TRACING RULES AND THE DEDUCTION FOR INTEREST PAYMENTS: A JUSTIFICATION FOR TRACING AND A CRITIQUE OF RECENT U.S. TRACING RULES

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In an article published in 1981, I set forth and defended a general principle to govern the deductibility of interest payments in a well-designed income tax system. According to that principle, the deductibility of interest payments on a loan ought to turn on the use made of loan proceeds. Defending this deceptively simple principle forced a reexamination of issues at the very foundation of the personal income tax and a challenge to the considered views of many distinguished tax analysts.

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For my principle to have any practical significance, I needed to develop a set of tracing rules that would allow for its implementation. My 1981 article set forth in some detail the tracing rules appropriate for an income tax system designed to achieve the traditional tax policy goals of fairness, economic efficiency, and administrative economy. A short article of mine published three years later discussed in general terms the special tracing problems created by the inclusion of tax expenditures in an income tax. That later article also discussed the heightened need for a tracing system in an inflationary economy.

Section I(A) of this paper discusses my general approach to tracing in an ideal income tax. That section draws heavily from my 1981 article. Section I(B) briefly addresses two common fallacies about tracing. Analysts who have embraced these fallacies have been led to favor a special tax regime for interest payments, divorced from the treatment they would give to expenditures that are strongly analogous to interest payments. Section I(C) distinguishes a tracing system, such as the one recommended in this Article, and a system for matching interest payments with one or more categories of income. As that section explains, tracing is consistent with the basic organizing principles of an income tax, whereas matching is typically an ad hoc response to some of the problems created by an unlimited deduction for interest payments.

Section II addresses tracing issues in a tax system that includes significant tax-expenditure provisions. Tracing rules appropriate for an ideal tax system need to be modified, in some cases quite substantially, to advance the goals of a tax expenditure. Section III discusses tracing rules designed for a tax system that excludes from taxable income some portion of the inflation component of nominal capital gains.


5. My 1981 article addressed the problems of inflation but not in great detail. The beginning of wisdom in a discussion of inflation issues is the realization that a portion of interest in an inflationary economy is a prepayment of principal. See McIntyre, supra note 1, at 796-98.
Section IV sets forth a brief description of the 1986 U.S. reforms of the interest deduction, as amended by subsequent legislation, and my critique of those reforms. I conclude that the U.S. reforms, which require tracing, represent a significant step towards the ideal treatment of interest deductions that I have recommended, despite the major political constraints under which U.S. policy-makers were operating. Although debates continue in academic quarters over the theoretical merits of tracing, the supporters of tracing have won a major political victory in the United States. That victory is probably irreversible for the foreseeable future.

This Article does not address the special problems of designing limitations on the interest deduction for corporate taxpayers. Concepts of tax fairness developed to govern the design of a tax on individuals apply only by analogy to a corporate income tax system. Most of the limitations on the deductibility of interest defended here ought to apply, nevertheless, to corporate taxpayers. Corporations should not be allowed to deduct interest payments on a loan unless the proceeds of the loan were used to produce current income.6

I. TRACING IN AN IDEAL INCOME TAX SYSTEM

Section I(A) explains why tracing is necessary to achieve a fair distribution of tax burdens in a tax system designed according to Haig/Simons principles. Section I(B) addresses two common fallacies: (1) the fungibility of money undermines the legitimacy of a tracing system and (2) the imposition of otherwise appropriate limitations on the deductibility of interest would create a systemic and unfair bias in favor of holders of property.

I refer to tracing of expenditures to their actual use as "physical tracing." I contrast "physical tracing" with tracing that makes use of simplifying accounting conventions designed to achieve the goals of physical tracing. Those accounting conventions are "pre-

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6. Thus interest paid by a corporation on debt incurred to acquire corporate stock generally should be treated as an acquisition cost, not a current expense. For a proposal to limit the current U.S. deduction for corporate interest payments, see Alice G. Abreu, *Distinguishing Interest from Damages: A Proposal for a New Perspective*, 40 Buff. L. Rev. 373 (1992). That proposal relies on tracing. Professor Abreu argues persuasively against a deduction for interest paid on corporate tax deficiencies. In the concluding section of her article, she suggests that a properly designed tracing system would impose additional limitations on the deductibility of corporate interest.
sumptive tracing rules” in my locution, and their use is “presumptive tracing.”

An “ideal” or “model” income tax system in this lexicon is one in which all of the system’s features have been designed so as to achieve some specified and rational goals. By characterizing a tax system as “ideal,” I do not mean to suggest that it meets some agreed criteria for a fair tax system. I simply mean that it has been designed according to logical requirements rather than, for example, the pressures of ad hoc political deals. What makes a system ideal is that the rules comprise a genuine system, with all the parts operating in harmony as means to specified ends.

A. Summary of the General Approach

Section I(A)(1) describes the tracing rules that I believe should govern the deduction for interest payments in an ideal income tax system designed according to Haig/Simons principles. Section I(A)(2) describes my proposed tracing rules for model income tax systems with less ambitious design criteria.

1. A Haig/Simons System

In a tax system based on Haig/Simons principles, the tax base is defined in terms of the uses of income. According to Simons’

7. After the publication of my 1981 article, some commentators began to use the term “stacking rules” to refer to a set of conventions for limiting the deduction for interest. See Stanley Koppelman, Tax Arbitrage and the Interest Deduction, 61 S. Cal. L. Rev. 1143, 1211-12 (1988). The “stacking rules” proposed by Professor Koppelman and others differ in important respects from my presumptive tracing rules. See infra, sections II(A)(1)-II(B)(2).

At least four alternatives to tracing have received support in the tax literature from time to time. All of these alternatives would create a special tax status for interest payments. One alternative allows a deduction for all interest payments. The second alternative imposes percentage limitations or other ad hoc limitations on the deductibility of all interest payments. The third alternative, described as “strict stacking,” treats interest payments as a cost of holding tax-favored assets without reference to the historical events that led to the acquisition of those assets. The fourth alternative makes the deductibility of interest on a loan turn on the taxpayer’s real or presumed intent in making that loan.

8. Analysts must have some general design criteria in order to construct a model tax system. For a discussion of my design criteria, see McIntyre, Contributions, supra note 2, (presenting a model income tax structure, with its components classified by function). See also McIntyre, Implications of Family Sharing, supra note 2 (extending my model to other personal taxes).

famous formula, an individual taxpayer’s taxable income should be computed by taking the algebraic sum of (1) the market value of the taxpayer’s consumption during the taxable period and (2) the net change in the market value of the taxpayer’s assets during that period. In a system seeking to tax consumption plus savings directly, a taxpayer’s interest payment that was properly classified as consumption would be taxable—that is, the amount of the payment would be included in the measure of the taxpayer’s taxable capacity. All other interest payments would be included in the tax base only to the extent that they affected the savings component of income.

Because money used by a taxpayer to pay interest would not be on hand at the close of the taxable period, it would not be directly included in the savings component of the taxpayer’s taxable income. Interest payments used to finance the purchase of an asset, however, would be taxable indirectly to the extent that the borrowing resulted in an increase in the amount of assets held by the taxpayer at the end of the taxable period.

Consider, for example, a taxpayer, A, who earns wages during the taxable period of $50,000 and who borrows $100,000 at ten percent interest to buy raw land for investment. At the start of the period, A has no assets and no liabilities. A pays interest of $10,000, which is not a component of his consumption. A engages in no other transactions during the taxable period. The $10,000 interest payment reduces A’s cash holding from $50,000 to $40,000. Assuming the land purchase was a good investment, the land will have appreciated in value by at least $10,000, and the tax base will include the amount of that increase. Thus, because of the effect on A’s asset holdings, the $10,000 interest payment is indirectly taxable to A as an element of savings.

Tax analysts have always envisioned that a practical Haig/Simons tax system would estimate a taxpayer’s consumption and savings from available information about the taxpayer’s income sources. In this scenario, gross income items received by a tax-

11. See Andrews, supra note 9. In writing my 1981 article, I was unable to locate in the tax literature a formula for calculating Haig/Simons income on the basis of income sources. Developing such a formula turned out to be moderately complex. The formula requires special rules to deal with assets acquired during the taxable period. Care must also be taken to ensure that the rules employed to allocate income to a particular taxable person and to a particular taxable period on the income-sources side of Simons’ formula are the same as
payer would be included tentatively in that taxpayer’s taxable income. The income figure so determined would be reduced by various allowable deductions. Deductions typically would be allowed for costs of earning taxable gross income and would not be allowed for expenditures properly classified as consumption. Certain expenditures unrelated to the earning of taxable income might also be deductible on the ground that they do not constitute taxable consumption as properly defined. For example, some commentators have argued that medical expenses and charitable contributions should be excluded from the definition of consumption as used to define the tax base of a personal income tax.\textsuperscript{12}

The traditional way of identifying a properly deductible expenditure is by examining the use made of the goods and services that the expenditure finances. In my lexicon, the rules for linking an expenditure with its ultimate use are “tracing” rules. In some instances, an expenditure has an immediate link with the earning of gross income. For example, a sales person’s salary may be directly linked with the gross income obtained from that person’s sales. In other cases, expenditures are linked with the earning of gross income through a chain of transactions. One such type of expenditure is rental payments, including payments made for the use of someone else’s money. For example, the deductibility of a payment for rent of an office would depend on the use made of that office.

To justify a deduction for a rental payment in a Haig/Simons income tax system, the taxpayer typically must demonstrate that the chain of transactions that began with the rental payment has resulted in the acquisition of assets (including goods or services) that contribute to the earning of gross income. For example, to determine whether a rental fee paid for the use of an automobile should be deductible, it is necessary to show, first, that a rental payment was made that resulted in the acquisition of the use of an automobile and, second, that the automobile was used to earn gross income.

With the possible exception of money borrowed simply to increase cash on hand, a payment for interest on a loan always

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\textsuperscript{12} See, e.g., Andrews, supra note 9 at 314-16, 331-75 (defending the medical expense deduction and the deduction for charitable contributions). I generally would defend the deduction for income taxes paid to subnational governments on tax policy grounds.
requires tracing beyond the initial receipt of the loan proceeds. It is necessary to see what goods or services were obtained with those loan proceeds and how those goods or services were used.¹³

Section I(B), below, presents the two chief arguments for giving a special status to interest payments. My argument for tracing is an argument against a special status for interest payments. I contend that the deductibility of all expenditures in a Haig/Simons income tax should depend on the use made of the assets (including goods or services) ultimately obtained from those expenditures. The assets ultimately obtained from an interest payment are the assets obtained from the proceeds of the loan for which that interest was paid.

Under a tracing system that makes the deductibility of interest depend upon the actual use of borrowed money, taxpayers would have a tax incentive to pay deductible expenditures out of borrowed money and to pay for consumption goods either out of current income or by drawing down assets acquired in a prior taxable year. For example, under a pure tracing system, a taxpayer holding $1,000 worth of stock and contemplating a $1,000 consumption expenditure would get a better tax result by selling the stock, using the proceeds to make the consumption expenditure, and then borrowing $1,000 to repurchase the stock.

The incentive illustrated above for using saved money rather than borrowed money to finance consumption is simply the mirror image of the famous “double tax” on savings produced by a Haig/Simons income tax. Assuming that the income tax is itself fair, the incentive feature is also fair—at least it would be fair in a world in which all taxpayers had access to good tax planning and had equal ability to reshuffle their asset holdings to benefit from the incentive.¹⁴

¹³. As I use the term, tracing has nothing whatsoever to do with the determination of a taxpayer's motive or intent in incurring an interest obligation. The tracing rules most familiar to U.S. tax analysts are those developed to implement the limitation on the deduction for interest incurred to purchase or to carry tax exempt bonds. See I.R.C. § 265(a)(2) (1992). Most commentators, myself included, consider the § 265(a)(2) tracing rules to be unprincipled and unworkable. I have been accused, nevertheless, of wanting to make intent the touchstone of deductibility. See David Shakow, Confronting the Problem of Tax Arbitrage, 43 Tax L. Rev. 1, 28 (1987) (asserting, incorrectly, that I am “concerned primarily with an individual’s intentions” in my approach to the interest deduction). Professor Shakow also suggests, I hope incorrectly, that tax analysts “swayed by economic arguments are unimpressed by specific tracing.” Id. I might agree with Shakow’s statement if he substituted “intoxicated” or “misled” for “swayed.”

¹⁴. See McIntyre, supra note 1, at 774-78 for an extended defense of the
To prevent unfairness in the real world, I proposed in my 1981 article a second principle, which I will call my special principle, to govern the design of tracing rules. According to the special principle, the tracing rules of an ideal income tax should be designed, to the extent feasible, to give taxpayers the benefits of optimal tax planning. Under tracing rules designed to implement that principle, taxpayers would be treated as if they had actually taken advantage of optimal tax planning advice by liquidating their savings to finance their consumption and by using their borrowed funds to finance a deemed reacquisition of the assets actually acquired out of saved income. In a Haig/Simons income tax, the end result would be that interest on a loan would be characterized as a cost of consumption only if the amount of the loan exceeded the taxpayer’s savings on hand at the time the loan was made.

