

Tax Incentives for Saving

By Harvey Galper and Eugene Steuerle*

The promotion of a healthy rate of economic growth has long been a central goal of public policy. The two principal categories of initiatives deployed in pursuit of that goal have been macroeconomic measures and structural tax incentives. The tax code now contains a variety of provisions intended to encourage saving and investment--and, through them, growth. Because of the lagging performance of the economy in recent years, many new incentives for household saving have been proposed. Unfortunately, few supporters of these proposals or of the saving provisions now on the books have developed a systematic conception of the attributes required for a saving incentive to be effective. In this article, we will grapple with that crucial issue.

Two disclaimers should be noted at the outset. First, we are not suggesting that increasing household saving is the only, or even the most important, goal of structural tax reform. An equitable distribution of tax burdens, minimal distortion of economic choices, and effective administration of the tax system must be considered as well. Each of these goals may place serious constraints on the possibilities for changing the tax structure to promote saving. Equity objectives may limit the extent of tax changes in particular income classes. The goal of a minimally distorting tax system requires that consideration be given to the impact of potential saving incentives on labor supply, consumption patterns, and resource allocation in general. Moreover, a tax system should be capable of being administered without imposing excessive paperwork or record-keeping burdens on the taxpaying public. Tax reforms that are designed to promote saving ought to be judged along these dimensions as well.

Second, we make no claim that tax incentives, even if well-designed, will necessarily generate substantially higher saving rates;

saving may just not be very responsive to tax changes that increase after-tax rewards. It is possible, however, to identify the criteria that incentives must satisfy if they are to have any chance of increasing saving levels.

In this essay, we first set out those criteria. Then we review existing tax incentives and evaluate them in terms of the criteria. Lastly, after determining that current incentives are decidedly deficient, we describe several tax changes that would constitute genuine saving incentives.

The Internal Revenue Code has numerous provisions, involving hundreds of billions of dollars annually, that affect the return to household saving. These include special deductions for retirement saving; dividend and interest exclusions; deferral and exclusion from taxation of unrealized capital gains; and full deductions for both real and inflationary components of interest expenses. Because these provisions were adopted in a piecemeal fashion, they are uncoordinated and arbitrary in their distribution of tax reductions among individuals and among different types of assets.

In an inflationary environment, the combined effect of these special purpose provisions become even more random and arbitrary. For example, inflation may increase the tax advantages of saving in the form of owner-occupied housing relative to the advantages conferred by purchases of corporate stock; the reason is that the yield from housing in the form of in-kind services to the homeowner goes untaxed, while the inflation-induced appreciation of stock values may lead to higher capital gains taxes. Such disparities in the treatment of different forms of capital income make the appropriate design of saving incentives especially crucial.

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DESIGN CRITERIA FOR AN EFFICIENT SAVING INCENTIVE

For any tax proposal or provision accurately to be labeled a saving incentive, three criteria must be met. First, tax benefits should not go to taxpayers who simply switch assets from one form of saving (or one kind of account) to another. The shift of assets into a tax-preferred form permits taxpayers to achieve tax reductions with no increase in their saving. When one asset is favored over others, there will indeed be additional investment in the advantaged activity. However, there will also be less investment in other activities and a less efficient allocation of investment across sectors and activities. Thus, although total saving and investment could conceivably increase if overall returns to capital rise, that increase would come at the cost of a poorer allocation of the capital stock.

Second, no tax provision can be considered a true incentive if it does not apply at the margin. A deduction with a cap--that is, one with a limit on the amount of deduction or exclusion permitted--provides little marginal incentive for a person already receiving income in excess of the maximum. For example, a cap of \$500 on the amount of interest or dividends that can be received tax-free would have only a very modest marginal incentive effect, since taxpayers who receive more than \$500 of dividend and interest income account for more than 97 percent of such income.

Third, a tax incentive for saving must provide symmetrical treatment of positive saving on the one hand and negative saving or borrowing on the other. If a taxpayer can borrow and deduct the costs of interest while at the same time acquiring an asset yielding income that is partially or fully tax-exempt--a process that is known as "tax arbitrage"--the taxpayer may achieve a tax reduction with no increase in net saving whatsoever.

