REALIZATION AS SUBSIDY

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Perhaps no concept in tax law is so well established, and yet so widely criticized, as realization, the rule that defers tax on appreciated property until it is sold. In this Article, Professor Schizer offers a new justification for realization: It is a subsidy for savings. The recent reduction in the capital gains tax rate suggests that Congress wants such a subsidy, the author observes. He then argues that realization has a significant advantage as a subsidy. It is credible, in that taxpayers expect it to survive long enough for them to collect it. This is important, Professor Schizer then argues, because realization offers taxpayers no benefit when an investment is made. It offers only the government's word-a promise, in essence-that unrealized appreciation will not be taxed. The author then demonstrates that even though the government remains free to renege on this promise, taxpayers will not expect this for reasons rooted in history, administrability, and politics. Taxpayers thus will have more confidence in realization than in another "promise" subsidy, a low capital gains rate. Notwithstanding this advantage, the author then points out, realization has unique disadvantages, such as the tendency to lock investors into particular investments, and also shares efficiency and equity concerns common to all savings subsidies.

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INTRODUCTION

Perhaps no concept in tax law is so well established, and yet so widely criticized, as realization. Under this rule, "[r]ather than assessing tax liability on the basis of annual fluctuations in the value of a taxpayer's property, the Internal Revenue Code defers the tax consequences of a gain or loss in property value until the taxpayer 'realizes' the gain or loss."¹ This principle is the foundational timing rule² of our tax system.³

Yet its distortive effects have drawn stern criticism. Realization has been called "an intricate and unwieldy edifice,"⁴ "the Achilles' heel" of the tax system,⁵ "the root of many tax evils,"⁶ and, indeed, "what most scholars believe to be the most intractable problem in the income tax."⁷ Academic commentators emphasize that, by sparing appreciation from tax until the property is sold, the rule defers tax on

¹ Cottage Sav. Ass'n v. Commissioner, 499 U.S. 554, 559 (1991); see also I.R.C. § 1001(a) (West 1998) (defining gain or loss from property as arising, for tax purposes, from "the sale or other disposition of property"); id. § 1001(b) (describing amount received from such sale as "amount realized").

² The rule is as old as the income tax itself. See Helvering v. Horst, 311 U.S. 112, 115 (1940) ("From the beginning the revenue laws have been interpreted as defining 'realization' of income as the taxable event \ldots .").

³ Timing rules are extremely important. As one practitioner has noted, "[1]he next best thing to not paying tax is putting it off. This principle, more than any other, has motivated tax planning over the years. In the quest for tax deferral, a taxpayer's best friend is the realization requirement." Stephen B. Land, Defeating Deferral: A Proposal for Retrospective Taxation, 52 Tax L. Rev. 45, 46 (1996).

⁴ Carl S. Shoup, The White Paper: Accrual Accounting for Capital Gains and Losses, 18 Can. Tax J. 96, 96 (1970) (arguing for mark-to-market or "accrual" accounting to simplify tax system).

⁵ William D. Andrews, The Achilles' Heel of the Comprehensive Income Tax, in New Directions in Federal Tax Policy for the 1980's 278, 280 (Charles E. Walker & Mark A. Bloomfield eds., 1983).

⁶ Edward D. Kleinbard & Thomas L. Evans, The Role of Mark-to-Market Accounting in a Realization Based Tax System, 75 Taxes 788, 789 (1997). Kleinbard and Evans count "administrative complexity [and] the understatement of income" among the tax evils precipitated by realization. Id.

⁷ Noël B. Cunningham & Deborah H. Schenk, Taxation Without Realization: A "Revolutionary" Approach to Ownership, 47 Tax L. Rev. 725, 728 (1992); see also, e.g., Fred B. Brown, "Complete" Accrual Taxation, 33 San Diego L. Rev. 1559, 1559 (1996) ("The realization rule has been referred to as the Achilles' heel of the income tax, and for good reason."); Thomas L. Evans, The Realization Doctrine After *Cottage Savings*, 70 Taxes 897, 897 (1992) ("[T]he realization doctrine presents almost intractable problems to those who would reform our tax system to operate in a more neutral and fair manner."); Mary Louise Fellows, A Comprehensive Attack on Tax Deferral, 88 Mich. L. Rev. 722, 727 (1990) (describing realization as one source of serious problems in Internal Revenue Code); Daniel Halperin, Saving the Income Tax: An Agenda for Research, 77 Tax Notes 967, 967 (1997) ("We need a more accurate measure of income, one that would be simpler, more efficient, and most importantly, fair. This can be achieved only if realization plays a less important role in the timing of both income and loss.").

appreciation. Because of the "time value" of money, this deferral effectively reduces the tax. For this and other reasons, discussed within, unrealized appreciation is taxed more favorably than other income—a fact that distorts investment decisions and induces tax-motivated planning.

Even so, realization endures. It is typically justified as a necessary evil, in that alternatives—such as taxing unrealized gains or charging the taxpayer "interest" upon a disposition to compensate for the deferral—are not administrable or politically feasible.⁸ The academic debate largely has focused on developing an alternative, while assuming that realization should be replaced.

This Article questions this premise by exploring a justification for realization⁹ not seriously considered in the academic literature: that it is a subsidy¹⁰ for private savings and investment.¹¹ There is a method to realization's madness. It reduces the effective tax on savings and thus increases after-tax yield in ways others have observed,¹² and also

¹⁰ One possible exception is David Slawson, Taxing as Ordinary Income the Appreciation of Publicly Held Stock, 76 Yale L.J. 623 (1967). In advocating mark-to-market accounting for publicly traded stock, Professor Slawson refers to realization as a "tax privilege" for investment. See id. at 626. Although Professor Slawson urges repeal of the "tax privilege," he does not consider whether realization is uniquely effective as a subsidy—the topic addressed here. Instead, he offers a general argument against subsidizing investment. See id. at 676.

¹¹ Economists distinguish between "saving" and "investment." Saving is foregone consumption. See Paul A. Samuelson & William D. Nordhaus, Economics 436 (14th ed. 1992) ("Saving is that part of income that is not consumed. That is, saving equals income minus consumption."). In contrast, investment is the formation of real capital (such as factorics, housing, and inventory). See id. at 422 (defining investment as "additions to the nation's capital stock of buildings, equipment and inventories" and emphasizing that investment means formation of "durable capital goods" rather than the purchase of financial instruments such as stock). In the interests of brevity, though, this Article uses the terms more colloquially, essentially as synonyms. Rather than speaking of "a subsidy for saving that is meant to induce additional investment in real capital," the Article speaks simply of a "savings subsidy." Purchase of a share of stock, moreover, is described as an "investment," although technically an economist regards it instead as a portfolio change. See id. at 446 n.4 ("Many people speak of 'investing' when buying a piece of land, an old security, or any title to property. In economics, these purchases involve financial transactions or portfolio changes There is *investment* only when real capital is created.").

¹² See, e.g., Evans, supra note 7, at 897 ("The realization doctrine creates substantial opportunities for deferral. By allowing taxpayers to delay the payment of taxes on gains until they are eventually realized, the real or effective rate of tax assessed on those gains is reduced."). Scholars also have noted that realization offers an immediate deduction for

⁸ See, e.g., William D. Andrews, A Consumption-Type or Cash Flow Personal Income Tax, 87 Harv. L. Rev. 1113, 1116 (1974) ("[P]ractical exigencies may prevent comprehensive inclusion of unrealized appreciation.").

⁹ In analyzing realization, this Article does not consider a controversial companion rule that eliminates tax instead of merely deferring it: the step-up in basis at death in I.R.C. § 1014. For a thoughtful critique of this rule, see generally Lawrence Zelenak, Taxing Gains at Death, 46 Vand. L. Rev. 361 (1993).

in a way they have not: by allowing taxpayers, in an atmosphere where the tax rate shifts constantly, to try to choose the rate they will pay. As savings may be subsidized in other ways—perhaps most importantly by a reduction in the capital gains tax rate—this Article considers whether realization has advantages or disadvantages *not shared* by other subsidies.¹³

This Article does not explore advantages and disadvantages *com*mon to all savings subsidies, as this territory is well charted. Others have questioned whether a government subsidy actually increases savings¹⁴ and, indeed, whether the tax burden on capital gains matters, given adjustments that taxpayers can make in their portfolios to offset it.¹⁵ Furthermore, the distributional effects of investment subsidies

¹³ In exploring this question, this Article's yardstick generally is efficiency rather than equity, although the final Part notes that unfortunate distributional effects may follow from any savings subsidy. Generally, the term "efficiency" is used here in the Kaldor-Hicks sense, essentially as a measure of the maximization of overall wealth. For a discussion of different notions of efficiency, including Kaldor-Hicks and Pareto, see Richard A. Posner, Economic Analysis of Law 13-17 (5th ed. 1998).

¹⁴ The sensitivity of savings decisions to expected yield is hotly contested. For example, some argue that savings decisions are determined instead by "life cycle" concerns. See, e.g., Michael R. Darby, The Effects of Social Security on Income and the Capital Stock 7 (1979) (summarizing modern literature on life cycle hypothesis); Franco Modigliani, Life Cycle, Individual Thrift, and the Wealth of Nations, 76 Am. Econ. Rev. 297, 298-99 (1986) (summarizing key articles in early development of life cycle hypothesis). Others argue that the amount saved *is* sensitive to yield, but that the two are inversely correlated; as yield increases, the amount a saver must save to reach her target decreases. See Noël B. Cunningham & Deborah H. Schenk, The Case for a Capital Gains Preference, 48 Tax L. Rev. 319, 377 & n.237 (1993) (discussing "target" saver theory). For a discussion of these issues, see infra Part IV.E.1.

¹⁵ See, e.g., Joseph Bankman & Thomas Griffith, Is the Debate Between an Income Tax and a Consumption Tax a Debate About Risk? Does it Matter?, 47 Tax L. Rev. 377, 396-400 (1992) (arguing that, under assumed conditions, tax burden on marginal return to risk is irrelevant because taxpayers will offset tax by increasing riskiness of portfolio); David F. Bradford, Fixing Realization Accounting: Symmetry, Consistency and Correctness in the Taxation of Financial Instruments, 50 Tax L. Rev. 731, 763 (1995) ("The striking fact is that, provided the *same* tax rate applies to the gains and losses from a risky position, the tax rate itself is of no fundamental importance.").

Yet as discussed infra Part IV.E.2, taxpayer portfolio adjustments cannot duplicate the tax-reducing effects of realization: Such "self help" cannot offset tax on the risk free return. Nor will it offset tax on marginal returns to risk either if the tax affects the price of risky investments or if tax on gains is lighter than on losses. Because each of these conditions probably holds, realization adds value that taxpayers cannot otherwise attain. Cf. Alvin C. Warren, Jr., Financial Contract Innovation and Income Tax Policy, 107 Harv. L. Rev. 460, 482 n.89 (1993) (noting that "[b]ecause the assumptions of full loss offsets and

losses while deferring tax on gains—a "timing option" that forces the government to bear a disproportionate share of losses. See, e.g., George M. Constantinides, Optimal Stock Trading with Personal Taxes: Implications for Prices and the Abnormal January Returns, 13 J. Fin. Econ. 65, 65-66 (1984) (discussing timing option); Jeff Strnad, Periodicity and Accretion Taxation: Norms and Implementation, 99 Yale L.J. 1817, 1882-84 (1990) (same). These issues are discussed infra Part I.

are cause for concern, as the wealthy benefit most directly.¹⁶ This Article generally does not strive to resolve these important issues, although the final Part highlights them. Instead, the Article assumes that a subsidy for savings is desired—an assumption supported by Congress's reduction in the capital gains rate in 1997 and its reduction in the holding period in 1998—and considers whether realization is effective as such a subsidy. In doing so, the Article presents reductions in the capital gains rate as a foil, and discusses the relative advantages of each.¹⁷

The Article concludes that realization has a significant advantage as a subsidy: It is credible, in that taxpayers believe it will survive long enough for them to collect it. This is important because realization offers no benefit at the time taxpayers invest, as might, in contrast, a tax credit paid when the investment is made. Instead, at this moment of decision, realization offers taxpayers only the government's word a promise, in a sense—that unrealized appreciation will not be taxed. Yet even though the government remains free to renege, taxpayers will not expect this, and thus will not discount the realization subsidy when making savings decisions. In contrast, taxpayers probably do discount reductions in the capital gains rate for the risk that these reductions will be reversed. In Part III, after explaining the importance of a subsidy's credibility, the Article considers reasons—rooted in history, administrability, and politics—why realization is more credible than a reduced capital gains rate.

Yet realization has unique disadvantages as well. Most importantly, although it may induce a larger *amount* of savings, realization may not promote an efficient *allocation* of savings. It discourages taxpayers from selling appreciated assets, a phenomenon called "lockin." Moreover, realization reduces only the tax on appreciation, not on periodic payments (such as interest and dividends); thus, the rule favors "growth" stocks over "income" stocks or debt. Furthermore, even though realization is a credible promise, the government could

 17 These two methods of subsidy are not alternatives. Every tax system must resolve two separate issues: the timing of the tax and the rate. Either variable may be adjusted. Accordingly, it is possible—as we do today—to employ both subsidies, by using a low rate and also deferring the tax through realization.

proportional taxation are not satisfied under current law," theory that taxpayers can offset effects of tax on risk "does not apply to the income tax as it has developed in practice").

¹⁶ For example, the Center on Budget and Policy Priorities concluded that reducing the holding period (the time a taxpayer must hold a capital asset in order to be eligible for preferential rates) from 18 to 12 months, a recent change discussed infra Part III.C.1, primarily benefits the wealthiest five percent of taxpayers. See IRS Reform Bill Carrying Many Tax Cuts for Rich, CBPP Says, 98 Tax Notes Today (TNT) 131-15, July 9, 1998, available in LEXIS, Fedtax Library, TNT File.

render its credibility irrelevant by not making a *promise* at all; instead it could deliver a reward "up-front" when the taxpayer invests. Yet up-front subsidies create problems not shared by realization. Most importantly, how does the government prevent the taxpayer from keeping the subsidy and selling the investment? Part IV discusses these issues, and also summarizes efficiency and equity concerns common to all savings subsidies.

Ι

Realization as a Reduction of Effective Tax on Capital Gains

The first order of business is to show that realization, like a rate reduction, reduces the tax burden on gains. First, realization allows taxpayers to defer tax on gains. This deferral allows taxpayers to retain use of, and thus to earn a return on, the money they otherwise would pay as tax. Second, subject to certain limitations, realization allows taxpayers to deduct losses immediately, while deferring tax on gains. This "timing option" allows the taxpayer to shift a disproportionate share of an investment's risk of loss to the government. Third, given that the capital gains rate changes so frequently, realization may enable taxpayers to choose the rate they will pay. Finally, although inflation increases the effective tax on gains, this "inflation penalty" is less severe under realization than under a mark-to-market rule; if the tax liability is deferred, inflation erodes its real value.

A. Deferral

When stock appreciates from \$100 to \$400, a taxpayer is \$300 wealthier; she is not taxed, though, until she disposes of the property. As any tax lawyer will tell you, a tax deferred is a tax reduced. "An investor who retains his appreciated property—or who can somehow dispose of it without triggering off a 'realization'—pays no tax," Professor Chirelstein has observed, "and therefore has more available for reinvestment."¹⁸ For example, assume Meredith invests \$100 in Stock XYZ and the stock appreciates 12.5% percent each year.¹⁹ Assume also that the tax rate on gains is 20%. Compare her after-tax return under two rules: first, realization (i.e., no tax until a sale); second, what tax lawyers call a "mark-to-market" regime—a system that

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¹⁸ Marvin A. Chirelstein, Federal Income Taxation 72-73 (7th ed. 1994).

¹⁹ From 1951 through 1997, the average annual return of the Standard & Poor's 500 index was approximately 12.5%. See Investors Are Unrealistic About Returns, Survey Finds, Plain Dealer (Cleveland, OH), Oct. 20, 1997, at C1, available at 1997 WL 6619601 (story reported by Bloomberg News).

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values assets at the beginning and end of the tax year²⁰ and treats the difference as taxable income (if positive) or loss (if negative), regardless of whether the asset is sold. The following chart shows the consequences under a mark-to-market system:

Year	1/1 Value	12/31 Value	Gain	Tax	After-Tax
1	\$100.00	\$112.50	\$12.50	\$2.50	\$110.00
2	\$110.00	\$123.75	\$13.75	\$2.75	\$121.00
3	\$121.00	\$136.13	\$15.13	\$3.03	\$133.10
4	\$133.10	\$149.73	\$16.63	\$3.33	\$146.40
5	\$146.40	\$164.70	\$18.30	\$3.66	\$161.04
6	\$161.04	\$181.17	\$20.13	\$4.03	\$177.14

Table I: Return and Tax Liability Under Mark-to-Market System

After a year, Meredith's investment grows to \$112.50 and she pays a 20% tax of \$2.50. Assume she finances this tax by selling a portion of her stock position. As a result, her stock is worth \$110.00 on January 1 of the second year. Once again, her investment earns a 12.5% return, but on only \$110.00 instead of \$112.50. The tax thus reduces the amount she may "reinvest." In the second year, a 12.5% return yields \$13.75, and a \$2.75 tax, leaving her with stock worth \$121.00 on January 1 of the third year. This process continues until Meredith's after-tax return is \$177.14 after six years.

In contrast, as the following table reveals, Meredith's after-tax return is higher under realization, because she can "reinvest" her unrealized appreciation.²¹ Each row describes the consequences if she sells at the end of a given year. For example, if Meredith sells after six years, she will have \$182.18 after taxes—\$5.04 better than the \$177.14 she would have under a mark-to-market system. The longer she holds the stock, the greater the difference. If she sells after ten years, the gap is \$20.41 (\$259.36 under a mark-to-market rule versus \$279.77 under realization), and if she sells after fifteen years the gap widens to \$70.43 (\$417.70 versus \$488.13).²²

²⁰ Theoretically, the relevant period does not have to be a year. See Strnad, supra note 12, at 1820 ("Why is annual assessment presumed to be ideal? In a medieval agricultural economy, tax compliance might have required collection at the time of the annual harvest. But today there is no obvious reason to assess taxes annually.").

 $^{^{21}}$ Another way to view the difference is that, under realization, taxpayers invest with an interest-free loan from the government (i.e., the tax liability that is deferred).

 $^{^{22}}$ Note that this gap also will widen if we assume a larger rate of return, because it becomes more valuable to reinvest dollars that otherwise would fund the tax.

Year of Sale	1/1 Value	12/31 Value	Gain	Tax	After-Tax 12/31 Value
1	\$100.00	\$112.50	\$12.50	\$2.50	S110.00
2	\$112.50	\$126.56	\$26.56	\$5.31	\$121.25
3	\$126.56	\$142.38	\$42.38	\$8.48	\$133.90
4	\$142.38	\$160.18	\$60.18	\$12.04	\$148.14
5	\$160.18	\$180.20	\$80.20	\$16.04	S164.16
6	\$180.20	\$202.72	\$102.72	\$20.54	\$182.18

TABLE II:	RETURN AND	TAX LIABILITY	Under
	Realizatio	on System	

B. Timing Option and Losses

Under realization, taxpayers generally can deduct losses immediately (and thus preserve the time-adjusted value of these deductions) while deferring tax on gains (and thus diminishing the time-adjusted value of this tax). This "timing option," as Professors Constantinides and Strnad have called it,²³ is another way that realization serves to reduce the tax burden. However, the timing option is curtailed by limitations on a taxpayer's use of losses. This discussion first ignores these limitations but returns to them later.

Like any option, the timing option has value in offering the right to choose—in this case, the right to determine the timing of gains or losses in the way that minimizes tax liability. This choice allows the taxpayer to share gains and losses with the government on favorable terms. In a sense, the government functions like a partner in any investment.²⁴ If the investment prospers, the government claims a share (i.e., tax with a nominal value equal to the gain multiplied by the relevant tax rate). If the investment founders, the government reimburses part of the loss by allowing a deduction from taxable income (whose nominal value equals the loss multiplied by the relevant tax rate).²⁵

 25 The relevant rate for valuing a loss is the rate imposed on whatever income is offset by the loss. If the taxpayer's next dollar of income would be taxed at a 35% rate, an

²³ See George M. Constantinides, Capital Market Equilibrium with Personal Tax, 51 Econometrica 611, 621-23 (1983) (analyzing effect of capital gains tax on investment decisions and asset prices, and explicitly considering timing option); Strnad, supra note 12, at 1882-84 (discussing impact of timing option on investment transactions); see also Chirelstein, supra note 18, at 89 ("Since gain or loss is realized and recognized only if a security is actually sold, the investor would be prompted to sell the losers and retain the winners . . ."); Mark P. Gergen, The Effects of Price Volatility and Strategic Trading Under Realization, Expected Return and Retrospective Taxation, 49 Tax L. Rev. 209, 211 (1994) (assessing effectiveness of timing option under realization, as well as under alternative regimes such as mark-to-market, retrospective, and expected-return taxation).

²⁴ For a thoughtful exposition of this argument, see Bankman & Griffith, supra note 15, at 394 (1992) (providing examples to show how government shares in profits and losses of investment).

At first blush, the government's share of loss and gain seems the same: a percentage equal to the tax rate. However, as shown above, tax burdens are not always what they seem, because of the time value of money. If the taxpayer may defer tax on gains, the government's share of gains is not really the stated rate (e.g., 20%), but something less. On the other hand, if the taxpayer may deduct losses immediately, the government's share of losses really is 20%.

This asymmetrical sharing puts money in the taxpayer's pocket. Consider the value of a simple investment under three tax regimes: first, no taxes; second, symmetric sharing; third, asymmetric sharing arising from a timing option. For simplicity's sake, assume the investment has a 50% chance of yielding one of two immediate payments: \$0 or \$100.

Without taxes, this investment's value, V1, will be the sum of these two possible payments, discounted by their relative probability of 50%:

VI = .5(100) + .5(0) = 50

Next, assume taxes but no timing option. The tax will not affect the investment's value, V2, as its two effects offset each other: The taxpayer is worse off when the investment yields a profit (because the taxpayer parts with some of the gains), but better off when the investment generates a loss (because she is partially reimbursed). For example, assume a uniform tax rate, T, and assume that both gains and losses are recognized immediately. If the payout is \$100, the taxpayer keeps [100 - T(100-V2)]. Yet if the payout is zero, the taxpayer receives a deduction equal to her loss (V2) times her tax rate (T). V2 equals the sum of these possible payments, discounted by their probability.

V2 = .5[100-T(100 - V2)] + .5(TV2) 2V2 = 100 - 100T + TV2 + TV2 2V2-2TV2 = 100 - 100T V2(2-T) = 50(2-T)V2 = 50

In other words, the investment's value remains \$50 for any tax rate, as long as the rate is applied to both gains and losses.

Yet if a timing option is added, the effective tax rate is lower for gains than losses—an imbalance that adds value to the investment. For example, assume that losses are immediately deductible, but that any tax on gains will be deferred for five years. Assume the interest rate is 10% (which will be used to discount the tax for time value).

additional dollar of tax losses is worth \$.35, in that it spares her from a 35% tax on this dollar of income.

Assume a constant tax rate; to make the math easier, use a number, 20%, instead of the variable T. The key difference from the above equation is that, if the investment yields \$100 before taxes, the taxpayer will keep a larger portion of this gain in real terms; because the tax will not be paid for five years, its present value shrinks.

$$V3 = .5[100 - .2(100 - V3)] + .5(.2V3)$$

1.10⁵

Solving for $V3^{26}$ we find that V3 = 52.26.

The timing option thus makes the investment more valuable than it would be without taxes²⁷ or with symmetric sharing.²⁸

Taxpayers have a timing option only if they can use losses at will.²⁹ Capital losses, however, generally can offset only capital gains and not ordinary income—subject to a \$3,000 exception for individuals.³⁰ Moreover, taxpayers who sell only for the tax loss, but immediately repurchase the asset, cannot use the loss; the "wash sale" rules of the Internal Revenue Code (Code) § 1091 prevent the taxpayer from repurchasing an asset within thirty-one days of selling it.³¹ To use a

²⁷ Compared to a no-tax world, the investor is better off if the investment loses money. Although she is worse off if the investment makes money, deferral reduces this potential tax cost. In effect, before we know whether the investment will yield a gain or a loss, the potential tax benefit in the loss scenario outweighs the potential tax detriment in the gain scenario.

²⁸ Compared to a symmetrical sharing world, the investor is in the same position if the investment yields a loss, but is better off if the investment yields a gain.

²⁹ The timing option is also eviscerated by transaction costs (e.g., the brokerage fee may exceed the value of taking the tax loss immediately). Yet, at least for publicly traded assets, transaction costs are low and are becoming lower. See Strnad, supra note 12, at 1871 n.152 ("There is a large class of assets with trading and monitoring costs that are very low but not zero. This class includes stocks and bonds that are listed on a public exchange."); see also Mark P. Gergen, Apocalypse Not?, 50 Tax L. Rev. 833, 835 (1995) (describing reduction in transaction costs as "hallmark" of recent financial innovation). But cf. id. at 834 (noting that transaction costs, along with credit risk and legal risk, do pose some constraints on financial contracting).

³⁰ See I.R.C. § 1211 (West 1998). Indeed, losses generally may be used only to offset income (and are not otherwise refundable), and companies may not "traffic" freely in losses. See id. § 382 (limiting ability of acquirer of "loss corporation" to use these losses). Cf. Mark Campisano & Roberta Romano, Recouping Losses: The Case for Full Loss Offsets, 76 Nw. U. L. Rev. 709, 734 (1981) (arguing that losses should be fully refundable through negative tax payments).

³¹ See I.R.C. § 1091 (West 1998). Another limitation on losses, less relevant here, is in the "straddle rules" of I.R.C. § 1092. Taxpayers who have "offsetting positions"—that is, positions that reduce risk of loss in each other (such as a share of stock and a put option)—

loss, therefore, the taxpayer must forgo economic exposure to the asset,³² typically by holding a substitute for thirty-one days.³³ Yet although these limitations are intended to reduce the timing option's value, evidence suggests that they have not been wholly successful. For example, trading increases significantly at the end of the year, probably as investors take losses for tax purposes.³⁴ It is unlikely, then, that these limitations eliminate the timing option, though they may reduce its value and make it harder to quantify.³⁵

C. The Rate Option

Strategic timing of sales can reduce tax liability in another way, not yet identified in the academic literature: predicting changes in the tax rate and taking losses when the rate is high, while recognizing gains when the rate is low. This effect may be called the "rate option."³⁶

cannot use the loss in one position until they recognize the gain in the other. See id. \S 1092.

 32 Alternatively, the taxpayer can "double up" her exposure by buying an identical asset more than thirty-one days before the sale.

³³ For example, if the relevant asset is the stock of Bell Atlantic, the taxpayer could hold the stock of Southern New England Telephone or a derivative (such as a properly structured equity swap) with economic characteristics similar, but not identical, to Bell Atlantic stock.

³⁴ See Gergen, supra note 23, at 213 (citing evidence that limitations on timing option have not been entirely successful); Joel Slemrod, The Effect of Capital Gains Taxation on Year-End Stock Market Behavior, 35 Nat'l Tax J. 69, 69 (1982) (observing that sales of stock at loss occur disproportionately in December). Cf. Terrance Odean, Are Investors Reluctant to Realize Their Losses?, 53 J. Fin. (forthcoming Oct. 1998) (manuscript at 1, on file with the *New York University Law Review*) (stating that empirical study of 10,000 accounts at large discount brokerage house indicates that many investors engage in taxmotivated selling, especially in December; however, study also suggests that taxpayers hold losers too long and sell winners too soon, suggesting that timing option is underutilized).