As a practical matter, the tracing rules I endorse for a Haig/Simons income tax would allow the deduction of most interest payments. Only net borrowers—persons who borrowed in excess of the value of their assets—would face a disallowance of the interest deduction. Contrary to popular belief, net borrowers are typically not poor. In most countries, the class of persons who borrow in excess of their assets is comprised primarily of young professionals and other individuals with excellent prospects for earning high incomes. The sardonic truth is that large loans generally go to those who can demonstrate that they do not need them. Banking and other financial institutions will rarely intentionally lend significant sums to the genuinely poor.\textsuperscript{15}

The special principle set forth above would not necessarily be applicable in designing tracing rules to implement tax-expenditure provisions. The design of tracing rules for a tax system that includes tax expenditures is the topic of Section II of this Article.

2. Modified Haig/Simons Systems

In the real world, all tax systems depart from the Haig/Simons ideal in at least two respects. First, they allow (with very limited exceptions)\textsuperscript{16} for the deferral of gains derived from the appreciation fairness of allowing taxpayers to minimize their taxes by drawing down their assets and spending the proceeds on consumption.

\textsuperscript{15} According to Mark Twain, "A banker is a fellow who lends you his umbrella when the sun is shining and wants it back the minute it begins to rain." \textit{The Dictionary of Humorous Quotations} (Evan Esar ed., Dorset Press 1949).

\textsuperscript{16} See, \textit{e.g.}, I.R.C. \textsection 1256 (taxing certain hedging transactions currently under marked-to-market system), 1272 (1988) (current taxation of original issue discount).
of assets until the gains have been realized through a disposal of those assets. Second, they provide a special tax regime for foreign source income, either exempting that income, deferring tax on it until repatriation, or reducing the tax otherwise imposed on it through the allowance of a foreign tax credit. Of course, most income tax systems depart from Haig/Simons principles in other ways: by providing tax incentives for favored activities; by exempting imputed income from home ownership; by giving a special concessional rate on capital gains; and so forth.

When designing rules to govern the deduction for interest payments in a modified Haig/Simons system, the principles I would apply are the same as those described in section I(A) above. First, the deduction for interest payments on a loan should depend upon the use made of the loan proceeds. Second, taxpayers should be given the benefits of optimal tax planning through the judicious use of presumptive tracing rules. In proposing these tracing rules, my assumption is that the modified Haig/Simons system is being designed to advance tax policy goals rather than spending goals or unarticulated special interest goals. As explained in Section II, below, different criteria should be used to design tracing rules in a tax system that contains tax-expenditure provisions.

In my 1981 article, I proposed that the tax techniques generally employed to match deductions with particular categories of income should generally be employed to link interest payments with the use made of borrowed money. I argue, for example, that interest paid on a loan that financed the acquisition of a capital asset should be capitalized. That is, each interest payment should be added to the cost basis of the asset in the year the payment is made. The interest expense would then reduce the gross taxable

17. Many tax analysts view the realization requirement as an undesirable feature of an ideal income tax system. Opponents of the realization rule might favor special limits on the interest deduction as an "nth best" technique for taxing unrealized gains. See infra note 38 for discussion of nth-best solutions. Other departures from Haig/Simons principles are also controversial. In my ideal tax system, I would retain some elements of the realization rule. For example, I would not impose a tax on unrealized gains in human capital. See McIntyre, Retrospective Comments, supra note 2. This Article does not address the merits of the realization rule and of other departures based on policy from Haig/Simons principles.

18. See generally McIntyre, supra note 1, at 780.

income it helped generate over the life of the asset in accordance with the tax system’s capital recovery mechanisms.

Similarly, I argue that interest expenses properly attributable to the earning of foreign source gross income should be matched with that gross income and should be allowed as a deduction only when that gross income is taxed.20 I noted that some of the techniques commonly used to match deductions with income are flawed, and I discussed in some detail the refinements that should be made in those techniques before applying them to interest payments.21

As an example of how presumptive tracing rules ought to operate to give taxpayers the benefits of optimal tax planning, I set forth tracing rules for an ideal income tax system applicable to realized income. In that ideal system, all Haig/Simons income would be fully taxed except for unrealized gains on appreciated property. Those tracing rules would need modification before their application to a tax system that has a preference for income other than unrealized appreciation. My methodology for designing tracing rules could be employed, however, without modification.

My first tracing rule applicable to an ideal realization system links interest paid on purchase-money loans and similarly tied loans to the use made of the loan proceeds. Thus, interest paid by a taxpayer on the typical home mortgage loan would be linked with the taxpayer’s home. The typical second mortgage would not be a tied loan. A tied loan, in my lexicon, is one that may only be used for a purpose specified by the lender. In the typical tied loan, the lender takes a security interest in the acquired property. This feature of the tied loan, however, is not relevant for my tracing rules. The important feature is that the proceeds of a tied


21. See McIntyre, supra note 1, at 788-93 for a discussion of the changes that would have to be made in the cost-recovery rules applicable to certain intangible property, such as bonds, to provide for the recovery of some portion of interest expenses over the life of that property. For a discussion of the policy implications of tracing, see Brian J. Arnold, Is Interest a Capital Expense?, 40 Can. Tax J. 533, 549-53 (1992). As Professor Arnold explains, Canada initially treated all interest payments as capital cost. This is the exact opposite of the U.S. approach. Over the years, the U.S. and Canada have both moved toward a tracing system. The Canadian government made a budget proposal in 1981 for a full tracing system roughly in accord with the system recommended in McIntyre, supra note 1. Arnold, supra, at 553.
loan are not fully fungible. That is, a taxpayer generally could not change the use of the proceeds of such a loan in response to expert tax advice.  

My second rule matches the taxpayer's actual purchases during the taxable period with the proceeds of untied loans incurred during that period according to a set of accounting conventions. The intent of these conventions is to guarantee that taxpayers get the maximum tax advantage obtainable through the judicious allocation of their interest payments.

A system designed to achieve tax policy goals would most likely allow a current deduction, the most favorable treatment granted in a tax system, for expenditures linked to the earning of current business income. In such a system, a well-advised taxpayer would use the loan proceeds to finance current business operations. Therefore, under my presumptive tracing rules, I provide that money borrowed during the taxable year is first allocated to business expenditures made during that year.

The balance of the borrowed money, if any, would be allocated to the next favored use of money in the tax system. In an ideal tax on realized income, that use would generally be the purchase of depreciable property. Thus, the proceeds of loans incurred during the taxable year in excess of current business expenditures would be allocated to purchases of depreciable property made during the year. Any balance in the proceeds of loans for the year would be allocated to the next favored use, and so forth, until all other proceeds had been linked with some expenditure made during the taxable year. Interest would be allocated to present consumption—the use that would provide no tax benefit—only if the proceeds of the loans obtained during the taxable period exceeded

22. Some taxpayers, typically those with substantial net savings, might alter their loan portfolios in response to the tracing rules proposed in the text. See Koppelman, supra note 7, at 1208. Contrary to Koppelman's suggestion, the likelihood of some behavioral responses does not imply that the proposed rule is defective. Under my permissive tracing rules, taxpayers with net savings should be allowed an interest deduction in the typical case. Moreover, in the extremely important case of tax shelters funded with purchase-money loans, the likely behavioral response would be the demise of the shelters. Generally, taxpayers could not convert their loans tied to tax-shelter investments because those loans are seldom commercially viable.

23. In some circumstances, a taxpayer might prefer an allocation of interest to inventory purchases. Some refinements in my presumptive tracing rules might be appropriate to deal with such situations.
the total amount spent during the taxable year for purposes that would generate a present or future tax benefit.\textsuperscript{24}

Employed in an ideal tax on realized income, my proposed tracing rules would prevent taxpayers from financing a high level of personal consumption by borrowing against the unrealized appreciation of their stocks, real estate, and other investment assets. The application of my methodology to the design of interest deduction rules for tax systems having additional source distinctions would result in additional reforms. For example, it would curtail certain unintended tax shelter benefits, and taxpayers engaged in both foreign and domestic operations could no longer understate their domestic source income by claiming a deduction for interest payments properly attributable to foreign source income.

B. Two Fallacies

Opposition to limitations on the deductibility of interest payments is commonly grounded on two fallacious positions. First, commentators sometimes assert that tracing makes little sense because of the fungibility of money.\textsuperscript{25} Section I(B)(1) addresses that contention. Second, commentators reject these limitations based on the belief that interest constitutes a form of “negative income.”\textsuperscript{26} Section I(B)(2) addresses the nebulous concept of negative income.

1. Tracing and the Fungibility of Money

The usual function of money is to buy goods and services in the marketplace. For that purpose, a borrowed dollar (or other unit of currency) and a saved dollar are often fungible.\textsuperscript{27} According

\begin{itemize}
\item \textsuperscript{24} McIntyre, supra note 1, at 782-84.
\item \textsuperscript{25} See, e.g., Koppelman, supra note 7, at 1209 (“it is difficult to understand the theory for adopting a tracing rule”); William D. Popkin, Introduction to Federal Income Taxation 505 (1987 & Supp. 1990) (“[T]racing makes little sense. Money is fungible.”).
\item \textsuperscript{26} The phrase “negative income” comes from White, supra note 3. It is used in Musgrave & Musgrave, supra note 3, at 256-57 (both types of interest are cost payments or negative income streams).
\item \textsuperscript{27} Commentators frequently assert without qualification that money is fungible. In many instances, however, money is not fungible. For example, coins having special value to collectors are not fungible with coins that have value as bullion or that have value only as a medium of exchange. Bills are not fungible with coins for operating some vending machines or for paying tolls at an automatic toll booth. Foreign currency is not always fungible with domestic currency. Most importantly, borrowed money that the lender has tied to a particular use is not fully fungible with saved money.
\end{itemize}
to some commentators, this shared characteristic of saved and borrowed dollars makes tracing economically meaningless and administratively difficult.

Taxpayers may create circumstances in which physical tracing is difficult or even impossible. Suppose, for example, that taxpayer T deposits $2,000 in her checking account, with $1,000 from her savings account and the other $1,000 from the proceeds of a loan. Obviously, when T writes a check for one dollar, it is impossible to know whether she has spent a saved dollar or a borrowed dollar.\textsuperscript{28}

In the example above, tracing became impossible because of T's actions. Those actions, or the possibility of such actions, do not justify a more favorable tax regime for interest payments than for other types of expenditures. One possible solution to T's tracing problem would be to adopt presumptive tracing rules, as I have recommended. An alternative solution would be to discourage taxpayers from commingling borrowed and saved dollars. This could be done by placing upon the taxpayers the burden of establishing the link between an interest payment and the use of their borrowed money. For expenditures other than interest, the usual rule is to deny taxpayers a deduction unless they establish a link between their expenditure and a tax-deductible use.

The following example illustrates the fallacy of the argument against tracing based on the fungibility of money. Consider taxpayer F who leases two Lincoln Town cars for a year at a monthly rental fee of $500 per car. For all relevant purposes, the cars are fungible. The cars are typically parked in F's driveway and are used by F and his wife, G. F sometimes uses a car for business and sometimes for pleasure. G never uses a car for business. For obvious reasons of convenience, F and G take whichever car is at the top of the driveway whenever they want to drive somewhere. F and G file a joint tax return. The question arises as to the allowable deduction for the automobile rental fees.

Should the taxpayers be allowed to deduct all of the car rental fees? More specifically, does the fungibility of the rented property justify a universal deduction for the cost of renting a car? The answer is clearly no. F and G could not strengthen their claim for a full deduction, moreover, by demonstrating the difficulties that they might encounter in distinguishing between the two cars.

\textsuperscript{28} Trust law may employ tracing rules in determining claims to assets held in a joint account.
The proper result, in the example above, would be to allow F and G a deduction for the portion of their rental fees attributable to the business use of the cars. If the cars were not fungible, the taxpayers would be required to keep records of the business use of each car. Because the cars are fungible, however, physical tracing of the rental fees to the business use of each car might be unnecessary. The portion of the rental fees attributable to business could be determined by multiplying the total fees by a fraction. The numerator would be the total business miles driven on both cars, and the denominator would be the total miles driven on the cars for any purpose.

As the example above illustrates, the fungibility of rental property does not undermine the case for making the deductibility of rental fees turn on the use of the rented property. In the case of the rented cars, their fungibility allows for some simplification in the recordkeeping otherwise required of the taxpayers. Just as it would be economically meaningful in that example to distinguish between the business use and the personal use of the cars, it also would be economically meaningful to distinguish between loans used to finance income-producing activities and loans used to finance personal consumption.

Distinctions might be made between rental fees paid for the use of borrowed money and rental fees paid for the use of other fungible property. The analogy between interest payments and other types of rent, however, is quite strong. In the example above, the rental fees paid by F and G had several components. A major component was compensation for the time value of the rental car owner’s money—that is, interest. Indeed, interest is a major com-

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29. My 1981 article begins by defining interest as “a type of rental payment — an amount paid for the use of borrowed money.” McIntyre, supra note 1, at 766. I coined this definition to highlight the analogy between interest payments and rental payments for the use of tangible property. I do not address the many nice questions that can arise as to whether particular payments constitute interest. I generally assume in this Article that the lender intended to create a debt obligation and that the borrower received money directly from the lender.

Under U.S. case law, interest has traditionally been defined as “an amount paid for the use or forbearance of money.” See Abreu, supra note 6, at 398. Abreu would not classify a payment as “interest” unless the recipient of the payment intended to create a debt obligation. Thus a damage payment intended to compensate a taxpayer for his inability to earn interest would not constitute interest under Abreu’s definition. Canadian case law apparently requires the lender to have an intent to create an indebtedness and to have transferred property or services to the borrower for a payment to constitute interest.
ponent of most rental payments.\textsuperscript{30} Radically divergent tax treatment of interest payments and other rental payments is difficult, perhaps impossible, to justify. As the example of the fungible cars illustrates, the fungibility of money provides no ground for divergent treatment.

