

Tax Planning, Effective Marginal Tax Rates, and the Structure of the Income Tax

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I. INTRODUCTION

Tax planning is big business. It is also one of the principal sources of frustration with and disrespect for the income tax.¹ The specter of wealthy individuals and large corporations hiring legions of high-priced lawyers and accountants to develop and implement tax saving strategies creates the perception that the system is unfair.² Regrettably, attempts to curtail the largest and most visible abuses have complicated the law, reinforcing the perception that the tax law favors the sophisticated and wealthy.³

Tax planning not only creates harmful perceptions, it also is frequently harmful in its own right. Because the tax consequences of a transaction often are divorced from the economic consequences, tax planning leads taxpayers to invest in many projects that they would not undertake solely on the economics.⁴ The losses from the resulting capital misallocation are real and, in the view of many, large.⁵ Tax planning is also wasteful. From a social standpoint, it would be better

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¹ The recent public outcry over corporate tax shelters might signal a rise in that frustration.

² See Diana B. Henriques (with Floyd Norris), *Wealthy, Helped by Wall St., Find New Ways to Escape Tax on Profits*, N.Y. Times, Dec. 1, 1996, at A1.

³ As Robert Willens, a managing director and tax analyst at Lehman Brothers who makes his living helping wealthy individuals and corporations reduce their taxes, observes: "I worry that there is a growing perception that [highly visible tax planning] techniques are available only to the wealthy few, that the average citizen and investor doesn't have access to them. Nothing does more to undermine our tax system than that." *Id.*

⁴ Daniel N. Shaviro, *Economic Substance, Corporate Tax Shelters and the Compaq Case*, 88 Tax Notes 221, 223 (July 10, 2000).

⁵ For example, Dale Jorgenson and Kun-Young Yun estimate the deadweight loss of the income tax to be around 30% of the revenue raised. Dale W. Jorgenson & Kun-Young Yun, *The Excess Burden of Taxation in the United States*, 6 J. Acct., Auditing & Fin. 457, 499-501 (1991).

simply to reduce taxes and redeploy the time and talent devoted to tax planning to other more productive pursuits.⁶

Viewed from almost any perspective,⁷ it would be desirable (other things being equal) if the tax system did not create a perception of unfairness and if it did not impose the high costs of tax planning. To this end, commentators have been searching for simple income tax systems that would eliminate (even under highly idealized circumstances) the incentives to engage in tax planning. The goal is to design an income tax with a basic structure that does not encourage tax planning.⁸

The logic behind that task is that if a tax system could be implemented with a basic structure that did not invite tax planning, there would be no need to resort to extensive asymmetric rules to curb it. These rules are rarely narrowly tailored; they tend to be prophylactic in nature and therefore broad in scope. Moreover, because these rules cover more than the abusive behavior, they greatly increase the complexity of the law. This is undesirable both because it increases the cost of compliance⁹ and because well-advised taxpayers often can navigate through the complexity to avoid paying taxes that others pay.¹⁰

In recent years, two prominent economists have developed simple retrospective tax systems that they claim would eliminate the incentives to engage in tax planning embedded in the existing realization-based income tax and so would permit the dismantling of the many anti-abuse provisions.¹¹ In an earlier article, I argued that such stripped-down retrospective tax systems would be ineffective in preventing tax planning because taxpayers could exploit the government's need to wait for realization in order to build up large tax liabil-

⁶ Shaviro, note 4, at 223.

⁷ Except perhaps that of the highly paid tax expert.

⁸ As Theodore Forstmann, chairman of Forstmann Little & Co., puts it: "[I]f you're rich enough, you can hire the entrepreneurial accountant or the entrepreneurial guy at Solomon Brothers who thinks these [new tax planning techniques] up. . . . What I would like is a system that put these guys out of business." Henriques, note 2, at A1.

⁹ The Tax Foundation has estimated the annual cost of tax compliance for businesses and individuals at \$125 billion. Tom Herman, Tax Report, Wall St. J., Nov. 22, 2000, at A1.

¹⁰ The best known statement of the view that tax rules written to curtail tax planning are "gamed" by sophisticated tax planners to create new strategies comes from Martin Ginsburg: "[E]very stick crafted to beat on the head of a taxpayer will metamorphose sooner or later into a large green snake and bite the commissioner on the hind part." Martin D. Ginsburg, *Making Tax Law Through the Judicial Process*, A.B.A. J., Mar. 1984, at 74, 76; see also David M. Schizer, *Sticks and Snakes: Derivatives and Curtailing Aggressive Tax Planning*, 73 S. Cal. L. Rev. 1339 (2000) (describing how well-advised taxpayers have used tax reforms to create new planning opportunities).

¹¹ Alan J. Auerbach, *Retrospective Capital Gains Taxation*, 81 Am. Econ. Rev. 167 (1991) David F. Bradford, *Fixing Realization Accounting: Symmetry, Consistency and Correctness in the Taxation of Financial Instruments*, 50 Tax L. Rev. 731 (1995).

ities that they would never pay.¹² In this Article, I describe a more fundamental failing with these tax systems.¹³ My thesis is that a simple retrospective income tax system would not eliminate tax planning; instead, it would only replace the incentive to engage in one form of tax planning with the incentive to engage in another. The second form (although present today) is not inherent in a traditional, realization-based income tax, but it would be inherent in a retrospective income tax.

I use the phrase "traditional income tax" to refer to income tax systems (including realization-based and mark-to-market) that are not retrospective. With retrospective taxes, later actions can determine earlier deemed prices for tax purposes. With a traditional income tax, later actions cannot affect earlier deemed prices. Thus, with traditional income tax systems, the taxpayer knows on any given date what value the tax system ascribes to all assets she holds as of that date. In contrast, with a retrospective tax system, the taxpayer generally would not know on any given date what value the system ascribes to the assets she holds on that date until the asset was retired.

The rest of this Article is divided into six sections. The next Section introduces the idea of effective marginal tax rates (EMTRs) and describes how tax planning works by reducing the EMTR on income. Section III describes how deferring gain in a realization tax system reduces EMTRs. Section IV describes the two retrospective tax regimes and how they eliminate the incentive to defer gains by deferring realization. Section V argues that retrospective tax systems introduce a form of tax planning that is not inherent in a realization-based income tax. Section VI shows how a cash flow consumption tax can eliminate both forms of tax planning. Section VII is the conclusion.

II. EFFECTIVE MARGINAL TAX RATES

One way to understand how the tax system encourages tax planning is by looking at effective marginal tax rates. The EMTR is the present value of the additional tax that a taxpayer will pay on an additional dollar of economic income earned today.¹⁴ Tax planning works only if it reduces the EMTR on at least some income.

To illustrate, assume that a taxpayer's statutory tax rate is 40%. An additional dollar in income that is taxable immediately will attract 40

¹² Michael S. Knoll, *Financial Innovation, Tax Arbitrage, and Retrospective Taxation: The Problem With Passive Government Lending*, 52 *Tax L. Rev.* 199, 214-23 (1997).

¹³ The problem I describe here would still exist even if the problems arising from government passivity that I identified in the earlier article were eliminated.

¹⁴ Myron S. Scholes & Mark A. Wolfson, *Taxes and Business Strategy: A Planning Approach* 146 (1992).

cents tax, so the EMTR is 40%. Assume, however, that the taxpayer has a pool of net operating loss carry forwards so that the additional income is not taxed currently.¹⁵ If the pool of losses expires without being fully used, the additional dollar of income never increases the taxpayer's tax. In that case, the EMTR is zero. Alternatively, if the taxpayer exhausts its pool of losses in three years, then an additional dollar of income today increases the taxpayer's taxable income in three years by one dollar. In that case, the EMTR is $.4/(1+r)^3$, where r is the after-tax discount rate. Thus, if r is 6%, the EMTR is 33.6%.¹⁶

If the EMTR on all items of income were the same, tax considerations would not provide taxpayers with a reason to prefer one kind of income over another. Because not all items of income are taxed at the same EMTR, however, taxpayers often prefer to receive income in one form or another.

Other things equal, taxpayers prefer items on which the EMTR is smaller. There are many examples where the EMTR is less than the statutory rate. These include various tax-advantaged methods of holding an asset, such as through certain employee benefit plans,¹⁷ various types of annuities,¹⁸ and life insurance (for the investment portion of life insurance),¹⁹ as well as broad classes of tax-advantaged assets, such as fringe benefits,²⁰ owner-occupied homes,²¹ and depreciable property.²²

Taxpayers also have an incentive to engage in tax planning that changes their EMTRs. If a taxpayer can reduce its EMTR on an item of income or increase its EMTR on a loss item, without changing its pretax cash flow, it will increase its after-tax cash flow. One method that taxpayers frequently have used to affect their EMTRs for specific investments is to shift the time when income or loss is recognized.²³

¹⁵ Net operating losses can be carried back two years and carried forward 20 years. IRC § 172(b)(1)(A).

¹⁶ $33.6\% = .4/(1.06)^3$.

¹⁷ IRC §§ 401, 403, 408 (deferring income until cash withdrawn from employee benefit plans).

