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Tax Incentives Without Inequity

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TAX INCENTIVES WITHOUT INEQUITY

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INTRODUCTION

Over the years, some taxpayers have paid low taxes on high incomes.¹ Their apparent tax evasion creates serious doubts about the fairness of the tax system. These doubts in turn diminish the morale of other taxpayers and reduce their compliance with the tax laws.²

But most tax analysts believe that reformers face a serious dilemma. Congress has long used the tax system to advance non-tax policies. The principal mechanism of non-tax policy is the tax incentive, which encourages taxpayers to engage in some desired activity by taxing income from the activity at a lower rate.³ Tax incentives, however, create opportunities for high-income taxpayers to reduce their taxes by holding their wealth in tax-preferred items.

Most analysts believe that the unfairness resulting from tax incentives can be ameliorated only through measures that reduce the desired effects of the tax incentives. Congress, these observers believe, is thus faced with three imperfect alternatives: It can abandon the use of tax incentives altogether, it can continue to enact preferences and tolerate the resulting inequity, or it can implement remedial devices that will improve equity but blunt the effect of incentives.⁴ Congress seems to have taken the third

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³ Lower rates are sometimes achieved indirectly, for example, by allowing special deductions for engaging in the activity. See Michael S. Knoll, Designing a Hybrid Income-Consumption Tax, 41 UCLA L. REV. 1791 (1994).

course. It has subjected many tax incentives to an Alternative Minimum Tax ("AMT"), which requires all taxpayers to pay a minimum percentage of their income in taxes. At the same time, Congress has excluded from the AMT those provisions whose effectiveness it wishes to safeguard.\(^5\)

Corrective taxes may indeed blunt the effects of incentives. Yet, as I will argue in this Article, two remedial measures leave the desirable effects of incentives unaffected. These two measures, a surplus tax on income from tax-preferred assets and the use of credits rather than deductions, have been given little attention and no support, yet they can wholly resolve the apparent conflict between incentives and equity.

The case for surplus taxes and credits is based on several observations, made long ago, that are the cornerstone of any analysis of tax incentives. The value of the tax incentive to any asset will be reflected in a lower return on the asset. Thus, holders of preferred assets pay an implicit tax in the form of reduced yields. But the return to tax-favored and taxable items will be exactly equivalent only if all tax-favored assets are held by taxpayers in the same bracket. If holdings of tax-favored assets are more widely dispersed, return on these assets will reflect lower tax rates applicable to middle-income taxpayers, and high-bracket taxpayers will be able to reduce their effective tax rates by purchasing tax-favored assets.

The basic economics of tax incentives has been long understood. Yet tax analysts have overlooked two simple solutions to the resulting unfairness. Under the first solution, a surplus tax, taxpayers in the market-clearing bracket would be treated as under present law. Taxpayers in higher brackets would pay a surplus tax equal to the difference between their own tax bracket and the market-clearing bracket. Under the second solution, tax preferences would be implemented by providing a credit, rather than the deduction granted under current law. Since a credit is worth the same amount to taxpayers in all brackets, high-bracket taxpayers would not reap any surplus by holding tax-preferred items. Both surplus taxes and credits will wholly eliminate any surplus to high-bracket taxpayers. In contrast, the AMT will only partially reduce the surplus received by high-income taxpayers.

Credits and surplus taxes do have one important limitation. Under a system of surplus taxes, many taxpayers will pay implicit rather than explicit taxes. Thus, under current accounting conventions, surplus taxes

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and credits will decrease but not eliminate the apparent unfairness of the tax system. The AMT, in contrast, can sometimes significantly increase perceived fairness without diminishing the effect of the tax incentive on which it is imposed. This surprising feature of the AMT results from the similarity, often overlooked, between the AMT and a limitation on the amount of preference income deductible by any given taxpayer. Unlike a surtax or credits, though, the AMT may not always be wholly costless: At high levels, the AMT will sometimes reduce the demand for exempt items. Still, neither preference limits nor the AMT should be dismissed out-of-hand. Public confidence, while perhaps less important than true tax equity, is nonetheless a legitimate concern.