 35 For an attempt at valuing the timing option (which assumes away the loss limitations), see Professor Strnad's excellent article. He concludes that for a tax rate of 30% and an investment of 25 years, 11% of the asset's value is attributable to the timing option, and for a tax rate of 50%, the percentage becomes 21.1%. See Strnad, supra note 12, at 1882-84.

³⁶ In an insightful article, Professor Auerbach recognizes that taxpayers speculate about future rates, but does not add that the *freedom* to speculate is another tax reduction bestowed by realization. See Alan J. Auerbach, Capital Gains Taxation in the United States: Realizations, Revenue, and Rhetoric, in 2 Brookings Papers on Econ. Activity 595, 605 (William C. Brainard & George L. Perry eds., 1988) [hereinafter, Auerbach, Capital Gains Taxation] ("[O]ne would expect the degree of uncertainty about [capital gains] tax rates to matter, . . . since holding a capital gain is like buying an option based on future tax rates."). Nor does he mention the rate option in his pathbreaking article on realization's distortions and how to undo them. See Alan J. Auerbach, Retrospective Capital Gains Taxation, 81 Am. Econ. Rev. 167, 167-69 (1991) [hereinafter Auerbach, Retrospective] (discussing timing option, deferral, and lock-in, but not rate option).

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As with any option, the rate option's value is a function of the magnitude and likelihood of the benefit it confers. The benefit will not arise if the rate never changes. Yet, as discussed in greater detail below, the capital gains rate has changed frequently, and the pattern is likely to continue.³⁷ For the rate option to be valuable, taxpayers must be able to predict rate changes in order to time sales strategically. Happily, changes in the tax law—and particularly in the widely followed capital gains rate—seldom catch interested parties unaware. A fleet of lobbyists and lawyers, as well as the media, monitor and debate pending developments. Given the plethora of information, the rate option likely has positive value, although how much may be debated.

To see how this value arises, consider the investment described above that pays either 0 or 100. Assume taxpayers always take losses immediately, while deferring recognition of gains. Assume the rate will be 20% in the fifth year, but there is a 50% chance it will be 10% in the fourth year. Finally, assume taxpayers can choose to recognize gain in either year. The investment is worth the sum of the discounted value of payments in three scenarios: a 50% chance the investment pays zero, such that the investor receives an immediate tax loss based on a 20% rate; a 25% chance the investment pays \$100 and the taxpayer pays tax in the fifth year at a 20% rate; and a 25% chance the investment pays \$100 and the taxpayer pays tax in the fourth year at a 10% rate:

$$V4 = .5(.2)V4 + .25[100 - .2(100 - V4)] + .25[100 - .1(100 - V4)]$$
(1.1)⁵
(1.1)⁴

Solving for V4, $V4 = 53.04.^{38}$ As the investment's value without a rate option was \$52.26, this option added \$.78 of value.³⁹

³⁷ For a discussion of the historic volatility of capital gains rates, see infra Part III.C.1.
 ³⁸ The solution is as follows:

 $\frac{40V4}{(1.1)^5} = \frac{4V4}{(1.1)^4} + \frac{1000}{(1.1)^4} - \frac{(100 - V4)}{(1.1)^4}$

57.96V4 = 3220 - 200 + 2V4 - 110 + 1.1V454.86V4 = 2910V4 = 53.04

³⁹ Note that the rate option, like the timing option, may be weakened by limitations on the taxpayer's ability to take losses. Note also that the facts above do not illustrate the rate option's maximum potential—in that, in order to secure the lower rate, the taxpayer must sacrifice a year's deferral. If the potential rate reduction were expected in the fifth year, instead of the fourth, the rate option would add more value.

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D. Blunting the Inflation Penalty

Under either realization or a mark-to-market rule, inflation increases the real (i.e., adjusted for inflation) tax burden on gains,⁴⁰ but only the nominal (i.e., not adjusted for inflation) tax burden on wages. For example, assume Mimi earns a wage of \$100 in 1998. A 20% tax is \$20. If all prices double, she earns \$200 the next year. A 20% tax is \$40—which, in real terms, is the same as the \$20 she paid before.⁴¹ In contrast, if Mimi buys stock for \$100 in 1998, a 100% inflation rate will cause the stock to trade at \$200 the next year. In real terms, she has no profit if she sells the stock for \$200. Yet, because our tax system does not adjust her cost basis for inflation, she has a taxable gain of \$100 (i.e., the difference between her \$200 sale price and the \$100 paid for the stock).⁴²

The inflation penalty on gains derives from the way they are measured—regardless of which timing rule is in effect, i.e., realization or mark-to-market. The tax base is not a gross amount, as with wages, but a *difference* between two amounts: under realization, the sale price and the purchase price and, under mark-to-market, the value at the beginning and end of a period. The inflation penalty arises because these values are set at different times, and thus are measured in dollars with different values. If these disparities are not corrected (or "indexed") for inflation—and, under our system, they are not—tax on the difference will be based partly on inflation, and only partly (if at all) on real gain.⁴³

⁴² To an extent, deflation would have the opposite effect in that it would reduce real economic gains or even generate phony economic losses. A deflation effect might be less pronounced, though, because of the restrictions on use of capital losses discussed above. For example, a corporate taxpayer that had a capital loss generated by deflation and no offsetting gains could not use this loss.

 43 In contrast, if cost basis is indexed for inflation, only real gain is taxed. For example, if Mimi bought stock for \$100, her basis initially would be \$100. After a year of 100% inflation, her basis would increase to \$200. Then, if she sold the stock for \$200, she would have no gain—which is the economically correct result.

⁴⁰ If this property is a "capital asset" within the meaning of § 1221 of the Internal Revenue Code (Code), the gain is a so-called "capital gain." See I.R.C. § 1221 (West 1998). Failure to index gains affects not only capital gains, but also gains on other property (which tax lawyers call "ordinary property") such as assets used in a trade or business. To refer to gains of both types, the Article uses the term "gains."

⁴¹ If the increase from \$100 to \$200 brings Mimi into a higher tax bracket, such that her tax rate on some or all of the \$200 is, say, 24% instead of 20%, then her tax liability increases in real terms as well as nominal terms. The discussion above assumes away this "bracket creep" to show a different inflation effect, unique to gains. Cf. Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, 95 Stat. 172, 188 (codified at I.R.C. § 1 (West 1998)) (indexing brackets for inflation). For a fine discussion of ways in which inflation affects the Code, see Reed Shuldiner, Indexing the Tax Code, 48 Tax L. Rev. 537, 540-42 (1993) (discussing nominal and real effects of inflation on tax liability).

Even without indexation, though, the inflation penalty is less severe under realization than under mark-to-market. Because the tax liability under realization is deferred, there is more time for inflation to "shrink" the tax. To see the point, assume the tax rate is 20% and Steve buys one share of stock for \$100. Assume that in real terms the stock price does not change, but that the annual inflation rate is 10%. After five years, the stock price will have increased to \$161.05,44 yielding a total gain of \$61.05. Under either realization or a mark-tomarket system, the nominal tax will be 20% of \$61.05, or \$12.21.45 Under realization, though, Steve does not have to pay any of this \$12.21 for five years, during which time this sum's real value declines. Assuming the discount rate is attributable solely to inflation, the present value of a tax liability of \$12.21 to be paid in five years is only \$7.58.46 Under a mark-to-market system, in contrast, most of the \$12.21 tax comes due earlier, and so its present value is \$9.10-20% more than under realization. The following table shows how this \$9.10 value is computed:

TABLE III: THE INFLATION PENALTY UNDER A MARK-TO-MARKET REGIME

Year	Value at Year End	Gain	Tax	PV Tax	Sum of PV Tax
1	\$110.00	\$10.00	\$2.00	\$1.82	\$1.82
2	\$121.00	\$11.00	\$2.20	\$1.82	\$3.64
3	\$133.10	\$12.10	\$2.42	\$1.82	\$5.46
4	\$146.41	\$13.31	\$2.66	\$1.82	\$7.28
5	\$161.05	\$14.64	\$2.93	\$1.82	\$9.10

Π

A Fresh Look at Realization: A Subsidy

A. The Scholarly Consensus: At Best a Necessary Evil

The complaint about realization is that it causes items of income to be taxed differently. Whereas the tax on unrealized gain is reduced, as discussed above, there is no corresponding reduction for other income, such as wages. Yet under the widely accepted defini-

 $^{^{44}}$ The price will be \$110 after the first year, \$121 after the second year, \$133.10 after the third year, \$146.41 after the fourth year, and \$161.05 after the fifth year.

⁴⁵ To make the comparison easy, it is assumed that under either rule Steve would continue to own one share and would not fund his tax under a mark-to-market system by selling stock.

 $^{^{46}}$ If instead the real interest rate were positive, this number would be lower, and the advantage of realization over mark-to-market would be even greater. I assume a zero real interest rate, though, in order to isolate the effects of inflation from those of the more conventional deferral effect.

tion of income of Professors Haig⁴⁷ and Simons,⁴⁸ unrealized appreciation is no different from other income.⁴⁹ A taxpayer is equally enriched when, on one hand, she earns \$300 in salary or, on the other, her stock appreciates by \$300; she is equally enriched, moreover, whether she sells the stock (and thus realizes the gain) or keeps it (and thus has unrealized appreciation).⁵⁰ Taxing unrealized appreciation differently from other income, critics warn, will distort behavior as taxpayers seek unrealized appreciation instead of other income.⁵¹

Critics of realization say its saving grace is its administrability as compared to theoretically superior alternatives. Indeed, in perhaps the only efficiency defenses of realization, Professors Shaviro⁵² and

⁴⁹ See, e.g., Fellows, supra note 7, at 723 (relying on Haig-Simons definition of income to critique realization); David J. Shakow, Taxation Without Realization: A Proposal for Accrual Taxation, 134 U. Pa. L. Rev. 1111, 1114 (1986) ("The intellectual basis for accrual taxation is the Haig-Simons definition of income as the sum of consumption and the change in value of property.").

⁵⁰ In a sense these two types of enrichment are different because unrealized appreciation can be lost if the market turns against the taxpayer, while wages generally are not subject to market risk. See Edward A. Zelinsky, For Realization: Income Taxation, Sectoral Accretionism, and the Virtue of Attainable Virtues, 19 Cardozo L. Rev. 861, 893 (1997) (noting "deep-rooted (if economically naive) intuition about property and taxation... that unrealized appreciation constitutes 'paper gain' and is thus insufficiently authentic to be taxed" (footnote omitted)); see also infra Part III.E.2 (discussing political power of this idea).

As Professor Chirelstein has argued, though, "the possibility that . . . gains *may* be succeeded by losses . . . can hardly be taken to show that the taxpayer has not been enriched when the value of his property appreciates." Chirelstein, supra note 18, at 71. Put another way, Bill Gates is considered a billionaire even though much of his wealth, Microsoft stock, is subject to market risk.

⁵¹ Indeed, concern about the distortive effects of realization is one of Professor Andrews' arguments for abandoning the income tax altogether in favor of a consumption tax. See Andrews, supra note 8, at 1116-19.

⁵² Professor Shaviro considers realization a second-best solution. He concedes that a mark-to-market system is theoretically superior but disregards it as administratively and politically unworkable. See Daniel N. Shaviro, An Efficiency Analysis of Realization and Recognition Rules Under the Federal Income Tax, 48 Tax L. Rev. 1, 66 (1992) ("In general, I find the tax system's reliance on sale and exchange as the sine qua non of realization ... to be plausible, although not clearly correct, once superior alternatives have been ruled out for reasons of measurement, liquidity, or simple politics."). Professor Shaviro argues that, assuming we must have a realization system, we should spare transactions from gain recognition where the taxpayer's preference for entering into the transaction is elastic (such as a stock for stock merger), whereas we should impose a tax on inelastic transactions (such as the taxpayer's death). See id. at 66-67.

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⁴⁷ See Robert Murray Haig, The Concept of Income—Economic and Legal Aspects, in The Federal Income Tax 1, 7 (Robert Murray Haig ed., 1921) (defining income as "net accretion to one's economic strength in a given period").

 $^{^{48}}$ See Henry C. Simons, Personal Income Taxation 50 (1938) (defining income as sum of "(1) the market value of rights exercised in consumption and (2) the change in the value of the store of property rights between the beginning and end of the period in question").

Zelinsky⁵³ each concede the theoretical appeal of an idealized markto-market system, while offering a "second best" defense of realization. The scholarly debate generally has not been whether realization is a good rule—as the overwhelming consensus⁵⁴ is that it is not⁵⁵ but rather, whether an administrable alternative can be developed.⁵⁶ Many proposals have been offered in the academic literature,⁵⁷ but the government generally has not pursued them.

B. A New Perspective: Realization as Subsidy

An essential premise of the conventional critique of realization is that all income should be taxed alike.⁵⁸ Interesting questions arise,

⁵⁴ See supra notes 4-7 (listing articles critiquing realization); see also, e.g., Daniel I. Halperin, Assumption of Contingent Liabilities on Sale of a Business, 2 Fla. Tax Rev. 673, 712 (1996) ("[T]he road to reform is improvement in the income tax, primarily efforts to extend the application of mark-to-market or other means of currently accounting for investment income and loss, so as to minimize the importance of realization." (footnote omitted)); Mary L. Heen, An Alternative Approach to the Taxation of Employment Discrimination Recoveries Under Federal Civil Rights Statutes: Income from Human Capital, Realization, and Nonrecognition, 72 N.C. L. Rev. 549, 554 (1994) ("[T]he realization requirement itself represents a departure from the theoretically correct taxation of accretion to wealth."); Theodore S. Sims, Long-Term Debt, the Term Structure of Interest and the Case for Accrual Taxation, 47 Tax L. Rev. 313, 356 n.177 (1992) ("The belief seems widely held that accrual taxation of asset gains and losses—often referred to as a 'mark-to-market' system—is part and parcel of an ideal tax based on accretion.").

⁵⁵ A thoughtful exception is Professor Zelinsky's article. See Zelinsky, supra note 50, at 862-63 (defending realization as superior to mark-to-market as latter actually would be implemented).

⁵⁶ See generally Cunningham & Schenk, supra note 7, at 742-43 (proposing to tax unrealized appreciation based on assumed rate of return); Fellows, supra note 7, at 727-29 (proposing interest charge to offset deferral caused by realization); Shakow, supra note 49, at 1114, 1118-19 (proposing broad use of mark-to-market or "accrual" taxation); Shoup, supra note 4, at 97 (arguing for periodic accrual accounting of capital gains and losses for individual taxpayers); Slawson, supra note 10, at 624-26 (advocating mark-to-market regime for publicly traded stock); Mark L. Louie, Note, Realizing Appreciation Without Sale: Accrual Taxation of Capital Gains on Marketable Securities, 34 Stan. L. Rev. 857, 861-71 (1982) (discussing advantages and disadvantages of taxing unrealized appreciation).

⁵⁷ For a discussion of various proposals, see infra Part III.D.2.

⁵⁸ This is a standard assumption in tax scholarship. See, e.g., Robert H. Scarborough, Colloquium on Capital Gains: Risk, Diversification and the Design of Loss Limitations Under a Realization-Based Income Tax, 48 Tax. L. Rev. 677, 679 n.9 (1993) ("I assume that

⁵³ Professor Zelinsky concedes the theoretical appeal of universally applicable markto-market (or "accretionism") and the power of the conventional critique of realization. See, e.g., Zelinsky, supra note 50, at 862 (because of its "messy realities and genuine shortcomings," realization has "understandably been found wanting" when compared to "theoretical promises of an ideal accretionist system"); id. at 864 (calling critiques of realization theoretically strong). Yet "second best considerations advise caution," id. at 863; accretionism, as implemented, will prove disappointing because it will govern only *part* of the economy. "Such selective accretionism," he argues, "would engender the same kinds of distortions and unfairness as the rule of realization while sacrificing the benefits of realization." Id. at 865. These benefits, Zelinsky contends, include valuation, liquidity, enforceability, and acceptability to the taxpayer. See id. at 879-904.

though, if we relax this assumption—something that, to my knowledge, no other analysis of realization has done.⁵⁹ Although differentials in tax treatment will induce tax-motivated planning, this planning is not necessarily bad.⁶⁰ A subsidy that induces factories to stop polluting, for example, can correct a negative externality; subsidies that induce voters to register or students to pursue higher education likewise promote significant goals. The question is not so much whether the tax differential will alter behavior, but whether the changes are desirable.

In this spirit, realization should not be dismissed merely because it creates a differential in the way various items of income are taxed. The same evidence (i.e., that realization reduces the tax imposed on unrealized appreciation) supports not only the conventional view that the rule is an unfortunate byproduct of administrability concerns, but also the hypothesis that realization is a subsidy to promote certain types of savings. One person's distortion is another's social policy.⁶¹

⁶⁰ Cf. Daniel Shaviro, Beyond Public Choice and Public Interest: A Study of the Legislative Process as Illustrated by Tax Legislation in the 1980s, 139 U. Pa. L. Rev. 1, 54 (1990) ("Preferences may significantly affect the allocation of economic resources . . . These allocative effects are not necessarily bad. Consider, for example, a preference that increased the relative return from an item with positive externalities.").

⁶¹ To some readers, the word "subsidy" may connote a policy that is consciously intended. My more modest claim is that realization functions as a subsidy rather than that Congress intends it as such. Indeed, it is difficult to establish what Congress intends. Among various members and congressional sessions, whose intent is most relevant? See, e.g., Max Radin, Statutory Interpretation, 43 Harv. L. Rev. 863, 870 (1930) ("The chances that of several hundred [members] each will have exactly the same determinate situations in mind as possible reductions of a given determinable, are infinitesimally small."); see also John F. Manning, Textualism as a Nondelegation Doctrine, 97 Colum. L. Rev. 673, 684-86 (1997) (describing difficulties with discerning legislative intent). The intent of tax policy is especially elusive, as some members may not understand the intricacies of tax rules they enact. Although I do not plumb congressional intent here, a plausible case for an intent to subsidize might be developed. The theory would be that Congress repeatedly has recognized the benefits of deferral and has proved willing to use or withhold them in pursuit of various goals. See, e.g., I.R.C. § 361 (West 1998) (offering "nonrecognition" provisions for reorganizations, presumably in order to lift tax barriers to corporate restructuring); id. § 401(k) (using deferral as an incentive to encourage savings for retirement); see also infra Part III.C.3 (discussing instances where Congress has revoked deferral to protect fisc from particular abuse).

tax rules should be judged by the criterion of neutrality. This is a conventional assumption.").

⁵⁹ For example, Professor Zelinsky's defense of realization accepts the idea that all income should be taxed alike. See Zelinsky, supra note 50, at 915 n.147 ("In this Article, I am accepting the accretionist vision of universally neutral taxation, but argue that, in practice, the accretionist program will not achieve it; the accretionist enterprise thus ultimately fails on its own terms.").

The purpose of this Article is to evaluate the effectiveness of realization as a subsidy.⁶² A comprehensive consideration of this subject would address at least two questions: First, is it wise to use the tax code to subsidize savings? Second, if this goal is desirable, is realization an effective means of achieving it? Each of these questions is broad enough to warrant considerable attention. As the first question has been widely considered⁶³ and the second, to my knowledge, has not been considered at all, this Article will address the second question almost exclusively.

This Article assumes, therefore, that it is desirable to use the tax code to subsidize savings. I do not make this assumption because it is uncontroversial or even necessarily because I believe it. Although there are reasons to support such a subsidy, there are likewise reasons to oppose it, and the Article takes no position on this question.⁶⁴ Rather, the Article assumes the desirability of a savings subsidy because Congress recently reaffirmed its interest in one by cutting the capital gains rate. In the Taxpayer Relief Act of 1997, Congress reduced the maximum rate for individuals from twenty-eight percent to

⁶² A gentler defense of realization is that it is a corrective for inflation rather than a subsidy. In reducing the tax burden on gain, realization merely would be offsetting inflation's tendency to increase that burden. There is, however, no reason to think that these effects will be precisely offsetting. In the current environment, realization's tendency to reduce the tax burden likely will predominate, not only because realization itself tends to mitigate the inflation penalty, as described supra Part I.D, but also because the inflation of reinvesting dollars that otherwise would fund tax payments) have been high in recent years. As a result, this Article assumes that realization is more than just a corrective for inflation. The essential argument still would hold, though, if realization were just a remedy: it would be a more credible remedy than, for example, a reduction in the capital gains rate. Yet to ensure that realization is not functioning merely to offset inflation, we could eliminate the inflation penalty on gains by indexing cost basis.

Realization is a "subsidy," moreover, only if it is otherwise correct to tax the return to savings—something advocates of a consumption tax would dispute. See infra Part IV.E.3 (discussing view that income tax penalizes savings). Again, though, realization may be analyzed as a *remedy*—in this case, for the income tax penalty on savings. If it is a remedy, realization is a more credible one than a rate reduction.

⁶³ For example, there is an extensive literature on the advisability of a capital gains rate preference. For a valuable survey, see George R. Zodrow, Economic Analyses of Capital Gains Taxation: Realization, Revenue and Equity, 46 Tax L. Rev. 419, 424-29 (1993); see also infra Part III.E.1 (discussing capital gains rate preference). For various efficiency analyses of the advisability of subsidizing investment, see notes accompanying the discussion infra Parts IV.E.1-3. For a survey of the literature on the equity implications of subsidizing investment, see Deborah M. Weiss, Can Capital Tax Policy Be Fair? Stimulating Savings Through Differentiated Tax Rates, 78 Cornell L. Rev. 206, 209-14, 217, 223-24 (1993); see also infra notes accompanying Part IV.E.5.

⁶⁴ The final Part of this Article discusses, in summary fashion, issues raised by use of the tax code to subsidize investment.

twenty percent,⁶⁵ and promised a further reduction to eighteen percent for property acquired after December 31, 2000 and held for five years.⁶⁶ The rationale repeatedly offered for these rate cuts was to promote savings;⁶⁷ indeed, the rate cuts fall within a title called "Savings and Investment Incentives," and in floor debate many members described the measure's purpose as promoting savings.⁶⁸ As Senator Hutchison said:

with the passage of this bill, we will cut the capital gains rate to 20 percent. This will encourage and reward investment and create new businesses and new jobs. A low capital gains rate is important to our future and our Nation's ability to save and invest. Our current Tax Code punishes people for saving and investing. This is wrong. We are trying to change it.⁶⁹

Given that Congress has determined to subsidize savings, the question is how to do it most effectively. In general, the burden of a tax is a function of two variables: first, timing (e.g., realization versus mark-to-market); and, second, the rate (e.g., twenty eight percent versus twenty percent).⁷⁰ These two variables can be calibrated to achieve a particular tax burden, and different combinations theoretically can yield the same result. For example, realization with a high tax rate theoretically might impose the same burden as mark-to-market with a lower rate.⁷¹ A subsidy thus can proceed on either (or both) of two tracks: It can defer the timing of the tax or it can reduce

69 Id. at S8,434.

 70 A third variable is how the tax base is measured (e.g., whether it is indexed for inflation). See supra note 43 and accompanying text.

 71 This equivalence depends on an assumption about how long the investor will hold the stock, because realization's effect on the tax varies with the amount of time the investor holds the investment. See infra note 300 and accompanying text. Likewise, the equivalence turns on assumptions about interest rates and the return that may be earned during the period of deferral.

⁶⁵ See Taxpayer Relief Act of 1997, Pub. L. No. 105-34, § 311(a), 1997 U.S.C.C.A.N. (111 Stat.) 788, 831-32 (codified at I.R.C. § 1(h)(1) (West 1998)).

 $^{^{66}}$ See id. (codified at I.R.C. § 1(h)(2) (West 1998)). For further description of this provision, see infra note 124.

⁶⁷ Cynics will note, no doubt, that the stated rationale is not necessarily genuine. At least in part, the capital gains tax cut presumably was a reward for a loyal constituency. This point is considered further infra Part III.E.1.

⁶⁸ See, e.g., 143 Cong. Rec. S8,416 (daily ed. July 31, 1997) ("Another important provision of this reconciliation package—one that will not only provide tax relief, but will, along with our IRA's, promote investment and jobs, is our capital gains tax cut.") (statement of Sen. Roth); id. at S8,429 ("The capital gains cuts and the lowering of the estate tax will help promote economic growth and help preserve family owned and operated businesses.") (statement of Sen. DeWine); id. at S8,433 ("A capital gains tax reduction is very important. That should help savings and investment in our country.") (statement of Sen. Baucus).

the rate.⁷² Congress's recent decision was, of course, to preserve realization and to add a second subsidy, a reduction in the capital gains rate. Given this menu of approaches, two questions arise. First, will a timing or rate subsidy more effectively induce savings?⁷³ Second, are there other reasons to prefer one to the other? The following Parts address these issues.

Ш

CREDIBILITY AND PROMOTING MORE INVESTMENT

Realization's strong suit is credibility; taxpayers are likely to believe realization will survive long enough to benefit them. To develop this argument, this Part first discusses why credibility is important and then explains why realization is a credible subsidy. In so doing, this Part uses a reduction in the capital gains rate as a foil, exploring differences in the relative credibility of the two.

A. Credibility and the Promise Subsidy

1. Up-Front Versus Promise Subsidies

A subsidy can be paid when the desired behavior occurs (an "upfront" subsidy) or some time thereafter (a "promise" subsidy), a distinction that may have considerable bearing on the subsidy's effectiveness.⁷⁴ An up-front subsidy theoretically could encourage the behavior desired here (i.e., savings today). For example, the government might provide an immediate credit based on an investment's size.⁷⁵ However, the two subsidies explored here—realization and a reduced capital gains rate—are promise subsidies, in that investors are

⁷⁵ Professor Goldberg classifies the investment tax credit of Code § 38 (repealed in 1986) and the deduction for research and development expenses of Code § 174 as up-front (or, in his terminology, "one time") subsidies. See Goldberg, supra note 74, at 310; see also Rev. Rul. 86-134, 1986-2 C.B. 104 (describing "WIR," an investment tax credit offered by the Netherlands that becomes available once the investment is made).

⁷² A subsidy also might take the form of a lump-sum up-front payment or credit. Such subsidies are considered infra Part IV.D.

⁷³ The following analysis assumes that increases in expected after-tax return induce savers to save more. It is possible, though, that savings decisions are not primarily influenced by yield, or that taxes are irrelevant to savings decisions, as sophisticated taxpayers can adjust their portfolios to offset them. See infra Parts IV.E.1-2 (discussing these theories).

⁷⁴ Professors Goldberg and Logue each have offered an analogous distinction. Professor Goldberg distinguishes between "one time" and "periodic" subsidies. See Daniel S. Goldberg, Tax Subsidies: One-Time vs. Periodic: An Economic Analysis of the Tax Policy Alternatives, 49 Tax L. Rev. 305, 309-12 (1994). Professor Logue distinguishes between "up-front" and "installment" subsidies. See Kyle D. Logue, Tax Transitions, Opportunistic Retroactivity, and the Benefits of Government Precommitment, 94 Mich L. Rev. 1129, 1139 (1996). I use the term "promise" subsidy to emphasize that the subsidy is a promise whose credibility is at issue.

not rewarded at the time they invest.⁷⁶ Instead, the reward is expected later, as a reduction of the tax on appreciation. This is obvious for a reduced capital gains rate.⁷⁷ It is equally true of a promise to retain realization—and thus to defer the tax until sale—because, as discussed above, such deferral reduces the tax burden. In either case, the government may induce savings today with a promise of value in the future.