Imagine a simple case in which the before-tax rate of interest on borrowing and the rate of return from an asset are both 10 percent. Suppose the income from the asset is advantaged through a partial exclusion so that the taxpayer need include only half of the 10 percent rate of return in income subject to tax. Since the interest paid on borrowing can be deducted fully and immediately, the taxpayer has an incentive to purchase the asset--but does not necessarily have an incentive to undertake any net saving. For instance, a taxpayer in the 50 percent bracket who borrows \$10,000 and invests it in the tax-favored asset realizes a subsidy equal to \$250 while engaging in no net saving (column 1 of Table 1 below). If that same taxpayer invests \$10,000 of new saving in the asset, the tax subsidy received still equals

only \$250 (column 2 of Table 1). Thus, the tax preference provides no additional return for increasing net saving. This problem can be overcome only if the rule that is applied to positive saving and capital income is also applied to negative saving and capital income. If an interest deduction were allowed as a deduction--then a taxpayer would not benefit from engaging in simultaneous borrowing and lending transactions.

Tax arbitrage reduces incentives to save--and incentives to work--in two ways. First, it permits taxpayers to increase their disposable income without doing any additional saving or productive labor--and may, therefore, encourage them to devote more time and resources, including otherwise unnecessary legal and administrative expense, to non-productive efforts. Because tax arbitrage reduces taxable income, it also lowers a taxpayer's marginal tax rate. However, this effect on the marginal tax rate results from any increases in deductions--not just those deductions that are intended to increase saving. Second, the loss of tax revenues due to arbitrage by some taxpayers necessitates increases in revenue collections from other taxpayers. Those in the latter group face higher tax rates on their labor income and on their income from capital--and, as a result, have somewhat diminished incentives to work and to save.

Table 1.--Example of Tax Arbitrage

	Arbitrager (1)	Saver (2)
A. Earnings on asset	\$1,000	\$1,000
B. Interest paid	1,000	0
C. Change in taxable income before exclusion (A-B)	0	1,000
D. Exclusion or other tax preference	500	500
E. Tax savings	250	250

An inflationary environment intensifies the problems created by tax arbitrage because the deduction of nominal interest payments may result in a negative real after-tax borrowing rate. For example, if the interest rate is 14 percent and the inflation rate is 8 percent, the after-tax cost of funds to a taxpayer in the 50 percent bracket is -1.0 percent (.5(14%) - 8%). Even if the after-tax rate is not negative, the gap between a partially exempt rate of return and the deductible rate of interest will increase with inflation--and so, too, will the potential rewards of arbitrage. Thus, if inflation increases the nominal interest rate (and the cost of borrowing) from 10 percent to 15 percent, a taxpayer in the 50 percent bracket who deposits borrowed money in

an IRA will experience a jump in arbitrage profits from \$50 to \$75 for each \$1,000 borrowed. Furthermore, since the taxpayer in such a transaction is both a debtor and a creditor and since inflation will affect both sides of that transaction equally, the taxpayer's real wealth will not be eroded by inflation. In the IRA transaction just described, the taxpayer's 50 percent increase in arbitrage profits will be a pure windfall.

The practice of tax arbitrage is neither unusual nor inconsequential. It is quite common for individuals to borrow at the same time that they purchase such tax-favored investments as pensions, annuities, land or corporate stock. The borrowing may take a variety of forms, including second mortgages, increased leverage in business investments, or decreased equity in housing as an asset when a home is sold and a new one purchased. The asset used as collateral need not be related to the assets actually purchased with borrowed funds. Individuals who borrow will receive the same tax subsidy as those who increase their net saving when they invest in tax-preferred assets.

In summary, for a saving incentive to be effective, it must meet three criteria: little or no inducement to shift forms of asset ownership, a positive incentive to save at the margin, and the prevention of tax arbitrage. We now turn to a review of the saving incentives in current law and an analysis of how well these incentives satisfy our criteria for effectiveness.