The various commentators who indulge the fungibility fallacy are not necessarily in agreement over the proper treatment of interest payments.\textsuperscript{31} They may recommend that all interest payments receive favorable tax treatment or that some or all interest payments receive unfavorable treatment. Despite these differences, they seem to agree that the fungibility of money requires a special status for interest payments and that those who reject that position have probably failed to appreciate the economic significance of fungibility.

2. "Negative Income" and Forgone Investment Income

Some commentators contend that a universal interest deduction (UID)—a deduction for all interest payments without reference to the use of the loan proceeds—is needed in an ideal income tax system to prevent the system from having an unwarranted bias in favor of savers.\textsuperscript{32} The following example, taken from my 1981 article, illustrates the crux of the case for a UID:

Consider two taxpayers, both of whom have a net salary of $12,000. Mr. Ant, a thrifty person, holds a $1,000 money market certificate earning 10% interest; Mr. Grasshopper, who is a spendthrift, has accumulated no savings at all. Assume that Mr. Ant and Mr. Grasshopper both spend $1,000 on a personal vacation. Mr. Ant finances his vacation by cashing in his demand certificate. Mr. Grass-

\textsuperscript{30} With a modest change in the facts of the example in the text, the implicit interest payment made by F and G could be made explicit. If F and G obtained the use of the cars for a year by purchasing them from the owner with a purchase-money loan and then sold them back to the former owner at the end of the year, they presumably would suffer some loss on the final sale, due in substantial part to depreciation of the cars. That loss plus the interest paid on their loan would approximate the rental fees they would have been obligated to pay under the facts presented in the text.

\textsuperscript{31} See, e.g., Koppelman, \textit{supra} note 7 (arguing for use of a strict-stacking rule to place severe limitations on the deduction for interest payments) and Shakow, \textit{supra} note 13 (arguing generally against limitations on the interest deduction).

\textsuperscript{32} See, e.g., Gunn, \textit{supra} note 3; \textit{White}, \textit{supra} note 3.
hopper finances his by borrowing the $1,000 at 10% interest. Assume also that Mr. Grasshopper pays $100 in interest on his loan, and that he and Mr. Ant spend all of their remaining net income on food and recreation. Both have enjoyed the benefit of a vacation worth $1,000, but Mr. Ant has $100 more than Mr. Grasshopper to spend on food and recreation. Unless permitted a deduction for his interest payment, Mr. Grasshopper will pay the same amount of tax as Mr. Ant, despite this difference in spending power.\textsuperscript{33}

In my 1981 article, I argue that equal treatment of Mr. Ant and Mr. Grasshopper is appropriate under the facts of this example in an ideal tax system based on Haig/Simons principles, including a modified Haig/Simons system. Mr. Ant’s advantage over Mr. Grasshopper stems from Mr. Ant’s decision in a prior taxable period to save $1,000. He presumably paid an income tax on that income and paid tax on any investment income generated by the investment of that income. Mr. Ant is now in a position to forgo the yield on his savings and convert the savings to consumption. It is entirely consistent with the logic of an income tax to allow him that advantage.

The only way to deprive savers systematically of the tax advantage they obtain by drawing down savings to finance consumption is to tax them on the income they could have earned from that savings. To do so, however, would convert the income tax into a tax on potential income. It would also provide no benefit to Mr. Grasshopper in the above example, assuming that he had forgone savings in a prior taxable period.

Characterizing interest payments as negative income does not strengthen the argument for a UID discussed above. The concept of “negative income” is muddled.\textsuperscript{34} In accounting terms, the opposite of “positive” income is a loss. It is farfetched to claim

\textsuperscript{33} McIntyre, \textit{supra} note 1, at 775. In attempting to make a case for a UID, some commentators use an example in which two taxpayers both have savings. One borrows and the other draws down his assets. The latter taxpayer, by reducing his investment income, would get the benefit of an interest deduction. In a tracing system that always requires physical tracing, the two taxpayers would receive unequal treatment. Under the tracing rules I proposed for a Haig/Simons income tax system, however, both taxpayers would get the deduction.

\textsuperscript{34} See Gunn, \textit{supra} note 3. Although Gunn rejects the characterization of interest as negative income, he nevertheless favors a UID to avoid what he considers an unfair burden on net debtors—a class he assumes to be poor.
that a taxpayer necessarily suffers an accounting loss either by incurring an obligation to pay interest or by discharging that obligation through the payment of interest due.

In my view, the members of the negative income school have committed what Henry Simons has characterized as "the folly of describing income as a flow." To treat interest payments as a form of negative income is to assign some independent status to those payments based on their inherent characteristics. According to Simons, however, income "exists only as the end result of appropriate calculations." It cannot be comminuted into a series of positive and negative flows without altering its fundamental character.

C. Tracing Versus Matching

Many commentators had proposed substantial limitations on the deductibility of interest payments prior to the publication of my 1981 article. Some of those proposals have considerable intuitive appeal. Typically, the proposals were defended by reference to a matching concept borrowed from accounting. According to that concept, interest payments should be deductible only upon the taxation of the income associated with those payments. Thus, interest paid to earn tax-exempt income would never be deductible, and the deduction for interest paid to earn tax-deferred income would be deferred.

The tax lexicon traditionally has not made the sharp distinction between "tracing" and "matching" that I make in my writings on the interest deduction. As indicated above, I reserve the term "matching" to signify the linking of interest payments with the particular sources of income that they are thought to generate. In my 1981 article, I argued that the appropriate linking in a tax system based on Haig/Simons principles should be between interest payments on a loan and the use made of the loan proceeds. I took the term "tracing," which had been used without any pretense of precision in the tax literature, and refined its meaning to conform with that theory.

In my 1981 article, I sought to refute the view of many tax analysts that the deductibility of interest should turn on the in-

35. Simons, supra note 10, at 51.
36. Id.
herent characteristics of interest payments—that these payments deserve a special status in an ideal income tax. My tracing system is proposed as a feature of a tax system designed according to Haig/Simons principles, including systems that depart from a pure Haig/Simons system by providing schedular treatment of foreign source income and by allowing deferral for some unrealized gains. In such a system, net income generally is taxable if it provides the taxpayer with consumption or savings benefits.

In operation, a practical income tax system assumes that an expenditure from gross income provides consumption or savings benefits unless the taxpayer “traces” an expenditure from gross income to a particular use and shows that the use did not provide such benefits. For example, a taxpayer justifies a deduction for rent paid to acquire space in a building by reference to the use made of that space. If the building’s use qualifies as a cost of earning income, then the taxpayer may deduct the cost. If rented for family living, the taxpayer may not deduct it. Similarly, the taxpayer should not be allowed to deduct interest on a loan without demonstrating that the loan proceeds did not finance his consumption or savings.

Matching, in contrast to tracing, is a special rule, designed to deal with perceived defects in the gross income rules of an income tax system. Proponents of matching implicitly assume that an interest payment is an inherently deductible expense in an ideal income tax system. However, in an imperfect tax system, in which some categories of gross income are not currently taxable, they believe that the deduction may properly be denied or deferred for interest matched with untaxed income. Thus, such a matching rule serves as an “nth best solution” to problems resulting from an inappropriate definition of gross income. As with all “nth best solutions,” the matching rule is difficult to defend. The defense depends almost entirely on questionable assumptions about its distributional effects in a specific tax system operating in a specific economic environment.38

38. A “second-best solution” to a problem is usually defined as the best possible solution to that problem given some unavoidable departure from the best solution. A best solution is established by reference to the axioms that define the problem being solved. Once the best solution is off the table for discussion, the best that can be attained is a second-best solution. No one can ever prove that a proposed solution to a problem is in fact the second-best solution. Second-best may be unattainable even when the departure from the best is trivial. In virtually all circumstances in which tax reform proposals are being formulated, analysts must accept more than one departure from the best solution, and those
In my view, matching is an ad hoc and rather fuzzy guideline, not a fundamental organizing principle of an income tax. It is not useful either for the design of a pure Haig/Simons income tax system or for the design of tax-expenditure rules. It does suggest a method for resolving certain timing issues in a tax on realized income—not surprising given the roots of the matching concept in accounting.\textsuperscript{39} It suffers from a fundamental operational weakness in that it assumes that particular interest payments can be linked with particular items of income without offering any guidance on how to establish that linkage. In contrast, I derived considerable guidance in the design of tracing rules by drawing on analogies to the accepted tracing rules applicable to other types of expenditures, such as rental payments made for the use of tangible property.

When the linkage between income and an interest payment is obvious, a matching system obtains intuitively appealing results. Those results, however, parallel those obtained in a tracing system. When the linkage between interest paid and income generated is unobvious or nonexistent, the matching concept gives little guidance as to the design of tax rules. Thus, the matching concept does not aid in determining how to treat interest payments made with respect to loans used to finance personal consumption.\textsuperscript{40} It also does not aid in determining the deductibility of interest on loans used to finance failed ventures.\textsuperscript{41}

II. Tax Expenditures and Tracing

Most tax systems, for better or worse, contain provisions that cannot be justified by reference to any of the traditional income

\textsuperscript{39} For discussion of timing issues, see Goode, \textit{supra} note 34, at 152.

\textsuperscript{40} See Melvin White & Anne White, \textit{Tax Deductibility of Interest on Consumer Debt}, 5 Pub. Fin. Q. 3 (1977) (demonstrating that a matching concept cannot justify the disallowance of interest on pure consumption loans); see also Melvin White & Anne White, \textit{Horizontal Inequality in the Federal Income Tax Treatment of Homeowners and Tenants}, 18 Nat'l Tax J. 225 (1965).

tax goals of fairness, efficiency, and administrative economy. Such provisions, commonly referred to as tax expenditures, may be justified in some cases as appropriate means to achieve some worthwhile spending goals. In other cases, they cannot be justified at all. Tracing rules designed to advance the worthwhile goals of a tax-expenditure provision or to limit the damage of an incoherent tax expenditure might differ significantly from the tracing rules designed to achieve fairness goals. Only by happenstance would those two sets of rules be the same.

In designing tracing rules for a tax system containing tax expenditures, analysts must confront two distinct problems. First, they must determine, for each tax expenditure, the tracing rules that would best advance its goals. Second, they must determine the optimal mix of tracing rules for best achieving the sometimes conflicting goals of various tax expenditures and the traditional tax policy goals of fairness, efficiency, and administrative economy. Getting an optimal mix may be complicated in some circumstances. For example, the effectiveness of many tax expenditures, especially those intended to provide an incentive for certain favored activities, depends upon the tax burdens imposed at the margin. The fairness of a tax system, in contrast, depends upon the overall tax burdens imposed over the taxable period.

In my 1984 article, I looked briefly at the tracing issues raised by the introduction of tax expenditures into a tax system. I expand my analysis of those issues here, making reference to the recent work of other tax analysts. Section II(A) discusses the proper treatment of interest used to finance the acquisition of tax-exempt bonds. Section II(B) discusses the treatment of interest used to finance the purchase of business assets that qualify for accelerated depreciation. The methodology illustrated in those sections could be applied to develop tracing rules for a broad assortment of tax expenditures.

The combination of an exemption or other preference for income with an unlimited (or improperly limited) deduction for interest presents taxpayers with opportunities for tax arbitrage. Some recent literature on the interest deduction has sought to determine whether tax arbitrage is an undesirable phenomenon that ought to be prohibited, or is a desirable—or at least benign—byproduct of appropriate interest-deduction rules. As the discus-

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42. McIntyre, supra note 4, at 976-79.
43. For discussion of the extent of tax arbitrage, see C. Eugene Steuerle,
sion below demonstrates, the case for and against tax arbitrage depends upon the goals of the particular tax preferences that produce the tax arbitrage opportunities. Depending upon the circumstances, rules that limit opportunities for tax arbitrage might defeat or advance those goals.

A. Tax-Exempt Bonds

To determine the appropriate deduction rules for interest on loans used to finance the purchase of tax-exempt bonds, analysts must determine, by postulate or otherwise, the objective that the preferential treatment of those bonds is intended to advance.44 Interest on state and local bonds has been exempt from tax in the United States since the adoption of the U.S. income tax in 1913. I strongly suspect that Congress initially granted the exemption to eliminate a possible ground for a constitutional challenge to the income tax.45 Section II(A)(1) discusses the design of interest

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44. For an early discussion of the implications of the deduction for interest on loans used to acquire or to carry tax-exempt bonds, see William A. Klein, Borrowing to Finance Tax-Favored Investments, 1962 Wis. L. Rev. 608 (1962).

45. The legislative history of I.R.C. § 103 (exclusion for interest paid with respect to state and local bonds) does not reveal the congressional purpose. In Pollack v. Farmer's Loan & Trust Co., 157 U.S. 429, aff'd on rehearing, 158 U.S. 601 (1895), the Supreme Court held that the taxation of the income from state and local bonds was unconstitutional. Commentators were uncertain, when the U.S. income tax was adopted in 1913, whether the 16th Amendment overturned Pollack on that issue. The Supreme Court has now asserted that it did. See South Carolina v. Baker, 485 U.S. 505 (1988).
deduction rules on the assumption that a national government has exempted the income from subnational bonds because of a constitutional mandate.