¹⁸ IRC § 72, 403 (deferring income until cash withdrawn and through ratable recovery of principal).

¹⁹ IRC § 101 (excluding proceeds of life insurance from both policyholder's and beneficiary's income).

²⁰ IRC § 132 (excluding various fringe benefits from income).

²¹ Imputed income from owner-occupied homes (and other long-lived assets) is not included in income.

²² Property generally is depreciated for tax purposes faster than its actual decline in value. Cf. IRC § 168 (providing for accelerated depreciation).

²³ Jeff Strnad has written several excellent articles illustrating how taxpayers can exploit the realization requirement. E.g., Jeff Strnad, *Tax Depreciation and Risk*, 52 SMU L. Rev. 547, 585-625 (1999); Jeff Strnad, *The Taxation of Bonds: The Tax Trading Dimension*, 81 Va. L. Rev. 47 (1995); see also George M. Constantinides, *Capital Market Equilibrium With Personal Tax*, 51 *Econometrica* 611 (1983).

III. THE TRADITIONAL, REALIZATION-BASED INCOME TAX

Under a traditional, realization-based income tax, income is not taxed as wealth changes, as would be required by the Haig-Simons definition of income.²⁴ Instead, income is taxed as it is realized.²⁵ The realization requirement thus encourages taxpayers to defer income for tax purposes as a way of reducing the EMTR.

A simple example illustrates that tendency. Consider an asset purchased one year ago for \$50 that is now worth \$110. The taxpayer must decide between selling the asset now and depositing the money in the bank or selling the asset next year. Assume that the tax rate is 40%. Although the existing income tax contains a capital gain preference,²⁶ I ignore it, assuming instead that the capital gain tax rate is also 40%.²⁷

If the taxpayer sells the asset today, there is a \$60 capital gain, producing \$24 tax, leaving \$86. Assume the \$86 can be invested at 10%, which produces \$8.60 interest. Because the tax on the interest is \$3.44, the taxpayer's wealth at the end of the second year is \$91.16.²⁸

If the taxpayer keeps the asset for another year, the taxpayer's wealth at the end of the second year will be uncertain. If the taxpayer wants to avoid the risk associated with fluctuations in the value of the asset, however, it can do so without selling it. Assuming that the taxpayer has locked in a profit on the asset permits a comparison of the tax consequences of selling now and deferring sale.²⁹ There are several techniques the taxpayer could use to lock in a profit today. One of the simplest is for the taxpayer to purchase a put option on the asset and write a call option. Assuming the risk-free interest rate is 10%, \$110 interest with interest will be worth \$121 after one year. Accordingly, a purchased put and a written call at \$121 will guarantee \$121 next year.³⁰

²⁴ Robert M. Haig, *The Concept of Income—Economic and Legal Aspects*, in *The Federal Income Tax 1, 7* (Robert M. Haig ed., 1921), reprinted in *Am. Econ. Ass'n, Readings in the Economics of Taxation 54* (Richard A. Musgrave & Carl Shoup eds., 1959); Henry C. Simons, *Personal Income Taxation 50* (1938). With a Haig-Simons income tax, the EMTR is the statutory rate.

²⁵ IRC § 1001.

²⁶ IRC § 1(h) (setting the maximum long-term capital gain rate at 20%, roughly one-half of the statutory maximum for ordinary income).

²⁷ The incentive to defer realization does not depend on whether there is a capital gain preference; a (long-term) capital gain preference only increases that incentive.

²⁸ $\$91.16 = \$86 + \$8.60 - \3.44 .

²⁹ As part of the Taxpayer Relief Act of 1997, Pub. L. No. 105-34 § 1001(a), 111 Stat. 788, 903-06. Congress added § 1259, which treats as constructive sales various transactions by which the taxpayer has transferred the economic risk of an appreciated investment to a third party.

³⁰ The text assumes there are no transaction costs. Put-call parity then implies that the cost of the purchased put equals the revenue from the written call.

If the taxpayer enters into such a transaction, she will have a \$71 capital gain, pay \$28.40 tax and, will be left with \$92.60.³¹ This is \$1.44 more than the taxpayer would have if she sold the asset a year earlier and invested the proceeds for one year at 10%.³² The \$1.44 difference arises because the taxpayer deferred paying \$24 of tax on the capital gain for one year, earning a return on the deferred tax liability. That saved the taxpayer \$1.44, the product of the tax (\$24), the interest rate (10%), and one minus the tax rate (.6).³³

As the example above illustrates, the traditional income tax provides taxpayers with a strong incentive to defer income and accelerate expenses. The rationale is that deferral is the equivalent of an interest-free loan between the taxpayer and the government. Such a loan is attractive to the taxpayer if she is the borrower, but not if she is the lender.

The interest-free loan arises because the traditional income tax can be conceptualized as conclusively presuming for the purpose of establishing the holder's tax liability that the asset's value equaled its basis until immediately before it was sold. The price then was presumed to jump from its acquisition cost to its sales price the instant before it was sold. Thus, the asset's deemed price path if it is sold at the end of Year 1 is given by the solid line in Figure 1; the price path if the asset is sold at the end of Year 2 is given by the dotted line.³⁴

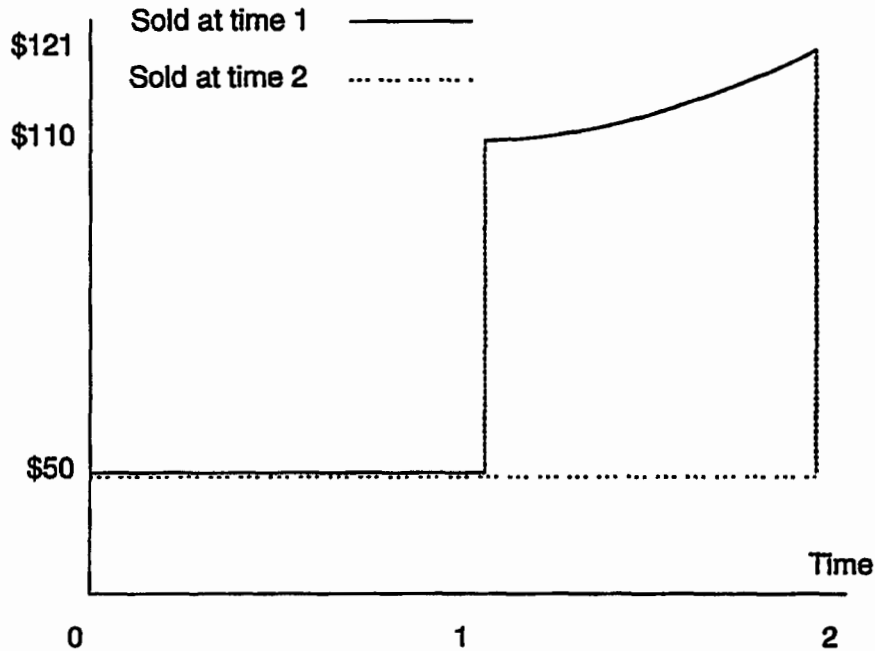
³¹ $\$92.60 = \$121 - \$28.40$.

³² See text accompanying note 28.

³³ A capital gain preference exacerbates the incentive to defer realization. If the capital gain tax rate is 20%, the taxpayer will pay \$12 tax if the asset is sold now, leaving \$98. In the second year, the taxpayer will earn \$9.80, pay \$3.92 tax, and be left with \$103.88. Alternatively, if the taxpayer sells the asset at the end of the second year, the taxpayer will pay \$14.20 tax, and be left with \$106.80, \$2.92 more than if the asset is sold earlier. This difference comes from two sources. First, the taxpayer deferred paying \$12 tax for one year, saving the taxpayer \$.96, the product of the tax (\$12), the interest rate (10%), and one minus the capital gain tax rate (.8). Second, the taxpayer converted ordinary income into capital gain. This saved the taxpayer \$1.96, the product of the capital gain preference (.2) and the second year income if the asset is sold at the end of the first year (\$9.80).

³⁴ It is common to describe the traditional, realization-based income tax as a tax on transactions, not on changes in wealth. See notes 24-25 and accompanying text. Throughout this Article, I recharacterize the traditional, realization-based income tax as a tax on changes in wealth that conclusively presumes all assets have a value equal to their basis until they are retired. This recharacterization makes it possible to contrast traditional and retrospective income taxes according to the different presumptions about deemed price paths.

FIGURE 1
PRESUMED PRICE PATH WITH A TRADITIONAL INCOME TAX



As is clear from Figure 1, selling the asset sooner accelerates the presumed increases in value. If the asset is sold at the end of Year 1, the increase in value to that time is presumed to occur then. If, however, the asset is not sold until the end of Year 2, the full increase is presumed to occur at the end of Year 2. The presumed increase that does not occur until the end of Year 2 when the asset is sold at the end of Year 2, but which is presumed to occur at the end of Year 1 when the asset is sold at the end of Year 1, provides in effect an interest-free loan from the government of the tax that would be due on the increase.³⁵

The interest-free loan from the government that is generated by deferring realization reduces the EMTR on the gain. Assume that the price jumps from \$50 to \$110 at Time 1. If the taxpayer sells the asset at Time 1, she pays \$24 tax. Thus, the EMTR is 40%.³⁶ If, however, the taxpayer waits one year to sell, she pays \$28.40. Of this amount, \$4.40 represents tax on the increase from \$110 to \$121. The remaining \$24 represents tax on the \$60 gain that occurred earlier. This tax is deferred one year, however, which reduces its present value by \$1.36

³⁵ In the example, \$24 tax would be due.