2. Credibility

A promise is more likely to induce behavior if it is credible. Absent assurance that the promise will be kept, the promisee will discount its value by the likelihood of breach.⁷⁸ For example, assume Jane wants to buy Michael's car and Michael is asking \$1,000. If she offers to pay him in the future for delivery today, he will increase the price to make up for the risk of nonpayment. Assuming he believes there is only a fifty-fifty chance she will pay, he will not sell the car for less than \$2,000.⁷⁹ The amount the promisor must promise to induce the same behavior, therefore, rises as the promise's credibility declines.

Accordingly, promisors benefit from making promises more credible, a reality well understood in the business world. It is why individuals care about their credit reports and corporate borrowers care about their Standard & Poor's and Moody's ratings. More fundamentally, the value of credibility constitutes an important justification for

⁷⁶ Although the focus of this Article is to compare realization with a rate reduction, see infra Part IV.D for a comparison of realization to up-front subsidies. As up-front subsidies enable the government *not to make* any promise (except the implicit pledge not to take the subsidy back), these subsidies can be extremely credible—potentially even more so than realization. Under other criteria, though, up-front subsidies do not fare as well. Most importantly, they are less readily calibrated to an investor's holding period—the length of which is not yet known when up-front subsidies are paid.

⁷⁷ The amount of time before the government either honors or breaches its "ratereduction" promise depends on the timing rule in effect and the investor's time horizon. Under realization, the benefits of the promise accrue when the investor sells the property. Under a mark-to-market system, these benefits accrue in part every year, as the taxpayer pays the annual tax on unrealized appreciation. Thus, the "weighted average" term of the rate-reduction promise is shorter under mark-to-market.

⁷⁸ For an example of this sort of analysis, see Pascal's wager argument, as recounted by Jon Elster: "Since there is a certain positive probability that God exists, and since he that believes in the existence of God receives an infinitely large gain if he proves right, whereas only a finite amount is at stake, the principle of expected utility maximization requires that one should believe." Jon Elster, Ulysses and the Sirens 47-48 (1979).

⁷⁹ The assumption here is that enforcement costs are prohibitive, such that Michael will not be able to collect unless Jane pays voluntarily. The discussion also does not consider the time value that Michael forgoes by not receiving payment today, a factor that would raise the price further.

the enforcement of private contracts.⁸⁰ By binding themselves through contracts, promisors are able to secure benefits that otherwise are unavailable, or at least are more expensive.⁸¹

When the promisor is the government, the effect is essentially the same.⁸² The government will have to offer more if its promise is not credible. Yet common ways to make promises more credible, such as enforceable contracts and security interests, may not be available,⁸³ particularly if the promise is a legislatively enacted subsidy.⁸⁴ The less the government is believed, the more value the government will have to offer to induce behavior.⁸⁵ As Professor Graetz has observed in a

⁸¹ For a classic discussion of "precommitment" and its implications, see Elster, supra note 78, at 36-111.

⁸² A difference is that, unlike private parties, the government is sometimes even more generous than it promised to be. See infra Part III.A.3 (describing how subsidy's credibility can be enhanced if government is likely to pay more than it has promised).

⁸³ Their absence is not necessarily bad. Although the government may have to offer more because it is free to rescind subsidies, this freedom allows the government to respond to changed economic and political circumstances. See Logue, supra note 74, at 1140 (noting that "cost of government precommitment (measured in terms of lost policy making flexibility) could theoretically overwhelm the default-premium effect").

⁸⁴ In contrast, such remedies may be available when the government actually enters into a contract, even if the breach is effected through legislation. In United States v. Winstar Corp., 518 U.S. 839 (1996), federal thrift regulators had offered favorable accounting treatment to healthy thrifts to induce them to acquire ailing thrifts. See id. at 847. When Congress later legislated away this favorable treatment, thrifts successfully sued for damages based on breach of contract. See id. at 858-59. For an interesting discussion of *Win*star and its significance for the credibility of subsidies, see Daniel S. Goldberg, Government Precommitment to Tax Incentive Subsidies: The Impact of *United States v. Winstar Corp.* on Retroactive Tax Legislation, 14 Am. J. of Tax Pol'y 1, 4 (1997) (arguing that *Winstar* does not permit Congress to precommit to preserving periodic tax incentives).

⁸⁵ Although the government must *offer* more, it conceivably might not have to pay more in total. Indeed, the government saves money by breaching (and thus, in effect, induces behavior for free). Theoretically, this savings could perfectly offset the expense of having to offer a nominally larger subsidy. For example, instead of paying \$100 each time to induce particular behavior, the government might pay \$200 half the time—for the same net \$100 cost per time.

Yet the savings and the costs of breach are perfectly offsetting only under two assumed conditions, which should not hold here. First, promisees must be risk neutral, such that they find equally appealing a certain payment of \$100 or a 50% chance at \$200. As discussed infra Part III.A.3, most people are risk averse, and demand a premium for uncertainty. Second, promisees must predict the risk of breach with perfect accuracy. The government will overpay if promisees value a subsidy based on a 50% chance of breach but the government in fact intends to pay—and does pay—100% of the time. The government thus overpays when it is more committed to a subsidy than promisees believe. If the government is indeed committed to subsidizing investment, as this Article assumes, then any

⁸⁰ See, e.g., Richard A. Posner, Economic Analysis of Law 103 (5th ed. 1998) ("[T]he fundamental function of contract law (and recognized as such at least since Hobbes's day) is to deter people from behaving opportunistically toward their contracting parties, in order to ... obviate costly self-protective measures."); Oliver E. Williamson, Credible Commitments: Using Hostages to Support Exchange, 73 Am. Econ. Rev. 519, 519 (1983) (remarking that credible commitments are undertaken to promote exchange).

pathbreaking article, when taxpayers apprehend the possibility of a change in law, "taxpayers should be expected to demand an additional amount of incentive—an 'uncertainty premium'—to compensate for the probability that the incentive might later be repealed."⁸⁶ In Professor Shaviro's words, people are not "permanently fooled by events that occur in broad daylight."⁸⁷ If the government has failed to deliver in the past, then, as Professors Doernberg and McChesney have observed, "the next time Congress attempts to encourage behavior in the private sector through tax incentives, it will have to raise the ante because taxpayers will be more mistrusting."⁸⁸ Investors not only will "price" the expected tax benefit into their investment decisions; they also will "price" the risk that the tax benefit will be eliminated before they enjoy it.⁸⁹

Therefore, in evaluating our two promise subsidies—realization and a cut in the capital gains rate—an essential question is, which of the two is more credible? Although each serves to reduce the tax on savings—and, for a given investment time horizon and discount rate, the reduction will look the same—one will be less effective if investors are less confident that it will endure.

3. Potential Generosity in Excess of Promise

Although a subsidy's credibility is undermined if the government is not likely to pay it, the subsidy's credibility correspondingly can be enhanced if the government is likely to pay *even more* than it has promised. After all, taxes fall as well as rise. As Professor Shaviro has emphasized in an important new work, taxpayers are likely to an-

⁸⁷ Daniel Shaviro, Tax Transitions and Tax Politics (forthcoming 1998) (manuscript at 4-5, on file with the New York University Law Review).

⁸⁸ Doernberg & McChesney, supra note 86, at 961.

⁸⁹ See Louis Kaplow, An Economic Analysis of Legal Transitions, 99 Harv. L. Rev. 511, 525-26 (1986) ("Perceptive investors will typically act on probability estimates of possible changes in the legal regime, just as they will take into account the probabilities of changes in relevant market conditions \ldots .").

discounting by taxpayers of this commitment would force the government not just to offer more, but also to pay more to induce the same behavior.

⁸⁶ Michael J. Graetz, Legal Transitions: The Case of Retroactivity in Income Tax Revision, 126 U. Pa. L. Rev. 47, 69 (1977); see also Richard L. Doernberg & Fred S. McChesney, On the Accelerating Rate and Decreasing Durability of Tax Reform, 71 Minn. L. Rev. 913, 960-61 (1987) ("Uncertainty alone is a disincentive to productive activity. A survey of the United States Chamber of Commerce's membership, taken while the [1986] tax bill was being debated, found that forty-two percent have delayed investment decisions because of uncertainty over the final shape of the bill."); Logue, supra note 74, at 1139 ("Because taxpayers who relied on the repealed incentive credit were 'burned' by the government, future incentive credits would have to be more generous").

ticipate, and adjust their behavior for, favorable as well as unfavorable changes in law.⁹⁰

To an extent, though, a stable subsidy starts with an advantage over a volatile one—even if the volatile subsidy is as likely to increase as to decrease. The reason is that people are generally risk averse.⁹¹ The certainty of receiving a dollar is generally more appealing than a fifty percent possibility of receiving two dollars. A risk premium is usually needed to persuade people to take a chance.⁹² Even if a volatile subsidy is just as likely to double as to be withdrawn, therefore, it still will be less effective than a stable subsidy that promises the same amount.

Yet where favorable changes in the volatile subsidy are *more* likely than unfavorable ones,⁹³ the volatile subsidy can become more attractive than the stable one. For example, a two-out-of-three chance of receiving three dollars is better than the certainty of receiving one dollar. In evaluating the relative credibility of the two subsidies, therefore, I will consider not only the possibility that either will

⁹² A premium is less necessary for a risk that can be mitigated through diversification, such as a risk that is specific to a narrowly applicable subsidy (for example, the exclusion from tax of income from municipal bonds). Yet where the subsidy applies to virtually all of a taxpayer's investments—as do the two subsidies under consideration here—diversification will be considerably less effective at mitigating the risk. See Gordon & Kornhauser, supra note 91, at 778-80 (comparing market-wide "systematic" risk, which warrants a premium, with issuer-specific "unsystematic" risk, which does not). In fact, some studies suggest that even diversifiable risk (such as security-specific risk) nevertheless may attract a premium. See id. at 782 n.53 (citing studies).

⁹³ By "likely," I mean to invoke the "weighted average" probability, a notion that accounts for the magnitude, as well as the likelihood, of the change. For example, a one-in-three chance that a payment will double would outweigh a one-in-two chance that the payment will decline by 10%.

⁹⁰ See Shaviro, supra note 87 (manuscript at 4-7) (advocating expanded use of "rational expectations" benchmark).

⁹¹ As Professors Gordon and Kornhauser have observed, one of the fundamental tenets of the capital asset pricing model is that "investors will insist on compensation for accepting risk." Jeffrey N. Gordon & Lewis A. Kornhauser, Efficient Markets, Costly Information, and Securities Research, 60 N.Y.U. L. Rev. 761, 779 n.45 (1985); see also John Lintner, The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets, 47 Rev. Econ. & Stat. 13, 16 (1965) (assuming that "if any two mixtures of assets have the *same expected return*, the investor will prefer the one having the *smaller variance* of return"); William F. Sharpe, Capital Asset Prices: A Theory of Market Equilibrium Under Conditions of Risk, 19 J. Fin. 425, 436-42 (1964) (presenting model of individual investor behavior under conditions of risk and examining its implications for relationship between asset's price and risk). There is strong empirical evidence that those who assume greater market risk are compensated with higher returns. See Gordon & Kornhauser, supra, at 782 n.53 (citing studies).

change, but the likely direction of the change (i.e., to increase or decrease the tax burden).⁹⁴

4. Inefficiency of Discounted Subsidy

This Article's premise is that it is socially undesirable for taxpayers to discount a subsidy for the risk that it will be withdrawn, because the government is forced to offer more to induce the desired behavior. Although this premise at first blush seems inconsistent with an influential argument made by Professor Kaplow, the two positions are, in fact, reconcilable. In his insightful article, Professor Kaplow has argued that it generally is efficient for investors to adjust their behavior for the possibility of changes in law.95 In drawing this conclusion, he explicitly assumes that the changes are socially beneficial. Thus he concludes that the gravitational pull of these changes-the adjustments investors make in anticipating them-likewise is beneficial.96 This conclusion makes sense when the change remedies an externality. His example is a factory that causes environmental damage.⁹⁷ If the factory is not yet regulated, it is desirable for investors to discount the factory's value for the possibility of regulation, so their valuation will approach the factory's "true" externality-adjusted value.98

Yet where the change of law is no longer assumed to be socially beneficial—and, in particular, where it is repeal of a subsidy rather than remedy of an externality—Professor Kaplow acknowledges that this conclusion no longer holds.⁹⁹ Desirability of the uncertainty premium in these circumstances, he argues, depends on one's view of the desirability of the subsidy. Those who like the subsidy will not like the uncertainty premium.¹⁰⁰ Thus, if one assumes (as this Article does) that a subsidy for savings is a good idea, an uncertainty premium is by definition undesirable.¹⁰¹

¹⁰¹ Professor Kaplow further notes that opponents of the subsidy, correspondingly, will welcome the uncertainty premium. See id. ("In contrast, from the point of view of the

⁹⁴ In a useful distinction, Professor Shaviro calls the mere possibility of a change "transition risk," and calls a change that is expected to take a particular direction a "retroactive tax." See Shaviro, supra note 87 (manuscript at 5-6).

⁹⁵ See Kaplow, supra note 89, at 529 ("The efficient level of investment is that induced when investors bear all real costs and benefits of their decisions.").

⁹⁶ See id. at 531.

⁹⁷ See id. at 512.

⁹⁸ See id.

⁹⁹ See id. at 573 ("In the event of changes in economic incentives, such as changes in taxes or subsidies, the overinvestment argument . . . does not apply as directly when one relaxes the assumption that reforms are desirable.").

¹⁰⁰ See id. ("From the point of view of those initially in control of government there is no overinvestment because the previously subsidized project is still deemed socially valuable despite the reform.").

5. Institutional Credibility Versus Inherent Credibility

Factors that enhance credibility may be grouped in two classes: "institutional" and "inherent" credibility. Institutional credibility arises when Congress cannot retract a subsidy *even if it wants* to do so, for example, because of constitutional constraints or mandatory grandfathering. Inherent credibility, in contrast, arises when Congress will not *choose* to repeal a subsidy even if free to do so. Inherent credibility may arise from the subsidy's historic durability or from reasons why Congress would prefer to retain the subsidy.

B. Institutional Credibility

1. Constitutional Constraints

A subsidy is most credible if guaranteed by the Constitution.¹⁰² No constitutional constraint prevents Congress from changing the capital gains rate prospectively, or, as a practical matter, retroactively.¹⁰³ In the early years of the income tax, in contrast, realization was constitutionally ordained, as *Eisner v. Macomber*¹⁰⁴ held in concluding that stock dividends were not taxable "income" under the Sixteenth Amendment. After stating that such dividends fail to enrich the shareholder (as they merely change the number of pieces of paper

¹⁰⁴ 252 U.S. 189 (1920).

reformers, there was always overinvestment because the project was never a good idea—or at least it should not have been subsidized.").

 $^{^{102}}$ See Elster, supra note 78, at 94 ("The Úlysses strategy is to precommit later generations by laying down a constitution including clauses that prevent its being easily changed.").

¹⁰³ The Supreme Court repeatedly has upheld retroactive tax legislation. See, e.g., United States v. Carlton, 512 U.S. 26, 30-31 (1994) (applying rational basis test); United States v. Hemme, 476 U.S. 558, 568 (1986) (noting that some retroactive effect is not necessarily fatal to revenue law); United States v. Darusmont, 449 U.S. 292, 297 (1981) (affirming that application of income tax statute to entire calendar year in which enactment took place is not per se due process violation); Welch v. Henry, 305 U.S. 134, 141-51 (1938) (holding that state legislation which retroactively imposed flat tax rate on, and eliminated deductions from, dividend income did not violate Equal Protection or Due Process Clause); United States v. Hudson, 299 U.S. 498, 500 (1937) (allowing retroactive effect where tax is occasioned by profit); Milliken v. United States, 283 U.S. 15, 21 (1931) (applying gift tax to gift made before passage of relevant revenue act). Commentators generally agree that retroactive taxation is constitutional. See Goldberg, supra note \$4, at 33 ("Nominally prospective tax legislation with retroactive effect appears to be permissible under current case law."); Graetz, supra note 86, at 48 (noting lack of constitutional restraints on retroactive taxation); Charles B. Hochman, The Supreme Court and the Constitutionality of Retroactive Legislation, 73 Harv. L. Rev. 692, 706-07 (1960) (discussing Court's reluctance to "override the legislative judgment as to the necessity of retroactive taxation"); Saul Levmore, The Case for Retroactive Taxation, 22 J. Legal Stud. 265, 269-72 n.12 (1993) (reviewing unsuccessful challenges to retroactive taxation).

she holds),¹⁰⁵ the Court rejected the government's claim "that the new certificates measure the extent to which the gains accumulated by the corporation have made him richer."¹⁰⁶ Rather, "enrichment through increase in value of capital investment," the Court said, "is not income in any proper meaning of the term."¹⁰⁷

If this language were still good law, realization could not be repealed without a constitutional amendment—a fact that by itself would make realization extremely credible. However, almost sixty years ago the Court began reading *Macomber* narrowly and describing realization merely as "founded on administrative convenience."¹⁰⁸ Adopting this view, lower courts have upheld surgical exceptions to realization.¹⁰⁹ Commentators almost universally agree that realization is not constitutionally required.¹¹⁰ Accordingly, as a constitutional

¹⁰⁶ Macomber, 252 U.S. at 214.

¹⁰⁷ Id. at 214-15.

¹⁰⁸ Helvering v. Horst, 311 U.S. 112, 116 (1940); see also Helvering v. Bruun, 309 U.S. 461, 468-69 (1940) (distinguishing *Macomber* as a narrow case about "the distinction between an ordinary dividend and a stock dividend" in concluding that landlord was taxable for value of building built on his land by tenant, even though landlord had not sold building or land).

¹⁰⁹ See, e.g., Murphy v. United States, 992 F.2d 929, 931-32 (9th Cir. 1993) (upholding constitutionality of mark-to-market tax accounting for commodity futures contracts under I.R.C. § 1256; using a narrow "constructive receipt theory," court said that appreciation in such contracts was taxable because taxpayers had immediate access to cash value of this appreciation; court did not decide "the broader issue of whether Congress could tax the gains inherent in capital assets prior to realization or constructive receipt"); Garlock, Inc. v. Commissioner, 489 F.2d 197, 200-01 (2d Cir. 1973) (upholding tax on shareholder's share of current but undistributed earnings of controlled foreign corporation; "The argument that Section 951 . . . is unconstitutional we think borders on the frivolous in light of this court's decision in Eder v. Comm'r" (citation omitted)); Eder v. Commissioner, 138 F.2d 27, 28-29 (2d Cir. 1943) (upholding tax upon undistributed earnings of foreign personal holding companies).

¹¹⁰ See, e.g., Chirelstein, supra note 18, at 71 ("[R]ealization is strictly an administrative rule and not a constitutional, much less an economic, requirement of 'income.'"); Joseph T. Sneed, The Configurations of Gross Income 65-72 (1967) (discussing "the Court's erosion of the constitutional requirement of realization"); Boris I. Bittker, Charitable Gifts of Income and the Internal Revenue Code: Another View, 65 Harv. L. Rev. 1375, 1380 (1952) (expressing "no doubt" that realization is not constitutionally required); Stone, supra note 105, at 916-18 (arguing that realization is issue of policy, not constitutional law); Stanley S. Surrey, The Supreme Court and the Federal Income Tax: Some Implications of the Recent Decisions, 35 Ill. L. Rev. 779, 791 (1941) (stating that most commentators agree that realization is not constitutionally mandated); see also Cunningham & Schenk, supra note 7, at

 $^{^{105}}$ See id. at 202. This conclusion generally has withstood the test of time. See I.R.C. § 305(a) (West 1998) (setting rule, with exceptions, that gross income does not include distributions of stock). However, stock dividends that do increase a shareholder's proportionate interest in a corporation—e.g., stock dividends paid only to some shareholders, while others get cash distributions—do give rise to taxable income. See id. § 305(b)(2). For an interesting discussion of the history of the rules for stock dividends, see Richard B. Stone, Back to Fundamentals: Another Version of the Stock Dividend Saga, 79 Colum. L. Rev. 898, 900-16 (1979).

matter, the capital gains rate and realization are equally susceptible to change.

2. Grandfathering

The conventional remedy for minimizing uncertainty premiums is grandfathering, i.e., applying rule changes only prospectively. The uncertainty premium would disappear if taxpayers were convinced that future changes would not affect them. Yet taxpayers may be unlikely to expect grandfathering-particularly given how broad it must be to offer complete protection. For example, assume Debbie is deciding on January 1, 1998 whether to purchase stock she plans to hold for five years; assume further that she will invest if the capital gains rate is twenty percent, but she is concerned that the rate may rise to twentyeight percent on January 1, 2001. Debbie is not completely protected even if the new rate applies only to post-enactment sales;¹¹¹ if the rate changes on January 1, 2001-two years before she plans to sell-she must forgo two years of deferral to get the old rate. What if the old rate is applied to anyone holding the asset on the effective date (i.e., January 1, 2001), even for sales after the effective date?¹¹² Even under such "holder only" grandfathering, the change still may reduce the price Debbie will receive for the asset, as her buyer will not benefit from the lower rate. Debbie is wholly reassured only if all assets in existence prior to the effective date are taxed at the old rate, regardless of who holds them.¹¹³ Yet such grandfathering is fairly uncommon, and so taxpavers are unlikely to expect it; moreover, although holder-only grandfathering may be somewhat more common-and almost as good-I doubt it is sufficiently pervasive for taxpayers to expect it routinely.¹¹⁴

¹¹² See id. at 60 (describing such rule as "holder only grandfathered" effective date).

¹¹³ See id. (describing such rule as "grandfathered" effective date).

¹¹⁴ Congress could try to reassure investors by *promising* such grandfathering, but the challenge would be to make this pledge credible. Professor Logue offers some creative suggestions about how to do so (e.g., allowing taxpayers to seek contract-type damages for breach or enacting a procedural rule requiring grandfathering). See Logue, supra note 74, at 1183-94. Yet although these devices might give taxpayers some comfort if enacted, Congress is, in a sense, ensnared in an infinite loop: absent a constitutional constraint, anything it does today can be changed tomorrow—including measures to prevent future changes. For a thoughtful discussion of obstacles to a consistent transition policy, see Kirk J. Stark, The Elusive Transition to a Tax Transition Policy, 13 Am. J. of Tax Pol'y 145, 147-

^{741 &}amp; n.69 (citing both judicial and academic authority for proposition that realization requirement is not constitutionally mandated). But see Henry Ordower, Revisiting Realization: Accretion Taxation, the Constitution, Macomber, and Mark to Market, 13 Va. Tax. Rev. 1, 56 (1993) (arguing that realization is still required by Sixteenth Amendment).

¹¹¹ See Graetz, supra note 86, at 57 (describing such rule as "nominally prospective" effective date).

Accordingly, instead of relying on grandfathering, Congress may prefer subsidies that taxpayers will regard as enduring. Congress thus would rely on the credibility of the subsidy itself, rather than on the likely transition relief if the subsidy is repealed. One such approach, as Professor Goldberg recommends, is to use up-front subsidies,¹¹⁵ because taxpayers have them in hand and thus are unlikely to fear losing them. Another approach is to use promise subsidies that, for reasons particular to the subsidy, are especially unlikely to be repealed, i.e., subsidies that are "inherently credible."

C. Inherent Credibility

Various characteristics can make a subsidy inherently credible. A proven track record is helpful.¹¹⁶ Just as a borrower who always has paid her debts earns a favorable credit rating, a subsidy that always has been delivered in the past will inspire confidence about the future. In addition, a subsidy also will be inherently credible if the government has reason to keep it, apart from its value as a subsidy. Such a separate purpose will "anchor" the rule or program in place, even if the government no longer wishes to offer a subsidy. The following section surveys the very different histories of the capital gains rate and realization. The section then discusses administrability, realization's "anchoring" function, and concludes by comparing the politics of either repealing realization or reducing the capital gains rate.

Reliance on historical data is common among sophisticated investors. For example, the capital asset pricing model relies on historical data to calculate "beta," a measure of an asset's riskiness,¹¹⁷ as past and future riskiness are assumed to correlate.¹¹⁸ Similarly, any investor who is "pricing" the expected benefit of either a rate reduction or realization likely will look to history. If one rule has changed frequently and the other has hardly changed, an investor will likely expect these patterns to continue.¹¹⁹

¹¹⁷ See Gordon & Kornhauser, supra note 91, at 779 (discussing beta measurement).

¹¹⁸ Likewise, when options are valued (a computation that turns considerably on the volatility of the underlying property), volatility forecasts are computed using historical data. See Nassim Taleb, Dynamic Hedging: Managing Vanilla and Exotic Options 92-95 (1997) (discussing calculation of historical volatility and correlation).

¹¹⁹ The most relevant historical data will relate to the particular subsidy at issue. Yet the broader context—the way Congress describes its commitment to current law and the fre-

^{48 (1996) (}arguing that institutional structures and hidden costs are obstacles for advance transition rules).

¹¹⁵ See Goldberg, supra note 84, at 29-33.

¹¹⁶ Cf. Jill E. Fisch, Retroactivity and Legal Change: An Equilibrium Approach, 110 Harv. L. Rev. 1055, 1103 (1997) ("If a rule has persisted over time, if it has been applied in a range of cases, and if its contours have been set by a high lawmaking authority, then the rule is more difficult to change.").

1. Capital Gains: Frequent Changes

As the following chart reveals, in the seventy-seven years since Congress added a special tax rate for capital gains, the maximum rate for individuals has fluctuated dramatically:¹²⁰

quency of tax changes generally-also will inform a taxpayer's decision. For example, the June 1998 House vote to eliminate the Code on January 1, 2002 (the so-called "Tax Code Termination Act") is unhelpful to the credibility of any individual Code provision, although sophisticated taxpayers are likely to see this vote as symbolic rather than as an indication of Congress's intentions. See Editorial, Grandstanding on Taxes, N.Y. Times, June 24, 1998, at A24 (noting that "Injeither businesses nor individuals would be able to plan their affairs with any firm idea of what the tax laws were going to be," but dismissing the vote as "outrageous example of political grandstanding"). Of perhaps greater relevance is the trend in recent years toward an "accelerating rate and decreasing durability" of tax legislation. See Doernberg & McChesney, supra note 86, at 913 (discussing increasing frequency of changes in taxation); see also Elizabeth Garrett, Harnessing Politics: The Dynamics of Offset Requirements in the Tax Legislative Process, 65 U. Chi. L. Rev. 501, 527-30 (1998) (describing budgetary procedures that shorten expected life span of subsidies; by requiring proponents of certain new subsidies to propose revenue offsets, budgetary rules likely will prompt challenges to existing subsidies). Major overhauls of the Code in the 1980s were followed by further legislation in the 1990s. See Taxpayer Relief Act of 1997, Pub. L. No. 105-34, 1997 U.S.C.C.A.N. (111 Stat.) 788 (codified in scattered sections of I.R.C.); Revenue Reconciliation Act of 1993, Pub. L. No. 103-66, tit. XIII, ch. 1, 107 Stat. 416 (codified as amended in scattered sections of I.R.C.); Budget Enforcement Act of 1990, Pub. L. No. 101-508, 104 Stat. 1388 (codified as amended in scattered sections of LR.C.); Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. 2085 (codified as amended in scattered sections of I.R.C.); Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, 95 Stat. 172 (codified as amended in scattered sections of I.R.C.). These frequent changes make it difficult for Congress to signal credibly its intention to retain any particular rule. Only subsidies with uniquely stable histories or other unique qualities, therefore, are likely to be inherently credible.