THE CURRENT TAXATION OF CAPITAL INCOME

Although proposed new forms of saving incentives have been the subject of public debate and countless congressional hearings in recent years, the extent to which capital income flows are already granted deferral or exclusion from taxation may not be well-known. Many of these preferences have been in the tax law for a long time and reflect the fact that the tax system generally taxes *realized* flows of cash and excludes or defers from taxation both unrealized accruals of income and receipts of in-kind service flows, such as those from housing and durables.

Perhaps the easiest way to indicate the pervasiveness of these existing incentives is to relate them to the broad categories of assets held by individual taxpayers. As indicated in Table 2, there were approximately \$10.5 trillion of these assets at the beginning of 1981, of which roughly \$5.9 trillion were in tangible assets--such as housing, durables, and land--and \$4.5 trillion were in financial assets. Very little of the income from tangible assets held by individuals is taxed.

Table 2.--Assets and Liabilities of Individuals in the United States--1981

Billions of Dollars Outstanding at Beginning of Year	
Tangible Assets	\$5,931
<i>Reproducible Assets</i>	\$4,267
Owner-occupied housing	1,920
Other residential structures	486
Consumer durables	995
Inventories and non-residential plant and equipment	864
<i>Land</i>	1,665
Owner-occupied	590
Farm business and nonfarm noncorporate business	1,032
Other	43
Financial Assets	4,521
<i>Currency, Saving Accounts, and Money Market Funds</i>	1,657
Demand deposits and currency	288
Time & savings accounts	1,294
Money market fund shares	74
<i>Securities</i>	1,644
U.S. savings bonds	73
Other U.S. government securities	210
State and local obligations	74
Corporate and foreign bonds	87
Open-market paper	38
Corporate equities (excluding corporate farms)	1,162
<i>Pension and Life Insurance Reserves</i>	950
Life insurance reserves	223
Pension fund reserves	727
<i>Miscellaneous Assets</i>	271
Total Assets	10,452
Home Mortgage	946
Consumer Credit	385
Other Mortgage Debt	240
Other Debt	284
Total Liabilities	1,855
Net Worth	8,598

Source: *Balance Sheets of the U.S. Economy* (Washington: Board of Governors of the Federal Reserve System, 1981).

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For example, the benefits provided by owner-occupied housing and durables are not subject to tax (although interest payments on mortgages and installment debt are deductible, as are property taxes). Income from investments in real estate is not taxed fully, in part because the owners of these assets are allowed generous investment credits and depreciation or cost recovery allowances.

Much of the total return from both household and business investments in land and real estate consists of appreciation in value. Very little tax is collected on this appreciation because of the capital gains exclusion and, more important, because of provisions in the tax code that defer increases in value from taxation until they are realized and exclude them completely from taxation in the event of death [1]. Taxpayers who are 55 years of age or older also receive a generous exclusion for gains from the sale of owner-occupied housing, while younger taxpayers are allowed to defer such gains by purchasing houses of equal or greater value. We should note, too, that compliance data published by the Internal Revenue Service indicate a substantial amount of underreporting of rental income and income from farms and non-corporate businesses.

Of the \$4.5 trillion held in financial assets, about 21 percent, or \$950 billion, was in the form of life insurance and pension reserves. Most of these assets receive favorable tax treatment because their purchase price is deducted from other income, or the income that they generate is excluded from the tax base, or tax liability for that income is deferred to the future. In addition, 1981 amendments to the tax code permit workers to deduct deposits of up to \$2,000 per year in Individual Retirement Accounts (IRA's).

Another \$1.2 trillion of the financial assets of individuals were held directly in corporate stock. Corporate stock ownership by individuals is given favorable tax treatment through several provisions: the exclusion of 60 percent of long-term gains from taxation; a dividend exclusion of \$100 per taxpayer (\$200 per joint return); a deferral from taxation and an eventual conversion to capital gains for a limited amount of dividends reinvested in public utility stock; and, most important, the combination of tax deferral of any gains until they are realized and the exclusion from taxation of all gains unrealized at the time of a taxpayer's death.

