers whose salaries already put them in the top bracket. For them, additional income (as well as a reasonable

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[139]For low-income taxpayers (who typically have few capital-gain yielding investments), a lower rate applies.

[140]These rates apply to capital assets that are held for less than one year, and also to profits from short sales and short securities futures.

[141]For example, rental and interest income each contain risk as well as time-value components, but are taxed as ordinary income (unless the lease or bond is sold at a profit, in which case this profit, which represents the capitalized value of future payments, can be taxed as long-term capital gain in some cases). Generally, payments on notional principal contracts are taxed at ordinary rates as well.

[142]Since human capital contributes significantly to these entrepreneurial returns, they are not the focus of this Article. See supra Part II.A.2.

level of deductions) will not change their bracket, so the gain-loss ratio for marginal income and deductions is effectively one as well.

2. *Timing Rules*

Another important influence on the gain-loss ratio is timing. As noted above, the timing option tends to push the ratio below one, while the capital loss limitation exerts offsetting pressure. What is the net effect? Data limitations are formidable here, but an important recent study sheds some light on the question.[143] Alan Auerbach, Leonard Burman and Jonathan Siegel use panel data on realizations of capital gains and losses from 1985 to 1994 for approximately 13,000 filers, who are disproportionately wealthy. The study has two provocative results. First, it is relatively rare for taxpayers to shelter gains with losses – and even more rare to realize more losses than gains.[144] Therefore, they conclude that most taxpayers do not make aggressive use of the timing option. This finding also implies that the capital loss limitations are not an especially powerful constraint (i.e., since many taxpayers have gains that go unsheltered).

The second finding, which is perhaps more important for our purposes, is "that a minority of taxpayers – mostly with higher incomes and wealth – manage to shelter all or most of their gains with losses."[145] This group grew over time, so that "[a]s many as one-third of the wealthiest taxpayers were able to realize their gains without immediate tax . . . in the early 1990s." [146] Notably, a salient characteristic of this tax-savvy subset is that many had engaged in at least one derivatives transaction.[147]

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[143]See Auerbach et al, supra note 36.

[144]Specifically, two-thirds of taxpayers with gains or losses are able to shelter less than 10% of gains. About 12% of taxpayers shelter all their gains, and only about 6% of all gains are fully sheltered. Id. at 374.

[145]Id. at 380.

[146]Id. For another empirical study of a type of sophisticated tax planning, in which corporate taxpayers simulate a sale without triggering tax, see William H. Gentry & David M. Schizer, *Frictions and Tax-*

The study probably understates the power of the timing option, moreover, because of an important data limitation. The study does not measure gains (and, for that matter, losses) that are *never realized*.[148] In all likelihood, at least some wealthy taxpayers in the sample have substantial unrealized gain.

Thus, it is reasonable to conclude that the gain-loss ratio for capital gains is fairly close to one for most taxpayers, and is lower – perhaps even substantially lower – for a sophisticated (and growing) core of wealthy taxpayers.[149] Even among sophisticated taxpayers, the gain-loss ratio will vary with the taxpayer's situation. As noted above, the capital loss limitations are irrelevant to someone who already has gains she is going to recognize (e.g., from hedge fund investments), so the gain-loss ratio on her other risky bets should fall below one. More generally, the combined effect of the timing option and loss limitations should vary across taxpayers, causing a gain-loss ratio either above or below one.

3. *Time-Value Returns*

Motivated Hedging: An Empirical Exploration of Publicly-Traded Exchangeable Securities, 56 Nat'l Tax J. 167 (2003).

[147]The study's measure of sophistication is whether the taxpayer has ever reported gain or loss from options, commodities, future contracts, or short sales. Auerbach et al, supra note 36. at 366. This sophisticated subset is more than twice as likely as other taxpayers in the sample to shelter all their gains from tax in a given year. Id. In every year of the sample, moreover, 20% of these sophisticated investors are able to shelter *all* their capital gains (although it is not always *the same* 20%). Id. Gains from derivatives are also much more likely to be sheltered than gains from other investments. Id.

[148]The authors try to measure this important fact indirectly through the Survey of Consumer Finances. They posit that if high-income taxpayers tend to defer the realization of gains, then unrealized gains should be more concentrated among high-income people than realized gains. The survey does not support this prediction, although the authors concede that this data sample – the only one available – gets few high-income respondents. Id. 378-79. Thus, the authors conclude that "much further research is needed in the area. . . . We could make only indirect inferences about the gains that are never realized but represent the most successful avoidance strategy." Id. at 380.

[149] See Schenk, supra note 13, at 423 (noting that loss limitations "have no effect on large numbers of taxpayers, who despite nominal limitations on the deductibility of losses, are able to shift sufficient risk to the government to eliminate the burden of the tax on the return to risktaking").

Even if the gain-loss ratio is above one for the underlying property, there is still a way in which investors in derivatives are taxed more heavily: They are more likely also to hold high-taxed debt instruments. The reason is that a swap or forward contract does not offer a time-value return, and thus is not economically equivalent to the underlying property.[150] To replicate the underlying, the taxpayer must also buy debt,[151] which bears a relatively heavy tax burden (i.e., accelerated timing at ordinary rates). In contrast, the underlying offers a time-value return that is not separately taxed as interest under current law. As noted above, any investment that requires a prepayment compensates investors for time value. When the underlying is subject to the realization rule, no tax is due on embedded time-value returns until the property is sold. If the taxpayer holds the property for more than a year, the long-term capital gains rate applies; if the taxpayer holds the property until death, the basis steps up and no income tax is ever due.