An alternative reason for exempting the income from subnational bonds from taxation is to provide the subnational governments with an indirect subsidy. The United States Congress probably continues the tax exemption for state and local bonds for that reason. Section II(A)(2) discusses the interest deduction rules that would contribute to the efficiency of the exemption as a subsidy for subnational governments.46

1. Exemption for Constitutional Reasons

For the sake of argument, assume that the sole purpose of the exemption for interest on subnational bonds is to satisfy a constitutional requirement and that no good reasons exist to extend the exemption beyond the constitutionally mandated minimum. Assume also that the Constitution does not prevent the national government from imposing limitations on the interest deduction. Under those circumstances, the national government should prevent borrowers holding subnational bonds from claiming an interest deduction on their outstanding loans, to the extent that those loans allowed them to acquire or to retain the subnational bonds.47

Consider, for example, a taxpayer, W, who holds subnational bonds and has an outstanding debt of $1,500. The bonds have a market value of $1,000. To achieve the alleged purpose of the exemption for interest on subnational bonds, W should be prohibited from deducting the interest paid with respect to $1,000 of her bonds.


47. In exempting income from subnational bonds from taxation in 1913, the United States Congress did provide, in what is now I.R.C. § 265(a)(2), that the interest deduction should be denied with respect to "interest on indebtedness incurred or continued to purchase or carry" tax-exempt obligations. The courts have interpreted that language to mean that a taxpayer investing in tax-exempt bonds loses the interest deduction only if the tax authorities have established that the taxpayer intended, in incurring a particular debt obligation, to acquire a tax-exempt bond. This intent test is wrong in principle and has proved unworkable in practice. See Wisconsin Cheeseman, Inc. v. United States, 388 F.2d 420 (7th CIR. 1968).
outstanding debt. The intended result would be that borrowers, in this circumstance, would not obtain any net benefit from the constitutional limitation on the power of the national government to tax interest on bonds issued by subnational governments.

The strict presumptive tracing rule illustrated above might be difficult to administer because of problems taxpayers and the government would occasionally encounter in determining the fair market value of subnational bonds.\textsuperscript{48} In addition, the implementation of that rule would require the development of complex allocation rules to deal with taxpayers who hold subnational bonds for only part of tax year or who are indebted for only part of a tax year.

As a more workable alternative to the strict presumptive tracing rule described above, the tax code might deny taxpayers a deduction for interest to the extent of the tax-exempt income they have earned on their subnational bonds.\textsuperscript{49} The tax literature refers to this income-matching rule as a "strict-stacking rule."\textsuperscript{50} Strict stacking does not depend for its operation on a computation of the market value of subnational bonds, and it automatically makes the appropriate adjustments for bonds and debt obligations held for less than a full taxable year.

A strict-stacking rule, which matches interest deductions with tax-exempt income, would permit taxpayers who borrow at an interest rate above the rate of interest paid on their subnational bonds to deduct the spread. In contrast, a strict presumptive tracing rule, which matches loans with the amounts spent to hold or acquire tax-exempt bonds, would prevent taxpayers from deducting the entire amount of interest paid with respect to the matched loans. This difference, however, is unlikely to have practical significance, except during a transition period, because the adoption

\textsuperscript{48} The market value of state and local bonds that are actively traded on an organized bond market is relatively easy to establish. For many state and local bonds, however, the market is thin or inactive.

\textsuperscript{49} Secretary of the Treasury Andrew Mellon actually proposed this rule in 1923 and Henry Simon endorsed it. See Klein, supra note 44, at 612 n.11 and Koppelman, supra note 7, at 1212 n.281. Simons' endorsement of this rule was unenthusiastic. He would have much preferred a repeal of the exemption for subnational bonds so as to avoid unwarranted disparities in the treatment of borrowers and savers. By postulate, however, a full repeal of the exemption is not an available option.

\textsuperscript{50} See Koppelman, supra note 7, at 1211. He uses the same term to describe what I have referred to as a "strict presumptive tracing rule." In my view, the two rules differ enough to justify different names.
of either rule may cause borrowers to refrain from purchasing subnational bonds.\footnote{The benefit of deducting the spread between the yield on the tax-exempt bonds and the market interest rate could be eliminated by requiring taxpayers to gross up their tax-exempt income by their projected tax savings before matching it with interest paid.}

2. Exemption as Subsidy

In an economy with good capital markets, an exemption for interest paid on subnational bonds should result in some reduction in the interest rate that subnational governments would need to offer in order to market those bonds. At the same time, the national government would forgo tax revenues otherwise collected from the holders of subnational bonds. The ideal result—having an efficient tax subsidy to subnational governments—would be for the interest savings enjoyed by the subnational governments to equal exactly the revenue forgone by the national government. In practice, taxpayers participating in the subsidy program would need to receive a small premium for their trouble. Except for that premium, however, taxpayers participating in the subsidy program would serve as mere conduits for transferring money from the national to the subnational level.

Borrowers will be potential buyers of subnational bonds only if they are allowed the deduction for interest. The question, therefore, is whether the efficiency of the tax subsidy would be enhanced by making the bonds attractive to borrowers. The answer is that the effects on efficiency of marketing the bonds to borrowers would depend in large measure on the volume of bonds to be marketed.

Whenever the volume of bonds to be sold is small, it matters little whether interest used to acquire or to carry the bonds is deductible. If the interest deduction is allowed, then the pool of potential purchases of the tax-exempt bonds would include all taxpayers in the top marginal tax bracket. Without the deduction, the pool would include only savers in the top bracket. With only a small volume of bonds to sell, however, the size of the pool of potential buyers would be adequate whether or not borrowers were included in the pool.

The analysis changes if the volume of tax-exempt bonds to be sold is large but not too large. In that event, the supply of savers in the top marginal tax bracket would be too small to buy all of the bonds. The subnational government might be able to market
the bonds to savers in the lower tax brackets. To do so, however, they would need to raise the interest rate on the bonds, thereby reducing the interest subsidy they would receive and providing windfall benefits to purchasers of bonds in the top tax bracket. Those undesirable results could be eliminated, or at least mitigated, by allowing the interest deduction. By so doing, borrowers in the top tax bracket would be added to the pool of potential purchasers of the tax-exempt bonds.52

A further change in the analysis is necessary if the volume of tax-exempt bonds is extremely large. In that event, the supply of buyers of tax-exempt bonds in the top marginal tax bracket would be inadequate to clear the market even if borrowers were allowed to deduct interest on loans used to acquire or to carry those bonds. Thus the subnational government, in order to market the bonds, would need to offer a higher interest rate. The higher rate would reduce the interest subsidy received by the subnational government and would give windfall benefits to top-bracket taxpayers. With at least some effective limit on the supply of tax-exempt bonds, the allowance of an interest deduction probably would enhance the efficiency of the subsidy program. Allowing the deduction in this circumstance would reduce the amount of windfall gains to high-bracket taxpayers, but the subsidy program would remain badly flawed.

With a truly unlimited supply of tax-exempt bonds, the interest rate on the tax-exempt bonds should approach the rate payable on taxable bonds, and the subsidy to the subnational governments would largely disappear. In that event, the subsidy program for subnational governments would be an absurdity. Almost any measure that limits its scope, including a denial of the interest deduction, probably would enhance efficiency.53

52. Other efficiency gains might be obtained from allowing a deduction for interest linked to the purchase of tax-exempt subnational bonds. See Auerbach, supra note 43. Professor Auerbach misses the forest for the trees. He seeks to justify a universal interest deduction on the basis of these apparently minor efficiency gains.

53. In my 1984 article, I proposed that the United States Congress impose a dollar limitation on the volume of state and local bonds that would qualify for the exemption, for the reasons explained in the text. The 1986 tax act included such a limitation for industrial development bonds. It apparently has succeeded in achieving its intended effect. See Livingston, supra note 46, at 1167. Before that change, some indirect limits on the volume of tax-exempt bonds guaranteed some spread between the interest rate on tax-exempt bonds and the rate payable on taxable bonds.
3. **Coordination with Other Deduction Rules**

For the reasons discussed above, analysts may conclude that the tax-expenditure goals of an exemption for subnational interest would be advanced in some circumstances by allowing a deduction for interest paid with respect to loans used to acquire or to carry tax-exempt bonds. In other circumstances, a full deduction for such interest should be allowed for tax-expenditure reasons. In either event, the interest-deduction rules designed to advance tax-expenditure goals should be coordinated with the deduction rules adopted to advance tax policy goals. I argue that the latter rules should be the tracing rules set forth in section I(A)(2) above.

If policy-makers have concluded that the efficient operation of a tax expenditure requires either the disallowance or the allowance of a deduction for certain interest payments, then the strict-stacking rule probably would be employed to identify that interest. The strict-stacking rule, however, would not mesh automatically with the tracing rules proposed in section I(A)(2). The latter rules trace the proceeds of loans incurred during a particular taxable period to expenditures made during that period. Once the proceeds of a particular loan have been linked with a particular purchase, the tax treatment of interest paid with respect to that loan continues for the life of the loan. In contrast, the strict-stacking rule applies without reference, even presumptive reference, to the historical use of the proceeds of particular loans.

To apply the strict-stacking rule and the tracing rules of section I(A)(2) to a particular taxpayer, some ordering rules are required. To give priority to tax-expenditure goals over tax policy goals—a priority that is implicit in the decision to employ a tax expenditure—the strict-stacking rule must be applied first. The result would be that taxpayers who have earned some tax-exempt interest and have also paid interest on a loan would have the deductibility of their interest payment, up to the amount of the tax-exempt interest income, determined under the rules that would advance the goals of the tax expenditure.

The question then is how to treat the interest paid in excess of the tax-exempt income. The answer depends upon whether the tax-expenditure goals are advanced by disallowing or by allowing a deduction for interest paid on loans used to acquire or to carry subnational bonds.

If the goals of a tax expenditure would be advanced by disallowing the interest deduction, then the disallowed interest should be presumed to be the interest that would have received the most favorable treatment under the tracing rules of section II(A)(2). Such an ordering rule would limit the benefits that
borrowers would obtain from purchasing subnational bonds to the maximum extent possible.

An opposite result would be appropriate if the logic of a tax expenditure requires that certain interest payments be fully deductible. That is, the proper ordering rule would treat interest deductible for tax-expenditure reasons as the interest receiving the least-favorable treatment under the tracing rules adopted for tax policy reasons.

The following example illustrates how a strict-stacking rule would be coordinated with the tracing rules set forth in section I(A)(2). Consider a taxpayer, T, who has borrowed $10,000 at 10% annual interest during year 1. The term of the loan is three years. During year 1, T spends $6,000 for ordinary and necessary business expenses and another $4,000 to acquire a parcel of vacant land. Under the tracing rules proposed in section I(A)(2), $6,000 of the loan proceeds would be traceable to the payment of the current business expenses and $4,000 would be traceable to the purchase of the land. During year 2, T pays $1,000 interest on the loan. Of that amount, $600 would be treated as a deductible business expense, and $400 would be treated as a capital cost of acquiring the vacant land and added to T’s cost-recovery basis in the land.

At the end of year 2, T buys a tax-exempt bond for $3,000 out of her business profits for that year. In year 3, T receives interest of $200 on her tax-exempt bond. She also pays $1,000 in interest during that year on the loan of $10,000 incurred in year 1.

Assume, first of all, that the policy goals of the national government in allowing subnational governments to issue tax-exempt bonds would be advanced by denying taxpayers a deduction for interest paid on loans used to acquire or to carry tax-exempt bonds. Also assume that the method adopted for identifying such interest is the strict-stacking rule. Under those conditions, $200 of the $1,000 of interest paid would be treated as a cost of carrying the tax-exempt bond and would not be deductible. To maximize the impact of the strict-stacking rule, that $200 should reduce the $600 of interest attributable to the business-expense loan, thereby resulting in the loss to T of a current deduction. Reducing the interest attributable to the vacant land would not have effected T’s tax liability in year 3 (unless she sold the land in that year).

Now assume that the policy goals of the tax-expenditure program would be served by allowing a full deduction for interest paid with respect to subnational bonds. The amount of that interest, identified by applying the strict-stacking rule, would be
$200. It would be deductible without reference to the tracing rules adopted for tax policy reasons. To maximize the benefit to the taxpayer of the $200 deduction, it should reduce the $400 of interest payments made in year 3 that were linked with the acquisition of the vacant land.

B. Investment Incentives

Investment incentives are a common feature of many income tax systems. When the government offers an investment incentive to taxpayers, the question arises as to the proper treatment of interest paid with respect to loans used to make the tax-favored investment. The answer depends in part upon the nature of the incentive and in part upon the goal that the tax incentive was designed to serve.

This section discusses the design of interest-deduction rules for a tax system that allows taxpayers to take accelerated depreciation with respect to certain tangible personal property used in a domestic business that is put into service after some start-up date. Accelerated depreciation generally means some method of cost recovery that allows taxpayers to deduct the costs of their tax-favored investments substantially ahead of the real decline in market value of those investments. With some modifications, my analysis of accelerated depreciation could be used to determine the appropriate interest-deduction rules for a wide range of other investment incentives.