Individuals also held \$74 billion worth of state and local obligations, the income from which is non-taxable, and \$73 billion worth of U.S. savings bonds, the income from which can be deferred from taxation until the bonds are sold. For years after 1984, a 15 percent exclusion is provided for net interest income

of up to \$3,000 (\$6,000 on a joint return), but only to the extent that interest income exceeds itemized interest expenses other than interest paid on debt related to a taxpayer's dwelling or conduct of a trade or business [2].

In the aggregate, then, about 80 percent of the \$10.5 trillion in individual assets is held in forms that are subject to some type of "saving" incentive.

Relationship of Existing Incentives to the Criteria for Efficiency

The hodgepodge of provisions relating to the taxation of income from capital may appear at first glance to have moved the tax structure toward some version of a consumption tax. This view is quite misleading, however, because it bypasses the question of whether the existing incentives actually work. Are they efficient according to the three criteria set out earlier?

As to the first criterion--the prevention of asset shifts--saving incentives adopted on a piecemeal basis and applying only to certain forms of saving will almost certainly encourage households to reorganize their portfolios. Because each investment decision will be based partly on tax considerations rather than exclusively on true economic productivity, the overall efficiency and productivity of investment will decline.

One especially important aspect of the efficiency losses induced by asset shifts has been generally overlooked. The exclusion of interest income and payment from most incentives means that individuals are charged the highest effective tax rate for direct lending to others, and a much lower tax rate for holding their saving in other forms.

Financial intermediaries--such as banks and thrift institutions--typically channel money deposited by savers to investors making investments for which economic returns are the greatest. However, when individuals restructure their portfolios to achieve the highest available after-tax returns, this process of financial intermediation is distorted. Lower-income individuals and new businesses are discouraged from borrowing in order to invest, while higher-income individuals and established businesses with current flows of income are encouraged to borrow and to leverage their investments even further or to retain earnings for investment in their own projects. The resulting loss in efficiency occurs not because of shifts in aggregate saving, but because the saving is not made available to those whose potential investments could yield the highest return.

It is clear that inducing individuals to switch their assets from one form to another

has adverse economic consequences. Even if saving and investment increase, the resultant net economic benefit is diminished--and perhaps even made negative--by the need for an increase in the capital stock just to offset the misallocation of capital across sectors and uses.

As to the second criterion for effectiveness, current tax preferences for capital income provide no incentive for increased saving on the margin in situations where a cap is placed on the amount of income eligible for a tax reduction. The current exclusion of \$100 of dividends per taxpayer (\$200 for a joint return) is a prime example. The tax provisions regarding IRA's include both a cap and an inducement to shift assets into tax-preferred accounts. While IRA's may provide some saving incentive for persons whose current rate of saving places them below the cap amount, inevitably those who can most easily obtain the tax reductions that IRA's offer are those who need only to switch the form of their saving, rather than those who actually must increase net saving. Accordingly, it should come as no surprise that in 1977 over half of the eligible taxpayers with incomes over \$50,000 made deposits in IRA's, but less than 5 percent of those with incomes under \$20,000 did so. Data on utilization rates for more recent years are not yet available, but preliminary evidence shows a similar distribution of benefits by income class.

Finally, all of the existing incentives are found to be deficient in terms of the third criterion; none of them effectively disallows tax arbitrage through borrowing. Indeed, much of the interest paid on the \$1.9 trillion of individual financial liabilities is deducted immediately, even though it is likely that many of these borrowed funds are used to acquire assets--such as pensions, annuities, land, housing, and corporate stock--for which income is deferred.

Although the tax law reflects some recognition of the problem of tax arbitrage, restrictions now in the law have had little impact. One provision bars the deduction of interest expenses incurred in borrowing funds used to purchase tax-exempt securities. However, the provision is difficult to enforce. Unless the tax-exempt securities themselves are used directly as collateral for the loan that finances their purchase, it is almost impossible to trace the connection between such a purchase and an increase in borrowing. Moreover, commercial banks and property and casualty insurance companies, which are major purchasers of tax-exempt securities, are ordinarily not affected by this limitation. A second provision limits itemized interest deductions in excess of investment

income, but this restriction does not apply to borrowing against one's home or through one's business.