To sum up, then, the treatment proposed here for derivatives generally should not be more favorable than the treatment of other risky positions is likely to be. Yet the word "generally" is important. Tax considerations will motivate some taxpayers either to shift in, or out, of derivatives. Taxpayers who can make aggressive use of the timing option (e.g., because they already must recognize capital gains) may prefer the underlying property, while taxpayers who are otherwise constrained by the capital loss limitations are likely to prefer derivatives. All else being equal, these tax-based preferences suggest the superiority of comprehensive reforms. But all else is not equal, since fundamental reforms are unlikely. In their absence, the problem of sectoral inconsistency must be considered, but it should not be serious enough, by itself, to scuttle this proposal. After

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[150]If the derivative *does* offer time-value returns, as do prepaid forwards, options and contingent debt, the agenda here would use an imputation regime to tax these returns as interest.
[151]This is an application of "put call parity." For an explanation, see Warren, supra note 8.

all, given the aggressive strategies available for derivatives under current law, we already have sectoral inconsistency in spades.

D. Progressivity

To keep inconsistencies from prompting planning, the gain-loss ratio must be one for risk-based returns on derivatives. An implication is that progressive rates cannot be used. Otherwise, the gain-loss ratio would exceed one, leaving taxpayers unable to cancel out the tax by scaling up and, thus, inclined to prefer deferral and low rates.

Although progressivity is a significant value,[152] it is a tolerable cost not to use progressive rates for derivatives. For one thing, derivatives already are taxed at essentially flat rates under current law. The long-term capital gains rate is a flat 15% for individuals. Even ordinary rates "feel" flat as well, because only wealthy taxpayers have access to derivatives and, typically, their other income puts them well within the maximum bracket; as a result, extra income from derivatives does not raise their rate, while deductions (in reasonable amounts) do not lower it. If anything, the rate structure is even more flat for corporations that use derivatives. So the agenda here is at least as progressive as current law, and likely more so. After all, taxpayers have been using derivatives to shelter income from other sources. By shutting down the sheltering, this reform agenda would *increas*e the system's progressivity.

In addition, an important argument for progressivity – the need to insure taxpayers against having low incomes – does not apply to derivatives. In the wage market, it is desirable for the government to redistribute income from winners to

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[152] For an argument that all returns, including risk-based ones, should be taxed at progressive rates, see Lawrence Zelenak, Taxing (or Not) the Returns to Risk-Bearing, Working Paper (2004).

losers,[153] since private insurance cannot offer this service.[154] However, for two reasons, this rationale does not work for derivatives. First, a government role is unnecessary, since taxpayers already can insure themselves against the relevant risk (i.e., losses on derivatives) by placing smaller bets. Second, progressive rates are an odd way to provide insurance for derivatives. The problem is that insurance is supposed to help the loser, but a gain-loss ratio above one (by definition) offers a less valuable deduction, and thus is less helpful than, a gain-loss ratio of one.[155]

For derivatives, then, a gain-loss ratio above one looks more like an excise tax than social insurance. It is a way for the government to take a cut off the bet, claiming more from the winner than it gives to the loser. Since every taxpayer will win some and lose others, mere participation in the derivatives market saddles taxpayers with a positive overall tax burden, even if they have not netted a pretax profit. Should we want such an excise tax? A comprehensive answer is beyond this Article's scope, but two concerns come to mind. First, although the excise tax would fall more heavily on wealthy taxpayers, since they are more likely to use derivatives, there obviously are other ways to pursue this sort of distributional goal, including a more progressive rate structure for wages and time-value returns. Second, a gain-loss ratio above one for derivatives denies

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[153] To see the application to wages, assume that a taxpayer does not know whether her wages will be high or low. Before she finds out, it makes sense to offer the government a larger share of a high wage so that, in return, she can pay a smaller share of a low wage. This way, she transfers money from times when she has a high wage (and, given diminishing marginal utility, values the last dollar less) to times when she has a low wage (and thus values the last dollar more).

[154] Customers know more about their earnings prospects, and those who expect low wages are more likely to want this insurance. The tax system is less susceptible to this selection problem because participation is universal.

[155] See David A. Weisbach, The (Non)Taxation of Risk, working paper ("Those who lose their bets would be much happier with a flat rate schedule than a graduated rate schedule.")

us the efficiency benefits emphasized in this Article, including freedom to tolerate inconsistencies in the service of administrability.[156]

While many readers will agree that progressivity is unnecessary here, some may not. For them, an important theme of this agenda nevertheless remains critical: Policymakers need to focus on differences between the government's share of gains and losses. For example, there are efficiency costs when taxpayers have a timing option, even if the gain-loss ratio would otherwise exceed one (e.g., due to progressivity). Thus, policymakers still need effective and nondistortive responses to the timing option. More generally, policymakers who pursue progressivity obviously want the gain-loss ratio for derivatives to be *at least* one – and, unfortunately, chances are that it is lower under current law. Which of the reform proposals discussed above is most helpful? Mark-to-market accounting with progressive rates obviously does the trick. So does the fixed term approach, if progressive rates are used and an interest charge is added to compensate for deferral. In contrast, the zero rate approach obviously does not serve this purpose.

E. Revenue

Another limitation of this reform agenda is that it has a very modest revenue goal: to prevent taxpayers from using aggressive strategies with derivatives to shelter other income. In other words, the objective is to shift from *negative* revenue from derivatives to *zero* revenue. Yet although it is theoretically possible to collect positive revenue from derivatives – by taking more from winners than we refund to losers, as noted above – this agenda does not seek to do so. Rather, with a gain-loss ratio of one, the system would

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[156] Similar arguments can be made for risk-based returns on investments other than derivatives, and an advantage of using a gain-loss ratio of one for these other assets is that sectoral inconsistency is less of a problem. But setting aside the question of whether we would *want* progressive rates for these other investments in an ideal world, the reality is that the current rate structure for investments other than derivatives is fairly flat as well. See supra Part IV.C.1.

collect no net revenue from derivatives, at least on a risk-adjusted basis. Obviously, no revenue can be collected if symmetry holds because, as noted above, one party's taxable gain is another's deductible loss. But even without symmetry, the system collects no revenue, on average, if each taxpayer is just as likely to have losses as gains.