³⁶ 40% = \$24/\$60.

to \$22.64.³⁷ Thus, the EMTR is 37.7%.³⁸ As commentators have recognized, the decline in effective tax rates with a longer holding period is one of the (if not the) fundamental failings of a traditional income tax.³⁹

Over the years, taxpayers have aggressively exploited the inconsistency created by the realization requirement. Although in its simplest form it only encourages taxpayers to hold onto appreciated assets longer and sell loss assets sooner, savvy tax advisors have used this inconsistency as the foundation for large-scale tax avoidance schemes.

The paradigm of such schemes is the tax straddle. A tax straddle begins with the taxpayer taking opposite sides of two highly correlated financial contracts, such as holding a forward silver contract for March delivery and writing a forward silver contract for May delivery.⁴⁰ Once silver prices have moved either up or down—the direction does not matter—the taxpayer closes out the loss leg, recognizing the loss. For example, if silver declines in price, the taxpayer closes out the March position. Because this would leave the taxpayer exposed to an increase in the price of silver, the taxpayer purchases another forward contract, say April, with the proceeds from the closed out March contract. Although the recognized loss on the March contract is offset by the embedded future gain on the written April contract, the gain is deferred.⁴¹

The logic behind the straddle easily can be expressed using EMTRs. Because the EMTR for an asset is a declining function of its holding period, the EMTR for the loss leg of the straddle (which is closed out first) exceeds that for the gain leg (which is closed out later). Because the gain and loss are equal, the result is a tax saving.

Although straddles effectively were shut down about 15 years ago with tailored anti-straddle provisions,⁴² the underlying inconsistency continues to be exploited by wealthy individuals in order to avoid pay-

³⁷ $\$22.64 = \$24/(1.06)^2$.

³⁸ $37.7\% = \$22.64/\60 .

³⁹ E.g., Mark P. Gergen, *The Effects of Price Volatility and Strategic Trading Under Realization, Expected Return and Retrospective Taxation*, 49 *Tax L. Rev.* 209, 212 (1994). Gergen's definition of retrospective taxation does not include the Auerbach or Bradford methods discussed in this Article, but instead imposes tax upon sale by presuming that an asset increased at a constant rate equal to its internal rate of return over the holding period. *Id.* at 222.

⁴⁰ Holding a forward contract means that the investor has committed to purchase the asset at a fixed strike price on the contract's expiration date. Thus, an investor who holds a forward contract gains if the price rises relative to the strike price and loses if it falls. Writing a forward contract means that the investor has committed to sell the asset. The writer gains if the price falls.

⁴¹ Moreover, that gain can be deferred indefinitely through more straddles.

⁴² IRC § 1092. The anti-straddle rules defer the loss until the gain is recognized, which reduces the EMTR on the loss leg to that on the gain leg.

ing tax on large stock gains.⁴³ Taxpayers have been able to reduce or even eliminate the economic risks of an investment without incurring the tax on gain at the same time; instead, that gain is deferred indefinitely.⁴⁴ Although the Tax Reform Act of 1997 added § 1259 to the Code to strike at these transactions,⁴⁵ that provision currently contains large holes through which transactions can be executed.⁴⁶

IV. RETROSPECTIVE TAXATION

Two prominent economists have proposed simple versions of a realization-based income tax that would directly eliminate, without resorting to asymmetric tax rules, the incentive to control when income is realized.⁴⁷ Both methods eliminate that incentive because they set EMTRs in a way that is independent of the holding period.

A. *The Auerbach Method*

Alan Auerbach proposed that taxpayers be taxed retrospectively when they sell an asset. Under his method, when an asset is sold or retired, the taxing authorities conclusively presume for the purpose of establishing the holder's tax liability that the asset appreciated from an instant after it was purchased until it was sold or matured at the risk-free interest rate. Tax is due on this deferred interest with additional interest thereon to compensate for the value of deferral. Under the Auerbach method, there is no tax on the gain (or deduction for the loss) that is conclusively presumed to have occurred immediately after the purchase.⁴⁸

An example illustrates the mechanics of the Auerbach method. Assume that an asset purchased exactly two years ago for \$50 is sold today for \$121. If the interest rate is 10%, the asset would be presumed to have been worth \$100 two years ago, immediately after its

⁴³ As David Bradford observes: "The simple fact is that anyone sitting on a big pot of money today probably isn't paying capital gains taxes . . . and the government can adopt rule after rule after rule – but the people who will get stuck paying capital gain taxes will be the ordinary investors who own mutual funds." Henriques, note 2, at A1.

⁴⁴ David P. Hariton, *The Tax Treatment of Hedged Positions in Stock: What Hath Technical Analysis Wrought?*, 50 *Tax L. Rev.* 803 (1995). In effect, these techniques permit taxpayers to reduce their EMTRs on gain.

⁴⁵ IRC § 1259. In effect, these provisions raise the EMTR on deemed sales to that of actual sales.

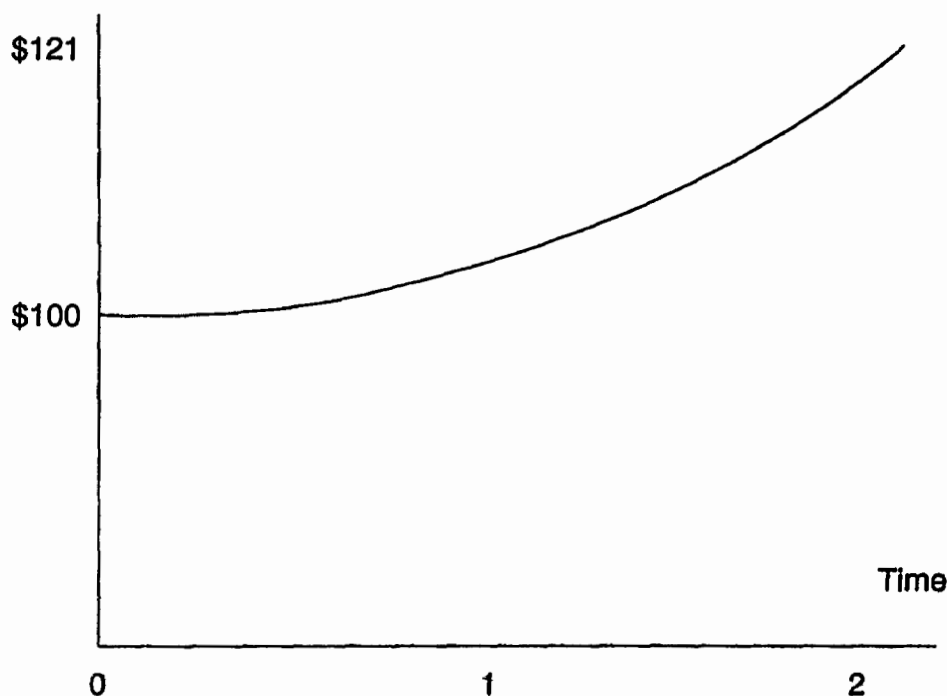
⁴⁶ Section 1259, for example, does not cover transactions using puts and calls.

⁴⁷ Auerbach, note 11, at 169 (proposing universal adoption of a retrospective tax system); Bradford, note 11 at 769 (proposing adoption of a retrospective tax system for financial assets and recognizing that universal adoption might be desirable).

⁴⁸ Auerbach, note 11.

purchase.⁴⁹ Over the first year, the asset would be presumed to have increased in value by \$10, from \$100 to \$110, and, in the second year, the value would be presumed to have increased by \$11, from \$110 to \$121. The presumed price path for the asset under the Auerbach method is illustrated by Figure 2.⁵⁰

FIGURE 2
PRESUMED PRICE PATH WITH THE AUERBACH METHOD



The assumption that the statutory tax rate is 40% implies that the taxpayer would owe \$4 ($.4 \times \10) in tax for the first year and \$4.40 for the second ($.4 \times \11). The taxpayer also would owe \$.40 in interest on the \$4 tax liability from Year 1 that is paid at the end of Year 2. Assuming that the payor can deduct the interest, the \$.40 in interest would generate a deduction of \$.16, and so the taxpayer would owe the government \$8.64 in tax when the asset is sold, leaving her with \$112.36.⁵¹

⁴⁹ The present value, as of two years ago, of \$121 today is \$100.

⁵⁰ The diagrams in this Article all assume continuous compounding.

⁵¹ Under the Auerbach method, the tax owed on the asset is independent of the price paid for it. The taxpayer would pay \$8.64 in tax regardless of the original purchase price.