Section I will examine the effects of tax incentives on the actual equity and the apparent equity of the Internal Revenue Code (the "Code"). Left unchecked, tax incentives do reduce both the actual and the apparent progressivity of the system. Section II will examine why corrective taxes might sometimes undermine the incentive effect of tax preferences. Section III will propose credits and surplus taxes, two devices to neutralize the distributive effects of tax preferences. As a check on real unfairness, credits and surplus taxes are superior to all the alternatives yet proposed. They will not, however, eliminate implicit taxes, and will thus leave the appearance of some inequity. Section IV will examine other devices designed to limit the inequity resulting from tax incentives. The most important of these is the AMT. Under the AMT, all taxpayers must pay a minimum percentage of their income in taxes.6 Another possibility, often considered, is to limit the number of preference items available to any given taxpayer. Under many circumstances the two devices are equivalent. The AMT and preference limitations, the Section then argues, can only imperfectly redress the true inequity caused by tax incentives. Both, however, may increase the apparent fairness of the tax system more effectively than surtaxes or credits.

I. TAX INCENTIVES

The Code imposes a tax on "all income from whatever source derived."7 This simple principle, though, is subject to many qualifications. Some of these qualifications are needed to define income accurately.

7. Id. § 61(a) (1988).
Others lower or eliminate taxes on income from certain sources or put to certain uses. These exceptions are often called “tax preferences.”

“Tax incentives” are preferences that result from a deliberate policy decision to encourage certain behavior. Some commentators have questioned the use of the tax system to advance non-tax policies, arguing that tax incentives inevitably create inefficiencies. This charge, I will suggest in Part A, is untrue. The most efficient tax system is not usually one that imposes a uniform rate on income from all sources.

Tax incentives can in fact create both real and perceived inequities. The precise nature of these will be examined in Part B. Taxpayers who hold tax-preferred assets do pay lower monetary taxes than those who hold fully taxable assets. This apparent inequity is in part an illusion, since the return on tax-preferred assets will reflect the value of the preference. However, incentives may create real as well as perceived inequity. In a progressive tax system, the value of the preference for high-bracket taxpayers may not be fully offset by the reduction in return.

A. Are Tax Incentives Efficient?

The use of tax incentives has been condemned by many tax scholars. For many years, most tax scholars approached tax policy from the perspective of comprehensive tax base theory. Comprehensive tax base theory begins with the view that tax systems should disrupt market forces as little as possible. To minimize distortion, the theory posits, a uniform rate of tax should be imposed on a broad income base, with few exclusions or deductions. Thus, comprehensive tax base theorists have advocated

8. Some tax preferences, such as those relating to sickness and disability, are presumably intended to relieve hardship rather than to encourage some particular behavior. See, e.g., id. § 104(a) (1988 & Supp. V 1993).

9. To the extent tax scholars acknowledge that intervention is desirable, such as when externalities are present, they would prefer to implement corrective measures through the expenditure system. See, e.g., STANLEY S. SURREY, PATHWAYS TO TAX REFORM 175-208 (1973).

eliminating all tax preferences from the Code. Many of them regard the AMT as a transition device for moving to a more comprehensive base.  

Comprehensive tax base theorists are correct when they assert that the most efficient tax system is one that interferes least with taxpayer behavior. Their view that uniform taxation minimizes interference, though, is subject to serious qualification. If all items of consumption or production can be taxed, a uniform tax system interferes least with market efficiency. Suppose, however, that one good is not taxed. This is a highly realistic assumption, for one of the most important consumption goods, leisure, in fact cannot be taxed. With one untaxed good, policymakers have two basic choices.  

They can either impose a uniform tax on income or taxable consumption, or they can impose a tax at different rates on different taxable consumption items or income sources. Any of these non-lump-sum taxes will have adverse efficiency effects by distorting the level of activity on which they are imposed. Specifically, they will tend to reduce the level of the taxed activity in favor of untaxed or less-taxed alternatives. For example, an income tax will reduce work in favor of leisure, a tax on housing will reduce housing expenditures in favor of other consumption items, and so on. The size of this reduction in the taxed activity will depend on the responsiveness, or elasticity, of demand for the taxed activity to taxes. The higher the elasticity, the greater the reduction in the level of the activity. The efficient tax system is the one that produces minimal changes in activity levels, and so the efficient taxes fall most heavily on less elastically demanded activities. In addition, goods which are consumed in conjunction with the untaxed good are a useful proxy for taxing that good.