Of course, gains are more likely if taxpayers earn a premium for bearing risk.[157] If this is the case, there might seem to be revenue at stake here. For example, mark-to-market could raise more revenue than the zero rate approach.[158] But these differences are unimportant for two reasons. First, evidence suggests that the risk premium has declined substantially in recent years.[159] Second, even if the risk premium is still positive, so that the government's share of risky bets has a positive expected value, the *market value* of this revenue stream is zero. The reason is that the government has to bear risk in order to collect this revenue. The revenue, which is the government's share of the risk premium, is just enough to induce the marginal investor to bear equivalent risk. In effect, a tax on

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[157]Inflation supplies another reason why (nominal) gains are more likely than (nominal) losses, at least when taxpayers take "long" positions (i.e., betting that the value of an asset will rise). While our system is not fully indexed for inflation, many believe it should be. In this spirit, collecting inflation-based revenue should not be a priority, though policymakers may need to consider problems with partial indexation (including the treatment of liabilities). Yet these issues are relatively unimportant now – and are not considered in this Article – since inflation is hovering at historic lows.

[158] The assumption here is that taxpayers (and not a tax indifferent counterparty) would be the one bearing the risk and thus earning the premium on average (e.g., by being long instead of short), but, as an empirical matter, this will not necessarily be the case.

[159]This premium generally is calculated at about 7% over the last century, and at about 4% over the last two centuries. Yet Fama and French find a much lower number, using a methodology that focuses on dividend and earnings growth instead of on average stock price return. See Eugene Fama and Kenneth R. French, *The Equity Premium*, 58 J. Fin. 637 (Apr. 2002) (finding a premium of 2.55% and 4.34% based on dividend and growth rates, respectively, during the period from 1951 to 2000). Similarly, Siegel claims that the historical premium is lower than 7%, in part due to transactions costs and in part because the number understates the risk-free return: the latter, Siegel argues, may have been larger ex ante than it turned out to be ex post, due to unanticipated inflation. Siegel, supra note 56; see also Jagannath et al, *The Declining U.S. Equity Premium*, N.B.E.R. Working Paper 8172 (finding that, since 1970, the equity premium has declined to 70 basis points). In any event, Siegel predicts that the premium will be less than 1% in coming years. Siegel, supra. In a recent survey, Ivo Welch finds that forecasts among finance economists have declined. Ivo Welch, *The Equity Premium Consensus Forecast Revisited*, Cowles Foundation Discussion Paper No. 1325 (Sept. 2001) (median forecast was 3% in 2001 survey, compared with 6% in 1998 survey).

the risk premium is a lot like a direct government investment in a portfolio of risky derivatives.[160] Unless there is a reason why the government is better at spreading risk than the derivatives market[161] -- an unlikely prospect – this sort of government risk-bearing seems unwise.[162] Thus, in deciding how to set the gain-loss ratio at one (e.g., whether to use mark-to-market, a fixed term, or a zero rate), policymakers should focus on considerations other than revenue.

V. Applications of the Agenda for Reform

So far, this Article has laid out the broad outlines of a reform agenda, and has analyzed its strengths and weaknesses. The next step is to offer concrete applications of this agenda. What does it have to offer for cutting edge doctrinal issues in the taxation of derivatives? Let's return to some inconsistencies and imbalances mentioned earlier. We begin with inconsistencies in the reach of Section 1032, and in the treatment of hedge funds, hedge fund derivatives, and hedge fund life insurance. The rest of the Part focuses

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[160]Weisbach, supra note 155 ("[T]his is just the revenue the government would get from taking risky market positions and it has zero risk adjusted net present value.").

[161]Cf. Bankman & Griffith, supra note 13 ("[T]he desirability of taxing risk premia cannot be determined without a more adequate theory of how government spreads its risk back among its citizens"). After all, at the end of the day, this risk doesn't stay with the government. "Individuals must ultimately bear this risk," Roger Gordon observes, "whether through random tax rates on other income, random government expenditures, or random government deficits." Gordon, supra note 121, at 5.

[162]Government risk-spreading is less necessary in sectors where financial markets are well developed. See Atkinson & Stiglitz, supra note **12**, at 125 ("If, for example, the private market provides complete risk-sharing for all but `social risks' (like the business cycle), then the argument that the government can increase risk-sharing through the tax system is less convincing."); Jeff Strnad, *Some Macroeconomic Interactions With Tax Base Choice*, 56 S.M.U. L. Rev. 171, 192-4; Gordon, supra note 121, at 6 (claiming that it is plausible to assume that "the risk in government tax revenues is as costly to bear as privately traded risk"). Indeed, government risk-spreading seems more justified in sectors where private insurance is unavailable. See, e.g., Kenneth J. Arrow & Robert C. Lind, *Uncertainty and the Evaluation of Public Investment Decisions*, 60 Am Econ. Rev. 364, 375 (1970) ("[W]hen risks are publicly borne, the costs of risk-bearing are negligible"); Strnad, supra, at 193 (noting that government insurance is valuable in sectors such as construction in which "it may be difficult even for sophisticated parties to construct appropriate hedging portfolios"). Even then, there is a risk that the government will spread risks in a way that is politically expedient but not feasible (e.g., to future generations). I am indebted to Jeff Strnad for this point.

on three imbalances: flaws in the character and timing rules for swaps, and in the wash sale rules.