¹²⁰ The maximum rate for corporations has been somewhat more stable, but it too has fluctuated. For a table of these rates, see CCH Study Shows 1997 Fight Over Capital Gains Is Just the Latest Chapter in the 76 Years of Changing Rates, Changing Philosophies, PR Newswire (July 29, 1997), available in LEXIS News Library, Wires File [hereinafter CCH Study].

Year	Maximum Capital Gains Rate for Individuals		
1913-21	Same as regular rate		
1922-33	12.5%		
1934-35	18.9%		
1936-37	23.7%		
1938-41	15.0%		
1942-51	25.0%		
1952-53	26.0%		
1954-67	25.0%		
1968	26.9%		
1969	27.5%		
1970	30.2%		
1971	32.5%		
1972-77	35.0%		
1978	33.8%		
1979-80	28.0%		
1981	23.7%		
1982-86	20.0%		
1987-96	28.0%		
1997-98	20.0%		
2001	18.0%		

TABLE IV: HISTORICAL LOOK AT MAXIMUM CAPITAL GAINS RATE FOR INDIVIDUALS¹²¹

Indeed, the maximum rate specified in 1997, twenty percent, is the eighteenth maximum rate since 1922. Nor could Congress resist revising the rate structure in 1998. In the Internal Revenue Service Restructuring and Reform Bill of 1998,¹²² Congress reduced from eighteen to twelve months the holding period required for the most favorable rate (and thus eliminated the twenty-eight percent rate, applicable in 1997, to assets held between twelve and eighteen months).¹²³ In addition, Speaker Gingrich has proposed (unsuccess-

The capital gains preference sometimes has been a partial deduction or exclusion, instead of a separately stated rate. See generally, Report to Congress on the Capital Gains Tax Reductions, supra, at 32-39 (describing mechanics of capital gains preference from 1922 through 1984). This table accounts for such computational elements by listing the maximum *effective* rate.

¹²² Pub. L. No. 105-206, 112 Stat. 685 (West, WESTLAW through all 1998 legislation) (to be codified in scattered sections of I.R.C.).

¹²³ See id. § 5001, 112 Stat. 787-88 (to be codified at I.R.C. § 1); see also Roth Release on Senate Approval of IRS Reforms, 98 Tax Notes Today (TNT) 132-14, July 9, 1998, available in LEXIS, Fedtax Library, TNT File (noting that bill includes amendment reducing holding period from 18 to 12 months).

¹²¹ For 1913, the year the income tax was established, through 1953, this table relies on Department of the Treasury, Office of Tax Analysis, Report to Congress on the Capital Gains Tax Reductions of 1978, 31-33, 34 tbl.1.12 (1985) [hereinafter Report to Congress on the Capital Gains Tax Reductions]. For 1954 through 1991, the table relies on House Comm. on Ways & Means, 102d Cong., 1st Sess., Overview of the Federal Tax System 61, tbl.9 (Comm. Print 1991) [hereinafter Overview of the Federal Tax System]. For 1991 through 1997, this table relies on CCH Study, supra note 120. For a more detailed chart that also reflects minimum and maximum taxes, see Overview of the Federal Tax System, supra, at 61 tbl.9 cols. 2-3.

fully, so far) to reduce the most favorable rate to fifteen percent—a proposal that presumably would moot the reduction to eighteen percent¹²⁴ scheduled for 2001.¹²⁵ If enacted, this fifteen percent rate would be the second lowest in history and the lowest since 1942, when the rate was increased from fifteen percent to twenty-five percent.

History thus suggests that, whatever the rate structure is today, it is likely to be different in a year or two. The average life span of the rate for individuals is 4.2 years—and, in the last thirty years, only 2.7 years. The maximum rate has changed after a single year six times¹²⁶ and after two years another four times.¹²⁷ One third of the maximum rates (six of eighteen), therefore, have survived for only one year, and more than half of the maximum rates (ten of eighteen) have survived for less than two.¹²⁸

This historical record suggests not only that the rate is unstable, but that it is near a low ebb—such that future changes are, on average, likely to be increases. Although a reduction to 18% is scheduled for 2002 and Speaker Gingrich has expressed interest in an even lower rate, history counsels skepticism about further reductions. The rate has not been lower than 20% since 1941 (when it was 15%) and on

¹²⁵ See Ryan J. Donmoyer & Heidi Glenn, There's Enough Surplus for Social Security, Tax Cuts, Gingrich Says, 98 Tax Notes Today (TNT) 137-1, July 17, 1998, available in LEXIS, Fedtax Library, TNT File (reporting Gingrich's advocacy of 15% capital gains rate at Cato Institute policy forum). But cf. Richard W. Stevenson, Top Republicans in Senate Reject Big Tax-Cut Push, N.Y. Times, July 24, 1998, at A1 (describing Republican leadership's decision not to seek capital gains tax cuts).

 126 As the chart above indicates, the rate lasted for one year in 1968 (26.9%), 1969 (27.5%), 1970 (30.2%), 1971 (32.5%), 1978 (33.8%) and 1981 (23.7%).

¹²⁷ As the chart above indicates, the rate lasted for two years from 1934-35 (18.9%), 1936-37 (23.7%), 1952-53 (26.0%), and 1979-80 (28.0%).

¹²⁸ A focus on rates alone neglects other ways in which the taxation of capital gains has been volatile. There have been numerous changes in the holding period necessary to attain the most favorable rate, as well as in the treatment of capital losses. For a discussion of such changes, see Report to Congress on the Capital Gains Tax Reductions, supra note 121, at 29-39; see also id. at 39 (noting frequent changes from 1913 to 1978 in "major aspects of the capital gains tax," such as percentage of long-term gains included in taxable income, holding period, loss offset provisions, and rate).

Note that the focus here is on changes in the capital gains rate itself—not on changes in the *differential* between capital and ordinary rates. Cf., e.g., Overview of the Federal Tax System, supra note 121, at 55-56 tbl.1 (listing maximum ordinary income rates from 1913-1991). The former is more relevant here; assuming that savings increase with yield, savers should save more as the tax on investment return (e.g., the capital gains rate) declines—even if the tax on wages is also low.

¹²⁴ The 1997 legislation enacted an 18% rate for assets acquired after December 31, 2000 and held for at least five years. See Taxpayer Relief Act of 1997 § 311(a), 1997 U.S.C.C.A.N. (111 Stat.) at 832 (codified at I.R.C. § 1(h)(2) (West 1998)). By its terms, the rate cannot apply until 2006. See id. (applying reduced rate only to property held for five years after December 31, 2000). Regardless of the Gingrich proposal's fate, one wonders whether this rate ever will take effect, given that Congress left itself nine years to repeal it.

average has been considerably higher. The mean rate from 1922 to 1998 is 25.1% and the median is 25.5%. The mean in recent years is higher still, at 27.9% over the last thirty years. This record suggests, then, that the capital gains rate is not only volatile, but also is likely to rise.¹²⁹

2. Realization: An Enduring Presence

In contrast, realization has been stable. As old as the income tax itself, the rule has not changed, except for limited modifications such as those described below. The foundational timing rule of the Code, realization applies to virtually all assets and prompts much of the efforts of tax practitioners.¹³⁰ As a proxy for realization's salient role in tax planning (and thus tax controversy), Professor Shakow, who has authored an influential proposal for repealing realization, concludes that adopting his proposal would substantially diminish the relevance of thirty percent of the cases published in a given volume of the tax court's reporter.¹³¹

3. Realization: Narrow Exceptions for Financial Instruments

In the taxation of financial instruments, realization has been replaced in narrow contexts, typically to address a specific abuse among a limited group of taxpayers.¹³² These changes are notable not as a

¹³² I focus on financial instruments because they are the classic vehicles for savings. Yet realization is the general rule for other assets as well, such as those used in a trade or business. There are other exceptions to realization for such assets, such as depreciation (i.e., allowing taxpayers to deduct losses before making a sale). Professor Evans details other such exceptions, including the uniform and interest capitalization rules of I.R.C. § 263A (which defers certain deductions associated with acquisition or production of property) and the percentage to completion method of I.R.C. § 460 (which accelerates income on certain long term contracts). See Thomas L. Evans, The Evolution of Federal Income Tax Accounting—A Growing Trend Towards Mark-to-Market?, 67 Taxes 824, 825-38 (1989). These measures generally target a particular problem—deferral of income while expenses necessary to produce it are deducted currently—in a selective manner. For example, as Professor Evans notes, the uniform capitalization rules do not apply to intangible property or to certain general and administrative expenses, see id. 828-30, and the interest

¹²⁹ In Professor Shaviro's terminology, the capital gains rate presents, not just "transition risk" (the likelihood of changes), but a "retroactive tax" (the likelihood of change in a particular direction). See Shaviro, supra note 87 (manuscript at 5-6).

 $^{^{130}}$ See Kleinbard & Evans, supra note 6, at 793. ("Every tax advisor (and most every taxpayer) understands, at least intuitively, the economic distortions caused by the realization principles of the Code.").

¹³¹ See Shakow, supra note 49, at 1117. For an outline of provisions that would not be needed if the realization doctrine were repealed with respect to capital assets, see Shoup, supra note 4, at 101-02 (listing sections); see also William Vickrey, Tax Simplification Through Cumulative Averaging, 34 Law & Contemp. Probs. 736, 743-44 (1969) (listing provisions that could be deleted or substantially shortened if significance of timing in tax law was reduced).

trend away from realization, but for their limited scope.¹³³ Congress repeatedly has preferred surgical to comprehensive change. This record suggests that narrow reforms likely will continue, but that realization will remain the general rule.¹³⁴ The following discussion describes the most important of Congress's narrow exceptions to realization.

a. Foreign "Incorporated Pocketbooks." Not long after the income tax was enacted, crafty taxpayers discovered that, instead of putting money in a domestic bank account (and thus earning taxable interest), they could form a corporation in a foreign jurisdiction and have this "foreign incorporated pocketbook" invest in the same bank account.¹³⁵ Because the foreign corporation was not a U.S. taxpayer,¹³⁶ its income was not subject to U.S. tax unless it was distributed as a dividend.¹³⁷ Although shares in the corporation would

¹³³ See Peter L. Faber et al., The Ownership and Disposition of Property: New Rules for Old Problems, 75 Taxes 768, 775 (1997) ("Although Congress has made exceptions to the general rule that appreciation in value is taken into the tax system when property is converted into another form for a variety of economic and public policy reasons, the general rule has remained intact."); see also Zelinsky, supra note 50, at 878 ("Congress's sallies into the accretionist world have been sectoral in nature, applying to quite specific slices of the economy").

¹³⁴ Although taxpayers are unlikely to expect significant changes in realization, it is possible that whatever changes they do predict, however remote, will be adverse. If realization already provides the outer limit of what it can offer, taxpayers will discount it to an extent, because the remote possibility of repeal is not outweighed by a countervailing possibility of expansion. Yet there arguably is room for the realization subsidy to grow—for example, if a rollover rule is enacted or if the tax on interest and dividends is deferred, as discussed infra Part IV.A. However unlikely, these reforms are probably as likely as a broad repeal of realization.

¹³⁵ See H.R. Rep. No. 75-1546, at 13-14, 19-20 (1937) (discussing "incorporated pocketbook" problem), excerpted in J.S. Seidman, Seidman's Legislative History of Federal Income Tax Laws 1938-1861, at 189-90 (1938); see also Joel D. Kuntz & Robert J. Peroni, U.S. International Taxation B2-71 (1996) ("Congress was concerned that U.S. persons may form a foreign corporation to accumulate income and thereby avoid current U.S. taxes on the income.")

¹³⁶ Foreign corporations with income that is "effectively connected" to the United States—generally, foreign corporations doing business in the United States—are subject to tax on this income. See I.R.C. § 864(c) (West 1998). "Foreign pocketbooks," though, typically had no "effectively connected" income.

 137 The income could be subject to tax by the foreign jurisdiction, but taxpayers typically would select "tax haven" jurisdictions in which rates were low.

capitalization rules apply even more narrowly. See id. at 831 (describing limited scope of interest capitalization rules, including their inapplicability to inventory). As limited responses to a particular abuse, these examples generally are consistent with the pattern, described below for financial instruments, of surgical modifications in response to specific abuses.

appreciate as it retained earnings, realization sheltered this appreciation from tax until the shares were sold.¹³⁸

To combat this abuse, Congress fashioned three targeted exceptions to realization. Under the first two—a rule for "foreign personal holding companies" enacted in 1937,¹³⁹ and a rule for "controlled foreign corporations" (CFCs) enacted in 1962¹⁴⁰—U.S. shareholders are taxed *as if* the undistributed passive income of these entities, such as interest and dividends, has in fact been distributed. In 1986, Congress added a regime for passive foreign investment companies (PFICs).¹⁴¹ PFIC shareholders can elect to have current income inclusions (as under the two regimes described above or under a mark-to-market regime)¹⁴² or they can pay no tax until realization, when the tax is increased by an interest charge.¹⁴³

b. Accretion on Debt. Another exception to realization forces holders of certain bonds to include interest in income before they receive it—in essence, to ensure that they have income at the same time the bond's issuer has a deduction. Without this special rule, different rules would determine when individual holders (who are typically

¹³⁹ See Revenue Act of 1937, ch. 815, § 201, 50 Stat. 813, 818 (1937) (codified as amended at I.R.C. §§ 551-558 (West 1998)). A foreign personal holding company generally is a foreign corporation that satisfies an income and a stock ownership test. Under the income requirement, at least 60% of its gross income must be "foreign personal holding company income." See I.R.C. § 552(a)(1) (West 1998). This includes "passive" income such as dividends, interest, royalties, annuities, gains from sale or exchange of stock and certain commodities. See id. § 553. Under the stock ownership test, five or fewer individuals who are U.S. citizens or residents must own more than 50% of the stock (measured by either value or vote). See id. § 552(a)(2).

¹⁴⁰ See Revenue Act of 1962, Pub. L. No. 87-834, § 12(a), 76 Stat. 960, 1006-27 (codified as amended at I.R.C. §§ 951-964 (West 1998)). Unlike the foreign personal holding company regime, the CFC regime applies only to U.S. shareholders that own at least 10% of the CFC. See I.R.C. §§ 951(a)-(b) (West 1998) (requiring income inclusions only for "United States shareholder[s]," who generally are shareholders who own at least 10% of controlled foreign corporation). A corporation can be both a foreign personal holding corporation and a controlled foreign corporation, and a U.S. shareholder generally need not pay tax on the same income under both regimes. See id. § 951(d).

¹⁴¹ See Tax Reform Act of 1986, Pub. L. No. 99-514, § 1235(a), 100 Stat. 2085, 2566 (codified as amended at I.R.C. §§ 1291-1298 (West 1998)). The definition of a PFIC depends, not on who owns it, but on the nature of its income and assets. A foreign corporation generally will be a PFIC if 75% or more of its gross income for a taxable year is "passive income," see I.R.C. § 1297(a)(1) (West 1998), or if the average percentage of assets held during the taxable year that produce passive income represents at least 50% of total assets. See id. § 1297(a)(2).

¹⁴² See I.R.C. §§ 1293-1296 (West 1998).

¹⁴³ See id. § 1291.

¹³⁸ Although realization has this effect on domestic corporations, the effect on foreign corporations seemed abusive because the latter are not subject to U.S. income tax. Thus, realization delays the second tax on U.S. corporate earnings, but delays the only U.S. tax on foreign corporate earnings.

"cash method" taxpayers) and corporate issuers (who are "accrual method" taxpayers) account for income and deductions. Cash method taxpayers do not include a payment in income until they actually receive it; accrual method taxpayers, in contrast, can deduct an expense as soon as their obligation to pay it becomes legally fixed, even if they have not yet paid it. Thus, when the issuer's obligation to pay interest becomes fixed before payment is made, as in the case of a bond issued with original issue discount (OID),¹⁴⁴ the accrual method issuer has an immediate deduction but the cash method holder has no corresponding inclusion until the bond matures. To remedy this disparity,¹⁴⁵ §§ 1271-1275 in essence put cash method bond holders on accrual accounting.

A related exception to realization, added in 1996 for "contingent" debt. requires holders to include in income (and allows issuers to deduct) amounts that have not yet been paid—and, indeed, may never be paid.¹⁴⁶ A contingent bond is a "derivative" whose yield depends on an economic variable unrelated to the issuer, such as the Standard & Poor's 500 index (S&P 500). For example, instead of a coupon, the bond at maturity would pay par plus an amount based on the appreciation, if any, in the S&P 500. Before the new regulations, neither cash method nor accrual taxpayers had income until they either sold the bond or received a payment, because until then it was unclear how much, if anything, the holder would earn. Although the S&P 500 might go up after the first year, it could decline thereafter.¹⁴⁷ The government was not satisfied with this result, though. As debt, these derivatives compensate holders for the use of money (albeit through an option), and the government ordinarily taxes time-value compensation currently. Thus, the new regulations require holders to accrue an amount based on an ex ante estimate, rather than the bond's actual market value. Known as the "comparable yield," this estimate is the issuer's usual borrowing cost for non-contingent debt. If the issuer

¹⁴⁶ See Treas. Reg. § 1.1275-4 (1996).

¹⁴⁷ Unlike in the OID case, issuers of contingent debt were not receiving a current deduction. There was, therefore, no asymmetry as between holder and issuer.

¹⁴⁴ A bond issued with "original issue discount" pays more at maturity than an initial holder has paid to purchase the bond. For example, the holder might pay \$100 and receive \$122.50 in three years. This bond is like one that pays a \$7 coupon every year, except that a holder must reinvest the coupon with the issuer. To access this time value compensation, the holder must sell the bond, thereby braving fluctuations in interest rates and the issuer's credit.

¹⁴⁵ There is an interesting debate about whether the original issue discount rules accurately measure the accrual of interest, in light of the term structure of interest rates. Compare Joseph Bankman & William A. Klein, Accurate Taxation of Long-Term Debt: Taking into Account the Term Structure of Interest, 44 Tax L. Rev. 335, 336 (1989) (arguing that rules mismeasure accruals), with Sims, supra note 54, at 366 (offering defense of rules).

ordinarily pays a seven percent coupon, the holder will pay tax on \$7 each year, whether the S&P 500 declines or soars. At maturity, once the actual yield is known, the holder and issuer will "settle up" with the government, either by including more income or by taking a loss.

c. Mark-to-Market Accounting for Certain Investments and Taxpayers. In perhaps the most fundamental exception to realization, Congress legislated a mark-to-market rule (i.e., inclusion of unrealized gains and losses in taxable income, based on the investment's fair market value at the end of the taxable year) for certain investments and taxpayers.

Section 1256 of the Code, enacted in 1981,¹⁴⁸ touches only those who trade in esoteric instruments such as exchange-traded futures contracts, foreign currency contracts, and certain index and commodity options.¹⁴⁹ These instruments were singled out for featuring prominently in tax-motivated transactions.¹⁵⁰ In a classic "straddle" trade, for example, taxpayers would enter into contracts to purchase and sell the same amount of silver on the same date. Inevitably, the taxpayer would have a gain on one contract (the "gain leg") and a loss on the other (the "loss leg"). The taxpayer could take a current deduction by settling the loss leg on December 31, while deferring the gain until the following year by settling the gain leg on January 1. To foreclose this gaming, Congress mandated annual accounting for all unrealized, as well as realized, gains and losses.¹⁵¹

Another mark-to-market rule, § 475 of the Code, was added in 1993 for securities dealers¹⁵² and was expanded in 1997 to securities

¹⁵⁰ See S. Rep. No. 97-144, at 156 (1981), reprinted in 1981 U.S.C.C.A.N. 105, 255 (stating that § 1256 would combat "use of futures for tax-avoidance purposes," allow more accurate determination of futures income, and reduce paperwork for both government and taxpayers); see also Ordower, supra note 110, at 59 ("Congress added section 1256 as part of its comprehensive effort during 1981 to overcome the tax sheltering impact of certain commodity future trading strategies.").

¹⁵¹ As an additional safeguard against this abuse, Congress added the "straddle rules" of Code 1092, which prevent use of losses from the loss leg until the taxpayer has recognized gain from the gain leg. See I.R.C. 1092 (West 1998). The straddle rules originated in the House, while the mark-to-market rules originated in the Senate. See Ordower, supra note 110, at 59-60 (describing history of straddle and mark-to-market rules).

¹⁵² See Revenue Reconciliation Act of 1993, Pub. L. No. 103-66, § 13233, 107 Stat. 312, 481-84 (codified as amended at I.R.C. § 475 (West 1998)).

¹⁴⁸ See Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, § 503(a), 95 Stat. 172, 327-30.

¹⁴⁹ See I.R.C. § 1256(b) (West 1998) (defining "Section 1256 contract"); see also Ordower, supra note 110, at 62 ("The commodities industry involves products far less familiar to the investing public than those available in the securities markets.").

traders who elect to be covered.¹⁵³ Section 475 was sought not only by the government, but also by securities dealers. The government was targeting abusive use of the traditional rule for a securities dealer's inventory¹⁵⁴—the lower of cost or market¹⁵⁵—which was even more favorable than realization. Under this rule (which was, in effect, a super-timing option),¹⁵⁶ dealers could defer income on appreciated inventory (by valuing it at "cost," i.e., the amount the taxpayer had paid for it), while taking a loss on depreciated inventory (by electing to value it at its market value). Although dealers obviously savored this accounting method, their preference-if they had to give it up-was for mark-to-market accounting rather than realization. The reason is that dealers profit by holding offsetting positions, such as a contract to sell something to one customer and to buy it from another. If the market price changes, one contract may appreciate and the other may depreciate; yet dealers are indifferent to such fluctuations, as their profit comes not from market movements, but from a fee (or "spread") charged in each contract. Under a realization system, though, the gain and loss on the two matching positions will offset only if realized in the same year-something that does not always occur. Mark-to-market, then, was "a cure for the timing mismatches that otherwise would result"¹⁵⁷ under realization¹⁵⁸—a problem that does not arise for most taxpayers.

¹⁵⁵ See Lee A. Sheppard, Who's Marking What to Market?, 97 Tax Notes Today (TNT) 130-3, July 8, 1997, available in LEXIS, Fedtax Library, TNT File (explaining that Code § 475 was enacted to "repeal the outrageous lower-of-cost-or-market accounting method long permitted for securities dealers"). The usual objections to mark-to-market accounting—the property may be hard to value and the taxpayer will not have cash to pay the tax—also were unpersuasive for securities dealers, "a group who know the value of everything they hold at every hour of the day." Id.

156 Dealers had a better timing option for two reasons. First, they did not have to sell the property to take a loss, and thus were spared transaction costs. See Kleinbard & Evans, supra note 6, at 800 (noting that dealers could takes a tax loss without incurring transaction costs). In addition, they were not subject to the Code's main limits on the timing option: the wash sale rules, see I.R.C. § 1091(a) (West 1998) (wash sale rules do not apply to dealers), and the capital loss limitations (as inventory is not a capital asset). See id. § 1221(1) (excluding inventory or "stock in trade of the taxpayer" from definition of capital asset).

¹⁵⁷ Kleinbard & Evans, supra note 6, at 797.

¹⁵⁸ As Kleinbard and Evans note, such mismatches were plaguing the burgeoning derivatives businesses of securities dealers. Because derivatives were not considered inventory, dealers could not use lower-of-cost-or-market accounting (although they could use this method in securities transactions that hedged derivative positions). When faced with realization accounting for derivatives but not for hedges, securities dealers lobbied for elective mark-to-market accounting for their derivatives books. See id. at 797-98.

¹⁵³ See Taxpayer Relief Act of 1997, Pub. L. No. 105-34, § 1001(b), 1997 U.S.C.C.A.N. (111 Stat.) 788, 906-07 (codified at I.R.C. § 475(f) (West 1998)).

¹⁵⁴ See A.R.R. 14, 1 C.B. 56 (1919) (describing valuation of inventories for tax purposes as lower of cost or market value, if taxpayers so elected).

d. Short Against the Box Legislation: The Exception that Proves the Rule. Ironically, perhaps the best evidence of realization's vitality is the narrowness of recent legislation limiting it: a reform targeting "shorts against the box" and other ways to simulate a sale without triggering tax.

In a short against the box, Jon, the owner of 100 appreciated shares in publicly traded company XYZ (the XYZ Stock), borrows from Cheryl 100 additional shares of XYZ Stock and sells these "short."¹⁵⁹ As a result, Jon feels like he has sold his appreciated shares—his true objective, if not for taxes. As in a sale, he has received cash proceeds (from the short sale) and has become indifferent to the economic performance of XYZ, because his two positions—the 100 shares he still owns ("the Long") and his obligation to return 100 shares to Cheryl ("the Short")—perfectly offset each other.¹⁶⁰ Yet under tax common law Jon has not made a sale, according to a formalistic line of cases that require a transfer of title or control before publicly traded stock is considered sold.¹⁶¹ As applied to our example,

¹⁶⁰ For example, assume the XYZ Stock was trading at \$100 when Jon sold short. If the Stock appreciates to \$175, Jon has \$75 of additional gain per share on the Long. However, at the same time the amount of his liability to Cheryl increases by the same \$75 per share. Likewise, if the XYZ Stock declines in value from \$100 to \$50, Jon loses \$50 per share on the Long, but makes \$50 on the Short.

¹⁶¹ See Bingham v. Commissioner, 27 B.T.A. 186 (1932) (holding that tax consequences on short sale are deferred until it is covered, even though taxpayer owns stock identical to stock that was sold short); Rev. Rul. 72-478, 1972-2 C.B. 487 (holding that tax on short sale is deferred where broker did not borrow identical securities held in taxpayer's account for delivery to purchaser); see also Edward D. Kleinbard, Risky and Riskless Positions in Securities, 71 Taxes 783, 793 (1993) (describing common law treatment of short sales against the box). In contrast, the law in effect for nonfungible property, such as real estate and closely held corporations, usually finds a sale upon a transfer of the economic benefits and burdens of property, even where title has not been transferred. See, e.g., Frank Lyon Co. v. United States, 435 U.S. 561, 583 (1978) (stating that ownership depends upon "economic substance"); Tennessee Natural Gas Lines, Inc. v. Commissioner, 71 T.C. 74, 83 (1978) (stating that sale is complete upon first of two events: transfer of legal title or shift of benefits and burdens of ownership); Rev. Rul. 82-150, 1982-2 C.B. 110 (finding that owner of deep-in-the-money option to purchase nontraded stock of foreign corporation is actual owner of stock for foreign personal holding company purposes).