Tax arbitrage is also possible when purchasing physical capital. In many cases, the combination of the investment tax credit and the vastly accelerated depreciation available under the new accelerated capital recovery system (ACRS) provides the equivalent of an immediate deduction for, or expensing of, the acquisition costs of particular investment. Since expensing is tantamount to exempting from taxation the return on investments, failure to deal with the deductibility of interest expenses results in negative tax rates for many leveraged investments.

One further question needs to be addressed: Is it possible that the various preferential tax provisions that we have been discussing, although they are sources of sectoral misallocation when taken one at a time, largely cancel each other out when treated in the aggregate? Three considerations argue against such an outcome. First, as already noted, interest income received by households is conspicuously absent from the list of items for which tax preferences are allowed. Second, the provisions are so varied in their approach and subject to so many caps and limits that the differentials among rates of taxation (or subsidy) for different types of assets are still quite significant. Finally, the ability to arbitrage the system undercuts any possible incentive effect, since the tax benefits can be obtained without increasing saving at all.

In summary, none of the saving incentives now in the tax code meets each of the three criteria for an efficient incentive: avoidance of unnecessary and inefficient asset shifts, provision of incentives at the margin, and prevention of tax arbitrage through borrowing. Most fail the first test, many fail the second, and all fail the last.

SAVING INCENTIVES THAT WOULD WORK

At this point, one might begin to question whether the tax code is even capable of accommodating an effective saving incentive. We believe that it is, and we offer as evidence three options that would meet all of the above criteria for effectiveness: a comprehensive income tax base conjoined with a reduction in marginal tax rates; a comprehensive personal consumption tax; and the indexation for inflation of income from capital. Particular advocates of these options may not view them as being intended primarily as incentives for saving; nonetheless, as the analysis below will indicate, each option would be an effective means to that end.

Broader-Base, Lower-Rate Income Tax

The adoption of a broader income tax base--and, with it, lower rates of taxation--is a traditional approach to tax reform. This course is supported by those who decry the erosion of the tax base and the attendant adverse impacts on the distribution of tax burdens and the allocation of resources. In terms of our current perspective, however, a broader base and lower rates would also meet all of the criteria for efficient saving incentives. A broader base would provide a more uniform treatment of capital income from disparate sources, thereby improving resource allocation. Saving would be directed toward the most efficient, rather than the most tax-favored, uses. Even if some assets continued to receive tax preferences, lower tax rates would reinforce the tendency toward efficient allocation by automatically decreasing the value of tax-preferred assets relative to other assets.

The remaining two criteria would also be met easily by a broader-base, lower-rate tax structure. The very nature of rate reduction means that incentives would apply at the margin, since marginal tax rates would be reduced for most, if not all, transactions. Finally, the tax arbitrage problem that is characteristic of existing saving incentives would be avoided because the rate reductions would apply equally to both receipts and deductions. In fact, lower rates would actually reduce the potential gains from tax arbitrage by narrowing any remaining differential between the tax treatment of interest and the treatment of other types of capital income.

There are two aspects of rate reductions that are generally ignored and that make these reductions even better at encouraging saving than is commonly recognized. First, a decrease in rates is one of the easiest ways to reduce the tax incentive to borrow without actually increasing the taxes paid by any borrower. All borrowers with positive net taxable income would benefit from a tax decrease because the reduction in taxes on their positive income would more than offset the increase in taxes on interest payments that are now deductible. Nonetheless, their marginal incentive to borrow would be reduced; only taxpayers with zero or negative taxable income, for whom the net tax change would be zero, would have an undiminished marginal incentive to borrow.

Second, in an inflationary economy with high nominal interest rates, a reduction in tax rates would provide a much greater percentage reduction in the tax on real interest income than in the tax on real wages or on the real return from partially taxable assets. For instance, suppose the inflation rate were 7

percent and the interest rate 12 percent. A reduction in a taxpayer's marginal tax rate from 33 percent to 25 percent would initially double the real after-tax rate of return for holding interest-bearing assets (because an increase from 8 percent to 9 percent in the nominal after-tax yield would amount to an increase from 1 percent to 2 percent in the real after-tax yield). However, the rate reduction would increase the return from work by only 12 percent (from 67 cents to 75 cents of each additional dollar earned).