A. Section 1032

In an important new paper, Alvin Warren raises concerns about the scope of Section 1032.[163] This provision applies a zero tax rate to the firm's own stock and warrants, but does not expressly reach other types of derivatives, such as swaps. Does this inconsistency trigger planning? Professor Warren believes it can,[164] emphasizing that firms can take offsetting positions to generate a tax benefit in some circumstances. For example, the firm can buy a call and sell a put (earning tax free income as the stock price rises) while entering into a short position on an equity swap (deducting losses as the stock price rises).

Yet as Professor Warren acknowledges, this arbitrage is attractive only if the firm knows that the stock price is going up, for instance, through private information. Indeed, if the stock price declines, the firm has a corresponding tax *detriment*: nondeductible loss on the options matched by taxable gain on the swap. To my mind, this is not an attractive planning strategy. If the firm knows that the stock price is going up, there are easier ways to profit. Why not simply buy back as much stock as possible? In any event, how often can managers be *certain* that their stock price will rise or fall? Predictions are hard because stock prices sometimes reflect general market and industry conditions, about which managers have no special expertise.[165] In cases where firm-specific information is

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[163] See Warren, supra note 15.

[164] Professor Warren also raises a second concern about current law: that Section 1032 is inconsistent with the anti-deferral purpose of the corporate tax. This issue is beyond this Article's scope. Id.

[165] See Zohar Goshen & Gideon Parchomovsky, Insider Trading, Markets, and "Negative" Property Rights in Information, 87 Va. L. Rev. 1229 (2001).

especially important, moreover, the securities laws keep (or at least are supposed to keep)

firms from trading based on it.

Instead of focusing on this arbitrage, then, this Article counsels a different

assessment of Section 1032 or, at least, an emphasis on different problems. First,

imbalances, rather than inconsistencies, are inherently problematic. Policymakers need

to ensure that, on each type of instrument, the gain-loss ratio is one. If gains are not

taxable, losses must not be deductible. As a result, the main problem with Section 1032

under current law – and the main source of arbitrage, at least of risky returns – is that

there is *uncertainty* about the treatment of swaps and forward contracts. Although

Section 1032 does not expressly cover them, some advisors conclude that they are

covered nevertheless, using purposive statutory interpretation. Thus, an important

concern – but one that Professor Warren does not emphasize – is that aggressive

taxpayers whipsaw the government, invoking Section 1032 for profitable swaps but not

unprofitable ones.[166] In short, the first priority is to clarify the rule. Once it is clarified,

risk-based arbitrages become much less likely, since market uncertainty, reinforced by

the securities law, serve as important constraints on tax planning.

Turning to the second prong of this Article's reform agenda, time-value returns

have to be addressed separately, since setting the gain-loss ratio at one is not sufficient to

block planning involving time-value returns. In this spirit, Section 1032 should not

permit corporations to earn what is in effect interest income tax-free; although Professor

Warren agrees with this point, it is not the focus of his analysis.[167] As an illustration of

the problem, assume that a corporation pays $100 million dollars to buy back its stock

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[166] Professor Warren mentions this issue in a footnote. See Warren, supra note 15.
[167] This issue also is addressed in a footnote. Id.

and, simultaneously, buys a put and sells a call that, in combination, obligate the firm to sell the same amount of stock for $110 million in two years. These two transactions net to a loan of $100 million, generating $10 million of interest income. Notwithstanding this substance, the form technically is a tax-free profit from selling stock. A rule is needed to impute interest income on this transaction, so that Section 1032 does not apply to the $10 million of interest. This step, along with a clear statement of when Section 1032 applies to risky positions, would go a long way toward shutting down arbitrages involving Section 1032, even if inconsistencies remain.

B. Hedge Fund Derivatives and Life Insurance

The agenda here also gives guidance about another important topic: derivatives and variable life insurance policies that are based on the value of hedge funds. The underlying funds are taxed at a high effective rate because they trade actively, generating short-term gains (or losses) that are taxed (or deducted) currently. In contrast, hedge fund derivatives used to offer deferred long-term gain before Congress targeted the practice in 1999 with the constructive ownership rule of Section 1260. Even today, a zero rate is available with a "life insurance wrapper," a policy in which the death benefit is based on the performance of a designated hedge fund.

What, if anything, is troubling about these inconsistencies? After all, this Article has emphasized that, as long as the gain-loss ratio is one, risk-based returns can be taxed inconsistently without prompting wasteful planning. If direct investments in the hedge fund are taxed at a higher effective rate, why can't investors simply scale up these positions to cancel out the tax? Thus, was Section 1260 necessary? Is further action

needed for hedge fund life insurance? Consistent with the agenda described here, at least

two conditions have to be policed.

1. *Gain-Loss Ratio of One*

First, the gain-loss ratio has to be one. However, the ratio was below one for

hedge fund derivatives before Section 1260 was enacted, since these derivatives offered a

timing option. The effective tax rate on gains was low due to deferral and the long-term

capital gains rate, but losses could be accelerated by terminating the derivative early. In

addition, when swaps were used, an ordinary deduction for periodic payments was

arguably available. To an extent, Section 1260 has remedied these imbalances,

mitigating the timing option by imposing an interest charge on gains (but not losses), and

mitigating the rate imbalance by taxing gains at ordinary rates.

Notably, though, Section 1260 is not the only way, or necessarily the best way, to

remedy these imbalances. For example, the interest charge and ordinary rates apply only

to a subset of gains (i.e., gains that would have been short-term if the taxpayer had

invested directly in the underlying fund). As a result, some residue of the timing option

and rate imbalance remains. Notably, the mark-to-market, fixed-term, and zero-rate

approaches discussed above also could have remedied these imbalances, without leaving

this gap. In addition, if one of these approaches had already been the general rule for

derivatives, there might well have been no need for a special rule for hedge fund

derivatives, so the complexity associated with a special rule could have been avoided.