In practice, it may prove difficult to determine the actual goal that would explain the enactment of a tax incentive. Tax incentives are typically defended in the political arena on a variety of conflicting grounds, some of which lack merit. To avoid the difficulty of identifying the actual goal of a system of accelerated depreciation, I postulate two goals for such a system. Section II(B)(1) assumes that the goal of accelerated depreciation is to induce taxpayers to shift their investment to certain tax-favored activities. Section II(B)(2) assumes that the goal of accelerated depreciation is to increase domestic investment by domestic taxpayers. This Article does not attempt to determine whether accelerated depreciation is a good or a bad mechanism for achieving either of those goals.\textsuperscript{54}

\textsuperscript{54} For articles discussing the proper relationship between the interest deduction and the accelerated depreciation adopted by the United States government in 1981, see Calvin H. Johnson, \textit{Tax Shelter Gain: The Mismatch of Debt}
I. Postulate One: Reallocation of Investment

As my first postulate, I assume that the goal of accelerated depreciation is to direct the use of capital towards some favored activity. That is, the incentive is part of the government's industrial planning policy. More specifically, I postulate for purposes of this discussion that the government has decided that businesses allocate too much of their capital to structures and not enough to machinery. To remedy that situation, it offers accelerated depreciation on new purchases of machinery. The government then must decide how to treat interest paid with respect to loans used to make those favored purchases.

To maximize the shift of capital from structures to machinery, the government should provide the benefits of accelerated depreciation to borrowers as well as to savers. To achieve that end, the tax code should not impose any special tax penalty on taxpayers who purchase machinery with borrowed funds. At the same time, borrowers should not be given a special tax advantage over taxpayers who finance their purchases of machinery out of savings. The correct policy is neutrality between borrowers and savers. To achieve that neutrality, taxpayers should be allowed to deduct interest on loans used to finance tax-favored investments under the same rules applicable to interest traceable to other types of investment. In the typical case, those rules would permit the interest to be deducted currently.

2. Postulate Two: Stimulation of Domestic Investment

As my second postulate, I assume that the goal of accelerated depreciation is to increase the level of domestic investment by

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and Supply Side Depreciation, 61 Tex. L. Rev. 1013 (1983); George Mundstock, Accelerated Depreciation and the Interest Deduction: Can Two Rights Really Make a Wrong?, 29 Tax Notes 1253 (1985); Hickman, supra note 43; Koppelman, supra note 7, McMahon, supra note 19; Oliver, supra note 43; Shkow, supra note 13; Warren, supra note 43.

55. By making borrowers eligible for accelerated depreciation, the government would encourage borrowers otherwise inclined to invest in structures to invest in tax-favored machinery.

56. Under the tracing rules proposed in section I(A)(2), interest on loans used to acquire a depreciable asset should be added to the cost basis of the asset. The interest would become deductible over the life of the depreciable asset under the cost-recovery mechanism applicable to depreciable property. The result typically approximates the allowance of a current deduction for interest. Adding interest to the cost basis would not be roughly equivalent to a current deduction, however, if the asset was not depreciable, if there was a significant time lag between its purchase and its being put into service, or if the depreciable asset was used to construct a capital good.
domestic taxpayers. That is, the government has determined that the total level of domestic investment resulting from the interplay of market forces is inadequate, and it has decided to use a tax incentive to stimulate investment. The government must then decide whether it wants to encourage domestic investment financed by borrowed money.

In deciding how to treat debt-financed investment, the government must come to some understanding about how its tax incentive is supposed to operate. Supporters of tax incentives typically assume, often implicitly, that an investment incentive created by lowering the after-tax cost of capital to taxpayers will induce taxpayers to invest more. The money to finance new investment, however, must come either from an increase in domestic savings or from foreign capital. I determine by postulate that the incentive under discussion here was directed at domestic rather than foreign taxpayers. It follows, therefore, that the incentive for new investment should be designed so as to increase the supply of domestic savings.

At first blush, it might appear that an investment incentive intended to increase the supply of domestic savings should not be made available to borrowers. Borrowers, after all, do not contribute to the pool of savings. That first order analysis may be incorrect, or at best incomplete, under some economic conditions.

In a closed economy with perfect capital markets and the other accouterments of simplistic economic models, an investment incentive generally would be expected to have the following consequences. First, it would increase the demand for investment by lowering its cost. Second, that increase in demand would trigger an increase in the demand for savings. Third, the increase in the demand for savings would trigger an increase in the rate of return on savings. Fourth, the higher return on savings would induce some domestic persons who otherwise would consume their resources to increase their contribution to the pool of domestic savings. Fifth, the increase in the pool of domestic savings would allow for the desired increase in domestic investment.

In this scenario, domestic investment would rise because of the increase in demand for investment—that is, the demand for investment would create its own supply through its effect on the supply of savings. To maximize the effect of accelerated depreciation on the demand for investment, it would be desirable, under these highly stylized conditions, to make accelerated depreciation available not only to savers but to those investing out of borrowed funds. No reason exists, however, to give a tax preference to
borrowers over savers. Thus, borrowers should be allowed to
deduct interest under the rules that would be applicable to them
without reference to the tax incentive.

Obviously, the above scenario is highly stylized and is unlikely
to approximate the economic conditions in some countries. It is
quite possible, therefore, that a government might reasonably
decide to deny borrowers the benefits of accelerated depreciation.
Once a government makes such a decision, it might consider the
imposition of limits on the deduction for interest payments.57 The
better technique would place limits on the deduction for deprecia-
tion rather than on the deduction for interest. Either approach,
however, would require the adoption of rules for linking borrowed
funds to particular purchases.

If practical rules are in place for linking borrowed funds to
their use, taxpayers who have acquired, or are deemed to have
acquired, a depreciable asset with borrowed money would then be
allowed to take only the normal depreciation deductions with
respect to that asset. If some of the funds used to acquire an asset
were borrowed and some were saved, then accelerated depreciation
would be allowed only with respect to the portion of the cost
financed by saved funds.

Consider, for example, a taxpayer, T, who purchased a deprecia-
table asset for $800. Under the accelerated method of depreciation,
T would be allowed to write the asset off over four years, with
deductions of $400, $200, $100, and $100 in years 1, 2, 3, and 4,
respectively. Under the normal depreciation rules, T could only
deduct $200 per year. If T is deemed to have paid for the asset
out of borrowed funds, she would then be allowed to deduct $200
per year for depreciation. If one half of the funds used to acquire

57. An alternative strategy might require taxpayers to include in income
the proceeds of loans used to finance the purchase of tax-favored assets. See
Johnson, supra note 54. As Johnson shows, the inclusion of the proceeds of a
loan in income can have the same economic effect, under some conditions, as
the denial of a deduction for interest paid on that loan.

McMahon, supra note 19, presents a detailed scheme for limiting the interest
deduction on loans linked to assets qualifying for accelerated depreciation (and
the investment credit). Professor McMahon proposes the adoption of presumptive
tracing rules to limit the interest deduction. His starting point in developing his
tracing rules is the set of tracing rules set forth in my 1981 article. See McIntyre,
supra note 1. The rules he proposes differ from the ones set forth in section
II(A)(2) above, in some important respects. McMahon tailored his rules to meet
the set of problems created by the generous investment preferences adopted by
the United States in 1981.
the asset were borrowed, then one half of the depreciation deductions would be determined under the accelerated rules and one half under the normal rules. Thus, she could deduct $300, $200, $150, and $150 for years 1, 2, 3, and 4, respectively.

Some rules would be needed to determine whether the taxpayer used borrowed money to purchase an asset otherwise qualifying for accelerated depreciation. If the designers of the tax incentive want to prevent taxpayers with any debt outstanding from benefiting from accelerated depreciation, they should adopt some type of strict-stacking rule. The appropriate strict-stacking rule would match the face amount of debts outstanding during a taxable year with the fair market value of assets otherwise qualifying for accelerated depreciation. That rule would not be easy to administer, primarily because of the problems that would arise in determining the fair market value of depreciable assets.\textsuperscript{58} If it could be made to operate, the rule would eliminate accelerated depreciation for taxpayers holding any significant amount of debt. In most countries, almost the entire corporate section would not qualify for accelerated depreciation.

It seems unlikely that a government interested in providing an incentive for investment would want to limit the incentive so extensively. A more likely policy goal would be to prevent borrowers from qualifying for accelerated depreciation to the extent that they incurred new debt to acquire depreciable assets. That policy could be implemented by adopting a modified version of the presumptive tracing rules described in section II(A)(2). As modified, those rules would first trace the proceeds of loans incurred during a taxable year to the acquisition of assets of the type qualifying for accelerated depreciation. The rules set forth in Section II(A)(2) would trace any remaining portion of the proceeds.

Consider, for example, taxpayer S, who takes out an untied loan of $4,000 during the taxable year. S also has saved funds of $3,000. He makes the following expenditures during that year: (1) $1,000 for a machine of the type qualifying for accelerated depreciation; (2) $1,500 for current business supplies; (3) $500 for a building of a type qualifying for normal depreciation; and, (4) $4,000 for raw land.

\textsuperscript{58} Under a strict-stacking rule, outstanding debt would match with depreciable assets, including assets acquired in prior years. Commentators have traditionally assumed that the decline in the value of depreciable assets from year to year is difficult to ascertain. Depreciation is usually permitted in accordance with some accounting convention, such as the straight-line method or the declining balance method, to minimize those valuation difficulties.
The modified tracing rules discussed above would require S to treat the $1,000 spent for the machine as coming from the proceeds of his loan. Thus, S would be allowed only the normal depreciation deductions on that machine. The rules applicable to loans used to purchase normal depreciable property would control the deduction of interest on that portion of the loan. Of the remaining loan proceeds of $3,000, S would trace $1,000 to the purchase of current business supplies and take a current interest deduction with respect to that portion of the loan. He would trace $500 of the loan to the purchase of the building and would deduct the interest under the cost-recovery rules applicable to such expenditures. The remaining $1,000 of the loan proceeds would be traced to the purchase of the raw land, and no interest deduction would be allowed. However, S would be allowed to add the interest to his cost basis in the land.

III. Targeted Inflation Adjustments for Nominal Capital Gains

Most versions of an ideal income tax would impose tax burdens with respect to "real" income—that is, income recalculated to remove, to the extent feasible, the distorting effects of inflation on the measurement of taxable gains and losses. The least complicated and most desirable way for governments to achieve that result would be to adopt fiscal and monetary policies that eliminate inflation. A second-best solution is to adopt a comprehensive-indexing scheme if a suitable scheme could be developed and administered.  

59. In theory, the interest would be added to the taxpayer's cost basis in the depreciable asset and recovered under the normal cost-recovery rules applicable to depreciable property. See McIntyre, supra note 1, at 780. The simple allowance of a current interest deduction could approximate that result in many cases.

60. Chile has adopted a full indexing scheme for business profits. See J. Andrew Hoerner, Indexing the Tax System for Inflation: Lessons from the British and Chilean Experiences, 2 Tax Notes Int'l 552 (June 1990). A plan for full indexing is set forth in Richard J. Vann & Darryl A. Dixon, Measuring Income Under Inflation (1990). For detailed analysis of an indexing scheme that incorporates the principal features of the Chilean system, see Bossons, supra note 4. For a brief outline of the Chilean model, see Arnold C. Harberger, Principles of Taxation Applied to Developing Countries: What Have We Learned? in World Tax Reform 25, 42 (Michael J. Boskin & Charles E. McLure, Jr. eds., 1990). Harberger, perhaps alone among tax analysts, believes that indexing is easy ("[T]he analytical base for dealing with [indexing] is now well developed. The task that remains is to disseminate the knowledge and experience we have, and perhaps to try to ensure that a wide segment of people come to appreciate
In the political arena, a popular alternative to comprehensive indexing is partial indexing. In the typical partial-indexing scheme, taxpayers index the cost basis of their capital assets for inflation, thereby eliminating the tax otherwise imposed on nominal capital gains arising solely from the depreciation of the national currency.\textsuperscript{61} Australia and the United Kingdom have adopted partial-indexing schemes,\textsuperscript{62} and the United States has proposed such schemes from time to time, most recently in early 1992.\textsuperscript{63}

Unfortunately, the partial-indexing schemes based on the Australian or United Kingdom model do not insulate the measurement of income from all, or even most, of the consequences of inflation. During a period of inflation, interest income, rents, and some other types of capital income typically include an inflation component, as would income derived from the sale of inventory property. Inflation also causes an understatement of income when borrowers are able to pay off their debts in depreciated currency. By failing to adjust for these inflationary effects (as well as others not addressed here), a partial-indexing scheme becomes nearly impossible to defend on tax policy grounds; it would create tax arbitrage opportunities, cause equally-situated taxpayers to pay substantially different amounts of tax, and generally reduce, in indefensible ways, the progressivity of the income tax.\textsuperscript{64} In sum,

\begin{quote}
the simplicity and easy of administration that characterize a well-designed indexing system.”). \textit{Id.} at 42. Harberger simplifies the problem of designing an indexing system by assuming that the “real” component of interest payments should be deductible as a current expense. \textit{Id.} at 44. Section I of this Article challenges that position.

Transition problems are likely to make even the simplest indexing scheme somewhat complex in practice. \textit{See} Jerome Kurtz, \textit{Comments on “Indexing for Inflation and the Interest Deduction,”} 30 \textit{Wayne L. Rev.} 969 (1984) (claiming that the administrative problems of comprehensive indexing are “considerably more severe than [Bossons] indicates”). \textit{See also} Bossons, \textit{supra} note 4, at 965 (conceding some complexity and responding to some of the concerns of Kurtz).