Although the magnitude of potential tax rate cuts would depend on the degree of base-broadening, even modest efforts toward a broader base could represent an improvement over current saving incentives. For example, a more uniform and comprehensive inclusion of capital income in the tax base, offset by a reduction in the corporate tax rate, would be likely to increase efficiency in the allocation of capital across sectors and uses without producing any decrease in net saving. Similarly, returning to the tax base certain forms of labor income now excluded--such as employer payments of health premiums on behalf of employees--would encourage saving if the resultant revenue increases were used to finance a rate reduction for all forms of income.

In terms of saving incentives, perhaps the only objection to a broader-base, lower rate structure comes from those who fear that taxes on capital income--or taxes paid by those with relatively high propensities to save--would be increased. In a revenue-neutral proposal, for instance, the preponderance of a rate reduction might be directed at labor income, rather than at capital income. Whether capital income would face a higher average tax rate would depend on the particulars of the restructured tax and, in no small part, on how the eliminated tax preferences had been distributed as between capital income and labor income.

There are reasons to discount this objection. First, it often leads to the type of "saving incentive" proposals that exist today--proposals that would cost revenue and decrease the efficiency of capital allocation, but would have at best an uncertain effect on total saving. Second, a proposal can always be designed to insure that labor income comes in for at least a proportionate share of base-broadening and that taxation of capital income is not increased.

Comprehensive Consumption Taxation

A second effective method of providing a saving incentive would be to convert the existing individual income tax into an individual consumption or expenditure tax. The nature of such a consumption tax should be made

clear. In general terms, the tax base would be household consumption, defined as income minus saving. This base could be taxed at progressive rates. Advocates of a consumption tax claim that it is superior to the income tax on a variety of grounds, only one of which is its efficiency as a saving incentive. Our purpose here is not to spell out the details of such a tax or to provide a complete evaluation of its merits and drawbacks, but to indicate the ways in which a comprehensive consumption tax would differ from the piecemeal saving incentives of current law.

A comprehensive consumption tax would meet our criteria for an efficient saving incentive in much the same way as would a broader-base, lower-rate income tax. The source of funds for consumption would not affect their tax treatment. Saving would also be treated uniformly; neither the source of the saving nor the type of investment financed by the saving would directly affect the tax rate. Thus, a consumption tax could be considered the equivalent for many purposes of a tax on labor income accompanied by no tax on capital income.

Because of its uniform treatment of all capital income and all saving, a comprehensive consumption tax provides a much more efficient saving incentive than does the current tax structure. A consumption tax would be neutral as among forms of saving--in contrast to existing saving incentives, which generally favor one form of saving over another. In a consumption tax, incentives would apply at the margin for all taxpayers; even for the wealthiest of individuals, the tax rate for income from saving would in effect be zero. Few saving incentives now in the tax code meet that second criterion. Finally, while existing incentives all increase the benefits that can be obtained by borrowing and simultaneously investing the proceeds in a tax-favored asset, a properly designed consumption tax would address the tax arbitrage problem directly by eliminating the deduction for interest paid or by treating all borrowed dollars as receipts (and gross saving as deductions from receipts).

Indexation of Capital Income

A third option--and one not generally considered a saving incentive--would be the indexation for inflation of all capital income [3]. Full indexing of capital income would mean that all depreciation deductions would be adjusted for increases in the price level that take place after the purchase of the depreciable asset; real, rather than nominal, capital gains would be subject to taxation, and only the real component of interest income or expense would be added to or subtracted from the tax base.

Indexing can be supported as a tax reform measure on more or less the same grounds as base-broadening--namely, that the more accurate measurement of income would increase the efficiency of resource allocation and tend to equalize the tax burdens of individuals with equal amounts of real income. But it is also possible for indexing to be a saving incentive, although its force as an incentive would depend upon whether marginal rates on all capital income were raised--as in the case of base-broadening with no corresponding rate reduction--then the outcome would be ambiguous and would turn on whether the improvement in the allocation of capital across uses was more than offset by the losses associated with a reduction in aggregate investment. However, if average marginal tax rates on capital income were lowered, the gains from increasing the aggregate capital stock would reinforce the gains from improving its allocation.