Finally, Section 1260 does not expressly address hedge fund life insurance. Do

these investments require special attention as well? A provocative implication of this

analysis is that they may not. The zero rate applicable to insurance is much like the zero

rate approach proposed in this Article. Whereas gains are not taxed, losses are not deductible. Paradoxically, for risk-based returns, this treatment is not more favorable than other alternatives that set the gain-loss ratio at one.

2.Time-Value Returns

The second prong of the reform agenda is to tax time-value returns separately and consistently. Before Section 1260 was enacted, then, any time-value returns embedded in a hedge fund derivative were taxed too favorably, benefiting from deferral and the long-term capital gains rate.[168] To an extent, Section 1260 addressed this problem by applying ordinary rates and charging interest to compensate for tax deferral. Yet the scope of these remedies is limited, as noted above, to gains that would have been short-term if the taxpayer had invested directly in the underlying fund. Any time-value returns embedded in the rest of the taxpayer's gain continue to be undertaxed.

This problem is even more acute for hedge fund life insurance. A zero rate requires policymakers to take particular care in policing the line between time-value and risk-based returns. Under current law, this line is not policed at all, as the zero rate applies to time-value returns as well. This problem needs to be addressed – not only for hedge fund life insurance, but for *all* variable life insurance contracts.[169]

3.Caveat About Sectoral Inconsistency

Even so, an important caveat about hedge fund derivatives and life insurance should be acknowledged. This Article's reform agenda stops planning – and, more

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[168] The extent of this problem should not be overstated since, as noted above, nonprepaid derivatives such as conventional swaps and nonprepaid forward contracts would not offer a time-value return. As a result, this issue was largely limited to prepaid forward contracts.

[169] To an extent, the modified endowment contract rules begin this work under current law. Taxpayers cannot borrow tax-free against a life insurance policy that front loads premiums beyond a certain level. Yet this remedy is not complete. For one thing, it does not affect taxpayers who plan to hold the policy until they die. In addition, considerable front-loading is allowed before the penalty kicks in.

generally, inconsistencies in risk-based return do not inspire planning – only if the gain-loss ratio is one for all possible substitutes. A potential concern here is that the gain-loss ratio for direct investments in hedge funds might be above one, at least for some taxpayers (e.g., because losses are not currently deductible). If this is the case, it is not enough simply to set the gain-loss ratio at one for hedge fund derivatives and life insurance, since these instruments would still be taxed more favorably than the underlying property. In short, sectoral inconsistency may be a problem here, and it may support the idea that consistency – and not just a gain-loss ratio of one – is needed. Section 1260 delivers something like consistency, and the point may be that anything less is insufficient. By the same token, the zero rate approach for life insurance would prompt planning if the gain-loss ratio for underlying fund investments exceeds one.

C. Character of Swap Payments

Let's turn to another important problem: the character of swap payments. Other commentators have emphasized the importance of matching the character of swap payments with the character of economically comparable instruments. But this goal is impossible since these substitutes are themselves taxed inconsistently. For instance, returns on the underlying property are usually capital, whereas returns on contingent debt are ordinary.[170] Yet as this Article shows, consistency is not essential to constrain tax planning. Indeed, character rules can vary even for different types of swaps. Rather, the priority needs to be ensuring that gains and losses have the same character *on any given swap*; relatedly, taxpayers have to commit to this character before knowing whether they have gains or losses.

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[170] See, e.g., NYSBA Tax Section, The Timing of Income and Loss from Swaps Providing for Contingent Payments, reprinted 93 Tax Notes 761 (Dec. 24, 2001).

Unfortunately, current law does not conform even to this minimal condition. Taxpayers can choose their character *after* learning whether they have gains or losses. Early termination or a sale yields capital character (e.g., for gains), while regularly scheduled payments yield ordinary character (e.g., for losses).

In response, a balanced character rule is needed, and it almost doesn't matter what it is. All told, ordinary character is preferable because of the second prong of the reform strategy discussed here: that is, the need to provide consistent treatment for time-value returns and wages. If the character is capital, policymakers will have to scrutinize swaps more carefully for hidden time-value returns or wages, a task that is not always easy.[171] The stakes obviously are lower if the character of swaps is ordinary.[172] To be clear, this will require changes in the treatment of sales and terminations.[173]

If ordinary character is used for swaps, four refinements are needed. First, since the capital loss limitation will not apply, other constraints on the timing option are essential, including either mark-to-market accounting or the fixed-term approach. (Indeed, since these constraints are more precise than the capital loss limitations, they are preferable even if policymakers choose capital character instead.) Second, if other instruments are treated as capital in character – for instance, as are forward contracts and bullet swaps under new proposed regulations[174] – clear guidance is needed to distinguish them from swaps. Otherwise, taxpayers might be tempted to call an instrument a swap if

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[171] For instance, assume that a taxpayer enters into two offsetting swaps that are separated by a brief period of time. For instance, the taxpayer makes a given payment in January, and receives a (slightly larger) payment in July. The two swaps will net to a loan, and the difference between these two payments will be akin to interest. By looking at either swap in isolation, though, policymakers would be hard-pressed to find the time-value return.

[172] Even then, there are still reasons to distinguish interest from other ordinary income, including for purposes of the foreign tax credit and Section 956. See supra note 83.

[173] See Section 1234A and Treas. Reg. 1.1234A-1.