61. Assume for example, that Q buys an asset for $100 and sells it for $120. During the period that Q held the asset, the inflation rate, according to the official price index, was ten percent. Under the typical partial-indexing scheme, Q would be allowed to increase her cost basis in the asset from $100 to $110, thereby reducing the taxable gain on the disposition of the asset from twenty dollars to ten.

62. The Australian partial-indexing system is criticized in \textit{VANN & DIXON}, \textit{supra} note 60, at 5. For a description of the United Kingdom’s partial indexing scheme, see Hoerner, \textit{supra} note 60.


64. \textit{See} \textit{VANN & DIXON}, \textit{supra} note 60, at 5 (“If indexing is to be introduced, it should be on a comprehensive basis. A partially indexed tax system such as Australia currently has is worse than no indexing at all.”).
a partial-indexing scheme cannot be a part of an ideal tax system.

Although a partial-indexing scheme departs from a normative tax structure, it is not easily classified as a tax expenditure. I suppose that any government that adopted partial indexing would defend its position by reference to some mixture of tax policy and tax-expenditure arguments. Supporters of partial indexing will likely argue that it would advance tax policy goals by eliminating some illusory gains from the tax base and would advance certain tax-expenditure goals by somehow encouraging investment in capital assets.65

A discussion of the design features of a comprehensive indexing scheme is outside the scope of this Article. The objective here is to show that tracing rules can limit the harmful effects of partial-indexing schemes even when the analytical foundation for such schemes is vague or nonexistent. To limit the scope of this Article, I address here only the defects of partial-indexing schemes that relate to their treatment of taxpayers who acquired capital assets with borrowed money.

For an example of the unwarranted benefits given to debtors under the typical partial-indexing scheme, consider B, a taxpayer who borrows $100 from L in year 1 to buy XYZ stock for $100. In year 3, B sells her stock for $200 and pays off her loan to L of $100. At the time of the sale, the purchasing power of $200 equals the purchasing power of $100 in year-1 dollars, as measured by an appropriate price index. In these circumstances, B has a nominal capital gain of $100 on the sale of the XYZ stock but no real gain. She also has a real gain on her loan transaction of $100 (stated in year-3 dollars) that exactly offsets the nominal gain on the stock.66

65. The Australian and United Kingdom partial-indexing schemes were introduced as parts of tax packages that included a general increase in the tax on capital gains. In Australia, indexing was a quid pro quo for the introduction of a capital gains tax. The United Kingdom adopted indexing to mitigate the impact of new legislation that would tax capital gains at the rates applicable to ordinary income. Both countries may have had some vague hope that the indexing schemes would encourage investment in capital assets. Both were also responding to the claim that an unindexed capital gains tax was unfair because it taxed illusory gains.

66. P's gain on the loan transaction, measured in year-1 dollars, is $50. In year-3 dollars, the gain is $100 ($50 x price index of 2). That latter amount
In the example above, \( L \), the lender, experienced a real loss of $100 (measured in year-3 dollars) from the loan transaction. A lender who anticipated inflation would attempt to protect himself against such a loss by shifting some, or all, of the risk of loss to the borrower. If \( L \) and \( B \) somehow knew the future inflation rate, they might have agreed that \( B \) would pay the normal interest charge for the use of money plus an additional fifty dollars (measured in year-3 dollars) of interest per year. The extra interest would compensate \( L \) for the loss he otherwise would suffer from getting the loan repaid in year-3 dollars. In substance, the interest surcharge of fifty dollars per year would constitute a prepayment of a portion of the principal amount of the loan and would not be true interest. In a world without taxes, the payment by \( B \) of the extra $100 ($50 + $50) of nominal interest would result in \( B \) not enjoying an inflation gain and \( L \) not suffering an inflation loss.

Proper tax results could be achieved in the example above by denying \( B \) an interest deduction for the $100 of extra nominal interest and by allowing \( L \) to exclude the $100 of nominal interest income from his income. These are the results that would be reached under traditional tax principles from characterizing the interest surcharge of $100 as a prepayment of principal. The partial-indexing schemes used in Australia and the United Kingdom do not achieve the proper results. On the contrary, \( B \) typically would be allowed to deduct $100 for the interest surcharge, and \( L \) would have additional interest income of $100.

Most borrowers and lenders do not anticipate the future rate of inflation correctly. In such circumstances, one of the parties to a loan transaction typically enjoys a windfall inflation gain, and the other party suffers a corresponding loss. A properly designed indexing scheme would require taxpayers to take those gains and losses into account in computing their taxable income.

Consider, for example, a transaction in which \( B \) borrows $200 from \( L \) in year 1 for a one-year period. Based on existing market conditions, \( B \) and \( L \) anticipate an inflation rate of ten percent for the coming year. They agree that \( B \) will pay \( L \) "real" interest at

equals her nominal capital gain on the XYZ stock, stated in year-3 dollars. The gain in year-1 dollars is computed by converting the amount of the repayment into year-1 dollars ($100/2) and subtracting that amount from the amount of the loan, stated in year-1 dollars ($100 - $50 = $50).

67. Many loans provide for floating interest rates to adjust for unanticipated inflation.
a rate of four percent. They also agree that B will pay $20 in year-2 dollars to compensate L for the decline in the real value of the $200 loan principal from the time of the loan to the time of repayment. During the one-year period, the inflation is only seven percent. Under these conditions, B has an inflation loss of six dollars (twenty dollars minus fourteen), and L has a corresponding gain of the same amount.\textsuperscript{68} In a tax system seeking to minimize the impact of inflation on income measurement, L should be taxed on his windfall gain, and B should be allowed a deduction for her windfall loss.

In the example above, rough tax justice would be achieved for L, the lender, by allowing him to exclude fourteen dollars from his total interest income of twenty-eight dollars (four dollars plus four plus twenty). In more general terms, persons who loaned money to be used by the borrower for the purchase of capital assets might be allowed to exclude the \textit{ex post} inflation component of interest income, estimated annually by multiplying their cost basis in their outstanding loans (typically the principal amount of the loans) by the official annual inflation index.\textsuperscript{69} Unfortunately, a partial-indexing scheme of that type is completely impractical. It is one thing to require borrowers to trace the use of their borrowed money. It is quite another thing to require lenders to do this kind of tracing. Even when such tracing would be feasible, as it might be for some purchase-money loans, it would be unfair and inefficient. It is hard to imagine that any country would be willing to adopt such a peculiar and asymmetrical system.

To achieve a proper result for B, the borrower in the above example, the tax system should allow her to add to her cost basis in the XYZ stock the amount of the "real" interest payment of eight dollars plus the windfall loss of six dollars. In other words, borrowers should not be allowed any interest deduction corresponding to interest payments made with respect to loans used to acquire capital assets. Interest payments made by a borrower would consist of three portions—the repayment of principal portion, the "real" interest portion, and the windfall loss (or gain) portion.\textsuperscript{70} The

\textsuperscript{68} For simplicity, I assume that a single interest payment was made at the time of the loan. In a more realistic example, provisions would need to be made to take account of potential gains and losses resulting from movements in the real value of periodic interest payments.

\textsuperscript{69} A \textit{comprehensive} indexing scheme that would provide such an adjustment for borrowers has been proposed in Bossons, \textit{supra} note 4.

\textsuperscript{70} Bossons defines "real" interest to include windfall gains or losses. \textit{See
portion that was, in substance, a repayment of principal would not provide a tax benefit. In effect, this would reduce or eliminate the untaxed cancellation of indebtedness income accruing to borrowers from paying off their loans in deflated dollars.\textsuperscript{71}

The net amount of the remaining two portions of the interest payments would be add to the borrower’s cost basis in the capital assets acquired with the borrowed funds. By becoming a part of the taxpayer’s cost basis in those assets, the real interest payments and the windfall loss would be subtracted from the proceeds derived from the sale of those assets at the time of their sale. They would also be indexed for inflation under a partial-indexing scheme. To determine which assets were acquired with borrowed money, a tax system must include tracing rules of the type described in section I of this Article.\textsuperscript{72}

The discussion above generally assumes that the borrower and the lender have underestimated the future inflation rate when they enter into their loan agreement. Complementary rules should apply if the borrower and lender overestimate inflation. In such circumstances, the lender has the windfall loss, and the borrower receives the windfall gain.

No change is needed in the basic scheme applicable to lenders, although that scheme is unworkable when indexing is not comprehensive, as explained above. For borrowers, the windfall inflation gain is subtracted from the amount of real interest, and the net amount is added to the taxpayer’s cost basis in the assets acquired

\textit{id.} at 961. His usage is apparently common among economists. So defined, real interest can be negative in certain situations. In such situations, a deduction for real interest would increase taxable income. For analytical purposes, it is useful to define the term “real” interest as the fixed (or determinable) and intended charge for the use of capital. Under this definition, real interest is always a positive number. The practical problems of determining the amount of “real” interest, as defined herein, are formidable. The concept of negative real interest, however, is a dangerous one. For example, it might lead analysts to expect that individuals would respond to a drop in interest rates from one percent to negative one percent as they would to a drop from four percent to two percent. I would expect major discontinuities around a real rate of zero.

\textsuperscript{71} The interest-deduction rules suggested in the text could be used, with minor adaptations, to complement an expanded partial-indexing scheme. If policymakers decided, for example, to index inventory gains for inflation, they might provide that borrowers be denied an interest deduction for the portion of their interest payments that represents a partial repayment of the principal amount of loans used to finance the purchase of inventory. In that event, the portion representing real interest should be added to the taxpayer’s cost of goods sold. The remaining portion, representing a windfall inflation loss or gain should also be added to or subtracted from the taxpayer’s inventory cost.

\textsuperscript{72} \textit{See also} McIntyre, supra note 1, at 788-93, 800-05, n.84.
with the borrowed funds. As long as the real interest paid exceeds the amount of the windfall gain, the system works reasonably well. If the windfall gain exceeds the real interest paid, however, then the proper net adjustment to cost basis would be negative. \(^{73}\) The administrative problems of policing a system that routinely required negative adjustments to basis are likely to be monumental.

This discussion supports the following conclusions. First, partial indexing for capital gains systematically produces bad results unless coupled with limitations on the interest deduction. If policy makers are not confident that proper limitations on the interest deduction will be enacted, they should strongly resist the political pressures for a partial-indexing system. If the system already exists, they should work for its repeal.

Second, a partial-indexing system that properly limits the interest deduction with respect to interest paid on loans used to finance the purchase of capital assets probably is feasible if a tracing system is in place (or can be added as part of the reform) and if unanticipated inflation rates are not terribly high. Under these circumstances, a system that denies a deduction for the inflation component of interest payments would be a desirable complement to a partial-indexing system. Otherwise, the proper policy course to follow is unclear.

Third, a system that restricts the deductibility of interest ought to be combined with a system for exempting from tax the inflation component of interest income. There is probably no practical way, however, to index interest income for inflation except as part of a comprehensive indexing scheme. \(^{74}\)

Policy makers who must deal with a partial-indexing scheme that is already in place will find the conclusions summarized above unsettling, especially if they believe that they do not have the political horses to bring about a repeal of partial indexing. They need a system for limiting the deduction for interest that is relatively simply to understand and to enforce and that does not require a fundamental change in the partial-indexing scheme.

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73. *See McIntyre, supra* note 4, at 981. B borrows $200 from L in year 1 under a loan agreement that requires B to pay real interest of $8 per year and an interest surcharge of $12 in anticipation of inflation. If inflation raged at an annual rate of 100%, B would have an inflation gain, in year-2 dollars, of $200 [principal amount of $200 minus repayment in year-1 dollars of $100 multiplied by price index of 2]. Of that amount, $12 would be the agreed prepayment of principal, and the remaining $188 would be a windfall gain. The net amount added to basis should be the real interest payment of $8 minus the windfall gain of $188—that is, the adjustment should be negative $180.

74. *See Bossons, supra* note 4, at 961 ("the key to easy implementation [of indexing] is comprehensive implementation for all assets and debts").
For policy makers stuck with a partial-indexing scheme, I propose the following solution. To begin, characterize partial indexing as a tax-expenditure provision intended to foster equity investment in capital assets. Next, only index that portion of a taxpayer’s cost basis in capital assets attributable to equity finance. Finally, design tracing rules consistent with the number of political horses available.

If many horses are available, policy makers should adopt a strict-stacking tracing rule that assumes that capital assets sold during the taxable year are debt-financed to the extent of the taxpayer’s outstanding debt at the time of the disposition. Such a rule would be relatively simply to administer. It is also consistent with the assumed tax-expenditure goal of partial indexing and eliminates most tax-arbitrage problems otherwise resulting from partial indexing.

As an illustration of the strict-stacking rule, assume that F holds two assets, \textit{aa} and \textit{bb}. The cost basis of \textit{aa} is $100, and the cost basis of \textit{bb} is $200. F also has an outstanding loan of $150. F sells \textit{bb} for $500, resulting in an unindexed gain of $300. Under strict-stacking, the $150 loan would be traced to the asset sold, with the result that only $50 (\$200 minus \$150) of the cost basis of \textit{bb} would be indexed for inflation. Assuming an inflation index of two, the nominal gain of \$300 would be reduced to \$250 (\$500 minus \$150 minus \$50 \times 2).

With a less plentiful supply of horses, policy makers should trace outstanding loans pro rata to the taxpayer’s capital assets. Although consistent with the assumed tax-expenditure goal of partial indexing, the rule is complicated to administer because it requires taxpayers to list on their tax return all of their capital assets, not just those assets sold during the year. It would also allow for some tax arbitrage.