12. In principle, a third choice is available: a lump-sum tax, that is, a tax levied on taxpayers independent of any production or consumption decisions they make. Some lump-sum taxes, sometimes called "head taxes," are the same for all taxpayers. Other lump-sum taxes, sometimes called "endowment taxes," depend on the size of the individual's endowment of wealth and ability. Either type of lump-sum tax will be wholly nondistortionary. Only an endowment tax, though, can be made equivalent to a uniform commodities tax. However, an endowment tax is impossible to implement, since endowments of ability cannot be directly observed.

13. More formally, goods with a high cross-elasticity with the untaxed good should be taxed. For example, if leisure is the untaxed good, suntan lotion should be heavily taxed.
Thus, the efficient tax structure will combine a relatively high tax on the less elastically demanded activities with a relatively low tax on more elastically demanded ones.4

The efficient tax rate on various activities is therefore not necessarily uniform. With uniform statutory rates, as in the present Code, rate differentiation can be achieved by tax incentives, which may be not only useful but indispensable in achieving efficiency. Consequently, tax analysts must consider whether efficient rates can be implemented without unfairness.

B. Do Tax Incentives Create Inequities?

Tax incentives may be useful policy tools, but they have some undesirable effects on the real and perceived fairness of the tax system. To understand these effects, this Part will examine the paradigmatic tax preference: the exemption from federal tax granted to the interest on state and municipal bonds.5

1. Capitalized Tax Incentives

For years, tax analysts argued that tax incentives created horizontal inequity. Tax equity, they argued, requires that individuals be taxed according to their ability to pay, or “taxable capacity.” Taxation according to ability to pay requires, among other things, that similar burdens be imposed on taxpayers in similar positions—horizontal equity.6 The exemption of state and local bonds, it seemed, violated horizontal equity by imposing different tax burdens on two taxpayers who were identical except that one held taxable bonds while the other held exempt bonds. Suppose, for example, that the interest rate is 10%, while the tax rate is 25%. Holders of taxable bonds would receive an after-tax return of 7.5%, while holders of exempt bonds would receive an after-tax return of 10%.

14. ANTHONY B. ATKINSON & JOSEPH E. STIGLITZ, LECTURES ON PUBLIC ECONOMICS 367–70 (1980); F.P. Ramsey, A Contribution to the Theory of Taxation, 37 ECON. J. 47 (1927). In particular, the efficient tax system will produce “an equal proportionate movement along the compensated demand curve for all goods.” ATKINSON & STIGLITZ, supra at 373; see also Ramsey, supra.


16. See, e.g., R.A. Musgrave, In Defense of an Income Concept, 81 HARV. L. REV. 44, 45 (1967). Not all tax scholars agree that horizontal equity is a compelling concept of fairness. But the significance of horizontal equity is, at least in this context, rendered unimportant by the operation of the market.
But on closer inspection, this argument contains a crucial mistake.\textsuperscript{17} The supposed difference in after-tax returns depends on the assumption that both exempt and taxable bonds pay the same pre-tax rate of return. In fact, the market return on the two types of bonds will reflect the tax preference granted to exempt bonds.

To illustrate this point, assume for simplicity that all bonds have identical risk characteristics. Thus, in market equilibrium, all bonds would pay the same after-tax rate of return. Suppose first that state and local bonds are taxable. The market for state and local bonds can be illustrated in Diagram 1. State and local bonds are a relatively small part of the overall bond market, and so they are price takers—they take the prevailing market interest rate on bonds as given. This is illustrated in Diagram 1 by the line at 10%, the rate of interest in the capital market as a whole. This line can be thought of as the supply of capital to state and local government. The willingness of state and local government to issue bonds, or the demand for capital, is illustrated by the sloped line. In the absence of a tax exemption, the equilibrium number of state and local bonds is $Q_e$.

Now suppose that state and local bonds are exempted from taxes. This change shifts the willingness of taxpayers to hold these bonds. As shown in Diagram 1, they are now willing to hold these bonds at an interest rate of 7.5%. When the change is first implemented, the market is temporarily out of equilibrium. Initially, both exempt bonds and taxable bonds pay a pre-tax return of 10%, so that exempt bonds provide a 2.5% higher after-tax return. This differential induces holders of taxable investments to bid for exempt bonds, thus driving up the price of exempt bonds. An increase in price drives the return on exempt bonds down, and this process continues until the return on exempt bonds is 7.5%, the same as the after-tax return on taxable investments. The new equilibrium is indicated by $Q_e$.