[174] Treas. Reg. 1.1234A-1. Under the regulations, a "bullet" swap is a transaction in which all payments are made at maturity (i.e., so that there are no periodic payments at all).

it yields a loss, but something else if it yields a gain. Third, to keep the gain-loss ratio at one, the tax bracket should be computed without reference to gains or losses on the swap (i.e., so that the return on the swap cannot shift the taxpayer into a different bracket). Finally, for the same reason, swap losses should not be subject to any limitations, including classification as a miscellaneous itemized deductions.[175]

D. Timing of Contingent Nonperiodic Payments on Swaps

The reform agenda also gives guidance on the timing rules for swaps. What if a swap includes a one-time, or "nonperiodic," contingent payment at maturity? As noted above, this sort of swap presents three potential timing problems. First, like other derivatives, it can offer a timing option. Second, the swap tends to front-load one of the party's deductions (i.e., even if it is not terminated or sold). As an example, assume that Larry expects XYZ stock to appreciate above $100 per share, so he enters into a swap based on the value of 10,000 shares. Every year, Larry pays a fixed rate of five percent times the $1 million notional value of this stock (i.e., $50,000).[176] After three years, Larry receives a payment based any increase in the value of the 10,000 shares, and makes a payment based on any decrease. Can Larry deduct periodic payments currently, while delaying any inclusions on the contingent nonperiodic payment until maturity?[177] Third, in front-loading his payments on the swap, Larry is implicitly earning a time-value return.

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[175] As such, these expenses are subject to a 2% floor and are not deductible under the alternative minimum tax. See supra note 47.

[176] Since XYZ is a "growth" stock, it doesn't pay a dividend, so Larry does not receive an annual payment based on the dividend in XYZ stock.

[177] Indeed, the swap can be rewritten to provide even more extreme front loading: Each year, Larry can make an annual payment based not only on the five percent finance charge, but also on *any declines* in the value of XYZ stock. In other words, any value-based payments that Larry *pays* are moved up into periodic payments, while any value-based payments that Larry *receives* are deferred until the final contingent nonperiodic payment.

He is able to pay a smaller nominal amount than if he had made these payment at maturity, as in a forward contract.[178] Is this time-value return taxed as interest?

Unfortunately, the original swap regulations punted on the treatment of contingent nonperiodic payments. In 2001, the government issued a notice seeking comments on various approaches. Finally, in February 2004, the government issued proposed regulations. After analyzing the noncontingent swap method, the default rule of the 2004 regulations, this Section compares it to mark-to-market and the stated-term approach. This discussion is especially timely, since the regulations are merely in proposed form, and policymakers will need to give the issue careful thought before guidance goes into effect.[179]

1. *Noncontingent Swap Method*

The "noncontingent swap method" aims principally at the second and third problems (i.e., front-loading and time value), while offering only a partial response to the timing option. This method accelerates income from the nonperiodic contingent payment, requiring the taxpayer to accrue a portion each year.[180] Since (by definition) we do not know what the payment actually will be until it is made, though, the taxpayer is directed to project (or, to use a more colloquial word, to guess) what it will be. Later, when better

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[178] In the above example, Larry's finance charge is a total of $150,000 (i.e., $50,000 per year). But if he paid it at maturity, as in a forward contract, the total would be $157,625. The extra $7,625 derives from compounding.

[179] In general, the regulations are proposed to be effective 30 days after they are published in final form. In the interim, taxpayers are left with some flexibility about how to treat these contracts, although the scope of this freedom is somewhat unclear. The preamble to the proposed regulations allows taxpayers who have adopted a proper method of accounting for swaps with contingent nonperiodic payments to keep using this method until the regulations become effective. But it is not clear whether the most common practice – accounting currently for the periodic payment while deferring the contingent nonperiodic payment until it is made – qualifies as a proper method of accounting for this purpose.

[180] The choice to accelerate this income is not surprising, since the swap rules already go a similar route when the payment at maturity is not contingent. For example, assume that Larry pays five percent for three years and, at maturity, receives a fixed payment equal to the compounded value of these payments. The swap rules accelerate the income from this fixed payment, taxing Larry on a portion of it each year.

information is available, adjustments are made in the form of extra interest or deductions to correct earlier errors.[181]

How can we predict XYZ's value in three years? Although risky bets are inherently unpredictable, a stock should appreciate by at least the risk-free rate, on average, or everyone would buy Treasury bonds. To project what Larry will receive at maturity, then, the noncontingent swap method assumes that XYZ stock appreciates at the risk-free rate.[182] In the typical case, this should turn out to be essentially the same as the compounded value of the periodic payments he has made, which generally are also based on the risk-free rate.[183] Put another way, Larry should earn at least as much at maturity, on average, as he has paid through periodic payments.

Using this assumption, the proposed regulations solve the front-loading and time-value problems. In the example, Larry is assumed to receive $157,625 at maturity, which represents the compounded value of a five percent return. Amortized back, this is equivalent to receiving $50,000 per year. Since this is the same as his periodic payments, this inclusion fully offsets his deduction (eliminating front-loading). Since Larry is not actually receiving this amount until maturity, though, the swap is assumed to offer him an extra $7,625 of interest, which (if it is significant enough)[184] is taxed separately (solving the time-value problem).

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[181] Obviously, this "noncontingent swap method" is cribbed from the "noncontingent bond" method used for contingent debt. See Treas. Reg. 1.1275-4.

[182] To be precise, the regulations direct taxpayers to base projections on publicly-available forward prices, if any are available. But a forward price is merely the current price increased by the risk-free rate. If forward prices are not available, taxpayers are explicitly directed to increase the underlying's current value by the risk-free rate.

[183] Since the swap payments are not based exactly on the risk-free rate, a more economically precise approach would be to use the actual financing rate in the swap.

[184] The test is whether the nonperiodic payment is "significant." If so, the swap is bifurcated into an on-market swap and a loan, and interest is imputed on the loan.