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¹⁵⁹ In a "short sale," a taxpayer sells a borrowed asset. The taxpayer must someday return an identical asset to the party who lent it. A short is a bet that the asset price will decline so that the taxpayer will be able to buy a new one for the lender—a process known as "covering" the short—for less than the proceeds from selling the borrowed asset. For example, assume the taxpayer shorts stock at \$100. If the price declines to \$40, the taxpayer can buy a new share for \$40 to return to the lender. Accordingly, the taxpayer has purchased a share for \$40 and has sold it for \$100 (albeit in the reverse order), thereby recognizing \$60 in gain. On the other hand, if the taxpayer shorts at \$100 and the price climbs to \$220, it will cost \$220 to cover the short, resulting in a \$120 loss.

Jon does not sell (or pay tax on) the Long until he delivers it to Cheryl, an event he can delay for many years.¹⁶²

The impetus to reform this formalistic result came from a highprofile transaction.¹⁶³ The Lauder family sold stock in the Estee Lauder Company to the public at an estimated gain of \$340 million.¹⁶⁴ Instead of paying approximately \$100 million of tax, the sellers sold "short against the box" by borrowing shares from each other.¹⁶⁵ They sought not just deferral, but avoidance: borrowed shares would not be returned until the borrower died and her basis stepped up,¹⁶⁶ so that tax on the built-in appreciation was forgiven.¹⁶⁷ Not surprisingly, this inequitable result caught the public's eye.¹⁶⁸ Given this outcry, markto-market accounting for all publicly traded securities conceivably could have been legislated, just as publicity about abusive commodities straddle transactions led to such accounting for commodities.

¹⁶³ See Sheryl Stratton, Treasury Targets Tax-Deferral Strategies, 96 Tax Notes Today (TNT) 12-4, Jan. 18, 1996, available in LEXIS, Fedtax Library, TNT File ("You have the well publicized Lauder transaction," which brought the tax-avoidance aspect of the short sale against the box into the national limelight." (quoting Steven Rosenthal, former legislation counsel for the Joint Committee on Taxation)).

165 See id.

 167 Surprisingly enough, this abusive outcome had been expressly approved by the government in a published ruling. See Rev. Rul. 73-524, 1973-2 C.B. 307 (holding that, when taxpayer dies with short and long positions on same stock, basis in long steps up to fair market value on date of death).

¹⁶⁸ See, e.g., Lee A. Sheppard, Fixes to Ensure That Tax Is Paid on Capital Gains, 95 Tax Notes Today (TNT) 236-5, Dec. 5, 1995, available in LEXIS, Fedtax Library, TNT File ("Rich people are different from you and me—they don't seem to get out of bed without consulting their tax advisers... The Lauder family, of Estee Lauder Companies, recently dodged more than \$100 million of tax when they cashed out of some of their holdings using a short sale against the box.").

¹⁶² The traditional rationale for this result is that, although Jon has two economically offsetting positions, he is not legally obligated to use the stock he already owns to repay Cheryl, and thus should not be deemed to have sold it. This freedom to deliver different property would be meaningless in the case of nonfungible property, such as a particular building. Yet for publicly traded stock, which is widely available, it is realistic that Jon might keep the shares he already has and purchase new ones for delivery to Cheryl. Since he does not yet know what shares he will use to "cover" the short, he does not know his basis in those shares and thus cannot compute his gain. See Treas. Reg. § 1.1012-1(c)(1) (as amended in 1996) (allowing taxpayer upon adequate identification to designate lot she is selling if she owns more shares than she sells).

¹⁶⁴ See id. (describing Lauder transaction).

¹⁶⁶ Under § 1014 of the Code, when a taxpayer dies while holding property, the basis in the property "steps up" to its fair market value; accordingly, the taxpayer's heirs start with a "clean slate" and no tax is ever paid on whatever unrealized appreciation existed at death. See I.R.C. § 1014 (West 1998). See generally Zelenak, supra note 9 (describing and critiquing basis step-up rule).

Instead, the President offered a narrow proposal that Congress narrowed further.¹⁶⁹ Under newly enacted § 1259 of the Code, a taxpayer who hedges (i.e., transfers the economic return of) an appreciated investment effects a taxable "constructive" sale only upon entering into a short against the box or a comparable transaction (of which the statute lists three) that "eliminat[es] substantially all of the taxpayer['s] risk of loss and opportunity for income or gain with respect to the appreciated position."¹⁷⁰ As indicated elsewhere, I believe Congress meant this language to cover only a narrow class of transactions.¹⁷¹ Realization thus endures not only for taxpayers who do not hedge, but also for taxpayers who *do*, but retain a sufficient stake in their investment's economic performance.¹⁷² Section 1259 fits comfortably in the tradition of targeted exceptions to realization that address a particular abuse and affect only a limited class of taxpayers.¹⁷³

e. The "Constructive Ownership" Proposal. The "constructive ownership" bill (recently proposed by Congresswoman Kennelly, who also sponsored the 1997 constructive sale legislation), if enacted, would be another limited modification of realization in response to a narrow abuse. The bill addresses ways that derivatives are taxed more favorably than the underlying property they replicate.¹⁷⁴ A highly publicized example of such a disparity, which helped prompt the pro-

¹⁶⁹ For a discussion of the congressional proposal (which was enacted), and how it differs from the earlier Treasury proposal, see Richard O. Loengard, Jr., N.Y. State Bar Ass'n Tax Section, Comments on H.R. 846, reprinted in 97 Tax Notes Today (TNT) 103-11, May 29, 1997, at 14-25, available in LEXIS, Fedtax Library, TNT File (noting David M. Schizer and Samuel J. Dimon as principal authors of section discussing proposal for constructive sales); see also William M. Paul, Constructive Sales Under New Section 1259, 76 Tax Notes 1467, 1467-68 (1997) (comparing congressional bill, as enacted, with Treasury proposal).

¹⁷⁰ 105 H.R. Rep. No. 105-148, at 183 (1997).

¹⁷¹ See David M. Schizer, Hedging Under Section 1259, 80 Tax Notes 345, 356 (1998) ("Section 1259 is a narrow provision that targets abusive transactions. It leaves intact considerable opportunities for tax-free hedging"); see also Faber et al., supra note 133, at 786 (describing techniques—not affected by new law—that taxpayers have used to monetize appreciated positions or to hedge themselves against risks without triggering recognition of gain, such as pledging appreciated securities as collateral for loans, acquiring put options with strike prices near property's present fair market value, and using collars to hedge risk).

 $^{^{172}}$ The New York State Bar Association Tax Section concluded that a taxpayer would comply with this rule as long as her hedge lasted no longer than five years and she retained exposure on a total "spread" of at least 20% of the current trading price of the hedged security. See Loengard, supra note 169, at 17 (recommending safe harbor or presumption for such hedge).

¹⁷³ See Faber et al., supra note 133, at 786 (explaining that § 1259 "can be viewed as an attempt to deal with perceived abuses under the present system and not as an attempt to change that system").

¹⁷⁴ See Representative Kennelly, Statement on Introduction of Constructive Ownership Legislation (Feb. 4, 1998) (on file with the *New York University Law Review*) [hereinafter

posal, involves a hedge fund. A partnership for tax purposes, such a fund does not pay taxes; instead the fund's owners pay tax on their share of the fund's income.¹⁷⁵ Because hedge funds often engage in frequent trading, much of the income passed through to investors is not deferred and is not eligible for long term capital gains rates.¹⁷⁶ By contrast, a derivative on the hedge fund's performance can be structured to yield only long term capital gains that are not taxed until the derivative is terminated¹⁷⁷ (e.g., after five years).¹⁷⁸

In response, Congresswoman Kennelly proposed § 1260 to prevent taxpayers from attaining through a derivative more deferral and long term capital gain than they would attain through the underlying investment.¹⁷⁹ Under the bill, if a taxpayer has a "constructive ownership" transaction (which, in general, means a "long" position in a derivative that offers the taxpayer "substantially all" of the underlying property's return),¹⁸⁰ a portion of her long term capital gain will be recharacterized as short term¹⁸¹ and an interest charge will be imposed¹⁸² to compensate the government for deferral.¹⁸³ Although a

Kennelly Statement] ("There is no tax policy justification for giving an investor in a derivative more favorable tax treatment than an investor in an identical underlying product.").

¹⁷⁵ See E.S. Browning, Where There's a Tax Cut, Wall Street Finds a Way, Wall St. J., Oct. 21, 1997, at C1 (describing tax treatment and trading practices of hedge funds). ¹⁷⁶ See id.

¹⁷⁷ The derivative can be structured to make no payments, and thus to trigger no tax liability, until the long term capital gains holding period has been satisfied. Payments in termination of the derivative should be capital rather than ordinary. See I.R.C. § 1234A (West 1998) (stating that termination of right or obligation with respect to capital asset gives rise to capital gain). For a critical discussion of this transaction, see Lee A. Sheppard, Constructive Ownership, or What?, 98 Tax Notes Today (TNT) 101-7, May 27, 1998, available in LEXIS, Fedtax Library, TNT File (describing and critiquing hedge fund derivatives).

¹⁷⁸ Just as the derivative will give the taxpayer a synthetic "long" position in the hedge fund, it will give the dealer who sells it to her a synthetic "short" position. As a dealer generally profits from market-making rather than from speculating on its holdings' performance, the dealer is likely to hedge its derivative "short" by holding the hedge fund interest. Yet the dealer, unlike an individual investor, is not adversely affected when the hedge fund produces short term capital gain and no deferral. If the dealer marks both its hedge fund interest and its derivative "short" position to market, see I.R.C. § 475 (West 1998) (stating that dealers generally mark securities to market); Rev. Rul. 74-223, 1974-1 C.B. 23 (providing pre-section 475 authority for dealers to mark certain positions to market), income on one will be offset by loss on the other, such that the dealer will generally have no net income (other than a fee). Thus, as David Miller has observed, "securities dealers are perfectly happy to own the assets their clients would rather not." David S. Miller, Taxpayers' Ability to Avoid Tax Ownership: Current Law and Future Prospects, 51 Tax Lawyer 279, 283 (1998).

179 See Kennelly Statement, supra note 174.

¹⁸⁰ See H.R. 3170, 105th Cong. § 1 (1998) (proposing I.R.C. § 1260(d), which would define constructive ownership transaction).

¹⁸¹ See id. (proposing § 1260(a)).

¹⁸² See id. (proposing § 1260(b)).

departure from the way realization ordinarily applies to *derivatives*, these results are meant to replicate the way realization ordinarily applies to the *underlying investments*. The bill is not only narrow in purpose, but also in scope: It would apply only to derivatives¹⁸⁴ and the subset of taxpayers who trade in them.¹⁸⁵

D. Administrability

A pivotal reason for realization's stability, and thus for its credibility, is that it doubles as a rule of administrative convenience. Congress thus has reason to retain realization even if it should decide not to subsidize investment.¹⁸⁶ To prove this point, this section compares the administrability of either raising the capital gains rate or replacing realization. The premise here is that a change with the following three characteristics is less likely: first, one that is difficult for Congress to write and for taxpayers to understand; second, one that imposes significant compliance costs on taxpayers and monitoring costs on the government; and third, one that encourages more tax-motivated planning. Professor Bradford has referred to these factors as "rule complexity," "compliance complexity," and "transactional complexity," respectively.¹⁸⁷

1. Capital Gains

Increases in the capital gains rate can be simple to draft and understand. The rule already exists and only one term, the rate, must

¹⁸⁵ Indeed, when Congresswoman Kennelly introduced the bill, she emphasized that it targets "tax avoidance techniques that are only available to the wealthy." Kennelly Statement, supra note 174.

¹⁸⁶ In evaluating Congress's reasons for retaining realization, this section assumes that Congress is motivated by a desire to craft sound public policy, rather than by a desire to maximize the wealth or prestige of individual members. Part III.E, infra, at times uses the more cynical lens of public choice theorists.

¹⁸⁷ David F. Bradford, Untangling the Income Tax 266-67 (1986).

 $^{^{183}}$ As in the PFIC regime, proposed § 1260(f) offers taxpayers the option instead to mark their constructive ownership positions to market. See id.

¹⁸⁴ In fact, the bill does not address all the ways that a derivative offers better tax consequences than the underlying instrument. For example, a 30% withholding tax is imposed on U.S.-source dividends paid to foreigners, see I.R.C. § 871(a)(1)(A) (West 1998) (imposing 30% tax on dividends); id. § 1441(b) (requiring withholding), but not on otherwise identical equity swap payments. See Treas. Reg. § 1.863-7(b) (1991) (not requiring withholding on swap payments to foreigners, as these are not treated as U.S. source income); see also Miller, supra note 178, at 289 (noting different withholding treatment of stock and equity swaps). The Kennelly proposal does not address this issue, but the government likely will address it elsewhere. See Trading Safe Harbors, 63 Fed. Reg. 32,164, 32,165 (1998) (to be codified at 26 C.F.R. pt. 1) ("[T]he Treasury and the IRS are considering whether rules should be developed to preserve the withholding tax with respect to [foreign investors' U.S.-based equity swap] transactions.").

change. Nor are compliance costs affected. Taxpayers already understand the regime and retain the necessary documentation (e.g., to demonstrate basis and holding period).

Although a *reduction* in capital gains rates may increase transactional complexity, an *increase* in this rate so that it approaches the rate for ordinary income—the change here being considered—tends to *reduce* such complexity.¹⁸⁸ When rates on ordinary income are higher, taxpayers have an incentive to turn such income into capital gain, a breeding ground for transactional complexity.¹⁸⁹ But when the gap between capital and ordinary rates is narrowed (e.g., by an increase in the capital gains rate), taxpayers lose interest in ordinary-to-capital alchemy.

2. Realization

In contrast, significant administrability hurdles discourage Congress from replacing realization—a reality acknowledged even by advocates of this course.¹⁹⁰ Prominent scholars have proposed four principal alternatives to realization. As the following analysis shows, each introduces its own blend of rule, compliance, and transactional complexity. Although at least some of these proposals *could* be administered, the increased administrative cost is a significant obstacle.

a. Mark All Assets to Market. The regime most consistent with the Haig-Simons definition of income¹⁹¹ is to mark all assets to market—real estate and stock in privately held corporations, as well as publicly traded securities.¹⁹² An advantage is reduced transactional

¹⁹¹ See supra notes 47-50 and accompanying text.

¹⁹² For proposals to impose such a system, see Brown, supra note 7, at 1613-59 (advocating use of sophisticated computer models to value all assets); Shoup, supra note 4, at 96-97 (arguing that accrual accounting of capital gains and losses would simplify tax laws).

¹⁸⁸ This is a reason to expect not only that the capital gains rate will change, but that it will increase. See supra Part III.A.3 (indicating that relevant issue is not only whether rate will change, but whether it will increase).

¹⁸⁹ See, e.g., Bradford, supra note 187, at 273 ("It is sometimes said that one-half of the practice of a tax lawyer is finding ways to convert ordinary income into long-term capital gains, the other half being the conversion of long-term capital losses into ordinary losses."); Cunningham & Schenk, supra note 14, at 357 ("[A] staggering amount of time is devoted to converting ordinary income into capital gains.").
¹⁹⁰ See, e.g., Brown, supra note 7, at 1560 ("[A]ccrual taxation presents serious

¹⁹⁰ See, e.g., Brown, supra note 7, at 1560 ("[A]ccrual taxation presents serious problems of its own—the difficulty of valuing assets and possible taxpayer illiquidity."); Shakow, supra note 49, at 1113 ("Unfortunately, the accrual system has never attracted a large group of adherents because its twin problems of valuation . . . and liquidity . . . have never been solved."); Shoup, supra note 4, at 99 ("But these advantages [of a mark-to-market system] will of course not be obtained without cost, notably the difficulties of valuation and the problem of cash payments of tax on an accrued gain."); Louie, supra note 56, at 865-67 (acknowledging problems with taxing unrealized appreciation).

complexity. As Professor Shoup has observed, "[A] large part of [the tax] law is given over to mitigating the distorting pressures that arise under the test of realization of capital gains and losses."¹⁹³

The two principal difficulties are forms of compliance complexity: First, taxpayers will owe tax but, because they have not sold the property, will not have cash to pay it (the "liquidity" concern); second, periodically valuing certain assets will prove difficult (the "valuation" concern).¹⁹⁴ Professor Shakow considers the liquidity concern less serious, as most taxpayers with appreciated assets have other income; those who do not can borrow against the appreciated asset, he argues, if they prefer not to sell a portion of it.¹⁹⁵ Even so, one might question whether forced leverage¹⁹⁶ or sales are tolerable costs; for example, compelling people to move or remortgage their houses to cover unrealized appreciation is arguably a nontrivial burden.¹⁹⁷ Yet setting aside the liquidity concern, valuation presents difficulties that may well prove insurmountable.¹⁹⁸ Although valuing publicly traded securities is virtually costless, as it requires only a Wall Street Journal, it would be extremely expensive for taxpayers to hire appraisers every year for real property, works of art, jewelry, and stock in privately held corporations. What is worse, monitoring the accuracy of these appraisals would be daunting. In the absence of comparable sales, appraisers generally rely on what are at best approximations, typically based on subjective assumptions.¹⁹⁹ Human nature being what it is,

¹⁹⁹ See Land, supra note 3, at 57 (discussing difficulties with income forecast and replacement cost methodologies commonly employed by appraisers in absence of data on comparable sales). Land emphasizes that valuation is a potentially indeterminate search

¹⁹³ Shoup, supra note 4, at 97; see also Chirelstein, supra note 18, at 89 ("[T]he realization requirement deserves the credit, or the blame, for much Code detail and complexity."); Boris I. Bittker, Tax Reform and Tax Simplification, 29 U. Miami L. Rev. 1, 3 (1974) ("If taxpayers were required to value their assets annually, and to take the current increase or decrease into account currently, a number of complexities in existing law would evaporate.").

¹⁹⁴ See Chirelstein, supra note 18, at 72 (stating that difficulty of marking may be chief reason for acceptance of realization, while absence of ready cash to pay tax on property appreciation and consequent "forced liquidation" of assets to pay tax is another); Brown, supra note 7, at 1560 (noting that, while mark-to-market taxation would increase equity and efficiency, it simultaneously would produce valuation problems); Shaviro, supra note 52, at 12 (describing valuation and liquidity concerns as "substantial").

¹⁹⁵ See Shakow, supra note 49, at 1167.

¹⁹⁶ Professor Zelinsky opposes forcing taxpayers to borrow, on the theory that the government can borrow more cheaply; an advantage of realization, he argues, is that it "allocates to the government the onus of financing its activity until a realization event fills the fisc." Zelinsky, supra note 50, at 890.

¹⁹⁷ Such a policy certainly would be politically unpopular, even if it was administrable. For a discussion of the politics of repealing realization, see infra Part III.E.2.

¹⁹⁸ For an admirable effort to overcome these difficulties, see Shakow, supra note 49, at 1118-67 (proposing ways to apply mark-to-market taxation to various assets).

valuations on average would come out against the government-leading to litigation and undetected fraud.²⁰⁰

b. Publicly Held Securities Only. Faced with this valuation difficulty, some commentators have suggested a partial solution: marking to market only publicly held securities, because valuation is simple.²⁰¹ Yet as Professor Zelinsky concludes, "accretionism applied selectively will generate unfairness and distortion."²⁰² If realization endures for some assets, so too will fiscal defenses necessary under realization, such as capital loss limitations, wash sale rules, and the straddle rules. Yet these defenses—which limit taxpayer control over the timing of realizations—are unnecessary under a mark-to-market regime, which already denies taxpayers such control. The scope of these defenses, then, will have to be circumscribed—an unenviable task, as the defenses are already complex. As Professor Weisbach has noted, "[t]he complexities of grafting mark-to-market onto rules developed for realization may be enormous,"²⁰³ and taxpayers no doubt will mine this complexity for planning opportunities.

²⁰⁰ See Cunningham & Schenk, supra note 7, at 743 n.78 ("Any system requiring appraisals is likely to be a loss for the government because it does not have the resources to win."). To reinforce this point, Professor Zelinsky discusses the "numerous, protracted, and costly" adjudications under local property tax regimes. See Zelinsky, supra note 50, at 881. Under realization, in contrast, litigation as to value is uncommon, not only because the sale yields clear evidence of value, but also, as Professor Zelinsky notes, because during a sale "the taxpayer and the tax collector have perfectly-aligned interests in maximizing the recognized value of the taxpayer's property." Id. at 881.

²⁰¹ See Joseph Bankman, A Market-Value Based Corporate Income Tax, 68 Tax Notes 1347, 1347 (1995) (proposing to replace corporate income tax on publicly traded corporations with "market value tax" under which corporations would pay tax yearly on annual appreciation in market value of their outstanding equity); Joseph M. Dodge, A Combined Mark-to-Market and Pass-Through Corporate-Shareholder Integration Proposal, 50 Tax L. Rev. 265, 299-300 (1995) (proposing to repeal corporate level tax, to tax shareholders of public companies on a mark-to-market basis, and to tax shareholders of nonpublicly traded corporations on a "pass through" basis, as in partnerships and subchapter "S" corporations); Halperin, supra note 7, at 977 (advocating ALI-type project to propose mark-tomarket treatment for publicly traded securities, along with elimination of double tax on corporate profits and indexation of gains for inflation); Michael S. Knoll, An Accretion Corporate Income Tax, 49 Stan. L. Rev. 1, 1, 12-15 (1996) (proposing to replace corporate income tax by taxing corporation on change in value of its outstanding securities, including certain nonpublicly traded securities); Slawson, supra note 10, at 625-26 ("[P]ublicly traded stocks amply meet both the test of liquidity and of measurability."); Louie, supra note 56, at 876 (arguing that Congress should tax appreciation annually on marketable securities of corporations with 500 or more shareholders and gross assets over \$1 million).

²⁰² Zelinsky, supra note 50, at 917-18.

²⁰³ David A. Weisbach, Tax Responses to Financial Contract Innovation, 50 Tax L. Rev. 491, 511 (1995).

for the hypothetical: What would the sale price have been *if* the asset had been sold? See id.

Furthermore, if mark-to-market applies only selectively, taxpayers will strain, at the margin, to avoid it. As Professor Shaviro has observed:

the risk and other characteristics of publicly traded and other stocks presumably do not differ systematically, and non-publicly traded stocks often may be reasonably marketable among business associates or other knowledgeable investors. Taxing publicly traded stocks, therefore, would likely cause shifts to other stocks (or deter companies from becoming publicly traded)²⁰⁴

Indeed, there is a fairly liquid private "144A" market in stock and securities.²⁰⁵ Although only qualified institutional buyers (QIBS) are eligible to participate, QIBS are responsible for a sizable portion of all investment activity. Moreover, the flight from publicly traded stock might lead not only to privately held stock, but also to real property, works of art, coins, and other assets that are harder to value.

c. Retrospective Method. Another alternative, variations of which have been proposed by Professors Auerbach,²⁰⁶ Blum,²⁰⁷ Fellows,²⁰⁸ Land,²⁰⁹ Shakow,²¹⁰ Vickrey,²¹¹ and Warren,²¹² is to wait

 205 The 144A market is open only to large institutional investors. It is named for SEC Rule 144A, which exempts securities from registration if they are sold only to institutions owning at least \$100 million in securities. For a discussion of Rule 144A, see Edward F. Greene et al., U.S. Regulation of the International Securities and Derivatives Markets § 4.03 (4th ed. 1998).

 206 See Auerbach, supra note 36, at 169-78 (proposing to tax assets when sold, as if they had appreciated at risk-free rate).

²⁰⁷ See Cynthia Blum, New Role for the Treasury: Charging Interest on Tax Deferral Loans, 25 Harv. J. on Legis. 1, 12 (1988) (considering two alternatives for allowing income deferral with interest charge, and comparing them to realization and mark-to-market).

²⁰⁸ See Fellows, supra note 7, at 730-34 (proposing to assess tax at time of realization, but to compensate government for deferral by adding interest-type charge to tax).

²⁰⁹ See Land, supra note 3, at 73-83. Instead of charging interest, Land's "yield based" method of retrospective taxation would treat the government as a passive partner entitled

²⁰⁴ Shaviro, supra note 52, at 38; see also Bankman, supra note 201, at 1352 ("Distortions and problems of legal integration will predictably arise at the boundary of the MVT and other tax systems."); Dodge, supra note 201, at 299 (leaving nonpublicly traded stock under realization while marking publicly traded stock would "create a major discontinuity" that would "attract intense planning activity and generate significant transaction costs"); Gergen, supra note 23, at 261 (expressing concern about applying mark-to-market selectively, as doing so may prompt distortive behavior near mark-to-market's "boundary"); Halperin, supra note 7, at 972 (describing taxpayer maneuvers to avoid mark-to-market as "most difficult question" and "major uncertainty relating to workability" of his proposal); Louie, supra note 56, at 870 ("Unfortunately the decision to tax only some assets' capital appreciation probably would cause private investors to shift their funds from assets subject to the appreciations tax into assets not subject to the tax, thereby distorting optimal investment behavior."). For a more detailed discussion of the problems arising when mark-tomarket taxation is applied selectively, see Zelinsky, supra note 50, at 918-47 (arguing that "sectoral" accretionism causes distortions that are as bad as, or possibly worse than, distortions caused by realization).

for a sale before imposing the tax, as under current law, but to add an interest charge for the deferral. As discussed above, a similar rule applies to PFICs.²¹³

For example, assume the taxpayer purchases an asset for \$100 on January 1, 1993 and sells it for \$200 on December 31, 1997. Her gain over five years is \$100. Instead of recording the appreciation from each period (as in a mark-to-market regime), we might assume a constant amount of appreciation every year—in this case, \$20. Thus, the taxpayer is treated as having owed tax on \$20 of appreciation in 1993, and pays five years of interest on this tax. She likewise is deemed to have owed tax on \$20 in 1994, and owes four years of interest, etc. To make the computation less difficult, the interest charge likely would be based on a single interest rate (e.g., the one in effect at the time of the sale).

This regime avoids the twin compliance costs of mark-to-market: liquidity and valuation. Because no tax is due until a sale, the taxpayer generally will have cash to pay the tax.²¹⁴ As the tax is based on a sale price, no appraisal is needed. However, in compensating the government for the deferral, this approach relies on assumptions rather than facts. The interest rate is *assumed* to reflect market conditions during the period of deferral, but probably will reflect instead the conditions at the time of the sale. This rate is *assumed* to reflect the riskiness of the particular taxpayer's credit, but a uniform interest rate likely will apply to everyone.²¹⁵ Moreover, the investment is *as*-

²¹¹ See William Vickrey, Averaging of Income for Income-Tax Purposes, 47 J. Pol. Econ. 379, 382-97 (1939) (proposing to charge interest on deferred tax payments).

 212 See Warren, supra note 15, at 492 ("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.").

²¹³ See supra Part III.C.3.a.

²¹⁴ With a long holding period, a low basis, and high interest and tax rates, the interest charge potentially could dwarf the actual tax liability; indeed, the tax may approach (or even exceed) the asset's value—an outcome that would deter the taxpayer from selling. In most circumstances, though, this will not occur.

²¹⁵ Professor Knoll contends that the government is likely to underestimate the degree of the taxpayer's credit risk, and thus to charge a below-market interest rate. See Michael S. Knoll, Financial Innovation, Tax Arbitrage, and Retrospective Taxation: The Problem with Passive Government Lending 25-27 (John M. Olin Foundation Working Paper No. 97-

to a fixed percentage of the gain (given by the tax rate). For example, if the pretax yield is 10% and the tax rate is 35%, the after-tax yield is 6.5%. The taxpayer thus is allowed to keep only what she would have earned if the asset appreciated annually at 6.5%; the balance is paid to the government. See id.