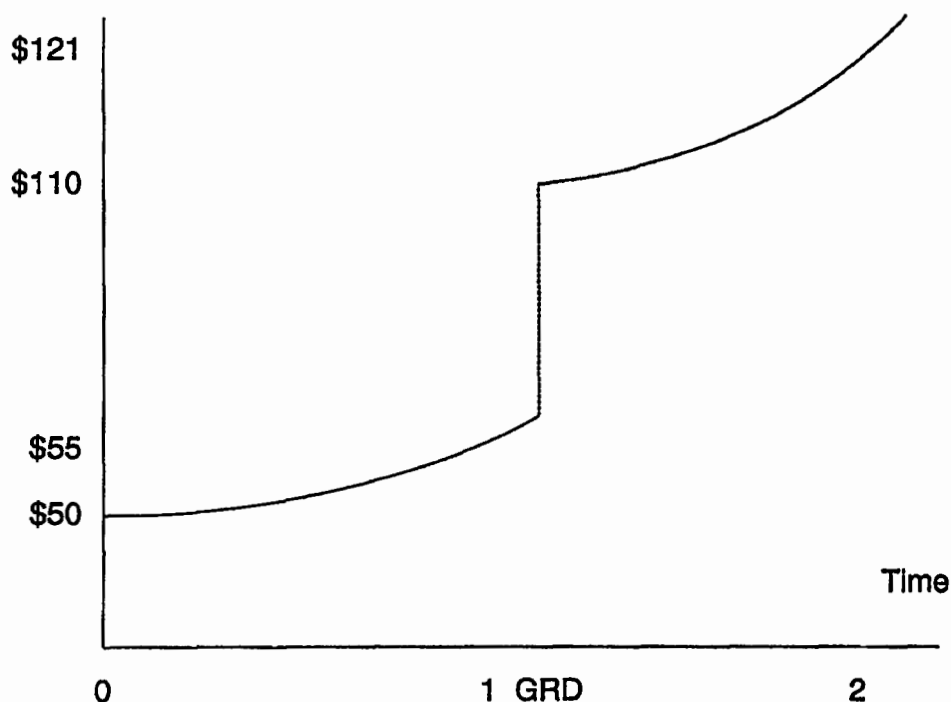
B. The Bradford Method

David Bradford has generalized the Auerbach method. Under Bradford's method, the taxpayer, on making an investment, must set a Gain Reference Date (GRD) and a Gain Tax Rate (GTR). Similar to the Auerbach method, when an investment is sold or matures, its value would be presumed to have increased from the GRD to the price at which it was sold or retired on the date of sale or retirement at the risk-free interest rate. The investment also would be presumed to have increased in value at the risk-free rate from the date it was acquired at the price paid for it until the GRD. As in the Auerbach method, tax would be owed on these presumed increases with interest on the deferred tax liability. In addition, and in contrast with the Auerbach method, tax also would be owed at the GTR on the capital gain (or a deduction would be allowed for the capital loss), which is presumed to occur at the GRD, with interest for the deferred tax liability (or refund).⁵²

The example used to illustrate the mechanics of the Auerbach method also can be used to illustrate the details of the Bradford method. The Bradford method requires that the investor set a GRD and a GTR when she makes the investment. Assume that the GRD is set at the end of the first year ($t=1$). Under this assumption, the asset would be presumed to have increased in value by 10%, from \$110 to \$121, during the second year. In order to determine the rest of the investment's presumed price path, and the holder's tax liability, one must know the investment's original cost. The assumption that the investment cost \$50 implies that it would be presumed to increase in value by 10%, from \$50 to \$55, during the first year, and that at the end of the first year there was a \$55 jump in value from \$55 to \$110. Figure 3 illustrates the presumed price path with the Bradford method.

⁵² Bradford, note 11, at 770-73. The Auerbach method is the Bradford method with the GTR set equal to zero and the GRD set at the date the asset was acquired.

FIGURE 3
PRESUMED PRICE PATH WITH THE BRADFORD METHOD



To determine the tax liability, one has to set a GTR. Assume the GTR is 40%, the tax rate on ordinary income. Tax on the first year's interest would be \$2, and the taxpayer would owe \$.20 interest on this deferred tax. Because the interest is deductible, it would reduce the taxpayer's taxes by \$.08, producing a net tax liability of \$2.12. There would also be a \$55 capital gain that would be presumed to occur at the end of Year 1, which would produce a \$22 tax liability. The interest owed on this deferred liability would be \$2.20, which would generate a deduction of \$.88, producing a net tax liability of \$23.32. The \$11 increase in the second year would be taxed as interest, producing a tax liability of \$4.40. Thus, the taxpayer's total tax liability would be \$29.84,⁵³ leaving her with \$91.16.

C. Retrospective Taxation Prevents Taxpayers From Deferring Income By Delaying Realization

I have described elsewhere how the Auerbach and Bradford methods of retrospective income taxation discourage taxpayers from shifting the timing of income through selective realization. The reason

⁵³ This is the sum of \$2.12 (net tax on first year ordinary income), \$4.40 (tax on second year ordinary income), and \$23.32 (capital gain tax).

why is that these two tax systems uniquely decompose the return on any asset into a return to waiting and a return to risk, allocate these returns over time, and charge interest at the market rate on deferred taxes.⁵⁴

Under either method, if an asset appreciates at the rate of interest, the taxes deemed due for prior years are unchanged. Thus, charging interest at the market rate and uniquely decomposing the return in a way that does not change if the asset appreciates at the rate of interest means that there is no benefit from simple deferral. In other words, the EMTR for an asset that increases at the rate of interest is holding period neutral. In addition, increases in value above or decreases below that amount produce symmetric tax increases or decreases. Thus, the symmetry between good and bad future outcomes means that there is no tax benefit from pure gambles. That is to say, the ex ante EMTR of a fair gamble is zero. Together, these two principles imply that there is no tax benefit from shifting the timing of income through selective realization.⁵⁵

That neither the Auerbach nor the Bradford method provides taxpayers with an incentive to defer realization can be demonstrated using the example. Assume that the asset is sold at the end of the first year for \$110 and the after-tax proceeds are invested for one year at 10%. Under the Auerbach method, the asset would be presumed to increase in value from \$100 to \$110 over the year. The taxpayer would pay \$4 tax, leaving \$106 to invest. At the end of the second year, the investment would grow by \$10.60 to \$116.60 and the taxpayer would pay \$4.24 tax. This would leave \$112.36, exactly the same amount as when the asset is sold after two years. Thus, the Auerbach method eliminates the incentive to defer the realization of income.

Figure 2 confirms this. Selling the asset at the end of the first year for \$110 and reinvesting the proceeds would produce the same deemed price path for tax purposes as selling the asset for \$121 at the end of the second year.⁵⁶ There is no benefit from deferring sale because the price path, which determines the tax liability, is unchanged.

That result also can be expressed using the investment's EMTR. Assume that the asset is worth \$110 at the end of the first year. If the asset was sold at the end of the first year, the tax would be \$4. If the sale price was \$111, the tax would be \$4.036.⁵⁷ Thus, the EMTR

⁵⁴ Knoll, note 12, at 211-13.

⁵⁵ Id.

⁵⁶ This is easiest to see if the taxpayer borrows the money to pay the tax (\$4.24).

⁵⁷ Over the first year, the asset would be presumed to have increased in value from \$101.91 to \$111, which would produce income of \$10.09, and a tax liability of \$4.036 ($\$10.09 \times .4$).

would be 3.6%.⁵⁸ If the asset was sold at the end of the second year, the tax liability would be \$8.64. Of this amount, \$4.40 would be owed on increases deemed earned in the second year. This would leave \$4.24 tax owed on the first year's deemed increase,⁵⁹ which at a 6% after-tax discount rate has a present value of \$4.⁶⁰ Thus, the present value of the tax on the deemed increase for the first year would be unchanged. Accordingly, the EMTR on an additional dollar of income in the first year again would be 3.6%.

Similarly, the Bradford method eliminates the incentive to defer realization. If the asset was sold at the end of the first year, the asset would be presumed to increase in value from \$50 to \$55 during the first year and to jump at year's end to \$110. The taxpayer would owe \$2 tax on the first year's interest and \$22 on the capital gain. In the second year, there would be \$11 interest, which would generate \$4.40 tax. The taxpayer would be left with \$91.16, exactly the same as when the stock was sold at the end of two years.⁶¹

With the Bradford method, the EMTRs cannot be calculated by dividing the taxes paid by \$121, the amount received. That is because an additional dollar of income does not increase all taxes. The price path and hence the taxes due (plus interest) from the time of acquisition to the GRD are not affected by the amount realized.⁶² Only the deemed gain at the GRD and the price path after that date are affected by the amount realized.

Consider first an asset sold at the end of Year 1. An additional dollar received would increase the capital gain that would occur then by \$1, which would produce \$.40 in tax. Thus, the EMTR would be 40%. Alternatively, consider what happens if that asset was sold at the end of the second year. The additional dollar that could have been realized at the end of the first year would grow to an additional \$1.10. Of this amount, \$.10 would be presumed to occur in the second year and would attract \$.04 tax. One dollar would be presumed to be a capital gain from the end of Year 1. This gain would attract \$.40 tax. Because the capital gain would be presumed to occur a year earlier, the taxpayer would owe \$.04 interest. Because that interest is deductible, the taxpayer would receive a \$.016 reduction in tax. Accordingly, the

⁵⁸ This is an additional \$.036 tax on an additional dollar of income.