Unfortunately, though, this methodology does not curtail the timing option. If the underlying outperforms the risk-free rate, Larry can trigger his loss by selling or terminating the swap (albeit at the cost of transforming the character of his loss from ordinary to capital).[185] But if the underlying outperforms the risk-free rate, Larry can defer this built-in gain until maturity (or, of course, a termination the day before then, in order to secure capital character). The regulations address the timing option, to an extent, by providing for annual adjustments. But the end result is substantially more complexity with little to show for it. Every year, Larry has to recompute what he expects to receive at maturity, and to amortize this amount over the term of the swap. This is a step toward mark-to-market – unfortunately, involving all the same challenges in valuation – but it does not eliminate the timing option. Indeed, it requires more work in return for less accuracy. In a given year, the taxpayer's return reflects only a *portion* of the change in the swap's market value; the rest is assigned to future years, and thus has no current effect on his tax return.[186] As a result, taxpayers can still accelerate losses by terminating the swap (i.e., when this methodology overstates their income), while deferring gains by keeping the swap (i.e., when this methodology understates income). Given the extraordinary complexity associated with this approach, it is worth seeking a simpler and more effective solution.

2. *Mark-to-Market Accounting*

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[185] See Prop. Treas. Reg. 1.1234A-1. This difference in character will be relatively unimportant to corporations, since they are ineligible for a rate preference.

[186] In the above example, assume the underlying stock appreciates from $100 to $200 after one year. The projected maturity payment, then, increases from $157,625 to approximately $1.2 million (reflecting a $1 million increase in the underlying's value). But this full $1 million is not immediately taxed. Instead, only about $750,000 of it is taxed: that is, an adjustment of approximately $350,000 for the prior year, and approximately $400,000 for the current year, but nothing for the $400,000 allocated to the final year of the swap. The earlier it is in the term of the swap, the more pronounced this effect (i.e., since there are proportionately more future years).

In this spirit, mark-to-market is much better and, fortunately, the proposed

regulations allow taxpayers to elect mark-to-market. Indeed, it may be that the

government does not expect taxpayers to use the noncontingent swap method. Perhaps

their strategy is to propose something so cumbersome that the mark-to-market election

will seem irresistible.[187] In any event, like the noncontingent swap method, mark-to-

market eliminates front-loading, and also the time-value problem (assuming the

taxpayer's marginal rate for ordinary income is used, as suggested above). In addition,

unlike the noncontingent swap method, mark-to-market completely eliminates the timing

option. Nor will taxpayers necessarily shy away from mark-to-market; instead, as long as

losses are fully deductible, they can cancel out the higher effective tax rate by increasing

the size of their swap.[188]

Ironically, mark-to-market is simpler to administer than the noncontingent swap

method. Both approaches require annual valuations, but mark-to-market avoids – or, at

least, it ought to avoid – the burden of amortizing projected payments each year.

Unfortunately, the regulations sacrifice some of this advantage. Even taxpayers who

elect mark-to-market must account for time value separately, using the noncontingent

swap method. So these taxpayers have to project a payment upon acquiring the swap,

and they have to impute interest each year. The only administrative savings of marking

to market is that the projected payment and interest are computed *only once*, since mark-

to-market, instead of annual adjustments, are used in subsequent years. Even so, why

clutter mark-to-market in this way? Presumably, the government is trying to distinguish

interest, on one hand, from swap income and deductions, on the other, as a way of

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[187] The PFIC rules took a similar approach, pairing a cumbersome default rule with elections that have
become the general practice.
[188] See supra Part III.D.

policing limitations that apply to one or the other. For example, investment interest

limitations apply only to interest.[189] But the rationale for most limitations is less relevant

if mark-to-market applies. With investment interest, for example, income on the financed

investment is no longer deferred, so there is less need to defer interest deductions.[190]

3. *Stated-Term Approach*

Although less desirable than mark-to-market, the stated-term approach has two

advantages over the noncontingent swap method. First, it eliminates the timing option.

Because all income and deductions on the swap are deferred until the scheduled maturity,

tax timing cannot change once taxpayers know whether they have gain or loss.[191]

Second, the stated-term approach is easier to administer. Even though taxpayers

must keep records of gain or loss from earlier years, they are spared the need to project

the maturity payment and amortize it back each year. After all, there are two ways to

solve the front-loading of deductions: either to accelerate income (as in the noncontingent

swap method), or to defer deductions (as in the stated-term approach). While each

approach erases the front-loading, the latter is simpler. The stated-term approach

implicitly estimates the market value of the final nonperiodic payment to be the same as

the periodic payments that Larry has to make, thereby avoiding the need for some other

estimate.[192] In effect, deferring all of these payments gives essentially the right answer in

a very simple fashion.

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[189] See Section 163(d).

[190] Unfortunately, the same cannot be said for other reasons to treat interest separately. See supra note 83.

[191] At first blush, this resembles an alternative in Notice 2001-44 called the "full allocation" method, but the two are actually quite different. The full allocation method defers tax consequences until the swap either matures *or is terminated early*, thus leaving the timing option in place: taxpayers with losses can terminate their swap prematurely to trigger losses.

[192] The New York State Bar Association proposes a similar assumption, although their proposal, like the government's full allocation method, does not eliminate the timing option. Premature termination of the swap would trigger gains and (more importantly) losses. See NYSBA Tax Section Report No. 1001:

However, the stated-term approach does have one disadvantage: To deal with the time-value problem, this approach becomes somewhat more complex. As noted above, Larry earns a time-value return by making periodic payments instead of paying the financing charge at maturity, as in a forward contract. This time-value return is undertaxed if taxpayers choose a long term on their swap, thereby reducing their effective tax rate. This problem is less serious for swaps of reasonably short duration (e.g., three years or less). For longer swaps, more elaborate rules are needed, including adding interest to the tax to compensate for tax deferral.[193] In my view, this additional complexity in the stated-term approach strengthens the case for mark-to-market accounting.