²¹⁰ See Shakow, supra note 49, at 1120-24 (describing adjustment of gains and losses to account for deferral as "the most attractive" method of taxing assets that should be excluded from a mark-to-market system for administrability reasons). Shakow proposes this methodology for certain assets that are especially difficult to value annually, and a mark-to-market approach for other assets. See id. at 1120.

sumed to have appreciated by a constant amount without reference to what actually happened.²¹⁶ This assumption will lead to either undertaxation or overtaxation.²¹⁷ For example, assume the above investment declined from \$100 to \$90 in 1993, to \$80 in 1994, to \$70 in 1995, and to \$60 in 1996, before skyrocketing to \$200 in 1997. The taxpayer will be overtaxed, because she is deemed to have unrealized appreciation for four years in which she actually had unrealized losses. On the other hand, if the investment soared to \$1,000 in the first year, and gradually retreated to \$200 by the time of the sale, the taxpayer will be correspondingly undertaxed.²¹⁸ In defense of this approach's inaccuracy, Professor Fellows points out that it is likely to be more accurate, on average, than imposing no charge for deferral.²¹⁹

Yet the computation required under this regime introduces significant rule complexity. Although a similar computation is required for

 216 To avoid this assumption, Professor Auerbach's proposal does not attempt to tax *actual* gain and, instead, imposes only a time value charge. See Auerbach, Retrospective, supra note 36, at 168. His proposal assumes that the investment appreciated at the risk-free interest rate while the taxpayer owned it (regardless of how the property actually performed), and, upon a sale, imposes tax on this assumed return. See id. at 172. For example, assume that the risk-free interest rate is 5% and that the taxpayer held property for one year before selling it for \$105. Auerbach would assume that the property was purchased for \$100 and accreted to \$105 (whether the property was in fact purchased for \$100, or indeed for \$300 or \$50). Accordingly, the taxpayer would have \$5 of taxable gain. One of the proposal's key advantages is that it avoids lock-in by eliminating the holder's incentive to keep an asset merely to avoid tax on built-in gain. See id. at 178. For a discussion of lock-in, see infra Part IV.A.1.

²¹⁷ See Thomas L. Evans, The Taxation of Multi-Period Projects: An Analysis of Competing Models, 69 Tex. L. Rev. 1109, 1150-55 (1991) (discussing arbitrage opportunities under this regime, and noting that it is inherently inaccurate); Kleinbard & Evans, supra note 6, at 794 (noting inaccuracy of retrospective method as applied to Passive Foreign Investment Companies).

²¹⁸ Such under- or over-taxation can induce strategic behavior. As Professor Auerbach has noted, "Assets achieving above-normal rates of return initially would still be subject to a lock-in effect, because an investor anticipating only normal returns from the asset in the future would be able to spread the accrual pattern retrospectively imputed for this gain over several years by holding on to the asset." Auerbach, Retrospective, supra note 36, at 168; see also Gergen, supra note 23, at 228 (stating that strategic trading remains possible because of mistaxation of above normal and below normal returns).

²¹⁹ See Fellows, supra note 7, at 731. Although retrospective taxation significantly diminishes the value of deferral (and thus the timing option), it leaves the rate option largely unscathed. Taxpayers still determine when (and at what rate) they pay tax. If they expect the rate to rise, they will take their gains immediately and delay losses. If instead they expect the rate to fall, they will recognize losses immediately and defer gains (as long as the interest charge does not outweigh the benefit of the reduced rate). In contrast, a markto-market system eliminates the rate option, as taxpayers lose control of when (and at what rate) they pay tax.

^{17,} University of Southern California Law School, 1997) (stating that if interest rate does not account for possibility of taxpayer defaulting on its tax obligation, time value charge fails to eliminate tax arbitrage). Yet if the government responds by raising the rate, it may overcharge some taxpayers while continuing to undercharge others.

PFICs, the PFIC experience proves, if anything, that taxpayers consider such a computation onerous; indeed, foreign issuers of stock strive not to qualify as a PFIC so that investors will not lose interest in the offering.

d. Expected Value Taxation. Another model, variations of which have been offered by Professors Cunningham and Schenk,²²⁰ Bradford,²²¹ and Schuldiner,²²² would impose an annual tax as if assets are earning an assumed return (e.g., the risk free rate)—regardless of how the assets are actually performing. Differences between the actual and assumed return are resolved when taxpayers sell the assets; they either pay more tax (on the excess of the actual return over the assumed return) or claim a deduction (for the excess of the assumed return over the actual return). As discussed above, a comparable regime was implemented in 1996 for contingent debt.²²³

For example, assume the taxpayer purchases stock for \$100 in January 1995 and the assumed return, the risk-free rate, is 6%. If the taxpayer does not sell during 1995, she includes \$6 of gain (regardless of whether the stock ends the year trading at \$106, \$160 or \$60). She then adds \$6 to her cost basis, so that it becomes \$106. In 1996, assuming she doesn't sell, she includes an additional 6% of gain—here, \$6.36 (with the extra \$.36 attributable to "compounding," i.e., the return on the \$6 she is assumed to have earned in 1995). Her basis is now \$112.36. Assume that on January 1, 1997 she sells the stock. If it has indeed earned the risk-free rate and sells for \$112.36, she has no gain or loss. But if the return diverges from the risk-free rate, she will have additional gain or loss.

²²² See Reed Shuldiner, A General Approach to the Taxation of Financial Instruments, 71 Tex. L. Rev. 243, 284-89 (1992). Professor Shuldiner proposes "expected value taxation," under which a complex financial instrument is divided into components and taxpayers pay an annual tax based on the expected appreciation of each component. Upon a sale, they settle up the difference between the actual and expected returns. See id. at 285. Unlike Professors Cunningham and Schenk, Professor Shuldiner would limit expected value taxation to financial assets. See id.

²²³ See supra Part III.C.3.b.

²²⁰ See Cunningham & Schenk, supra note 7, at 733-40 (proposing to tax assets annually as if they were earning risk-free rate, with adjustment when asset is sold).

²²¹ See Bradford, supra note 15, at 770-71. In Professor Bradford's proposal, taxpayers accrue interest during their holding period and make an adjustment (by including additional income or taking a loss) based on actual return. See id. Professor Bradford's proposal is notable for allowing taxpayers to choose the rate imposed on the adjustment, provided they designate it before they know how the adjustment turns out. In offering this freedom to choose, he seeks to demonstrate that the tax rate—and, indeed, the tax treatment—for risk-based returns is less important than for time-based returns. See id.; see also Part IV.E.2 (discussing Professor Bradford's view of unimportance of tax on risk).

This rule avoids any valuation issue by relying on an estimated return (e.g., the risk-free rate). Although this estimate likely will be inaccurate, it may be less so than realization's implicit assumption that the asset yields nothing until it is sold.²²⁴ However, unlike the retrospective method described above, this rule presents a liquidity issue by imposing tax prior to sale. As with the retrospective rule, moreover, the rule's complex computations are a potential compliance cost (or, at least, a political cost). Use of a similar rule for contingent debt should not allay these concerns. Where possible, issuers prefer to issue debt not governed by the contingent debt regulations—and their counsel strain to draft ambiguous tax disclosure supporting the conclusion that these regulations do not apply²²⁵—in part because complexity and liquidity concerns undermine investor enthusiasm²²⁶ for such debt.²²⁷

²²⁶ Investor disinterest in contingent debt also derives from the fact that all income on contingent debt, including gain upon sale, is deemed ordinary rather than capital.

²²⁷ In addition to the four alternatives to realization discussed above, Professor Evans proposes a fifth, which also presents administrability problems. Instead of requiring taxpayers to report an asset's value in income (i.e., mark-to-market accounting), we can do essentially the same thing, he points out, by deferring deductions in an amount equal to the asset's value. Either way, taxable income rises by the asset's value. The challenge, then, is to identify the deductions to be disallowed. They are, he posits, the costs of producing the property, on the theory that an asset's value—the number we are seeking—should equal the costs of producing it. See Evans, supra note 132, at 826 ("[A]n accounting method that capitalized all economic costs incurred in the production of property would result in the property being stated at an amount equal to its market value (a mark-to-market result).").

The problem, though, is that it may be hard to identify these costs (e.g., where one expenditure contributes to the production of several goods). Cf. Warren, supra note 15, at 476 (noting "administrative burden" imposed by need to establish connection between disallowed expense and particular category of income or assets). The methodology, moreover, is less useful for assets that a taxpayer does not produce (e.g., financial assets such as shares of stock). Finally, as Professor Evans concedes, a key cost of production is the return to equity. Yet because this item is not otherwise deductible, it is not already stated on the tax return. Thus, as Professor Evans recognizes, capitalizing it "might involve difficult administrative problems." Evans, supra note 132, at 827. If taxpayers must compute this amount, the computation may be expensive and, indeed, inaccurate. To avoid this result, Professor Evans would use the return to a taxpayer's creditors as a proxy for the return to equity, and thus would capitalize a portion of the taxpayer's interest expense.

 $^{^{224}}$ The rule leaves some room for deferral and thus the timing option. For example, to the extent that the asset is outperforming the assumed return (e.g., risk-free rate), taxpayers can defer the tax on this excess by not selling the asset. As under the retrospective method, the expected value method does not eliminate the rate option, as taxpayers control when, and thus at what tax rate, they settle up the difference between the estimated and actual yield.

²²⁵ See, e.g., Houston Indus. Inc., 7% Automatic Common Exchange Securities Due July 1, 2000, at 34 (prospectus dated July 9, 1997) (on file with the *New York University Law Review*) (describing conclusion that contingent debt regulations do not apply as something "company believes," rather than as opinion of counsel; disclosure offers "no assurance" that IRS will accept this view, and specifically warns that contingent debt regulations might be applied).

E. Politics

Although it is more administrable to reverse a rate reduction, repeal of realization is not totally unadministrable. The tax system could function under one of the above proposals (or perhaps a combination thereof, such as mark-to-market for publicly traded assets and the retrospective method for others). Yet realization is simpler and more administrable, and simplicity has political appeal. Put another way, repeal of realization carries a political cost not shared by an increase in the capital gains rate: The average voter's tax return becomes more time consuming and difficult. As the two otherwise have similar tax-increasing effects, legislators are likely to prefer the latter. To develop this point, I contrast the tempestuous politics of rate reductions with the political stability of realization.²²⁸

1. Capital Gains Rate

Political support for a capital gains preference has long been uneven. For those who believe that ideas influence politics,²²⁹ it is not surprising that the political realm is divided, as there is great uncertainty in the academy about the need for, and effects of, reductions in the capital gains rate.²³⁰ Advocates point to the importance of capital formation and the low savings rate, and assert that reducing the capital gains rate will encourage savings;²³¹ opponents counter that such subsidies are not effective²³² and benefit the wealthy disproportion-

²²⁹ See, e.g., Rogers M. Smith, Ideas, Institutions, and Strategic Choice, 28 Polity 136-40 (1995) (arguing that focusing on role of ideas in institutions can provide greater understanding of politics).

²³⁰ See, e.g., Zodrow, supra note 63, at 421-22 ("Although there are a wide variety of causes for this unsettled state of affairs [concerning the capital gains rate], one prominent reason for the continuing debate is the considerable uncertainty in the economics literature regarding the effects of capital gains taxation.").

 $\overline{2^{31}}$ See, e.g., Michael J. Boskin, Taxation, Saving and the Rate of Interest, 86 J. Pol. Econ. S3, S15 (1978) (estimating that elasticity of saving with respect to after-tax return is 0.4); Martin Feldstein, Tax Rates and Business Investment: Reply, 32 J. Pub. Econ. 389, 389-96 (1987) (stating that investment is fairly sensitive to changes in after-tax rate of return).

²³² See, e.g., Auerbach, Capital Gains Taxation, supra note 36, at 597 ("[T]he existing time series evidence is that it is just as possible that the response of investors to a tax cut will *reinforce*, rather than offset, the effect of lower rates in reducing revenues."); Robert S. Chirinko, The Ineffectiveness of Effective Tax Rates on Business Investment, 32 J. Pub.

Yet interest capitalization is an imperfect proxy—not only because taxpayers with insufficient debt are beyond its reach, see id. at 831—but also because too little will be capitalized; creditors ordinarily are satisfied with a lower return than equity holders. See id. at 828.

²²⁸ Explorations of the political process generally depend on much-debated assumptions about the variables driving it—for example, interest groups, ideas, institutions, and the self interest of individual legislators. Instead of relying on any single variable, this Article draws on insights from different schools of thought.

ately.²³³ There also is controversy about a rate reduction's revenue effects.²³⁴ Advocates claim that, paradoxically, a rate cut will raise revenue by persuading taxpayers who otherwise would not sell to do so, and thus to pay capital gains tax.²³⁵ Given the absence of dispositive research on this issue,²³⁶ opponents argue with equal conviction that such rate reductions drain away revenue, particularly over the long term.²³⁷

Thus armed with reasonable arguments, competing interest groups have waged pitched battles. A low rate finds strong support in the "growth" wing of the Republican party. Business groups favor this cut because it helps them raise capital.²³⁸ Many investors who have prospered in this longstanding bull market, moreover, seek lower

²³³ In Zodrow's view, of the issues described above, there is "compelling" empirical support only for the proposition that capital gains "accrue primarily to the wealthy." Zodrow, supra note 63, at 424; see also Joseph M. Dodge, Restoring Preferential Capital Gains Treatment Under a Flat Rate Income Tax: Panacea or Placebo?, 44 Tax Notes 1133, 1136 (1989) (criticizing distributional effects of capital gains rate reduction); Daniel Feenberg & Lawrence Summers, Who Benefits from Capital Gains Tax Reductions?, in 4 Tax Policy and the Economy 1, 5 (Lawrence Summers ed., 1990) (stating that in 1986, taxpayers in top 0.5 percentile, i.e., those with incomes above \$203,000, received 54% of all capital gains, compared to 8% of all income).

 234 See, e.g., Zodrow, supra note 63, at 429 ("[D]espite a voluminous literature examining the relationship between tax rates and capital gains realizations, this issue is far from settled.").

²³⁵ See, e.g., Martin Feldstein et al., The Effects of Taxation on the Selling of Corporate Stock and the Realization of Capital Gains, 94 Q.J. Econ. 777, 790 (1980) (finding that capital gains realizations on corporate stock held by high income taxpayers were highly sensitive to tax rates, strongly suggesting that rate cut would increase revenue).

²³⁶ See Zodrow, supra note 63, at 423 (concluding that debate remains unresolved).

²³⁷ For example, in a recent study, the Center on Budget and Policy Priorities concluded that reducing the holding period from 18 to 12 months would be revenue neutral in the first 10 years after the change, but would lose \$30 billion in the following 10 years. See IRS Reform Bill Carrying Many Tax Cuts for Rich, CBPP Says, supra note 16 (describing results of study); see also Jane C. Gravelle, Will Reducing Capital Gains Taxes Raise Revenue?, 36 Tax Notes 419, 419-24 (1987) (arguing that capital gains rate reduction will reduce revenue); Zodrow, supra note 63, at 494-507 (discussing and citing time-series studies, which generally conclude that taxpayers' decisions to realize gains are not sensitive to capital gains rates, such that rate reductions do not increase revenue).

²³⁸ See Jacob M. Schlesinger, Relief Pitchers: After Years of Talks, Capital-Gains Tax Cut Appears on the Horizon, Wall St. J., Feb. 14, 1997, at A1 (stating that capital gains rate cut "has strong business support from Wall Street to Silicon Valley").

Econ. 369 (1987) (arguing that changes in after-tax rate of return have almost no effect on investment; other factors, especially those related to macroeconomic variables, are more important); Paul A. David & John L. Scadding, Private Savings: Ultrarationality, Aggregation, and "Denison's Law," 82 J. Pol. Econ. 225, 228 (1974) (concluding that savings is invariant to changes in net returns); cf. Robert E. Hall, Intertemporal Substitution in Consumption, 96 J. Pol. Econ. 339, 356 (1988) (arguing that consumption does not rise more rapidly in times of high expected returns in stock market). See generally Zodrow, supra note 63, at 469-78 (summarizing debate and offering citations on effects of capital gains rate reduction on investment, savings, and economic growth).

rates so they can "cash out" at a reduced tax cost. Their representatives, such as the American Council for Capital Formation, have lobbied tenaciously for a rate reduction.²³⁹ On the other hand, organized labor, the poor, and the middle class prefer other subsidies that benefit them more directly.²⁴⁰ Their allies in government, including the President and most congressional Democrats, thus did not advocate the 1997 rate reduction.

The balance among competing groups will shift with the composition of the legislature and executive (and the ideological and personal affiliations of key members), as well as with fluctuations in national resources and the procedures for allocating them. An enduring tax policy may be harder to attain when different parties control Congress and the White House, as in recent years, because policy may well fluctuate with the shifting balance of power between the branches.241 Moreover, tax reductions are no easy feat when the deficit is high, because revenue shortfalls either increase the deficit or erode spending-an unpopular result in either case. These tradeoffs have been highlighted since the mid-1980s by budgetary rules requiring advocates of new tax expenditures to find revenue offsets.²⁴² Such constraints pit advocates of different programs against each other, as Professor Garrett has observed, thereby intensifying interest group competition while impeding enactment of new tax expenditures and undermining existing ones.243

For Congress to reduce the capital gains rate, then, the political stars must align perfectly. Although these rare conditions held in 1997, they have not held in the past and could well be reversed in the future. Indeed, the Democrat-controlled Congress denied President Bush a rate reduction, even after the Gulf War had enhanced his popularity dramatically.²⁴⁴ Nor could the new Republican majority win a

²⁴¹ This may be particularly true when the parties trade places (such that each party loses one branch and captures the other), as each branch offers unique advantages and vulnerabilities. The switch thus may shift the parties' balance of power on particular issues.

²⁴² See Garrett, supra note 119, at 503, 509-14 (recounting history of revenue neutrality norm, which arose during consideration of Tax Reform Act of 1986 and was codified in "pay as you go" or "PAYGO" provisions of 1990 legislation).

²⁴³ See id. at 514-26, 555-69.

²⁴⁴ See Bennett Minton, The Year in Review: Relative Quiet of 1991 Sets Stage for a Noisy 1992, 53 Tax Notes 1446, 1446 (1991) ("While the Air Force was bombing Baghdad

²³⁹ See id. (noting that Mark A. Bloomfield, a lobbyist for the American Council for Capital Formation, has been called "Mr. Capital Gains" for "his two decades of cheerleading").

²⁴⁰ See, e.g., Pat Jones, The Capital Gains Debate: Partisan Politics or Economic Discourse?, 41 Tax Notes 1373, 1373 (1988) (discussing politics of capital gains debate and noting Democrat Michael Dukakis's criticism of capital gains cut as "Republican largess toward wealthy Americans").

rate reduction during its early years, because President Clinton withheld his support.²⁴⁵ The 1997 session proved different not only because the Republicans were in control of Congress-a fact that could change, and with it, the rate-but also because revenue projections were unexpectedly favorable.²⁴⁶ Congress's budgetary procedures also facilitated the reduction by, in effect, understating its cost. In testing whether a provision will reduce revenue, such that its sponsor must raise offsetting revenue, Congress looks only at cash expenditures in the next five years (without considering the present value of more remote costs). The capital gains provision thus fared well, as it was projected to raise \$123 million in the first five years (when lower rates would spur sales), while costing \$21 billion in the second five.²⁴⁷ Given this favorable accounting and the fortuitous burst in revenues, the fiscal "pie" was (or at least seemed) sufficiently large for all competing constituencies, including investors, to have a larger slice. These unique conditions endured in 1998, when Congress extended the twenty percent rate to assets held between twelve and eighteen months. Yet in leaner times, the struggle will resume²⁴⁸ and the outcome may well be different.

Indeed the tax law is likely to keep changing, public choice theorists tell us, because these changes reflect the efforts of government officials to maximize their wealth²⁴⁹ and prestige.²⁵⁰ Under one the-

into a technological Stone Age, President Bush used his January State of the Union message to call again for capital gains cuts. . . . The idea never went anywhere.").

²⁴⁵ See John Godfrey, Fashioning of Crown Jewel Complete; Clinton Plans to Cut It to Size, 69 Tax Notes 943, 943 (1995) (describing President Clinton's promise to veto Republican budget bill, which included capital gains tax cut).

²⁴⁶ See, e.g., Carolyn Lochhead, Clinton Signs Balanced-Budget Pact into Law, S.F. Chron., Aug. 6, 1997, at A3 ("New revenue projections last spring gave the budget negotiators a \$225 billion windfall that clinched the initial agreement—allowing Republicans to cut taxes and Democrats to increase spending while still projecting a balance in 2002.").

 247 See id. at 528-29 (noting favorable budgetary accounting treatment accorded to reduction in capital gains rate).

²⁴⁸ Indeed, assuming that the "pay-as-you-go," or PAYGO, provisions continue to govern, advocates of new subsidies will have an incentive to challenge existing subsidies, such as the capital gains preference. See Garrett, supra note 119, at 516-18.

²⁴⁹ The so-called "economic theory of regulation" views government action as an auction where "goods" (i.e., favorable policies) are delivered to the highest bidder. A foundational work is George J. Stigler, The Theory of Economic Regulation, 2 Bell J. Econ & Mgmt. Sci. 3, 3 (1971) (formalizing idea that regulation is actively sought by certain groups to attain competitive advantage). For a description of this theory and citations to key works, see Steven P. Croley, Theories of Regulation: Incorporating the Administrative Process, 98 Colum. L. Rev. 1, 34-41 (1998).

²⁵⁰ There is a significant division between those who believe politicians seek wealth and those who believe they seek prestige. The former view is more traditionally associated with public choice theory. See, e.g., Doernberg & McChesney, supra note 86, at 926 ("[T]he 'economic theory of regulation' sees government action supplied in response to ... well-organized groups that are willing to pay for it in votes, campaign contributions, and so

ory, offered by Professors Doernberg and McChesney, legislation is a contract by which legislators "sell" tax preferences to interest groups in return for campaign contributions.²⁵¹ As one Ways and Means Committee member put it, "America needs a tax bill each year (to give) a little help to your friends."²⁵² Under this view, these "contracts" have shortened in duration because the risk of electoral defeat prevents legislators from making commitments.²⁵³ Thus, the capital gains rate is constantly being "renegotiated."²⁵⁴

Under an alternative view advanced by Professor Shaviro, Congress changes the tax law not for campaign contributions, but for the prestige that individual members earn for the "reform."²⁵⁵ The tax law's complexity, he suggests, prevents most voters from seeing through this political theater. An example of this phenomenon, he says, is the cycle of "tax instrumentalism"—use of the tax code to promote investment—and "tax reform"—attempts to root out such preferences.²⁵⁶ The greatest example of tax instrumentalism, the 1981

forth."). The latter view comes from Professor Shaviro as a spirited critique of traditional public choice theory. See Shaviro, supra note 60, at 6-11 (criticizing public choice theorists for failing to recognize that legislators engage in self-interested activity other than wealth maximization). It is not wholly accurate, therefore, to describe the latter as a "public choice" theory, as this Article does, see infra notes 255-58 and accompanying text, even though it shares the assumption that officials pursue their self interest.

²⁵¹ See Doernberg & McChesney, supra note 86, at 925-27.

²⁵² Id. at 942 n.163 (quoting Rep. Fortney Stark).

²⁵³ See Fred S. McChesney, Money for Nothing: Politicians, Rent Extraction, and Political Extortion 23 (1997) ("A legislator not party to the original bargain has less incentive to abide by the political rent-creation deal struck by his predecessors unless he too is compensated. Guaranteed rent durability is thus impossible."). Congress has institutions that reinforce the durability of legislative "contracts," such as a committee structure and a strong seniority system. See Garrett, supra note 119, at 545 (noting that incumbency, strong seniority system, and stable committee structure reinforces durability of legislative contracts). Yet the seniority system and the authority of committee chairs is not as powerful as it once was. See Doernberg & McChesney, supra note 86, at 948-50 (noting turnover in tax writing committees and effect of Watergate-era changes in committee system, which diminished power of chair).

²⁵⁴ These renegotiations undermine the expected length and value of a given "contract," and thus the degree of gratitude (and contributions) a legislator may earn. Yet although legislators may "earn" less per negotiation, they should have more earning opportunities. As Professor McChesney has argued, each renegotiation, and each threat of renegotiation, can be a new occasion for interest groups to show gratitude. See McChesney, supra note 253, at 2-3; cf. Garrett, supra note 119, at 549 (explaining that PAYGO, which destabilizes and thus devalues legislative contracts, may be seen as method of inducing postenactment contributions through threat of repeal).

²⁵⁵ See Shaviro, supra note 60, at 9 (emphasizing importance of "voters' taste for symbolism and politicians' taste for power and prestige").

 $^{^{256}}$ See id. at 9-10 (citing above factors as "dominant" explanations of 1981 and 1986 tax legislation).

Act,²⁵⁷ was followed only five years later by the greatest example of tax reform, the 1986 Act,²⁵⁸ which, among other things, narrowed the rate differential between capital gains and ordinary income. We may well see more such cycles, since each change may enhance its sponsor's political resume by drawing attention from the media and generating prestige among voters.

2. Realization

In contrast to rate reductions, realization has broad support, even though it has essentially the same effect. As Professor Evans observed, "an attempt to repeal the realization doctrine on a wholesale basis for individual taxpayers would create such a firestorm of political opposition that few politicians would seriously consider such a proposal."259 The debate on the short against the box legislation reveals a glimpse of this "firestorm." Influential interest groups such as the Securities Industry Association (SIA), the International Swaps and Derivatives Association (ISDA), and other lobbying arms of the finance industry mobilized to limit (or, if possible, to defeat) that slender exception to realization.²⁶⁰ They presented realization as a principal that, like baseball and apple pie, should be disturbed with great reluctance, if ever. For example, ISDA's lobbying proposal urged that exceptions to realization, which it called an "important guide to fairness and administrability in the tax system," should be made only in the "most compelling circumstances, and then only in a carefully cir-

²⁵⁷ See Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, 95 Stat. 172 (codified as amended in scattered sections of I.R.C.).

²⁵⁸ See Tax Reform Act of 1986, Pub. L. No. 99-514, 100 Stat. 2085 (codified as amended in scattered sections of I.R.C.).

²⁵⁹ Evans, supra note 7, at 898; see also Faber, supra note 133, at 778 ("Ultimately, the principal reason why the realization requirement is likely to remain in the law is that repealing it would set off a political firestorm."); Shaviro, supra note 52, at 3 (describing realization as "politically inevitable").