Using the facts of the example above, the pro rata stacking rule would operate as follows. F would allocate $50 of the loan to asset \textit{aa} (\$150 \times \$100/\$300) and $100 to asset \textit{bb} (\$150 \times \$200/\$300). Only $100 of the cost basis of \textit{bb} would be indexed for inflation, and F’s taxable gain would be $200 (\$500 minus \$100 minus \$100 \times 2).

For policy makers with a nearly empty stable, a permissive-stacking rule is the best practical option. Under that rule, the taxpayer traces his loans to any capital assets in his possession. Only the amount of the loans exceeding the cost basis of unsold capital assets are allocated to the capital assets actually sold. This rule is consistent with a strained interpretation of the assumed tax-
expenditure goal of partial indexing. It would only occasionally reduce tax-arbitrage opportunities and would be no more difficult to administer than a pro rata system.

Again using the facts of the above example, the permissive-stacking rule would operate as follows. F would allocate $100 of his loan to asset \( aa \) (the maximum allowable) and the remaining $50 to asset \( bb \). He would index $150 of the cost basis of \( bb \) for inflation, and his taxable gain would be $150 ($500 minus $50 minus $150 \times 2). With unlimited indexing, F would have a taxable gain of $100 ($500 minus $200 \times 2).

IV. LIMITATIONS ON THE INTEREST DEDUCTION UNDER THE U.S. TAX CODE

As part of the landmark Tax Reform Act of 1986,\(^75\) the United States adopted major reforms of the deduction for interest payments. These reforms have been modified somewhat by subsequent legislation and have been refined by temporary Treasury regulations issued in July of 1987. The reforms include a disallowance of the deduction for interest paid by individuals on consumer loans,\(^76\) a limitation on interest traced to the investment income of individuals,\(^77\) and, most importantly, a limitation on the deduction for interest attributable to loans used to finance tax-shelter activities.\(^78\) Although the current treatment of interest by the U.S. Tax Code needs further reform, the current rules represent a significant improvement over the treatment afforded to interest prior to the 1986 reforms and are a movement in the direction of the tracing system that I advocated in my 1981 and 1984 articles.\(^79\)

The U.S. Tax Code classifies interest into the following five categories: (1) qualified residence interest; (2) business interest; (3) investment interest; (4) tax-shelter interest; and (5) personal interest.\(^80\) The last of these categories is the residual class, comprising

\(^77\) See Id. § 163(d).
\(^79\) See McIntyre, supra note 1; see also McIntyre, supra note 4.
\(^80\) I.R.C. § 163(h)(2). The code also provides for a sixth category—interest
all interest other than interest falling within one of the other five
categories. In general, interest in the first category gets the most
favorable treatment, and so forth down the list. Individuals paying
interest falling within the fifth category are not allowed a current
deduction and are not provided with any other tax benefit in a
future taxable year.\footnote{81}

The sorting of interest into categories is done in accordance
with the use made of the proceeds of the loan with respect to
which the interest was paid or accrued.\footnote{82} In sorting, it is generally
irrelevant whether the lender takes a security interest in property
owned by the borrower.\footnote{83} In general, taxpayers have the burden
of establishing the category in which their interest payments fall.
Otherwise their interest is treated as personal interest.\footnote{84} Special
ordering rules, generally favorable to the taxpayer, assist the
taxpayer in establishing the use made of loan proceeds that are
commingled with other funds.\footnote{85} These are all features of the tracing
system proposed in my 1981 article.\footnote{86}

The limitations summarized above generally do not apply to
corporate taxpayers. Corporations must capitalize some interest
payments and are subject to certain other restrictions in claiming
a deduction for interest.\footnote{87} The proper treatment of corporate
interest payments is not addressed in this Article.

The 1986 limitations on the interest deduction were phased in
over a 5-year period, with 1990 being the last transition year. For
1990, taxpayers reported total "personal" interest—primarily in-
terest paid on consumer loans—of approximately $38 billion, of
which allowable deductions totaled to only about $4 billion. Tax-
PAYERS with adjusted gross income over $40,000 per year paid over
75 percent of the total amount of personal interest reported.\footnote{88}

imposed for late payment of certain estate taxes. \textit{Id.} \S 163(h)(2)(E). The provision
is of relatively little importance and is not discussed in this paper.

\footnote{81} \textit{Id.}


\footnote{83} \textit{Id.} \textit{\S} 1.163-8T(c). \textit{But see id.} \textit{\S} 163(h)(3)(B)(i)(II) and (C)(i) (requiring
a loan to be secured by the taxpayer's qualified residence for the interest on that
loan to be deductible).

\footnote{84} \textit{Id.} \textit{\S} 1.163-8T(c)(5)(ii).

\footnote{85} \textit{See id.} \textit{\S} 1.163-8T(c)(4).

\footnote{86} \textit{See McIntyre, supra note 1.}

\footnote{87} \textit{See, e.g., I.R.C. \S\S 263A (1988 & Supp. II 1990) (requiring capitaliza-
tion of certain interest payments), 163j (Supp. II 1990) (restricting the deduction
for certain earnings stripping payments), 279 (1988) (limiting deduction on loans
used to finance certain corporate acquisitions).}

\footnote{88} Unpublished data (1990) provided to the author by the Statistics of
Income Division of the Internal Revenue Service.
Thus, the limitation on consumer interest almost certainly is progressive. Home-mortgage interest is the most important category of interest paid by individuals. For 1990, the deductions for home-mortgage interest totaled approximately $195 billion and additional deductions of $3.5 billion were allowed for mortgage points.\textsuperscript{89}

Section IV(A) below, discusses the treatment of consumer interest, including interest linked to consumer durables, such as a personal residence. Section IV(B) discusses the treatment of interest paid on loans used to acquire investment assets. The limitation on the deduction for interest linked to tax-shelter activities is discussed in section IV(C). Section IV(D) discusses the treatment of interest paid on loans used to finance business operations. Each of these sections begins with a description of current U.S. law and concludes with a critique of that law in light of the ideal tracing system proposed in Sections I and II.

\textbf{A. Consumer Interest}

\textit{1. Current U.S. Law}

Prior to the 1986 reforms, U.S. individuals claiming itemized deductions could deduct all of their interest on consumer loans, including home-mortgage loans. After the recent reforms, they have lost their deduction for interest paid on their VISA cards and similar purchase-money consumer loans.\textsuperscript{90} In theory, they have lost the deduction with respect to interest paid on all consumer loans other than loans secured by a mortgage on their residence.\textsuperscript{91} Well-advised taxpayers, however, have probably accommodated themselves to the new rules by taking out home-equity loans to finance consumer purchases. Banks and other lending institutions have advertised heavily to inform customers of the tax advantages of home-equity loans. Taxpayers taking the standard deduction remain unaffected by the reforms of the interest deduction. That deduction was liberalized substantially by the 1986 reforms.

As modified by the 1986 Tax Act, the U.S. Tax Code provides that "personal interest" paid or accrued during a taxable year is not deductible.\textsuperscript{92} It defines personal interest as all interest other than business interest, investment interest, tax-shelter interest, qual-

\begin{itemize}
\item \textsuperscript{89} Id.
\item \textsuperscript{90} I.R.C. § 163(h) (1988).
\item \textsuperscript{91} Id. § 163(h)(2).
\item \textsuperscript{92} Id. § 163(h)(1).
\end{itemize}
ified residence interest, or interest imposed for late payment of certain estate taxes.93 Thus "personal interest" is the residual category of interest. The major component of personal interest is interest on consumer loans. It would include, however, other types of interest, such as interest due for failure to make timely income-tax payments to the government.94

Qualified residence interest is always deductible. Because of its exclusion from the definition of personal interest, taxpayers who itemize their deductions may deduct most of the interest they pay to finance their personal consumption. Qualified residence interest has two components. The first component is interest paid with respect to a loan used to finance the acquisition or substantial improvement of a "qualified residence."95 That latter term is defined to include (1) the taxpayer's principal residence and (2) a second residence—typically a vacation home—designated by the taxpayer.96 Interest paid on a loan used to acquire a qualified residence does not qualify for a deduction to the extent that the principal amount of the loan exceeds $1 million.97

The second component of qualified residence interest is interest paid on a home-equity loan.98 Interest paid on a home-equity loan does not qualify, however, to the extent that it exceeds $100,000.99 This feature of current law was adopted as part of the 1987 Tax Act.100 Under the 1986 Act,101 interest on a second mortgage generally was deductible only to the extent the principal amount of that indebtedness, plus all other indebtedness secured by the residence, did not exceed the taxpayer's cost basis in the residence.102 The intent of the rule was to prevent homeowners from claiming a deduction for interest on a second mortgage that was secured by the unrealized appreciation in their home. This provision was made unworkable, however, by the inclusion of exceptions for loans used to finance certain medical and educational expenses.103

93. Id. § 163(h)(2).
96. Id. § 163(h)(5)(b)(4)(A)(i).
97. Id. § 163(h)(3)(B)(ii).
98. Id. § 163(h)(3)(A)(ii) and (C).
99. Id. § 163(h)(3)(C)(ii).
103. Id. § 163(h)(4). For a full discussion of the legislative history of the
For purposes of the alternative minimum tax, interest on a loan secured by a qualifying residence is deductible only if the loan proceeds were used to purchase the residence or to finance substantial improvements in the residence. 104 Thus, interest on the typical home-equity loan used to finance consumption expenditures would not be deductible under the alternative minimum tax.

2. Critique of the Federal Rules Applicable to Consumer Interest

The current federal rules governing the deduction for consumer interest are badly flawed. On the positive side, they do establish in the U.S. Tax Code the principle that full taxation consumer interest is the appropriate tax policy goal. The establishment of that principle is an important political achievement—important because the principle has real content and influential critics. This principle, unlike the ability-to-pay principle, has not achieved approval because of its inherent ambiguity.

As explained in section I, above, interest paid on a loan used to finance current consumption should not be deductible in a tax system designed according to Haig/Simons principles. To the extent that current law reaches this result, it is in accord with my ideal tracing system. The favorable treatment of home-equity loans under federal law, however, is obviously improper under my proposed system.

The full deduction for interest paid on loans used to acquire a personal residence is also improper in a Haig/Simons system. The proper treatment depends (1) on the treatment afforded to accrued gains from the appreciation in the value of the residence and (2) on the treatment of the benefits derived from living in the residence rent-free. If those benefits are taxable on an accrual basis, then the interest on the home mortgage should be fully deductible. Of course, no income tax system in operation in the world aspires to tax those benefits fully.

In a modified Haig/Simons system in which unrealized gains and imputed rental income are not taxed, interest paid on a home mortgage should be treated as an acquisition cost. As explained in detail in my 1981 article, the interest payments should be added

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104. Id. §§ 56(b)(1)(C)(i), 56(b)(1)(C)(e). A special rule allows taxpayers to refinance their home and still deduct interest, to the extent that the principal amount of the refinanced loan does not exceed the principal amount of the original loan.
to the taxpayer's cost basis in the home. The cost basis should be reduced each year, however, by the amount of depreciation allowable if the property had been rented out for profit. Adding interest to the cost basis of a residence would reduce the gain otherwise realized on the sale of the residence. Such a reduction appeals to a well-informed intuition because it reduces the unwarranted advantage otherwise obtained by persons who finance the purchase of their home with saved income over those who continue to pay on their home mortgage.

Obviously, the treatment of home-mortgage interest under current federal law is inconsistent with the ideal set forth in section I. The deduction for interest on home mortgages constitutes a certified sacred cow in the U.S. Tax Code. No one should expect that Congress would eliminate it merely on account of tax policy objections to it. Even the Treasury Department's 1984 report, which was purist on most points, recommended the full preservation of the deduction.

At its inception, the U.S. Tax Code granted a deduction for all interest payments. The rate of tax was very low, however, and the science of tax avoidance was still in its infancy. As the federal tax rates went up and taxpayers started using the interest deduction to avoid taxes, Congress began imposing some limits on the deduction. The deduction for home-mortgage interest, however, remained untouched by reform. It came to be defended, to the extent it is defended at all, as an encouragement to home ownership. Congress and the Treasury Department now classify it as a tax expenditure. It has the typical defects of most tax deductions used to promote social goals—it gives no benefits to the poor and it favors taxpayers in the highest tax bracket over other taxpayers.

As explained in section II, the appropriate tracing rules for a tax expenditure depend upon the goal that the tax expenditure is supposed to serve. One plausible goal of the home-mortgage interest deduction is to encourage taxpayers to buy rather than rent their home. In that event, only first-time buyers should qualify for the deduction, and then only if they finance the purchase of the home with a purchase-money mortgage or its functional equivalent. The design of appropriate tracing rules would be simple. To get the deduction with respect to interest paid on a loan, taxpayers

105. McIntyre, supra note 1, at 802-05.
106. TREASURY DEPARTMENT, 1 TAX REFORM FOR FAIRNESS, SIMPLICITY, AND ECONOMIC GROWTH: TREASURY DEPARTMENT REPORT TO THE PRESIDENT 63 (1984) ("left intact will be the current itemized deduction for interest on the principal residence of the taxpayer.")
would be required to establish both their status as first-time buyers and their use of the loan proceeds to purchase a home.