E. Wash Sales

The various proposals here eliminate the timing option for derivatives, thus obviating the need for blunter constraints on derivative losses, such as the capital loss limitations and wash sale rules. However, mark-to-market, the stated-term approach, and the zero rate are all harder to apply to the underlying property, for a combination of administrative and political reasons. As a result, other well-tailored constraints on the timing option are needed for these assets, if only to avoid sectoral inconsistency.

The wash sale rules are a good place to start. Under current law, when stock or securities are sold at a loss, this regime defers the deduction if the taxpayer buys substantially identical stock or securities within a designated period of time. This regime is meant to constrain the timing option, making it more difficult to accelerate losses. The price of claiming the deduction is that the taxpayer must divest herself economically of

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Report Responding to Notice 2001-44 on the Timing of Income and Loss From Swaps Providing For Contingent Payments, reprinted in 2001 TNT 221-39.

[193] Alternatively, the party making periodic could be required to earn imputed interest income on them.

the investment. Yet the wash sale rules are thoroughly porous. As I have written elsewhere, it is only a slight exaggeration to say that compliance with the regime is voluntary for very wealthy taxpayers – or, at least, for those who are willing to take aggressive positions.[194] At a minimum, taxpayers should not be able to claim a loss unless they make *at least some* real change in their economic condition. For instance, when depreciated stock is replaced with a periodic swap, the deduction needs to be disallowed.[195]

In order to set the gain-loss ratio at one, though, the wash sale regime should be quite a bit broader. To achieve balance, the timing for losses needs to match the timing for gains, and under current law gains are treated very generously. With sophisticated hedging transactions, taxpayers can essentially sell investments without triggering tax. Since 1997, taxpayers have had to retain a relatively modest amount of economic exposure to avoid a so-called "constructive sale" under Section 1259. No tax is due as long as they do not "eliminate substantially all of their risk of loss and opportunity for gain." Most practitioners believe this test is satisfied if a taxpayer keeps the first 20% of appreciation in the investment over three years. If the stock is worth $100, the appreciation from $100 to $120 is enough. In effect, taxpayers can turn stock into a 100-120 call spread without triggering gains.[196]

In order to match this deferral of gains, the wash sale rules should be tougher. Losses should be deferred – even when taxpayers make meaningful changes in their economic position – as long as they keep material elements of their old return. By

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[194] See generally Schizer, supra note 42.
[195] If this Article's reform agenda is implemented for derivatives, the wash sale rules do not have to apply when a *swap* is terminated at a loss. However, the point here is to constrain the timing option on the *stock*, not on the swap.
[196] See generally Schizer, supra note 31.

analogy to the constructive sale rule's treatment of gains, if a taxpayer sells stock at a loss, the deduction should be deferred if she acquires a 100-120 call spread or any other investment offering at least as much exposure to the stock. The overall concept (though not the statutory test) should be that any replacement position with a "delta" at least as great as that of a 100-120 call spread should trigger a wash sale.[197]

While a test based on delta is too sophisticated for most taxpayers to understand, this "call spread" theory can give guidance to policymakers about what the right answer is as a matter of policy, and thus about which aspects of current law need to be changed. Fortunately, current law already conforms to this standard in one important way. When stock is sold at a loss, the purchase of a call option triggers a wash sale, even if the call option offers fairly different economic exposure.[198] In other contexts, though, Section 1091 needs to be significantly broader. For instance, a wash sale should be triggered when stock replaces a call option, when a put option replaces a short sale, when equity-linked life insurance replaces an investment in the underlying equity, and when one sector-specific mutual fund replaces another.[199]

VI. Conclusion

This Article breaks the deadlock in reforming the tax treatment of derivatives. For years, we have understood the value of consistency, but we haven't been able to attain it. This Article offers a new theory for tackling this seemingly intractable challenge. By focusing on balance instead, policymakers can leave inconsistencies in

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[197]"Delta" is the change in price in one position (e.g., the call spread) when the other position (e.g., the loss position) declines in value by one dollar.
[198] Section 1091(a).
[199] For a discussion of the call spread theory and its implications, see generally Schizer, supra 42.

place without prompting planning. This offers a unique opportunity to pursue administrability goals in an incremental and context-specific manner.

In addition to developing a broad theory of reform, this Article offers concrete guidance on specific issues. Most importantly, mark-to-market accounting should be used more broadly for derivatives and, contrary to popular belief, we do not have to worry that taxpayers will shy away from this regime. Instead, as long as losses are fully deductible, taxpayers can cancel out the higher effective tax burden by scaling up their positions. Likewise, the stated-term approach and even the zero rate can be used when valuation issues render mark-to-market impractical. With these two alternatives, the main challenge for policymakers is distinguishing risk-based returns, which can appropriately be taxed in this way, from wages and time-value returns, which cannot. The agenda in this Article also has implications for cutting edge problems in the taxation of derivatives, including the timing and character rules for swaps, Professor Warren's critique of Section 1032, and the wash sale rules.

Finally, this Article makes a contribution that is of particular interest to academics. The Domar and Musgrave theory has long been a subject of controversy in the legal academy and, in a recent flurry of articles, this issue is once again coming to a boil. Some have suggested that the theory is hopelessly impractical. How in the world can taxpayers simply scale up their bets? Isn't this like the cliché about economists who open a can by assuming a can opener? In response, this Article identifies a context – the derivatives market – in which taxpayers can scale up cheaply. Indeed, the Domar and Musgrave theory becomes utterly practical, offering grounded applications, in the sophisticated world of financial engineering.