⁵⁹ See text accompanying note 51.

⁶⁰ $\$4(PV) = \$4.24/1.06$.

⁶¹ As can be seen from Figure 3, the deemed price path would be the same whether the stock was sold at the end of Year 1 or at the end of Year 2. Since the path is unchanged, the tax would not be affected by deferring sale.

⁶² This liability is a function only of time, the acquisition cost, and interest rates. It is not a function of the amount ultimately realized.

tax due on the capital gain would be \$.424, which has a present value of \$.40.⁶³ Thus, the EMTR again would be 40%.

In summary, the Auerbach and Bradford methods eliminate the incentive to accelerate losses and defer gains through selective realization because the EMTR on any asset is independent of the asset's holding period. Taxpayers cannot change an asset's EMTR by choosing when to sell because both methods charge interest on tax due on deferred gains from the date they are deemed to arise and because the date on which such gains are deemed to arise is set in advance.

V. RETROSPECTIVE TAXATION AND THE INCENTIVE FOR CHARACTER-SHIFTING TAX PLANNING

In this Section, I show that adopting a retrospective tax system would not eliminate tax planning. Although realization-based tax planning is the only form of tax planning inherent in a realization-based income tax and retrospective income taxes would eliminate the incentive to engage in such planning, they would not eliminate the incentive to engage in all forms of tax planning. That is because retrospective tax systems contain within them the incentive to engage in another form of tax planning, character-shifting tax planning, that is not embedded in the traditional income tax.

It is common to divide tax planning strategies into three broad categories: accelerating or deferring the timing of income (time shifting), changing the character of income (character shifting), and shifting the party to whom income is taxed (entity shifting).⁶⁴ A classic example of the first strategy is selling depreciated assets to accelerate losses and retaining appreciated assets to defer gains. A well-known example of the second strategy is converting ordinary income into capital gain, which can be accomplished through a variety of devices. An example of the third strategy is transferring an income-producing asset, such as a patent, copyright, or bond, to children taxed at a lower rate.

As illustrated above, the first strategy (time shifting) is embedded in the structure of a traditional income tax. The other strategies, to the extent that they exist in any actual tax, are a result of additional provisions that are not inherent in the basic structure of the income tax. The second strategy (character shifting) would not exist under a simple tax system with the current system's basic structure. That strategy exists with the actual income tax only because the tax law establishes different classes of income (baskets) that it treats differently. Thus,

⁶³ $$.40(PV) = $.424/1.06$.

⁶⁴ Scholes & Wolfson, note 14, at 15-19. Changing the location (source) of income sometimes is treated as a fourth category of tax planning. Alternatively, this can be treated as a subset of the second strategy, changing character.

there is a capital gain preference,⁶⁵ capital loss limitations⁶⁶ and numerous other special rules that create an incentive to change the character of income.⁶⁷ A simple income tax that treated all income the same would not create any incentive to change the character of income.⁶⁸ The third class of strategies (entity shifting) also would not exist under a simple income tax that shared the current system's basic architecture.⁶⁹

Under a simple, realization-based income tax, an individual with many investments and businesses would not care from which one an additional \$1 of income arose. Consider, for example, a taxpayer who receives \$242 in total from selling two assets—*Donatello* and *Leonardo*—that she originally purchased for \$50 each. The taxpayer pays the same tax regardless of how her profit is split between the two assets. The reason why the total tax liability is not affected by how the income is split is because the value of each (nondepreciable) asset is presumed equal to its original basis until sold. Thus, shifting income between assets changes only the size of the price jumps at the sale date: one asset has a larger jump and the other has a correspondingly smaller jump.

There is also no incentive with a simple, realization-based income tax to shift income between gain on the sale of an asset (capital gain) and earned income. Both are taxed currently. Shifting \$1 of income between gain and earnings would increase (decrease) earnings by \$1. Assuming that capital gain and earned income were taxed at the same rate,⁷⁰ there would be no net tax consequence.

Why the second tax planning strategy (character shifting) is not present with a traditional income tax can be understood using the language of effective marginal tax rates. With a simple, realization-based income tax, the EMTR is constant across assets and between gain and earned income. For income that arises in the current year (and is not offset by loss carryforwards), the EMTR is the statutory rate (in the

⁶⁵ IRC § 1(h) (setting a maximum capital gain rate of 20%, roughly half the maximum on ordinary income).

⁶⁶ IRC § 1211 (corporations can deduct capital losses to the extent of gains; individuals can deduct capital losses to the extent of gains plus \$3,000 a year).

⁶⁷ Examples include the distinctions between active, passive, and investment income (IRC §§ 469, 951, 952, 954) and between foreign subsidiary and foreign branch income.

⁶⁸ Some of the distinctions between different classes of income (such as the distinction between capital losses, which are severely curtailed, and ordinary expenses, which are not) were developed to restrain tax planning opportunities created by the realization requirement.

⁶⁹ Taxpayers seek to shift income to other taxpayers, such as their minor children, because the income tax is progressive. Taxpayers also care whether they earn income in one pocket or another (for example, in their pension or in their personal investment account) because of various complicating rules.

⁷⁰ See text accompanying note 27.

example, a constant 40%). And the EMTR declines at the after-tax discount rate each year that recognition is deferred. Accordingly, because the EMTR depends on when the gain arises, and not on the asset to which it is attributed, there is no incentive to shift income across assets.

The Auerbach and Bradford methods of retrospective taxation eliminate the first class of tax planning strategies, the incentive for time shifting.⁷¹ That is the only strategy embedded in the traditional income tax and attempts to curtail it are responsible for much of the current tax system's complexity.⁷² It, therefore, might be thought that the Auerbach and Bradford methods do not contain embedded within them any incentives for tax planning. The next three Subsections explain why that view is incorrect.

A. *Retrospective Taxation Encourages Character-Shifting Tax Planning*

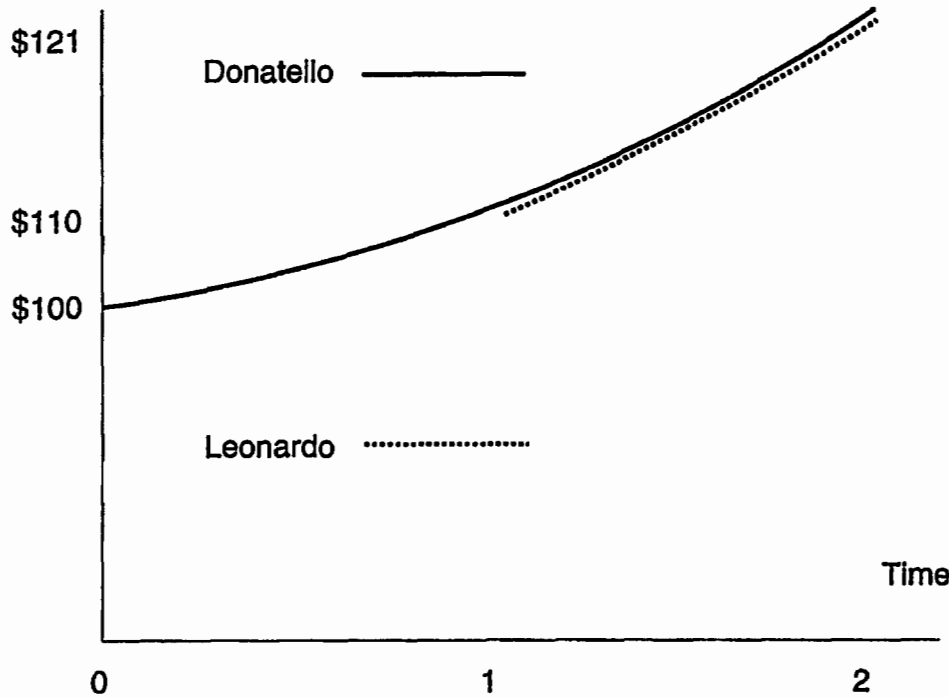
In contrast to a traditional income tax, retrospective income tax systems contain within their structure the incentive to shift the character of income. Thus, unlike with a traditional income tax, the tax liability with a retrospective income tax depends on how revenue is split among assets.

This is easiest to see with the Auerbach method. Consider two assets: *Donatello* and *Leonardo*. *Donatello* was acquired two years ago and *Leonardo* was acquired one year ago. Both are sold today for \$121 each. Under the Auerbach method, *Donatello* would be presumed to have increased from \$100 to \$110 in Year 1 and from \$110 to \$121 in Year 2. *Leonardo* would be presumed to have increased from \$110 to \$121 in Year 2. Figure 4 illustrates the presumed price paths for *Donatello* and *Leonardo*.

⁷¹ See Section IV.C.