As one component of an effort to measure and to tax all real income uniformly, indexing would fulfill all the criteria for an efficient saving incentive. First, it would reduce the unnecessary asset shifts that occur under the existing tax rules. Second, to the extent that real after-tax returns would be increased, the incentives to save would be applied at the margin. Finally, the indexing of capital income would reduce the potential rewards of tax arbitrage by allowing the deduction of only real interest expenses (even as it would permit the taxation of only the real component of interest receipts).

There are several advantages to providing incentives for saving through full indexing. Because indexing would affect capital income only, a revenue-neutral tax program containing full indexing could be designed to avoid raising the average marginal tax rate on capital income--an outcome feared by many of those who oppose the creation of a broader-base, lower-rate income tax structure. At the same time, indexation would work within the context of the income tax; it would neither remove real capital income from the tax base nor exempt wealth accumulation from taxation, as would a consumption tax. Finally, indexation would meet almost everyone's standards of fairness, because it would be a move toward the more accurate measurement of income.

Many of the existing tax preferences for capital income were adopted as crude forms of indexing or have had the effect, whether intended or not, of moderating the tendency of inflation to change real effective tax rates across assets. However, such ad hoc indexing operates in an imperfect, uneven, and haphazard way; some assets are fully or partially

shielded from inflation and others are essentially exposed. Among the current instances of ad hoc indexing are: for fixed physical capital, accelerated depreciation and the investment tax credit; for inventories, the last-in-first-out (LIFO) method of accounting; and for corporate stock and other assets that appreciate in value, deferral and exclusion of realized capital gains. Of the various types of capital income, interest is least protected and thus the most vulnerable to the effects of inflation.

Short of comprehensive indexation, there are two ways in which the existing system of ad hoc indexation could be brought closer to conformance with our criteria for efficiency. First, improvements could be made in how indexing is provided for particular items of income. For instance, the current method of accelerated depreciation--which results in highly disparate tax rates being imposed on different types of capital income--could be replaced with an adjustment that would lower tax rates simply by assuring that inflation does not reduce the real value of allowed deductions.

Second, even partial indexation of interest income would reduce significantly the existing incentive for asset shifts and portfolio reallocations. A concomitant indexation of deductible interest expense would decrease the incentive to borrow and reduce the gains that can be realized through tax arbitrage. One possibility would be fractional inclusion of both interest income and expense--with lenders paying tax on only a portion of their nominal interest receipts, and borrowers deducting only a portion of their nominal interest payments; this arrangement would clearly measure net real income more accurately than does current law.

CONCLUSION

Although the tax code contains numerous provisions that are designed to provide incentives for saving, virtually none of them meets the criteria for an effective incentive.

Most cause unnecessary and inefficient asset shifts, many fail to provide incentives at the margin, and all permit tax arbitrage through borrowing.

As we have seen, however, it is possible to design an effective incentive; three comprehensive options were delineated above. Short of these more thoroughgoing measures, partial reforms in the direction of a more uniform treatment of income, additional rate reductions, and the indexation of interest could provide some enhancement of saving incentives. We would emphasize, however, that the top priority for designers of tax incentives--and one that has been neglected for too long--should be the revision of interest deductibility rules in order to minimize the opportunities for tax arbitrage.

NOTES AND REFERENCES

NOTE: Additional materials, not referenced in this article, which relate to subjects discussed, are listed in [4 and 5].

- [1] This exclusion applies to heirs as well as to decedents and is achieved by increasing the heir's basis in an asset to the asset's value at the time of the decedent's death.
- [2] This provision has not yet come into effect, and many bills now before Congress would defer or eliminate it.
- [3] We are considering here the effects of inflation on the size of the tax base and on the measurement of real income; we are not examining the so-called "bracket creep" effect.
- [4] U.S. Department of the Treasury, Internal Revenue Service, *Statistics of Income--Individual Income Tax Returns*, appropriate years.
- [5] U.S. Department of the Treasury, Internal Revenue Service, *Statistics of Income--1976, Individual Retirement Arrangements*.