²⁶⁰ See John Godfrey, Finance Industry Opposes Administration Revenue Proposals, 97 Tax Notes Today (TNT) 49-2, Mar. 13, 1997, available in LEXIS, Fedtax Library, TNT File (describing finance industry's opposition to constructive sale proposal); see also Unofficial Transcript of W&M Hearing on Revenue-Raising Provisions in Clinton's 1998 Budget, 97 Tax Notes Today (TNT) 51-56, Mar. 17, 1997, available in LEXIS, Fedtax Library, TNT File (statement of Robert Gordon, member of Securities Industry Association board of directors, to House Committee on Ways and Means on March 12, 1997) (opposing constructive sale proposal as imposing "punitive and unjustified taxes" on hedging) [hereinafter Gordon Statement]; Cliff Massa III, Writer Passes on Copy of Letter to Chairman Archer from the International Swaps and Derivatives Association, 96 Tax Notes Today (TNT) 102-33, May 23, 1996, available in LEXIS, Fedtax Library, TNT File (describing ISDA lobbying piece opposing constructive sale proposal).

cumscribed way."²⁶¹ Similar protests would be lodged against a more generalized repeal of realization and the likely opponents—including owners of closely held businesses, farmers, homeowners (and thus the real estate industry), as well as union members whose pensions could become taxed currently—wield considerable influence.²⁶² In contrast, a broad repeal of realization has not attracted much interest group support (or even attention). To my knowledge, no interest group is lobbying for this change, and so politicians are unlikely to score political points by seeking it.²⁶³

At first blush, it is puzzling that there is strong political opposition to a reduced capital gains rate but not to realization, even though their economic effect is similar. The explanation lies in part with the public's antipathy to taxes on "paper gain"—a sentiment evident, as Professor Zelinsky has pointed out, in popular dissatisfaction with property tax assessments.²⁶⁴ "Scholars tend to view increases in wealth ... as proper indicators of taxable capacity, whether or not these increases in wealth are realized by a sale of the assets in question," Professor Netzer has observed, yet "[v]oters tend to view taxes on unrealized capital gains as indecent²⁶⁵ Irrational though it may be, many voters deny they are enriched—or, at least, sufficiently enriched to qualify for tax—until they sell, and thus lock in the gain.

Realization's political stamina likewise derives from the administrability concerns discussed above. The rule is more than a subsidy. It averts the compliance and rule complexity of alternative rules. Need-

²⁶⁴ See Zelinsky, supra note 50, at 893-900 (discussing public's irrational resistance to tax on paper gain); see also id. at 896 (citing California's adoption of Proposition 13, described by the Supreme Court as "grounded on the belief that taxes should be based on the original cost of property and should not tax unrealized paper gains in the value of the property" (quoting Allegheny Pittsburgh Coal Co. v. County Comm'n, 488 U.S. 336, 344 n.4 (1989))).

²⁶⁵ See id. at 896 (quoting Dick Netzer, Does the Property Tax Have a Future?, in The Property Tax and Local Finance 222, 232 (C. Lowell Harriss ed., 1983)).

²⁶¹ Massa, supra note 260. A board member of SIA picked up this theme in testimony before the Ways and Means Committee, emphasizing that the constructive sale proposal contradicted "well established policy." Gordon Statement, supra note 260.

²⁶² See Zelinsky, supra note 50, at 946-47 (noting political influence wielded by realization's defenders).

²⁶³ A politician might favor repeal of realization as a relatively disguised tax increase. See Shaviro, supra note 60, at 59 (observing that Congress often relies on "fiscal illusion," such as increased withholding, inflation, deficit spending, and corporate income tax, to raise taxes indirectly). Congress could say that it was not raising taxes—as the rate was not changing—but was merely making a "technical" change. Yet the point of fiscal illusion is for Congress to raise taxes without provoking opposition—something that repeal of realization would not achieve. Even naive taxpayers who accepted the change as "technical" would oppose it as administratively costly—a point developed below. The taxpayers most directly affected by the change, moreover, would recognize it as a tax increase, and would mobilize to resist it.

less to say, complexity in the tax code is not popular. Indeed, the issue propelled Steve Forbes, a relative political unknown, in a credible run for the 1996 Republican presidential nomination. What politician would dare replace an administrable rule with one requiring difficult computations, valuations, or forced sales? Realization derives credibility from the political power of anti-complexity sentiment.

This is ironic, in a sense, as realization exacerbates *transactional* complexity, i.e., it induces taxpayers to plan their affairs with taxes in mind. Perhaps voters find (or are perceived to find) rule and compliance complexity more objectionable than transactional complexity. The chore of filling out a complex return may be more vexing than the availability of loopholes to well advised taxpayers.

Yet I suspect voters are not so much indifferent to transactional complexity as they are uninformed about it—and, particularly, about realization's role in breeding it.²⁶⁶ The relevant audience for a politician is the average voter, as opposed to the average tax practitioner or law review reader. It usually is not worthwhile for voters to understand the tax law except as it applies (narrowly) to them—a phenomenon known as "rational ignorance."²⁶⁷ Voters thus perceive only realization's administrability benefits, and not its administrability costs. In contrast, if realization were repealed, the administrability benefits (i.e., reduced transactional complexity) would be lost on most voters, whereas the costs (i.e., forced sales, valuation and/or interest charges, etc.) would be obvious—a reality likely to deter even the bravest politicians from challenging realization. Ironically, realization thus draws strength from a principle, simplicity, that may be its foe as much as its friend.²⁶⁸

Although realization thus has a firm footing as the general rule, the stream of narrow exceptions likely will continue. Congress usually enacts these exceptions in response to well publicized abuses.²⁶⁹

²⁶⁶ Indeed, Professor Graetz views transactional complexity—the widespread belief "that 'everybody else' was engaging in tax avoidance"—as a key political vulnerability of the income tax, along with its complex rules, the marriage penalty, and the effects of inflation. See Michael J. Graetz, The Decline (and Fall?) of the Income Tax 7-8, 42 (1997) (discussing marriage penalty and idea that public engages in tax avoidance).

²⁶⁷ See Shaviro, supra note 60, at 58 (noting that, in public's understanding of tax issues, "[r]ational ignorance is mixed with just plain ignorance").

²⁶⁸ If voters come to recognize realization's role in transactional complexity, they may support repeal of the rule. Such voter enlightenment seems unlikely, though. Most voters (and, indeed, most members of Congress) lack the time (and, in the case of the average voter, the access to technical expertise) needed to acquire this education. One must admit, though, that stranger things have happened.

²⁶⁹ Classic examples of this paradigm are the constructive sale and constructive ownership rules discussed supra Part III.C.1.e.

Although realization's defenders usually are unable to save the abusive transaction, they keep the reform limited.

Narrow changes are, after all, easier for staff to draft and for legislators to evaluate. Tax measures typically reside in revenue and budget bills—documents too voluminous for any individual to absorb. Congress negotiates these monstrosities on a tight schedule, which seldom allows for theorizing about systematic reform; there is time only to plug the loophole at hand. Hence the tax law develops incrementally. Exceptions, and exceptions to exceptions, are added each session.

This phased reexamination of realization offers self-interested legislators advantages not given by a general repeal. By targeting only a particular sector, they can threaten it with a unique handicap. To save itself, the group is likely to express gratitude for legislative assistance.²⁷⁰ To the extent that such gratitude motivates legislators, selective repeal serves that purpose as well.

IV

DISADVANTAGES OF REALIZATION AS SUBSIDY

Although realization is inherently credible, it is not a perfect subsidy. Even so, its deficiencies either may be alleviated with targeted reforms or are common to other subsidies. Most importantly, even if realization promotes a larger *amount* of savings, it could interfere with the optimal *allocation* of these funds—a problem that may be alleviated in several ways, as discussed below. Moreover, realization's effectiveness varies somewhat with the capital gains rate. Nor is the difficulty of replacing realization a strength if Congress seeks *flexibility*, rather than credibility. Even if realization is credible, moreover, it may be less credible than an up-front subsidy, which should prompt no concern about whether the reward will come. Yet, as discussed below, up-front subsidies present disadvantages avoided by realization.²⁷¹

Other concerns are common to all investment subsidies: whether a subsidy will induce more savings; whether there is a market failure

²⁷⁰ See Doernberg & McChesney, supra note 86, at 944 (noting that congressional leadership receives generous contributions from beer industry by threatening to raise excise tax on beer); Garrett, supra note 119, at 549 (noting potential advantage to legislators in making "a credible threat to holders of tax benefits that, absent continued compensation, Congress will withdraw their benefits and repeal the tax subsidy"); McChesney, supra note 253, at 2 ("[P]ayments to politicians are often made, not for particular political favors, but to avoid particular political disfavor, that is, as part of a system of political extortion, or 'rent extraction.'").

²⁷¹ See infra Part IV.D.

justifying government action; whether a subsidy is best offered through the tax code or direct expenditures; and whether such a subsidy is equitable.

A. Misallocation of Savings

1. Lock-In

Instead of analyzing a taxpayer's incentives before investing, we focus on her incentives *after* her investment has appreciated. A taxpayer may be "locked in" to an appreciated investment because switching triggers tax, which erodes the amount available for reinvestment.²⁷² For example, assume Larry's \$100 investment in XYZ has grown to \$181.06. Assume he expects it to grow at 16% for two years, and he expects a more profitable investment, ABC, to grow at 17% for two years. "Lock-in" will prevent Larry from switching.²⁷³ Because a sale would trigger a 20% tax of \$16.21, he could invest only (\$181.06 - \$16.21), or \$164.85, in ABC. Growing at 17%, ABC would yield \$225.66 after two years, or \$213.50 after taxes.²⁷⁴ In contrast, if Larry keeps his money in XYZ, he can "reinvest" the full \$181.06. At the lower 16% rate, it grows to \$243.64, or \$214.91 after taxes.²⁷⁵ Ironically, switching to the more profitable investment would cost him \$1.41.²⁷⁶

Lock-in is tempered by reductions in the capital gains rate, and thus in the "penalty" for switching investments.²⁷⁷ For instance, if the tax rate is 10% instead of 20% in our example, Larry will switch.

²⁷⁵ The gain of \$143.64, taxable at a 20% rate, yields a tax liability of \$28.73.

 $^{^{272}}$ See Shaviro, supra note 52, at 5 (stating that main disadvantage of realization is lockin); Louie, supra note 56, at 864 (explaining "lock-in" phenomenon).

²⁷³ Such failures to switch can generate three related efficiency costs, whose magnitudes are debated. First, the asset might not be transferred to the owner who would use it most productively. Second, because locked-in holders will not accept bids they otherwise would take, the asset's price could be artificially inflated, such that new investments are misallocated. Third, locked-in holders may not be fully satisfied with their portfolios. For a discussion of these efficiency costs and citations, see Cynthia Blum, Rollover: An Alternative Treatment of Capital Gains, 41 Tax L. Rev. 385, 388 n.13 (1986).

 $^{^{274}}$ Larry has a gain equal to (225.66 - 164.85), or 60.81, which, taxed at 20%, yields a liability of \$12.16.

 $^{^{276}}$ Lock-in would not operate under a mark-to-market regime, because Larry would be taxed even if he did not make a sale; thus he would have no tax motivation to avoid doing so.

²⁷⁷ Paradoxically, lock-in also is alleviated by a rate *increase*—as long as taxpayers have time to sell before it takes effect. As Professor Auerbach has observed, 1986 witnessed a burst of sales prior to (and presumably in anticipation of) a rate increase from 20% to 28%. See Auerbach, Capital Gains Taxation, supra note 36, at 595 (documenting this effect); Alan J. Auerbach, Capital Gains Taxation and Tax Reform, 42 Nat'l Tax J. 391, 392 (1989) [hereinafter Auerbach, Tax Reform] (same); see also Zodrow, supra note 63, at 497-501 (discussing Auerbach's and other studies).

Larry's tax in selling XYZ is \$8.11 (instead of \$16.21), and so he will have \$172.95 to reinvest in ABC (instead of \$164.85). After two years of growth at 17%, Larry will have \$236.75, or \$230.37 after taxes. In contrast, if Larry keeps his money in XYZ he will have \$243.64 (or \$229.28 after taxes). After taxes, he makes \$1.09 more by switching investments. Cutting the rate thus induces the socially preferred outcome.²⁷⁸

Yet if the goal is to mitigate lock-in while retaining realization, other rules may suffice. Under current law, sophisticated taxpayers are seldom "locked-in" to appreciated publicly-traded investments, as they can hedge them tax-free and receive cash for new investments—a practice that endures (although it is more difficult) under the 1997 "constructive sale" legislation.²⁷⁹ We also could undermine lock-in by repealing the basis step-up at death²⁸⁰—a rule that encourages elderly taxpayers to hold appreciated property until death (when income tax on unrealized appreciation is forgiven).²⁸¹ Alternatively, under a "rollover rule,"²⁸² tax otherwise due upon a sale would be deferred if sale proceeds are reinvested.²⁸³ Under such a regime, no special reduced capital gains rate is necessary,²⁸⁴ as deferral reduces the tax burden.²⁸⁵

²⁷⁹ For a discussion of the constructive sale legislation, see Part III.C.1.d. For a detailed description of tax-free hedging under the new regime, see Schizer, supra note 171, at 347-56. For those who view realization as a subsidy, a potential criticism of § 1259 is that it undermines an anti-lock-in device. Yet as such, tax-free hedging is overbroad, as it applies not only to gain that is reinvested, but also to gain that is consumed.

²⁸⁰ See I.R.C. § 1014 (West 1998) (basis in property steps up to fair market value when owner dies).

²⁸¹ For such a proposal, see Auerbach, Capital Gains Taxation, supra note 36, at 625.

 282 As Professor Andrews has observed, such a regime draws support from consumption tax theory. See Andrews, supra note 8, at 1177 n.140. For a detailed discussion of rollover, see Blum, supra note 273 (proposing rollover regime).

²⁸³ Until the Taxpayer Relief Act of 1997, a comparable rule was in effect for capital gain realized upon sale of a residence. In lieu of this provision, Congress excused from tax the first \$250,000 (or \$500,000 for a couple) of gain. See Taxpayer Relief Act of 1997, Pub. L. No. 105-34, § 312(a), 1997 U.S.C.C.A.N. (111 Stat.) 788, 836 (codified at I.R.C. § 121 (West 1998)).

²⁸⁴ See Andrews, supra note 8, at 1179 (proposing to tax capital gains at ordinary rates when not reinvested). Such a rule probably should be paired with repeal of the step-up in basis at death, or it would be too generous to taxpayers. Cf. Andrews, supra note 8, at 1183-84 (advocating either constructive realization or carryover basis at death).

 2^{85} Such a regime is similar to the treatment of 401(k) plans and IRAs, except that these rules sometimes allow pretax dollars to be invested.

²⁷⁸ See, e.g., Cunningham & Schenk, supra note 14, at 344 ("The most serious argument in favor of a capital gains preference is premised upon the so-called lock-in effect."). In combating lock-in, the rate cut no longer is a "promise" subsidy, but an "up-front" subsidy; the government confers the benefit (a reduced penalty for switching investments) at the same time as the desired behavior (a shift from one investment into another). See supra Part III.A.1 (discussing distinction between promise and up-front subsidies).

2. Growth Versus Income

Under realization, tax is deferred on appreciation, but not on periodic payments such as dividends and interest. As a result, realization causes investors to favor appreciation over periodic payments, and thus "growth" stocks over debt instruments²⁸⁶ or "income" stocks.²⁸⁷ There is no justification for this incentive.²⁸⁸ Yet it can be eliminated not only by repealing realization, but also by extending deferral to periodic payments that are reinvested.²⁸⁹

3. Bias Toward Risky Assets

Assuming the timing option described above is effective, such that taxpayers are fairly free to deduct losses, realization favors riskier assets. These assets are especially likely to appreciate—and thus to render the realization subsidy more generous. Admittedly, risky assets are also especially likely to depreciate, but, under the timing option, realization preserves the value of losses by allowing an immediate deduction.²⁹⁰ By thus subsidizing gains without penalizing losses, the rule favors the assets most likely to produce dramatic gains.²⁹¹

 287 See Evans, supra note 7, at 897 ("Growth stocks, for example, are taxed at a lower rate than income stocks. As a result, the tax system operates in an inherently non-neutral manner, creating concerns regarding the fairness of the system and its influence on the allocation of the country's resources.").

 288 This bias against income-producing investments is a disadvantage shared by a reduced capital gains rate (which does not apply to ordinary income), but not by an up-front subsidy (which presumably is paid whether the investment produces growth or income).

²⁸⁹ Professor Andrews advocates rollover treatment for both capital gains and periodic payments. See Andrews, supra note 8, at 1179-80 & 1179 n.142. This regime, by sparing investment yield from tax until it is consumed, resembles a cash-flow consumption tax. Cf. Blum, supra note 273, at 400 (noting that her rollover proposal, which applies to reinvested capital gain but not to reinvested ordinary income, is "only an incomplete step toward a cash-flow tax because it does not extend deferral to saved ordinary income").

²⁹⁰ See Shuldiner, supra note 222, at 260 (noting that timing option encourages risky investments). This conclusion assumes that the Code's various limitations on losses are not effective. For a discussion of these rules and evidence that they are not wholly effective, see supra Part I.B. To the extent that these limitations are (or through reforms become) effective, the bias realization creates for risky assets would be tempered and, indeed, potentially reversed. See, e.g., J.E. Stiglitz, The Effects of Income, Wealth, and Capital Gains Taxation on Risk-Taking, 83 Q. J. Econ. 263 (1969) (arguing that capital loss limitations discourage risky investments). For a discussion of these issues, see Scarborough, supra note 58, at 679.

²⁹¹ In contrast, an up-front subsidy that does not depend on the investment's performance neither favors nor discourages risk. Rate reductions, though, are more complicated. For example, if losses are restricted, reducing the rate may favor risk by reducing the value

²⁸⁶ Although debt *holders* are taxed less favorably than growth stock holders, this differential is offset by more favorable treatment of debt *issuers*. Interest payments are deductible, whereas dividends are not. This tax benefit presumably is shared with holders through higher pretax returns.

B. Sensitivity to Capital Gains Rate

It is more valuable to defer a large tax liability than a small one.²⁹² As a result, the realization subsidy's value correlates with the capital gains rate; as the rate (and thus the tax) increases, the realization subsidy increases. The instability of capital gains rates—which, as discussed above, renders rate-based subsidies less effective²⁹³—thus can have some spillover effect for the realization subsidy as well. Although taxpayers can expect realization to endure, its expected value is hard to quantify because it varies with the tax rate.

This fluctuation should not be overstated, however. Over a long period, deferral will be valuable even when tax rates are low. Moreover, although the instability of rates may make realization's value less predictable, this instability also *enhances* the subsidy by fueling the "rate option" discussed above.²⁹⁴ On balance, it is hard to know how these two effects net out. In any event, even if rate instability to an extent undermines realization's persuasiveness as a subsidy, it undermines rate reductions even more. Realization, thus, is the more persuasive subsidy.

C. Stickiness of Subsidy

In a sense, the same feature that lends realization credibility—the difficulty of replacing it—also can be a weakness. There is a tradeoff between flexibility and credibility. Yet if Congress indeed wishes to subsidize investment, as this Article assumes, an effective subsidy would seem preferable to a flexible one. Moreover, should Congress prefer instead to raise the tax on investments, it can do so without repealing realization by raising the rate so that even the deferred tax is high.²⁹⁵

 292 The larger the deferred payment, the larger the return it can generate during the period of deferral.

²⁹³ See supra Part III.C.1.

²⁹⁴ See supra Part I.C (discussing strategic timing of sales based on expected rate changes).

²⁹⁵ If Congress's purpose is to discourage new investment, this disincentive may not be wholly credible, given the possibility of repeal. If Congress instead intends to encourage liquidation of existing investments, it can enact a "grace period" preceding the rate in-

of disallowed losses. See Auerbach, Capital Gains Taxation, supra note 36, at 625-27 (discussing loss limitations as justification for reducing capital gains rate). Yet under a symmetrical regime (where gains and losses are accorded the same treatment, as in a mark-tomarket system), reducing the rate may favor less risky assets, which will offer the same after-tax return as riskier ones would under a higher tax rate. See, e.g., Bankman & Griffith, supra note 15, at 396-402 (stating that under assumed conditions, taxpayers offset tax by adjusting riskiness of portfolio; the higher the tax, the more risk they take). For a nuanced analysis that distinguishes between unique and market risk, see generally Scarborough, supra note 58, at 684-700.

D. Comparison with Up-Front Subsidies

1. Credibility

Realization's strength, credibility, affords a greater advantage over other promise subsidies, such as a rate reduction, than over upfront subsidies (i.e., subsidies that induce behavior with an immediate reward). In up-front subsidies, the government's credibility is less important because the taxpayer has the money in hand when investing. The government's credibility bears only on the implicit promise not to reclaim the reward (e.g., by repealing the subsidy retroactively or enacting an offsetting penalty).²⁹⁶

Other than for this retroactivity risk, an up-front subsidy need not offer an uncertainty premium. If this were our sole criterion, an upfront subsidy never would be worse—and likely would be better than a promise subsidy.²⁹⁷ Realization could only be *as credible*, and not more so (unless the up-front subsidy presented significant retroactivity risk). Accordingly, realization's superiority to a rate reduction would be almost beside the point, as an up-front subsidy would be better still. Yet once we introduce criteria other than credibility, upfront subsidies no longer seem like the Holy Grail.

²⁹⁷ A further strength is that taxpayers cannot duplicate up-front subsidies by adding risk to their portfolios. Cf. infra Part IV.E.2 (observing that under assumed conditions, taxpayer can simulate rate reduction through added risk). Yet realization shares this advantage (particularly if the Code's limitations on losses are not wholly effective). For a discussion of this point, see infra Part IV.E.2.

crease, during which taxpayers will be encouraged to liquidate investments before the rate increases. In fact, Professor Auerbach observed this reaction in 1986; sales increased dramatically in anticipation of the rate increase from 20% to 28%. See Auerbach, Tax Reform, supra note 277, at 392 (discussing this reaction).

²⁹⁶ Professor Goldberg suggests that constitutional constraints prevent Congress from retracting an up-front subsidy retroactively. See Goldberg, supra note 84, at 29 (arguing that targeted tax on those who had received an up-front subsidy should violate Due Process). Yet he concedes that there is no authority directly on point, see id., and Professor Logue seems to takes a different view. See Logue, supra note 74, at 1193 & n.191 (acknowledging possibility of retroactive repeal, but deeming it unlikely). Given the absence of clear authority and the virtual consensus that Congress may act retroactively in other tax contexts, see supra note 103, I would not expect taxpayers to have complete confidence in constitutional protections for up-front subsidies, absent a clearer statement from the Supreme Court. Moreover, even if Congress cannot retract a subsidy directly, it presumably can achieve the same result indirectly: For example, assuming it cannot impose a special tax on those who have collected an up-front subsidy, Congress presumably can impose a nondiscriminatory tax on the class to whom the subsidy was offered—as long as no distinction is made between those who took it and those who did not.

2. Sensitivity to Holding Period

A savings subsidy's purpose is to induce taxpayers to defer consumption. The longer they save,²⁹⁸ the more they should be rewarded. It would make no sense to offer the same subsidy for a five-year and a five-day investment. Yet such distinctions are harder to draw for upfront than promise subsidies. The latter are easy to calibrate to an investment's length because the government can wait until the investment ends—a luxury unavailable for up-front subsidies. Thus the government can, and does, apply favorable capital gains rates only to investments that last for a minimum period.²⁹⁹ Likewise, the realization subsidy becomes more generous as the period of deferral increases.³⁰⁰ Indeed, the government "pays" only so long as the taxpayer engages in the desired behavior, i.e., keeping the investment.³⁰¹

In contrast, it is more cumbersome to calibrate an up-front subsidy to an investment's length, as this fact is not yet known when the subsidy is paid. Theoretically, the taxpayer can commit to a minimum interval. Yet once the government has paid, what prevents the taxpayer from breaching? Instead of trusting the taxpayer's unreliable word, the government will need rules to prevent premature sales and a mechanism to monitor compliance. It is possible to craft such a regime, as Congress did for IRAs³⁰² and 401(k)s.³⁰³ Yet the subsidy will be less attractive if taxpayers must digest complex rules and make onerous commitments to get it.³⁰⁴ In contrast, a virtue of realization is

 301 Because the desired behavior is really deferring consumption, rather than retaining a particular asset, these subsidies can be enhanced with a rollover rule, as discussed supra notes 282-84 and accompanying text.

³⁰² See I.R.C. § 408 (West 1998) (specifying rules for Individual Retirement Accounts).
 ³⁰³ See id. § 401(k) (specifying rules for qualified cash or deferred arrangements).

³⁰⁴ Although it may be possible to craft up-front subsidies that are sensitive to holding period but do not require onerous commitments from taxpayers, I suspect that such subsidies will rely, to an extent, on government promises whose credibility may become an issue. In other words, I hypothesize a tradeoff between taxpayer commitments and government promises. For example, the government might allow an immediate deduction for income that is saved, while taxing these amounts when they ultimately are consumed. Such a system, a type of consumption tax, encourages savings in two ways: First, there is an upfront reward (the deduction for current savings); second, there is a deferred penalty (i.e., the tax when savings are consumed). The longer the penalty is deferred, the more gener-

 $^{^{298}}$ By "save," I mean deferring consumption, but I don't necessarily mean investing in the same asset. Investing in Asset A for two years is not necessarily better than investing in Asset B for one year and then reinvesting in Asset C for a year. In either case, consumption is deferred for two years.

²⁹⁹ See I.R.C. § 1222(3) (West 1998) (specifying required holding period for long term capital gains rates).

³⁰⁰ To see this effect, compare Tables I and II, supra. For example, the switch from mark-to-market to realization improves the after-tax return by \$.25 for a two-year investment, and by \$5.04 for a five-year investment.

that, except perhaps through lock-in, the rule does not constrain a taxpayer's freedom.

Even a well policed up-front subsidy would expose the government to the taxpayer's "credit" risk, i.e., the risk that the taxpayer will be insolvent and thus will default when required to return the subsidy. Admittedly, the government is always exposed to the credit of insolvent taxpayers who cannot pay taxes, and tax liens offer some protection. An up-front subsidy, though, exposes the government to more than the usual risk that back taxes will go unpaid—a fairly manageable risk because much income is withheld at its source and because the taxable income of insolvent taxpayers may be quite modest.³⁰⁵ The more serious risk here is that insolvent taxpayers will, in effect, take *new* money from the government without any intent or ability to return it. A private lender would screen counterparties for credit risk. Yet the government lacks the institutional capacity to do so. It might protect itself by putting less money at risk, but a diminished subsidy is a poor outcome for taxpayers.

3. Politics

In addition to these contract-type concerns, up-front subsidies present a political cost not shared by realization. Human nature being what it is, paying later is usually more tempting than paying now even if the present value of the two payments is the same.³⁰⁶ With a promise subsidy, it is not *this year's* budget that is affected. A publicspirited legislator may prefer to incur the cost later, after the subsidy's beneficent economic effects begin to register. More self-interested legislators may conclude that, by the time the piper must be paid, they may even have left Congress. At the least, the delay affords them the opportunity to take credit for the program, and then to distance themselves from it before the costs come due. A further political advan-

 305 This, of course, is not always true. Some extravagant taxpayers have ample taxable income, but spend even more than they have.

 306 Under Congress's budgetary procedures, moreover, costs weigh more heavily—in that they may require revenue offsets—if incurred within five years. See Garrett, supra note 119, at 527 (noting that PAYGO's budget window is five years, and that costs are measured in cash flow, rather than present value).

ous the subsidy becomes—so the subsidy is sensitive to holding period. Nor does it exact onerous commitments from the taxpayer. The problem, though, is that the subsidy relies on two implicit government promises, which may not prove credible: First, the government pledges to defer the tax until savings are consumed—a promise somewhat akin to realization, yet perhaps without its inherent credibility; second, the government implicitly promises that the deferred tax will not be at an unexpectedly high rate (e.g., there will be no general rise in rates and, more importantly, no special penalty on savings to cancel out the subsidy). Thus, whereas taxpayer commitments are avoided, government promises are not.

tage of realization is that it may be easier to hide. Where the government offers a particular credit, its cost is easily calculated as the sum of the credits offered. Although the value of deferral is also measurable, the computation is not likely to appear as an item on the budget (or even on the "tax expenditure" budget). Given their political costs, up-front subsidies are less likely to be proposed than promise subsidies. Thus, even if we thought that up-front subsidies were always better, a conclusion I resist, it still would be useful to rank the effectiveness of promise subsidies, as these subsidies are more likely to be enacted.