⁷² A common example of the second class of strategies, converting ordinary investment income into capital gain, also is eliminated by the Auerbach and Bradford methods. Even though these strategies are not embedded in the structure of a traditional income tax, the two retrospective tax systems can eliminate them. This is because the capital gain amount is a fair gamble with zero expected value and symmetric payoffs. Thus, the taxpayer cannot convert ordinary income into expected capital gain (or vice versa).

FIGURE 4
CHARACTER-SHIFTING TAX PLANNING WITH THE AUERBACH METHOD



On *Donatello*, the taxpayer would pay \$8.64 in tax, leaving her with \$112.36.⁷³ On *Leonardo*, however, the taxpayer would pay only \$4.40 in tax,⁷⁴ leaving her with \$116.60. The EMTR on an additional dollar of income on *Donatello* in Year 2 would be 7.9%.⁷⁵ The EMTR on *Leonardo* would be 3.6%.⁷⁶ Accordingly, shifting one dollar of revenue away from *Donatello* would reduce taxes by \$.079; shifting one dollar to *Leonardo* would increase taxes by \$.036. Thus, every dollar shifted from *Donatello* to *Leonardo* would reduce the taxpayer's total taxes by \$.043.

As the above example illustrates, with the Auerbach method, the tax on a dollar of revenue would be greater, the longer the taxpayer held the asset. Accordingly, taxpayers would pay less tax the larger the share of their revenue that was concentrated in recently-acquired assets. This would encourage taxpayers to shift revenue away from earlier-acquired assets to later-acquired assets.⁷⁷

The Bradford method also encourages such character-shifting tax planning. To demonstrate, consider two assets—*Donatello* and

⁷³ See text accompanying note 51.

⁷⁴ $.4$ (tax rate) \times \$11 (presumed increase in value for year) = \$4.40.

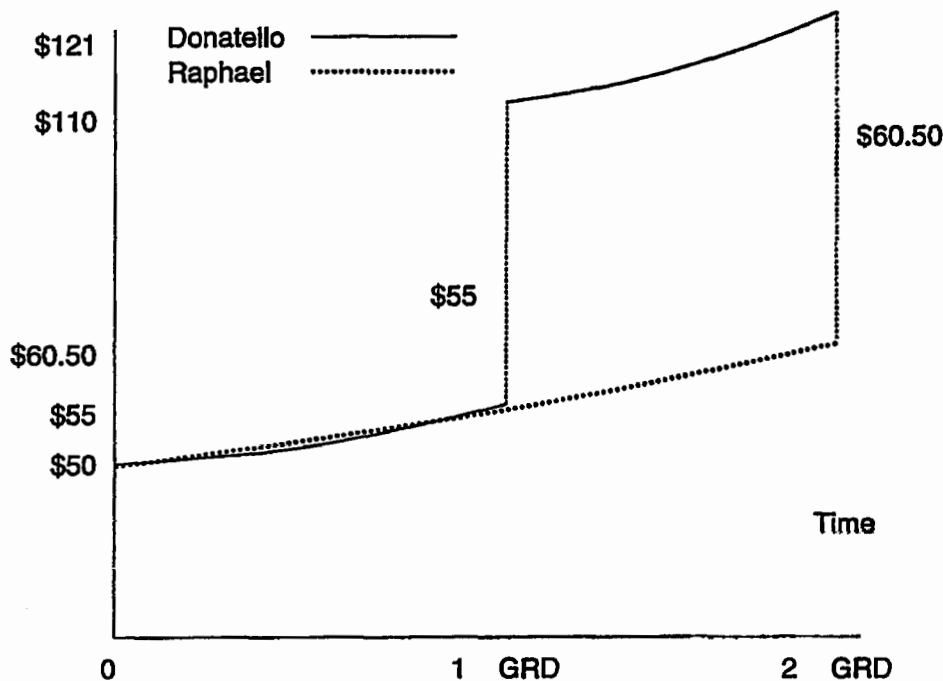
⁷⁵ $7.9\% = \$8.64/\110 .

⁷⁶ $3.6\% = \$4.40/\121 .

⁷⁷ With the Auerbach method, character thus would be defined by date of acquisition.

Raphael—both purchased two years ago for \$50. Assume that the GRD (set in advance) is one year after purchase for *Donatello* (Year 1) and two years after purchase for *Raphael* (Year 2). The Bradford method presumes that *Donatello* increased from \$50 to \$55 in the first year, jumped from \$55 to \$110 at the end of that year, and increased from \$110 to \$121 in the second year. The Bradford method also presumes that *Raphael* increased from \$50 to \$55 in the first year, from \$55 to \$60.50 in the second year, and jumped from \$60.50 to \$121 at the end of the second year. Figure 5 illustrates the two presumed price paths.

FIGURE 5
CHARACTER-SHIFTING TAX PLANNING WITH THE BRADFORD METHOD



On *Donatello*, the taxpayer would pay \$29.84 in tax, leaving her with \$91.16.⁷⁸ On *Raphael*, the taxpayer would pay \$28.52 in tax, leaving \$92.48.⁷⁹ The EMTR would be 42.2% on *Donatello* and 40% on *Raphael*. Accordingly, reducing the revenue from *Donatello* by one

⁷⁸ See text accompanying note 53.

⁷⁹ There would be \$5 income in the first year and \$2 tax. Interest (deductible) would be owed on this tax, so the taxpayer would owe \$2.12 at the end of the second year. There would be \$5.50 income in the second year and \$2.20 tax. There also would be a capital gain of \$60.50 in the second year, which would produce \$24.20 tax. The total tax would be \$28.52.

dollar would reduce taxes by \$.422;⁸⁰ increasing the revenue from *Raphael* by one dollar would increase taxes by \$.40.⁸¹ Thus, shifting a dollar of revenue from *Donatello* to *Raphael* would reduce total taxes by \$.022.

Accordingly, taxpayers could reduce their taxes by shifting revenue to assets with later GRDs. Figure 5 shows that a portion of the price increases on *Donatello* would be deemed to occur earlier than those on *Raphael*. Thus, shifting a dollar of revenue from *Donatello* to *Raphael* would defer when some portion of the taxpayer's income would be presumed to arise for tax purposes, reducing the tax liability.⁸²

The Auerbach and Bradford methods also encourage taxpayers to shift income between investments and earnings, even if the statutory tax rates on capital gain, interest, and earnings were the same. As shown immediately above, the EMTR on investment revenue would vary across assets. It follows, therefore, that the tax on earned income could not equal that on investment gain for all assets. Thus, in at least some cases, taxpayers would have an incentive to shift income between earnings and investments.

In effect, with retrospective tax systems, the effective marginal tax rate on investment income would not be constant across assets. Under the Auerbach method, the EMTR would be higher the longer the asset was held; under the Bradford method, the earlier the GRD, the higher the EMTR.⁸³

It follows, therefore, that the Auerbach and Bradford methods would not eliminate tax planning. Although the Auerbach and Bradford methods would eliminate the time-shifting tax planning opportunities embedded in the existing tax system,⁸⁴ they would do so only by introducing new character-shifting tax planning opportunities that are not embedded in the structure of the current tax.

There is, thus, a trade-off with traditional and retrospective realization-based income taxes. The former (traditional realization-based in-

⁸⁰ A \$1 reduction in revenue from selling *Donatello* would reduce capital gain by \$.91, producing a tax saving of \$.364. The savings would increase to \$.386 because the taxpayer would not be assessed interest on this amount. The taxpayer also would reduce taxes by an additional \$.036 because there would be \$.09 less interest. Thus, the total tax saving would be \$.422.

⁸¹ A \$1 increase in revenue from selling *Raphael* would increase capital gain by \$1, increasing taxes by \$.40.

⁸² With the Bradford method, character thus is defined by the GRD.

⁸³ This assumes that the GTR with the Bradford method is the same across assets. If the GTR differed across assets, EMTRs generally would not be equal, but then an earlier GRD would not necessarily imply a higher EMTR.

⁸⁴ This assumes that the tax authorities can overcome the problem of government passivity. See Knoll, note 12.

come taxes) maintain EMTRs that are constant across assets, but at the cost of EMTRs that decline as the asset's holding period increases. The latter (retrospective realization-based income taxes) would maintain EMTRs that were constant over different holding periods, but at the cost of introducing EMTRs that differed across assets. Thus, with realization-based income taxes, either there will be tax planning opportunities from shifting income through time (traditional) or from shifting income between assets (retrospective).

In this Article, so far I have talked of time-shifting and character-shifting as two distinct forms of tax planning. Although the techniques might be different, for the stripped-down income taxes considered here, the goals of both forms are identical: to reduce the EMTR on economic income by deferring when income is considered to arise for tax purposes.

As described above, a traditional, realization-based income tax provides taxpayers with an incentive to defer income, and it allows taxpayers to defer income by controlling realization. The Auerbach and Bradford methods eliminate the possibility of deferring income through selective realization by setting in advance the date at which any income in excess of the risk-free rate of return (capital gain) from a given asset is presumed to arise. The Auerbach and Bradford methods, however, do not eliminate the incentive to defer when income is presumed to arise for tax purposes. They merely eliminate the possibility of deferring income by controlling the realization. In doing so, they make it possible to defer income by shifting income across assets that differ in when the income they generate is presumed to arise.