The deduction allowable under current U.S. law for interest on home mortgages cannot be explained by a societal interest in having Americans own their own homes. The tax benefit encourages Americans to move up from their original home to a bigger and better home and to have at least one additional home. It also encourages taxpayers to put their home ownership in jeopardy by taking out home-equity loans to finance their current consumption. The spending goal that Congress pursues by setting up this set of incentives is difficult to fathom. As explained in section II, the proper tracing rules for an ineffective or irrational tax incentive are those that limit its scope. Of course, the political pressures that led to the enactment of the inappropriate tax expenditure may also prevent the adoption of restrictive tracing rules.

B. Investment Interest

1. Current U.S. Law

Interest paid or accrued during a taxable year with respect to loans used to acquire property held for investment may be deducted only against net investment income for that year. Any excess of interest over net investment income may be carried forward and deducted against the taxpayer’s investment income derived in future years.

The definition of “property held for investment” includes stock, bonds, royalty contracts and similar intangible property that would yield a return of interest, dividends, annuities, or royalties. Property that produced such income in the ordinary course of a trade or business would not be treated as investment income. Partnership interests and similar interests in a business would also constitute investment property if the activity of the business is not a tax-shelter activity and the taxpayer does not materially participate in the business. Net investment income is the income generated during the taxable year by investment property, minus

108. Id. § 163(d)(2).
110. Id. §§ 163(d)(5)(A)(i), 469(e)(1).
111. Id. § 163(d)(5)(A)(ii).
the expenses (other than interest) properly allocable to that income.\textsuperscript{112}

The limitation placed on the deduction for investment interest prevents taxpayers from obtaining a current interest deduction on loans used to buy investment assets that are expected to generate a substantial portion of their return in future years. As explained in section IV(C) below, the definition of investment interest\textsuperscript{113} is also important in preventing taxpayers from using artificial losses generated by their tax-shelter activities to offset their dividends, interest, and other periodic gains from their investment assets.

2. \textit{Critique of the Investment Interest Rules}

In the tracing system suggested in my 1981 article, interest paid on loans used to finance the purchase of investment assets would be capitalized and recovered under the capital-cost recovery system applicable to such assets.\textsuperscript{114} As explained in that article, tax systems generally do not allow any cost recovery for the expenses of acquiring intangible property with an indefinite useful life until the sale or disposal of the property.\textsuperscript{115} Given that primitive system of cost recovery, a requirement that interest be capitalized would give improper results in many important circumstances.

Consider, for example, a taxpayer who bought a $1,000 bond yielding 10% interest with money borrowed at 8%. The taxpayer ought to have a net gain each year of two percent, or twenty dollars. That result can be achieved by capitalizing the interest payments over the life of the bond and then allowing their recovery over that period. To achieve that result, however, the current cost-recovery rules applicable to bonds would need to be reformed.

The limitation imposed on the deduction for investment interest gets approximately the result achieved under my tracing system in some important cases. It is too generous, however, in two circumstances. First, it allows taxpayers who have a high yield from one asset and a low yield from another to deduct interest paid to finance the purchase of the low-yield asset against the income generated by the high-yield asset. This cross deducting of interest is usually inappropriate.

\begin{itemize}
  \item \textsuperscript{112} \textit{Id.} § 163(4)(d)(A).
  \item \textsuperscript{113} \textit{Id.} § 163(d)(3).
  \item \textsuperscript{114} \textit{See} McIntyre, \textit{supra} note 1, at 796.
  \item \textsuperscript{115} \textit{Id.} at 788-93.
\end{itemize}
The current U.S. treatment of investment interest is also too generous to taxpayers who expect both a current income stream from their asset and a capital gain. In such circumstances, they are allowed to deduct all of the interest used to acquire that asset as long as its current yield equals or exceeds the interest paid on their acquisition loan. Consider, for example, a taxpayer who buys 100 shares of XYZ stock at a cost of $6,000, with $3,000 of the purchase price coming from savings and the balance coming from a 10% loan. The taxpayer reasonably anticipates that the XYZ stock will pay annual dividends of $300 and will appreciate in value at an annual rate of approximately 5%. Under these facts, only about half of the taxpayer’s interest would be deductible in a tax system employing appropriate tracing rules. The entire amount is deductible, however, under current U.S. law.116

C. Tax-Shelter Interest

1. Current U.S. Law

The U.S. Tax Code currently provides that interest paid to acquire tax-shelter assets is deductible only against the income generated by such assets. In the overwhelming majority of cases, those assets would not yield any current income—indeed, the point of a tax shelter is to generate current paper losses. Taxpayers may carry forward indefinitely the deductions denied under this rule. Thus, the rule applicable to tax shelter interest is a capitalization rule, similar in function to the rule limiting interest paid on loans used to acquire investment property.

The details of the rules limiting the deduction for tax-shelter interest are beyond the scope of this Article. Their operation depends on the complex set of rules generally applicable to tax-shelter activities.

The U.S. Tax Code does not use the term “tax-shelter interest.” I have coined the term to refer to what the Code describes as “any interest which is taken into account under section 469 in computing income or loss from a passive activity of the taxpayer.”117 Section 469 uses the term “passivity activity” as a euphemism for “tax-shelter activity.” That section specifies what constitutes a passive activity and imposes limitations on losses generated by such an activity.118

117. Id. § 163(d)(3)(B)(ii).
118. Id. § 469(a)-(m).
In general, an activity constitutes a passive activity with respect to a taxpayer if the activity involves the conduct of a trade or business and the taxpayer is a passive participant in that business, typically as a limited partner. A passive activity usually includes real estate activities. As a concession to the Texas oil lobby, it does not include so-called working interests in an oil or gas lease.

2. Critique of the Tax-Shelter Interest Rules

As part of the 1986 reforms, the United States Congress adopted an elaborate system designed to eliminate most tax-shelter abuses. It would appear, from substantial anecdotal evidence, that Congress has accomplished its mission. The tax-shelter business is in the water closet, yuppy investment bankers who relied on the sale of tax shelters for their livelihood have put their BMWs up for sale, and many of the law firms and accounting firms that depended on the tax-shelter business face a financial crisis. So the news on the tax-shelter front is uniformly good.

The limitations imposed on tax-shelter interest are an important part of the overall assault on tax shelters. There is a legitimate question whether the complex definitions needed to define tax-shelter activities would be warranted if their sole objective were

119. Id. § 469(c)(1).

120. Id. § 469(c)(2).

121. Id. § 469(c)(3). The inclusion of the concession to oil interests in the 1986 tax act is usually attributed to the actions of two slick operators — Treasury Secretary James Baker and his chief deputy, Richard Darman. See Jeffrey H. Birnbaum and Alan S. Murray, Showdown at Gucci Gulch: Lawmakers, Lobbyists, and the Unlikely Triumph of Tax Reform 231 (1987).


The preliminary data from the IRS on tax shelters is heartening. Just from 1986 to 1987, net business "losses" reported on tax returns fell from $149.3 billion to $104.9 billion, a decline that can be expected to be continuing as the restrictions are phased in. And as the incentive to mine the tax code has been reduced, tens of billions of investment dollars have left shelters to seek real returns in the productive economy.
to limit the interest deduction. Since they were already in place, however, their use to limit the interest deduction imposes little additional cost.

The rules applicable to tax-shelter interest generally work in accord with the requirements of an ideal tracing system. They operate improperly to the extent that they allow cross deducting of interest deductions relating to one tax-shelter activity against income generated by another tax-shelter activity. However, the definition of a tax-shelter activity is such that most taxpayers will not have any positive income from those activities. Thus, that defect in the rules is likely to be a de minimis one.123

D. Business Interest

1. Current U.S. Law

In this Article, the term “business interest” refers to what the U.S. Tax Code calls an “interest paid or accrued on indebtedness properly allocable to a trade or business (other than the trade or business of performing services as an employee).”124 Unless one or more special limitations apply, the Code does not quarantine or schedularize such interest. Instead, the taxpayer may deduct such interest against any income he earns. For example, a taxpayer whose business interest exceeds his business income may use that excess interest to reduce his taxable income from wages or investments.

Several limitations do apply, however, to business interest. U.S. Tax Code § 263A contains the most important uniform capitalization rules. Subject to some major exceptions, interest expenses that are allocable to the production by the taxpayer of real or tangible personal property and are paid or accrued during the construction period must be capitalized. After adding the interest to the cost basis of the property, § 263A allows a deduction under the applicable cost-recovery system or upon the sale or other disposition of the property.

A strict-stacking rule, described in section II, determines the amount of interest allocable to the production of real or tangible

123. In the post-1986 era, tax planners have been packaging investments that qualify as passive under the passive activity rules and that generate positive income flows. In most instances, this tax planning strategy would be defeated if the government treated ownership of a limited partnership interest as passive only if the partnership produces tax losses in its early years.

personal property. Interest payments on loans that are specially linked to the construction of the property must be allocated to that property. In addition, taxpayers having other outstanding indebtedness must allocate to that property a sufficient portion of that indebtedness to cover the costs of its production.\textsuperscript{125}

Consider, for example, a taxpayer who uses $10,000 to construct a building. He borrows $6,000 at a 10% interest rate for that specific use. He also has an outstanding loan of $30,000 on which he pays interest at 6%. He must allocate all of the interest attributable to the $6,000 loan and interest attributable to $4,000 of the $30,000 loan to the acquisition of the building. He must capitalize that interest during the construction period but not thereafter.

2. Critique of the Business Interest Rules

The general rule allowing excess business interest to be netted against other interest is proper, but only to the extent that the interest relates to the earning of current income. Interest payments made to carry inventory or to finance the acquisition of an asset should not be deductible currently against any income. Those allocable to carrying inventory should be treated as an inventory expense, with the deduction deferred until the inventory goods are sold. Those interest expenses used to finance the acquisition of capital assets should be recovered under the cost-recovery system generally applicable to capital assets. Most interest expenses incurred in business are probably allocable either to carrying inventory or to the acquisition of capital assets.

Development of good tracing rules for linking business interest payments with the income they help generate would facilitate the allocation and apportionment of interest expenses between U.S. source income and foreign source income. Instead of using the conceptually flawed asset method of current law, taxpayers would match their interest deductions with the income generated by the assets acquired with the borrowed funds. The asset method, in theory, allocates the interest deductions claimed by a taxpayer pro rata to the fair market value of the taxpayer’s assets. That portion of total interest deductions allocated to assets used to produce foreign source income is then allocated to foreign source income.

\textsuperscript{125} Id. § 263A(f).
The asset method treats all of the taxpayer's capital, including its fixed assets, as fungible.

In practice, the asset method works only because of a series of ad hoc rules that are wildly inconsistent with underlying theory. The method was invented in the 1970s by economists working in the United States Treasury Department who believed that the fungibility of money prevented interest from being linked in any meaningful way with particular items of gross income. In the terminology of section I(B)(1), the fungibility fallacy led them astray.126

V. CONCLUSION

From the perspective of the tax collector, the deduction for interest is the most dangerous of all the deductions. Unless properly curbed, it allows taxpayers to deplete their current taxable income by accelerating their deductions for capital costs into the current period, by generating artificial losses, by converting personal expenditures into deductible costs of earning income, and by pushing their income offshore. In the long run, a country that does not impose appropriate limitations on the interest deduction fails in its attempt to establish an effective tax system. Although a tax system in form, in effect, the government simply pleads for voluntary contributions to the fisc.

In an attempt to limit the abuse of the interest deduction, the U.S. Tax Code classifies interest into categories and then imposes different restrictions on interest payments in each category. Some commentators object to this system, stating that the schedularizing or quarantining of income that results from this classification system moves away from the Haig/Simons ideal. They apparently fail to realize that a modern income tax is inherently a schedular system in some important respects.

The generally approved methods of taxing income having a foreign nexus illustrate this point. Most countries, including Australia and the United States, have detailed rules for determining the portion of a taxpayer's income that is subject to their primary jurisdiction. This division of worldwide income into domestic

126. The assets method is described in detail in McIntyre, supra note 20, at 3/B2ai.
source income and foreign source income is inherently schedular. If it violates some tax specialist's version of the Haig/Simons ideal, then that version of the idea is unsuitable as a guide to the design of a modern tax system.

Under the current system, the division of income into foreign and domestic baskets is just one of the ways that deductions must be quarantined. More basically, the Code quarantines deductions for purposes of computing gain on the sale of goods. Inventory accounting by its nature links deductions with particular items of income. That is also the whole point of requiring taxpayers to determine their cost basis in assets. A pure Haig/Simons system—a system that taxed all income as it accrues—dispenses with inventory accounting and the maintenance of cost basis. Every tax system in the world today, however, needs such features to operate.

The problem that governments face in controlling abuse of the interest deduction can be compared to the problem they would face in controlling pollution of harbors and beaches from an oil tanker constructed with one very large storage compartment. With such a tanker, a sharp rock piercing the hull sends millions of barrels of crude oil into the ocean. One possible way of minimizing the risk of a disastrous oil spill is to install a double bottom on the tanker. This approach reduces the risk of a breach of the bottom of the tanker, but it would not have any effect in limiting the oil leakage once a breach actually occurs. A better solution is to divide the storage area of the tanker into compartments, with each compartment separately sealed.

The United States adopted the separate-compartment solution to prevent wholesale leakage from its tax base through abuses of the interest deduction. An elegant solution in many respects, the separation of interest into categories serves not only to protect against abuse but also to properly measure taxable income. Commentators complaining about that solution on the ground that money is fungible have missed the point. They might just as well complain about the division of the storage compartment of an oil tanker into separate compartments on the ground that oil is a fungible commodity.