E. Use of the Tax Code to Subsidize Savings

As a subsidy, realization is sound but not flawless. The more fundamental question is whether we should have a subsidy for savings at all. I do not attempt to resolve this interesting question here, given Congress's repeated interest in a savings subsidy. However, it is important to highlight singular issues because, in my view, the best arguments against realization really are arguments against *any* savings subsidy.

1. Elasticity of Savings Decisions: Life Cycle and Target Savings

Although realization increases the after-tax yield on savings, the question is how sensitive (or "elastic") savings decisions are to yield. As Professor Shaviro has noted, "[t]ax elasticity at the margin between consumption and investment is more disputed than known."³⁰⁷ Yield may have less influence on savings decisions than "life cycle" factors, such as one's current and expected expenses.³⁰⁸ If so, a savings subsidy might pay people to do what they would have done anyway—a waste of scarce government resources.³⁰⁹

³⁰⁷ Shaviro, supra note 52, at 27.

³⁰⁸ See, e.g., Cunningham & Schenk, supra note 14, at 377 ("Individuals tend to save while they are working so that they can consume during their retirement. For this reason, the capital gains preference may not increase the amount of private savings as much as one might otherwise expect."); Modigliani, supra note 14, at 299 (recounting development of theory that individuals will tend to make saving decisions that enable them to maintain steady level of consumption throughout their lives).

³⁰⁹ In Professor Zelinsky's phrase, the subsidy would not be "technically efficient." See Edward A. Zelinsky, Efficiency and Income Taxes: The Rehabilitation of Tax Incentives, 64 Tex. L. Rev. 973, 992-93 (1986):

[[]T]echnical efficiency is a means of viewing tax incentives from the perspective of the government as purchaser of economic behavior.... To the extent a tax incentive rewards a producer for production in which he would have engaged anyway... the government has acted inefficiently by giving up revenue without inducing more activity.

The subsidy would be counterproductive, instead of just ineffective, if savings *decline* as the subsidy increases. For those who seek a "target" amount (such as the price of a car or an education), increases in yield reduce the amount that must be saved.³¹⁰ For example, someone who will need \$20,000 in five years must set aside only \$10,000 if the government offers a \$10,000 subsidy.

Yet the premise that taxpayers respond to a subsidy by saving the same amount, or less, runs contrary to our usual assumption that economic actors seek to maximize their wealth. Under this conventional view, taxpayers forgo more consumption as the reward for doing so increases³¹¹ (i.e., an increased return, and thus more consumption in the future).

Each effect is likely to operate for some taxpayers.³¹² The question is how they net out. The empirical results on this question, unfortunately, are inconclusive. Professor Boskin has offered the most optimistic study about the positive correlation between return and the amount of savings.³¹³ Other studies are less confident on this point.³¹⁴

2. Elasticity of Savings Decisions: Portfolio Rebalancing

Even if investors *do* save more when they expect a higher yield, the next question is whether a tax reduction actually offers taxpayers a better return than they otherwise could earn. This question arises because scholars have observed that, under certain conditions,³¹⁵ the level of tax on the return from risk taking (such as the tax on capital

³¹⁴ See Cunningham & Schenk, supra note 14, at 376 n.233 (citing other studies).

³¹⁵ The most relevant assumption is that the effective tax burden for losses is the same as for gains. The argument also assumes zero transaction costs, such that rebalancing portfo-

 $^{^{310}}$ See Cunningham & Schenk, supra note 14, at 377 (observing that increase in rate of return enables "target savers" who "save until they reach their goal" to achieve their goal more quickly, and that they may not continue to save thereafter).

³¹¹ In broad terms, this is a "substitution effect." See Cunningham & Schenk, supra note 14, at 377 (stating that economists describe phenomenon of forgoing current consumption in order to save for greater future consumption as "substitution effect"); see also Michael J. Graetz, To Praise the Estate Tax, Not To Bury It, 93 Yale L.J. 259, 282 (1983) (describing positive relationship between savings and real after-tax interest rate).

³¹² As Professor Samuelson has observed, people save for a wide variety of reasons, such as providing for retirement, concern about a rainy day, desire to leave a legacy, acquisitiveness, and simple force of habit. See Paul A. Samuelson, Economics 194 (8th ed. 1970). Given their varied motives for saving, taxpayers may have somewhat different responses to a savings subsidy.

³¹³ See Boskin, supra note 231, at S15 (calculating correlation between rate of return and savings as 0.4, such that 10% increase in rate of return would increase total savings by 4%); see also Tax Incentives for Increasing Savings and Investment: Hearings Before the Senate Comm. on Finance, 101st Cong. 186 (1990) (statement of Michael J. Boskin, Director, Council of Economic Advisors) (arguing that "rate of growth and living standards will require higher rates of saving and investment," and that cutting capital gains tax would boost savings rate by reducing cost of capital).

gains) "will have no effect on an individual's decision to save."316 Although the tax reduces after-tax gain, it also reduces after-tax losses (because losses are deductible). The tax thus makes the asset "feel" less risky by diminishing both gains and losses-an effect that becomes more pronounced as the tax rate increases. Yet an investor can neutralize this effect by making her portfolio more risky. Then, net of taxes, her expected return will be the less risky one she really wanted.³¹⁷ Correspondingly, if Congress reduces the tax, the investor may diminish her portfolio's riskiness so that her after-tax return remains unchanged.³¹⁸ Thus, changes in the tax may not affect the aftertax return available to an investor, although such changes do induce adjustments in her portfolio's riskiness. Yet if a tax reduction does not give an investor a better yield than she otherwise can expect, the reduction is not a particularly persuasive subsidy. After all, to induce behavior, a subsidy must offer recipients something they cannot otherwise get for free.

There are, however, three reasons why realization offers taxpayers a better after-tax return than they could earn by taking more risk.

³¹⁶ Id. at 396 ("Because the investor who properly adjusts her mix of safe and risky investments will have the same after-tax return on her investments as in a no-tax world, the [income] tax will have no effect on an individual's decision to save."). Professor Bradford similarly notes:

The tax has the effect of reducing the *scale* of the bet, but not the relative payoffs under the various relevant contingencies. Since transactors have the option of varying the scale of the bets without recourse to the tax system, taxation does not affect the set of possible bilateral bets at all.

Bradford, supra note 15, at 763; see also Noël B. Cunningham, The Taxation of Capital Income and the Choice of Tax Base, 52 Tax L. Rev. 17, 29 (1996) (observing that, for sophisticated taxpayers who rebalance portfolios, income tax on capital appreciation taxes only time-based return); 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, 6-7 (1996) (describing theory that, under assumed conditions, income tax affects only time-based return because "investors can and will modify their portfolios to offset the effects of taxation on risk taking").

³¹⁷ For example, recall the asset, used above to illustrate the timing option, which is equally likely to pay either \$0 or \$100. As discussed supra Part I.B, an investor would pay \$50 for this asset (regardless of the tax rate). At a 0% rate, this investment, which we call Safe Asset, yields either a \$50 gain or a \$50 loss. Yet at a 50% rate, it yields either a \$25 gain or a \$25 loss. Thus, the higher the tax rate, the less volatile the after-tax return. To attain the same after-tax return that she was earning under the 0% tax rate (i.e., a \$50 gain or a \$50 loss), the investor can replace Safe Asset with Risky Asset, which costs \$100 and has a 50% chance of paying either \$200 or \$0. After taxes, it would yield a gain of \$50 (i.e., .5(200-100)), or a loss of \$50 (i.e., .5(100-0)). For a more true-to-life example, which involves a portfolio of stocks, see Joseph Bankman & Barbara H. Fried, Winners and Losers in the Shift to a Consumption Tax, 86 Geo. LJ. 539, 543 n.10 (1998).

³¹⁸ For example, if the tax rate is reduced from 50% to 0%, the investor could keep the same after-tax return by replacing Risky Asset with Safe Asset.

lios is costless. See Bankman & Griffith, supra note 15, at 397 (assuming that if investors make costless portfolio adjustments, they also receive full loss offsets).

First, adding risk to the portfolio will offset the tax only on *a portion* of the investment return—the marginal return to risk—and not the tax on the rest: the risk-free return (i.e., compensation for deferring consumption)³¹⁹ or inframarginal returns to risk (i.e., returns higher than the market rate for comparable risk).³²⁰ Thus the tax burden continues to matter, and reductions in it, whether through deferral or a reduced rate, will be welcomed by a taxpayer.

Second, reductions in the tax burden allow taxpayers to attain a particular after-tax yield with a broader range of assets—not only the riskier ones needed under the higher tax burden (which might be in short supply, and thus priced at a premium),³²¹ but less risky assets as well.³²² By increasing the supply of assets that can generate a particular return, a tax reduction—again, whether through deferral or a reduced rate—can drive down the price of these assets, thereby increasing their expected yield.

Third, a riskier portfolio cancels out the effect of a tax, as described above, only if the tax accords the same treatment to gains and losses.³²³ If instead a tax reduction offers the taxpayer a larger share of gains than losses—as does realization, because of the timing and

³²⁰ See id. at 24 (explaining that inframarginal return is subject to income tax, even if taxpayer adjusts level of risk to offset tax). Investors cannot offset tax on an inframarginal return, Professors Bankman & Fried explain, because they "generally will be unable to gross up their investments to offset the effects of the tax on such returns." Bankman & Fried, supra note 317, at 544. Regardless of income tax considerations, taxpayers already have an unlimited appetite for investments that yield inframarginal returns; they will already borrow to the limit to acquire as much as they can of these extra-profitable assets.

³²¹ Theoretically, premium pricing for risky assets can be avoided, as Professor Kaplow notes, if the government increases the supply by selling to the public its "share" of risky assets (i.e., its claim to future tax revenues). See Louis Kaplow, Taxation and Risk Taking: A General Equilibrium Perspective, 47 Nat'l Tax J. 789, 794 (1994) ("[B]y adjusting the government's portfolio in an offsetting manner, it is possible to change tax regimes without changing private and total risk taking."). Yet no such program is underway or, to my knowledge, is anticipated.

³²² Professors Bankman and Griffith acknowledge this point. Their argument, they note, is "a partial equilibrium analysis. Changes in the demand for risky assets and safe assets and shifts in government spending decisions may have secondary effects that could alter these conclusions." Bankman & Griffith, supra note 15, at 396 n.55; see also id. at 397-98 ("[I]nvestors in publicly traded securities may find it impossible to eliminate the impact of an income tax through increased purchases of risky assets if the tax leads to an increase in their price. A price increase is plausible because the tax would increase demand for risky assets.").

 323 See id. at 402 ("Our analysis shows that an income tax without symmetrical treatment of gains and losses . . . reduces the utility, or surplus, of risk-takers in much the same way that taxation of interest reduces the utility or surplus of savers."); Bradford, supra

³¹⁹ Professor Cunningham notes that the amount subject to tax may be higher: the return given by the taxpayer's borrowing rate, rather than the risk-free rate. See Cunningham, supra note 316, at 29-30 (noting that even taxpayers who rebalance their portfolios to offset the income tax still owe tax on the risk-free return that they earn—or, if they borrow at a higher rate, a return given by their borrowing rate).

rate options discussed above³²⁴—the taxpayer is better positioned than if she simply took more risk. Under such an asymmetric tax,³²⁵ an investment becomes not just less risky (i.e., less possibility of loss, less possibility of gain) but more favorable (i.e., less possibility of loss, but potentially the same possibility of gain).³²⁶

3. Efficiency, Tax Neutrality and Free Market Norms

Because the market usually allocates resources more efficiently than the government, the government generally should intervene only to correct a market failure. Accordingly, taxes should be "neutral" that is, comparable activities should be taxed alike—so that taxes do not skew market allocations.³²⁷ Under this principle, a savings subsidy is justified only to repair a market failure.

The best justification for the government to promote savings is, ironically, that the government may already be discouraging savings and investment³²⁸ by taxing income and (at least in the recent past) by running a budget deficit. "The behavioral bias frequently attributed to an income tax," Professor Shaviro has observed, is "that it favors

note 15, at 764 ("The essential requirement is that the treatment of gains and losses for a given party be the same and specified before the uncertainty is resolved.").

³²⁴ See supra Parts I.B-C.

³²⁵ An up-front subsidy is also asymmetric, as it offers value whether the investment generates gains or losses. In contrast, a rate reduction—tested by itself (i.e., in a mark-tomarket system, without capital loss limitations or a realization subsidy)—is symmetric, and thus is not an unequivocal boon to the taxpayer: The price of keeping a higher share of gains is that the taxpayer also bears a higher share of losses. Accordingly, a rate reduction (or increase) is more easily offset, and thus potentially less influential, than either realization or an up-front subsidy—another advantage these two subsidies share over a rate reduction.

 326 For an example showing that asymmetric taxes can raise the ex ante value of an investment, see supra Parts I.B-C (discussing timing and rate options).

³²⁷ See, e.g., Stuart Rosow, The Treasury's Tax Reform Proposals: Not a "Fair" Tax, 3 Yale L. & Pol'y Rev. 58, 65 (1984) ("Economic neutrality is an affirmation of faith in the free market economy. More particularly it is an assertion that those private actors who control economic development will make the 'right' choices for society without government involvement."); Edward Yorio, The President's Tax Proposals: A Major Step in the Right Direction, 53 Fordham L. Rev. 1255, 1287 (1985) ("Preferential tax treatment of certain activities . . . results in economic distortions by interfering with a marketdetermined allocation of resources."); Zelinsky, supra note 309, at 980-81 (describing this view as advocacy of "universal market efficiency").

view as advocacy of "universal market efficiency"). ³²⁸ See Scarborough, supra note 58, at 679 n.9 ("[S]ince government action outside the tax system affects economic behavior, it is not clear whether removal of all biases from the tax system would increase or reduce economic welfare."). This point is an application of the theory of second best, see R.G. Lipsey & Kelvin Lancaster, The General Theory of Second Best, 24 Rev. Econ. Stud. 11 (1956), which posits that, in an imperfect world, the effects of any single rule cannot be judged in isolation. Proposals that at first blush appear to enhance efficiency may prove counterproductive upon interacting with some imperfection in the system. The theory has had broad influence on tax scholarship. See Kleinbard & Evans, supra note 6, at 791 n.17 (citing articles that engage in "second best" analysis). immediate consumption over investment."³²⁹ An income tax treats *deferred* consumption less favorably than *current* consumption by eroding the reward for deferring consumption³³⁰—the return on the savings.³³¹

When the government was borrowing money to fund a budget deficit, moreover, it was siphoning resources away from private investment. As Professor Stein has written:

[T]he important effect of the absolute size of the deficit or surplus is the effect on private investment. That is, I think, the view now held by most, although not all, economists. The argument is simple. Private savings equal the sum of private investment plus the government deficit. Private saving is totally absorbed in these two uses. The larger the government deficit is, the smaller private investment will be—unless the larger government deficit is matched by an equally larger total of private savings.³³²

Another market failure that may depress the savings rate, the "overlapping generations problem," is not the government's fault.

 330 See Andrews, supra note 8, at 1167 ("[A] consumption-type tax is preferable because an accretion-type tax imposes an excessive burden on deferred consumption."); see also Scarborough, supra note 58, at 677 ("A major argument against an income tax is that it distorts taxpayer choices between savings and consumption."); Weiss, supra note 63, at 213 & n.24 (noting that "advocates of a consumption tax argue that capital taxes are horizontally inequitable because two taxpayers with income of the same pre-tax net present value will have different post-tax net present value if . . . they have different tastes for timing of consumption"). It is not clear how severe this income tax penalty on savings is, though. As discussed above, under certain conditions savers can reduce the impact of the tax by rebalancing their portfolios. Yet a tax still will be imposed on the time-value-based return. See supra notes 316-20 and accompanying text.

 331 Assume, for example, that Michele purchases an apartment for \$100,000. She can either "consume" it herself (by moving in), or treat it as an investment (by renting it to her friend Andy) while renting a separate apartment for herself. Assume further that the annual rent on Michele's apartment, and on an equivalent one, is \$10,000. Without an income tax, Michele would be indifferent between "consuming" and "investing" in the apartment. If she rents it out, she can use the income to rent an equivalent apartment for herself. However, if a 40% tax is imposed on rental income, investing becomes a losing proposition. Michele's after-tax rental income is only \$6,000 per year, so she needs another \$4,000 to cover her own rent. The strong tax incentive, therefore, is to move in herself, i.e., to "consume."

³³² Herbert Stein, American Enterprise Institute, Presidential Economics: The Making of Economic Policy from Roosevelt to Clinton 350-351 (1994), quoted in Proposing a Balanced Budget Amendment to the Constitution of the United States: Hearings Before the House Committee on the Judiciary, 105th Cong. 99 (1997) (statement of John Berthoud).

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 $^{^{329}}$ Shaviro, supra note 52, at 9 n.29; see also Lawrence Zelenak, The Reification of Metaphor: Income Taxes, Consumption Taxes and Human Capital, 51 Tax L. Rev. 1, 12 (1995) (discussing "the heavier burden an income tax imposes on deferred consumption" and noting that "[t]he standard policy argument in favor of tax-deferred retirement savings is based on the premise that the tax system should not discourage life cycle savings").

The problem is that future generations, who benefit from current savings, play no role in determining how much is saved today.³³³

Empirical evidence reveals, moreover, that the level of savings in the United States is at a historic low and is meager compared to other industrialized countries.³³⁴ As Professor Weiss has observed, "Americans do not save enough. This proposition commands rare assent among legislators and academics who agree on little else. Economic growth requires investment, which in turn requires savings."³³⁵

4. Tax Expenditures vs. Direct Expenditures

A savings subsidy may be offered through direct expenditures as well as the tax code. Critics of "tax expenditures" claim they are harder to measure³³⁶ and receive less scrutiny in the legislative process.³³⁷ However, the very success of this critique of tax expenditures, Professor Zelinsky argues,³³⁸ has triggered a more searching legislative review of tax expenditures.³³⁹

³³⁴ See Joan C. Courtless, Trends in Savings, 4 Family Econ. Rev. 15, 15 (1991) (reporting decline of U.S. personal savings rates: 1970-74, 8.5%; 1975-79, 7.5%; 1980-84, 6.6%; 1985, 5.1%); Burton G. Malkiel, The Capital Formation Problem in the United States, 34 J. Fin. 291, 292-93 (1979) (stating that savings rate in U.S. is too low, due to various factors including inflation and business regulation); Perry Brothers, 'Super-IRA' Advanced As Answer to Low Savings, Cincinnati Enquirer, Jan. 6, 1997, at B14 (citing Congressional Budget Office for proposition that U.S. has lowest savings rate of all industrialized nations); Matthew Kyler, U.S. Must Do Something About Abysmal Savings Rate; Consequences Could Be Dire from What Is Shaping up as an Economic Crisis, Minneapolis Star Trib., Nov. 25, 1996, at 3D, available in 1996 WL 6938134 (reporting Securities Industry Association data showing that U.S. savings rate fell from 8% of disposable income in 1970 to just over 4% in 1995, placing U.S. third from bottom among industrialized nations).

 335 Weiss, supra note 63, at 206. A further issue is that, even if a subsidy increases domestic savings, this savings may not be channeled into domestic capital formation. Instead, it may be invested abroad. See Graetz, supra note 266, at 209 ("The globalization of capital markets adds further uncertainty about the potential impact of additional savings on the nation's economic growth.").

³³⁶ A tax expenditure imposes a potentially unlimited obligation. Congress must forgo revenue if taxpayers comply with designated conditions, and it is hard to anticipate the number who will comply.

³³⁷ For the classic critique of tax expenditures, see Stanley S. Surrey, Tax Incentives as a Device for Implementing Government Policy: A Comparison with Direct Government Expenditures, 83 Harv. L. Rev. 705 (1970); see also Stanley S. Surrey, Pathways to Tax Reform, The Concept of Tax Expenditures (1973).

³³⁸ See Zelinsky, supra note 309, at 1029-33 (offering defense of tax expenditures); see also Edward A. Zelinsky, James Madison and Public Choice at Gucci Gulch: A Procedural Defense of Tax Expenditures and Tax Institutions, 102 Yale LJ. 1165, 1165 (1993) (observing that "[f]ew academic doctrines can claim the intellectual and political success of [Surrey's] tax expenditure analysis").

³³⁹ See Zelinsky, supra note 309, at 1030, 1033 (describing broad influence of tax expenditure critique and arguing that, as a result, tax expenditures are now scrutinized). Indeed, tax expenditures are estimated in an annual "tax expenditure" budget. See 31 U.S.C.

³³³ See Weiss, supra note 63, at 221 (describing overlapping generations problem).

5. Equity

Perhaps the gravest difficulty with a savings subsidy is its impact on the distribution of wealth. How severe are the equity costs of a policy that promotes efficiency? One test of a fair tax system, vertical equity,³⁴⁰ requires the wealthy to bear a disproportionate share of the fiscal burden because of their greater ability to pay. Unfortunately, a savings subsidy generally does not fare well under this criterion. Although meant to benefit society as a whole by promoting capital formation and economic growth, the subsidy will, in the first instance, benefit those who save. It is widely acknowledged that the wealthy save relatively more of their incomes, although scholars disagree about why this is so.³⁴¹ As a result, a savings subsidy's immediate effect is to mute the progressivity of our tax system. For example, the Citizens for Tax Justice concluded that two-thirds of the benefit from a reduction in the capital gains rates would inure to those making more than \$241,000 a year, a group that represents the top one percent of all tax filers.³⁴² On the other hand, there is general agreement that savings are necessary for future economic growth and that the United States does not save enough. Two aspirations are pitted against each other-the quest for prosperity tomorrow and the quest for a just distribution of wealth today. There should be room for compromise, though. If a savings subsidy is necessary for growth, it should be paired with additional savings subsidies exclusively for low and middle income taxpayers (such as IRAs), and with measures of more immediate assistance to people with low incomes, such as education and health care programs or a more progressive tax rate on noninvestment income.

³⁴¹ Some economists and psychologists argue that affluent people save more because they are more future oriented. See, e.g., Edward C. Banfield, The Unheavenly City Revisited 52-76 (1974) (arguing that tendency to save more is simply one corollary of theory that individual's future-orientedness increases with class); Lawrence L. LeShan, Time Orientation and Social Class, 47 J. Abnormal & Soc. Psychol. 589, 590-92 (1952) (reporting laboratory study finding that length of individual's subjective time horizon is positively related to class). Others argue that there is no systematic difference between the readiness of wealthy people and poor people to defer gratification; rather, the current demands on a poor person's income are relatively greater—and so there is less left over for savings. For a discussion of these issues, see Weiss, supra note 63, at 224-26.

³⁴² See Schlesinger, supra note 238, at A1 (describing conclusions of study).

^{§ 1105(}a)(16) (1994) (requiring President to include level of tax expenditures in budget submitted annually to Congress); see also Zelinsky, supra note 309, at 1033 (discussing § 1105).

³⁴⁰ See generally Joseph T. Sneed, The Criteria of Federal Income Tax Policy, 17 Stan. L. Rev. 567, 576-77, 581-82 (1965) (discussing difficulty in "determining the extent to which unequals should be taxed unequally"); see also Louie, supra note 56, at 863 (arguing that realization offends principle of vertical equity because "[t]he realization requirement allows well-to-do taxpayers to defer payment of taxes on unrealized capital gains income").

CONCLUSION

This Article's primary purpose is to question the conventional wisdom that realization is at best a necessary evil. Judged as a measure of income—the traditional Haig-Simons analysis that most commentators apply—realization is admittedly unimpressive. Judged as a subsidy for savings, however, realization has the significant advantage of inherent credibility: Because of the rule's long history, its administrability, and its deep wellsprings of political support, taxpayers can be confident that realization will endure. Thus, they are unlikely to demand an uncertainty premium for this subsidy.

Realization is not a perfect subsidy, though. Its tendency to "lock-in" investments has been widely observed, an effect that may inhibit the ideal allocation of savings. Yet other policies can be paired with realization to alleviate this problem, such as a repeal of the step up in basis at death or an investment rollover rule. Given the solubility of lock-in, the strongest arguments against realization, in my view, are those against *any* savings subsidy. Savings decisions may well be inelastic (or even elastic "the wrong way," for those who are "target" savers). Even if a subsidy does promote more savings and growth, we must balance this efficiency objective against its equity costs. The distributional consequences of any subsidy for savings are cause for concern. There is room to oppose realization, but such opposition really is to savings subsidies in general.

Opponents of all savings subsidies are well advised, though, to target the reduced capital gains rate first. One reason to oppose this subsidy—which, surprisingly, has not featured prominently in either political or academic debates—is that, in realization, we *already have* a subsidy that reduces the tax on long term investments.³⁴³ A second subsidy arguably is not needed. Another reason to oppose capital gains rate reductions—one that no one else has offered—is that, in the current political climate, this subsidy is not credible. The rate has changed so frequently, and the political lifeline of the current reduced rate is so fragile, that taxpayers presumably discount its value significantly when deciding whether to make a new investment. The best justification for reducing the capital gains rate, at least in this political climate, is not so much to encourage new savings as to minimize lockin; yet other policies, such as an investment rollover rule, would more directly address this concern.

³⁴³ Professors Cunningham and Schenk do mention this point. See Cunningham & Schenk, supra note 14, at 365 ("Even in the absence of a [rate] preference, because of the realization requirement, capital gains receive favored treatment.").

These reflections about two subsidies-realization and the reduced capital gains rate-point to a larger conclusion about subsidies in general. If we are going to have them, we should make them credible; otherwise, they are a waste of money.³⁴⁴ Seeking credibility through institutional solutions, such as grandfathering, is an uphill battle. Congress is unlikely to tie its hands with respect to future changes or to provide the kind of comprehensive transition relief needed to keep people from discounting the subsidy. A better approach is, where possible, to prefer subsidies that are inherently credible. We should rely on the credibility of the subsidy, instead of the credibility of the transition relief. A sound way to do that is to devise subsidies that accomplish—or, to be precise, are perceived as accomplishing—a durable mission apart from offering a subsidy: for example, administrability (as in the case of realization), intergenerational equity (as in the case of social security), or cultural objectives such as promoting the "American dream" (as in the case of home ownership) or "protecting a way of life" (as in the case of farm subsidies). Through this sort of "anchoring" mission, a subsidy will inspire confidence that the promise it embodies will be kept.

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³⁴⁴ It would be worthwhile to apply this standard to other subsidies, such as the new "Roth" IRA, see I.R.C. § 408A (West 1998), and the older "deductible" IRA. See id. § 408. The latter has both an up-front component, in allowing a current deduction for amounts invested, and a promise component, in deferring tax on investment returns. In contrast, the Roth IRA has only a promise element; it offers tax-free returns, but requires taxpayers to invest after-tax dollars. Given Congress's history of vacillation on tax policy (and, indeed, on some savings subsidies but not others), it is worth asking how credible these subsidies are. Yet I leave this issue for another day.