B. Opportunities for Character-Shifting Tax Planning

For taxpayers investing in the shares of large publicly traded companies, the opportunity to shift income across assets is almost nonexistent.⁸⁵ Thus, if *Donatello*, *Leonardo*, and *Raphael* represent shares in large, publicly traded companies, there would be few opportunities to shift income. Where the investments are in small, closely held businesses, however, there would be many opportunities.⁸⁶

In the case of closely held businesses controlled by the same people, policing the borders and reining in character-shifting tax planning

⁸⁵ But not entirely nonexistent: A large investor could arrange to pay a higher commission on one sale and a lower commission on another.

⁸⁶ Auerbach notes that his system might have difficulty with closely held assets, but he does not identify the general problem of shifting income between assets. He also does not recognize the trade-off between character- and time-shifting tax planning. Instead, he only notes that because his system exempts gain from tax, there would be an incentive to shift salary to gain. Auerbach, note 11, at 177.

would be very difficult. The inquiries necessarily would be intensely fact specific. What is the market salary for a given job? What is the market interest rate on a particular loan? What is the market price for an input, product, or service? If the tax authorities decide that the prices set internally are not realistic, then there is the factually intensive and economically difficult task of determining the appropriate prices for the purpose of assessing taxes. Potentially, salaries, interest rates, and the prices of inputs, services, and products all would have to be set.

Furthermore, the tax system would encourage taxpayers to create such opportunities. Thus, even if it would be relatively easy to rein in such actions today (which I doubt),⁸⁷ the adoption of a retrospective tax system would encourage taxpayers to find new ways to exploit this inconsistency. It also would encourage taxpayers and capital to move into activities where such opportunities exist.

One obvious technique to shift income across assets would be to divide a single company—such as one that both produces and sells a product—into two separate companies to carry out those activities. The taxpayer could regularly set up a new company (with a later GRD and thus a lower EMTR) to sell the product, shifting income to it by charging a low price for the product. Another technique would be to make loans from one company to a related company at nonmarket rates.⁸⁸ A third technique would be to increase or decrease salaries paid to the owner and the owner's family. The owner would take higher salaries from firms with high EMTRs and lower salaries from firms with low EMTRs.⁸⁹ Assuming the salary were taxed at the statutory rate, the deduction, whether passed through or not, would be worth more the higher the EMTR. Thus, there would be a saving from taking the salary from the firm with the higher EMTR. A fourth technique would be to set up a new company and to pay it an excessive fee to provide a financial service, such as insurance or a loan guarantee.

Auerbach asserts it would be easy to identify the cases where such tax planning is a problem,⁹⁰ and he implies that it would be relatively simple to write rules to curb the abuses. Anecdotally, at least, the evidence is otherwise. In the international field, where elaborate transfer pricing rules are necessary to determine U.S. tax liability and

⁸⁷ See text accompanying notes 91-93.

⁸⁸ Taxpayers could shift income to borrowers through below-market loans and to lenders through above-market loans.

⁸⁹ Presumably, the marginal tax rate on salaries would be the statutory rate. Because the EMTR on income from investments would increase over time, salaries would become more attractive over time.

⁹⁰ Auerbach, note 11, at 177 n.13.

the availability of foreign tax credits,⁹¹ these precise questions have led to an explosion in cross-border tax planning. That explosion has led to increased challenges by the authorities as well as concomitant increases in expenditures on lawyers and consultants.⁹² A retrospective tax system would translate this inquiry, so prevalent and problematic in cross-border transactions, into the domestic arena. The difficulty, expense, and time that the tax authorities would have to spend trying to uncover and correct such factually messy tax planning should not be underestimated.

Moreover, this problem would not be limited to closely held businesses; it would arise every time one business acquired another business. Under a retrospective tax system, an important characteristic of every asset or taxable entity is its GRD. The preservation of desirable tax attributes and the loss of undesirable ones has long been important in mergers and acquisitions. The adoption of a retrospective tax system would add another attribute, GRDs, to that list.

As long as there is a corporate tax, the corporation would have to have at least one (and possibly more) GRDs. When two companies were combined, their GRDs would have to be reconciled. How the GRD is set is important because a later GRD means a lower EMTR. As it does not appear to be possible to set that date for the combined entity in a neutral way,⁹³ mergers would create tax planning opportunities.

Of course, character-shifting tax planning opportunities also would arise with cross-border transactions (especially for multinational companies whose parent is located in a country with a territorial income tax).⁹⁴ There would be an obvious incentive to shift income to the related entity with the lowest EMTR, which assuming equal tax (and interest) rates would be the country with the company with the latest GRD. This incentive would exist if the United States adopted a retrospective tax system whether other countries did or not.

⁹¹ IRC § 482; Reg. §§ 1.482-1 to -8. These rules were enacted because a general arm's-length or market-price standard was too open-ended to enforce.

⁹² As a hint just how complex the law in this area has become, Richard Doernberg has devoted 58 pages of his most recent nutshell on international tax to intercompany transfer pricing. Richard L. Doernberg, *International Taxation in a Nutshell* 236-93 (5th ed. 2001).

⁹³ At least, I have not figured out how to do so.

⁹⁴ A country with a territorial tax system taxes home-based multinational corporations only on their domestic income. Countries that employ a worldwide tax system tax home-based multinationals on their worldwide income and provide a credit for taxes paid to foreign authorities.

D. The Bradford Method With the Same GRD for All Investments Can Eliminate Both Time- and Character-Shifting Tax Planning, but Only by Increasing EMTRs Over Time

Although neither the Auerbach nor the Bradford method can generally eliminate character-shifting tax planning, the Bradford method can be used to simultaneously eliminate both character- and time-shifting tax planning. What is required is that the authorities set the same GRD and GTR for all investments.⁹⁵ If all investments have the same GRD and GTR, taxpayers cannot change their aggregate tax liability by shifting income across investments. That is to say, the EMTR would be both independent of the holding period and constant across assets.

That the Bradford method with the same GRD for all investments eliminates character-shifting tax planning can be illustrated using *Donatello* and *Leonardo* and assuming that the GRD for both securities is one year ago. Since the GRD for *Donatello* would be unchanged, the tax liability would be as described previously. The taxpayer would pay \$29.84 in tax, leaving \$91.16.⁹⁶ As for *Leonardo*, it would be presumed to have increased in value in the second year from \$110 to \$121. This increase would be taxed as interest, producing a tax liability of \$4.40. There also would be a \$60 capital gain on *Leonardo*, which would be presumed to have occurred immediately after purchase, producing a \$24 tax liability. The interest owed on this deferred liability would be \$2.40, which would generate a deduction of \$.96. Thus, the total tax liability on *Leonardo* would be \$29.84, which would leave the taxpayer with \$91.16.

Although the taxes on *Donatello* and *Leonardo* would not be equal, the taxpayer could not change her tax liability by shifting income between the two assets. Reducing the sales price of *Donatello* by \$1 would reduce capital gain by \$.91 and second year interest by \$.09. Similarly, increasing the sales price of *Leonardo* by \$1 would increase capital gain by \$.91 and second year interest by \$.09. The total tax would be unchanged because the shift would have no effect on net capital gain or net interest.

The shift is a wash because only the capital gain at the GRD and the accrual of interest thereafter would be affected. The difference in the tax paid on the two assets would arise from price increases presumed to have occurred before the GRD. These increases, however, would depend only on the price originally paid for each asset, the interest rate, and the asset's date of acquisition. Accordingly, the total tax

⁹⁵ The GRD should not be set in the future since the tax calculation then would require estimating future interest rates using the yield curve.

⁹⁶ See text accompanying note 53.

could not be affected by transferring income at sale. Thus, the only version of a realization income tax that can stop both time- and character-shifting tax planning is the Bradford method with the same GRD throughout the economy.

The Bradford method with the same GRD eliminates character-shifting tax planning because the same GRD eliminates the possibility of deferring income by shifting income across assets. With the Bradford method, taxpayers still would want to defer the date at which the gain would be presumed to occur. The Bradford method, however, prevents taxpayers from deferring gain through selective realization and setting the same GRD for all assets prevents them from deferring gain by shifting income across assets.

Although the Bradford method with a fixed GRD would prevent both time- and character-shifting tax planning, and thus would not provide an incentive for any kind of tax planning, such a tax system would have several undesirable characteristics. First, if the statutory tax rates on interest and capital gains were left unchanged,⁹⁷ EMTRs on capital gains would increase over time as the GRD receded into the past.⁹⁸

Second, the tax system cannot simultaneously prevent both time- and character-shifting tax planning and maintain constant EMTRs on earned and investment income. If all statutory tax rates (interest income, capital gain, and earned income) were constant, over time (as the GRD receded and EMTRs rose), salaries would become relatively more attractive. Accordingly, to prevent tax planning that involved shifting between earned income and investment income, either the statutory tax rate on interest income would have to fall over time or the tax rate on earned income would have to rise. There is, then, not enough flexibility to set statutory tax rates so that salaries, interest, and capital gains were taxed at the same effective marginal tax rate over time. If statutory tax rates were constant, then over time EMTRs on capital gains would rise as the GRD receded. The only way to keep these EMTRs constant over time would be to reduce the statutory tax rate on ordinary investment income over time. Such a reduction would hold the EMTR on capital gain constant as the GRD

⁹⁷ In order to prevent tax planning using selective realization, the Bradford method sets the statutory tax rate on capital gains permanently. See Bradford, note 11, at 770.

⁹⁸ In the limit, the EMTR approaches 100%. It seems reasonable to assume that capital gains would be more prevalent than capital losses under the Bradford method because some portion of capital gains would be a return to effort. See Auerbach, note 11, at 177, n.13. Accordingly, as the GRD receded, taxes would increase.

receded (thus permitting the EMTR on earned income to remain constant at the statutory rate), but would reduce the EMTR on interest.⁹⁹

Third, most taxpayers (but I hope not readers of this Article) would find such a tax system incomprehensible. They would not understand why they are presumed to have realized a capital gain at some hypothetical date. Their dissatisfaction would likely grow over time as the GRD recedes, especially if EMTRs on capital gains and salaries rose.

In summary, it is possible to use the Bradford method to eliminate the incentives to engage in both time- and character-shifting tax planning, but this can be done only by setting the GRD at a fixed date for all investments once and for all time. This, in turn, would substantially increase the complexity of tax filings. It also would require either reducing the tax rate on interest income or raising the tax rate on earned income over time. The resulting tax system would not be simple. Accordingly, if both time- and character-shifting tax planning are to be eliminated with a simple tax system, a method of taxation other than an income tax must be used.

V. A CASH FLOW CONSUMPTION TAX ELIMINATES BOTH TIME- AND CHARACTER-SHIFTING TAX PLANNING

In previous sections of this Article, I showed that a simple, realization-based income tax can eliminate either time- or character-shifting tax planning, but not both. This Section shows that a simple cash flow consumption tax can simultaneously eliminate both forms of tax planning. Thus, unlike an income tax, a consumption tax does not contain embedded within it the incentive to engage in either time- or character-shifting tax planning.¹⁰⁰

The workings of the consumption tax can be illustrated using the examples of *Donatello* and *Raphael*, which were both purchased two years ago. *Donatello* was sold one year ago for \$110, and the proceeds were invested at 10%. One year ago, when *Raphael* was also worth \$110, the owner of *Raphael* locked in a sales price of \$121 today.

Consider first time-shifting tax planning. If the taxpayer sold *Donatello* at the end of the first year, she would receive \$110. If she reinvested the proceeds, there would be no current tax. Invested at 10%, the taxpayer would have \$121 at the end of the second year. Assuming a 40% tax rate, she would pay \$48.40, leaving \$72.60. Alternatively, if the taxpayer locked in the profit at the end of the first

⁹⁹ In the long-run, therefore, the Bradford method with a declining tax rate on interest income would approximate a consumption tax.

¹⁰⁰ Moreover, the cash flow consumption tax eliminates the two planning incentives without the need to change tax rates annually as does the Bradford method with the same GRD.

year, guaranteeing \$121 at the end of the second year, no tax would be paid until the end of the second year. At that time, the entire \$121 would be subject to tax. The taxpayer, thus, would pay \$48.40, leaving the same \$72.60 as where *Donatello* was sold at the end of the first year.¹⁰¹

There are also no character-shifting tax planning opportunities with a consumption tax. Regardless of how the taxpayer shifts revenue between *Donatello* and *Raphael*, assuming that they are both sold after two years, the taxpayer still would pay \$96.80 in tax at the end of the second year on \$242 of revenue.¹⁰²

The cash flow consumption tax also would prevent tax planning by shifting income between investment gain and salary. If the tax rate on salaries were the same as the tax rate on investment gain, then because gain would be subject to tax at full ordinary tax rates, the cash flow tax would treat an additional dollar of salary the same as an additional dollar of gain. Accordingly, a cash flow consumption tax also would eliminate the incentive to shift income between investment profits and salaries.¹⁰³

The cash flow tax does not encourage either time- or character-shifting tax planning because the EMTR on economic gain always would be the statutory rate. The EMTR is the statutory rate because if the asset increased in value over time at the rate of interest, the tax liability would increase at that rate. Thus, if the asset increased over time at the rate of interest, the EMTR would be unchanged. If the asset increased at a faster (slower) rate, the additional gain (loss) would be taxed at the statutory rate when recognized. Thus, the EMTR for that gain (loss) also would be the statutory rate. Moreover, because the EMTR always would be the statutory rate, there would be no opportunities for entity-shifting tax planning by shifting between capital gain and earned income.

How is it that a cash flow tax can eliminate both forms of tax planning? The key lies in the difference between the tax treatment of the ordinary return on investment by an income tax and a cash flow tax. An income tax subjects the ordinary return to tax; a cash flow tax exempts that return. Both taxes subject the net present value of an

¹⁰¹ The cash flow tax also eliminates any incentive for taxpayers to defer consumption for tax reasons. If *Donatello* was sold after one year and the proceeds were used for consumption, the tax would be \$44. If it was sold after two years (*Raphael*), the tax would be \$48.40, which has a present value of \$44. Thus, the present value of the tax liability would not be affected by deferral.

¹⁰² Shifting income to *Leonardo*, which was purchased one year ago, would not change the liability either. The tax still would be 40% of the total revenue.

¹⁰³ See generally Noël B. Cunningham, *The Taxation of Capital Income and the Choice of Tax Base*, 52 *Tax L. Rev.* 17 (1996).

investment to tax.¹⁰⁴ Because an income tax subjects the ordinary return to tax, a taxpayer, by deferring gain, reduces the ordinary income she earns between the date she first considers recognizing the gain and when she eventually recognizes it.¹⁰⁵ The elimination of this income from tax is the saving from deferral.

The Auerbach and Bradford retrospective tax systems eliminate such tax planning by fixing in advance the date at which the gain, if any, is considered to be recognized.¹⁰⁶ Because the date at which any gain or loss is presumed to arise is set in advance, delaying realization would not reduce ordinary income at any time. That eliminates the incentive to defer income because the taxpayer no longer could reduce her ordinary income by deferring sale.

The retrospective tax systems, by fixing the date at which the gain is presumed to occur, however, cause taxpayers to be concerned with that date. The sooner the gain is presumed to occur, the greater the ordinary return from capital, and thus the greater the tax liability. This provides taxpayers with an incentive to engage in character-shifting tax planning. By shifting income to assets where the gain is presumed to arise later, taxpayers could reduce their ordinary income, reducing their tax liabilities.

In contrast, a cash flow consumption tax eliminates both types of tax planning. Because the cash flow tax exempts from tax the ordinary return from capital, the amount of ordinary income and the time it arises would not affect the taxpayer's tax liability. Only the magnitude of any extraordinary gain or loss affects that liability. Thus, the cash flow tax eliminates the incentive to defer income in order to reduce or defer the amount of ordinary income. Furthermore, because the presumed gain would increase over time at the rate of interest, the present value of that gain would be unchanged by deferral. Thus, with a cash flow tax, taxpayers would be unconcerned with when the gain is presumed to arise. Thus, with a cash flow tax there would be no incentive to shift income between assets for which the gain was presumed to arise on different dates.¹⁰⁷

¹⁰⁴ Michael S. Knoll, *Designing A Hybrid Income-Consumption Tax*, 41 *UCLA L. Rev.* 1791, 1801-02 (1994); Jeff Strnad, *Taxation of Income from Capital: A Theoretical Reappraisal*, 37 *Stan. L. Rev.* 1023, 1029-30 (1985); 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, 4-6 (1996).

¹⁰⁵ This statement is still correct if the income tax is assumed to subject only the risk-free rate to tax through portfolio shifts. See Warren, note 104, at 6-13.

¹⁰⁶ With the Auerbach method, that date is the date the asset was acquired, text accompanying note 46; with the Bradford method, it is the GRD, text accompanying note 52.

¹⁰⁷ The cash flow tax is in substance equivalent to the Bradford method with a tax rate of zero on the interest (the ordinary return to investment). With such a version of the Bradford method, the tax liability would be independent of the GRD. The interest on the

It is, therefore, possible to implement a simple tax system that does not contain embedded within it the incentive to engage in tax planning. That is possible, however, only if the ordinary return from capital is exempt from tax, which is to say, if the tax is a cash flow consumption tax and not an income tax.

VI. CONCLUSION

The architects of the tax system face a choice. They can design a simple, realization-based income tax system with a basic structure that either encourages time- or character-shifting tax planning. For the basic structure of a simple income tax to eliminate one form of tax planning, however, it must encourage the other. It cannot do both. Alternatively, they can adopt a simple cash flow tax, which can eliminate both time- and character-shifting tax planning, but only by exempting the ordinary return on an investment from tax and embracing a consumption tax.

smaller tax from an earlier and smaller gain would just offset the increase (at the rate of interest) of the gain and hence the tax with a larger and later gain.