\textsuperscript{17} The classic statement of this point in the legal literature is Boris I. Bittker, \textit{Equity, Efficiency, and Income Tax Theory: Do Misallocations Drive Out Inequities?}, \textit{16 San Diego L. Rev.} 735 (1979). The concept of capitalization also has been applied to tax shelter legislation. See, e.g., Bankman, \textit{supra} note 4, at 43–45; Zelenak, \textit{supra} note 4, at 530–54.
More generally, suppose that the pre-tax return on taxable investments is $i$, and the tax rate is $t$. In equilibrium, exempt bonds will only pay $i(1-t)$, not $i$, and both exempt bonds and taxable bonds will pay an after-tax return of $i(1-t)$. The tax preference is said to have been capitalized, and differential treatment of state and local bonds therefore produces no horizontal inequity.

The capitalization of tax preferences does not imply that the tax exemption has no effect. If their bonds are exempt, state and local governments will only have to offer $i(1-t)$, rather than $i$, to induce people to buy their bonds. The net result of the exemption is to transfer funds from the federal to state and local governments and to increase the number of state and local bonds on the market. In Diagram 1, the increase is indicated by the shift from $Q_t$ to $Q_e$. Investors, though, receive no advantage from the exemption, and there is no horizontal inequity between people who own exempt and taxable bonds.

If some bonds are tax-exempt, holders of exempt and taxable bonds receive different pre-tax cash incomes, but end up with the same after-tax return. To emphasize this similarity, the differential between the pre-tax return to taxable bonds, $i$, and exempt bonds, $i(1-t)$, is said to constitute implicit income of $i(t)$ to the holders of exempt bonds. In other words, a holder of exempt bonds which produce a monetary return of $i(1-t)$ also has an implicit income of the difference, $i(t)$, for a total economic income of $i$. 

Diagram 1
The holder of taxable bonds has no implicit income but has a monetary return of $i$, for an after-tax return of $i(1-t)$.

Similarly, both taxpayers pay the same effective taxes. The holder of taxable bonds pays a monetary tax of $i(t)$ while the holder of exempt bonds pays an implicit tax of the same amount, $i(t)$. Finally, both taxpayers pay the same effective tax rate, even though one pays a statutory tax rate of $t$ and the other a statutory rate of zero. The effective tax rate on a particular type of income is calculated by dividing effective taxes paid by effective economic income. Since these are the same for both taxpayers, the effective tax rate is the same, $t$.  

2. Capitalized Tax Incentives in a Progressive Tax System

Tax incentives do not tend to produce horizontal inequity. However, the public and tax analysts worry about another kind of fairness, vertical equity. Vertical equity requires that more affluent taxpayers pay proportionately more in taxes. In general, this requires a rate structure with at least some degree of progressivity.  

In a progressive tax system, tax incentives can produce vertical inequity. This inequity results from a general principle of supply and demand. In any market, the price is such that the last individual to purchase—the marginal buyer—just breaks even. If all buyers are the same, then all just break even. Some buyers, though, may value the good at more than the market price. These so-called “inframarginal buyers” will receive a profit in the amount of the difference between their maximum willingness to pay and the market price.  

This generally applicable principle explains why tax incentives can create vertical inequity. With progressive rates, taxpayers in different brackets will place different values on exempt bonds. Suppose that there are two groups of taxpayers, wealthy taxpayers and average taxpayers. Wealthy taxpayers are subject to higher marginal rates, and therefore value exempt bonds more highly than do average taxpayers. Suppose, for example, that wealthy taxpayers are in a 50% tax bracket while average taxpay-

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18. The effective tax rate on taxable bonds is $i(t)$. The effective tax rate on exempt bonds is $i(t)/(1-t)$.

19. A tax system is progressive if the average rates rise with income, proportional if rates are constant, and regressive if they fall. ATKINSON & STIGLITZ, supra note 14, at 29 (progressive system).

20. The argument applies mutatis mutandis to sellers.
ers are in a 25% bracket. If the return on taxable bonds is 10%, wealthy taxpayers will be willing to purchase tax-exempt bonds paying 5%, while average taxpayers will only be willing to hold exempt bonds if they pay 7.5%. These assumptions are illustrated by the demand curves in Diagram 2.

![Diagram 2](image)

If the assets of wealthy taxpayers are large in relation to the financing needs of state and local governments, the equilibrium will resemble the earlier equilibrium where all taxpayers were identical. State and local bonds will pay 5% tax-free, and wealthy taxpayers will be indifferent between tax-exempt bonds and taxable bonds. Average taxpayers, though, will hold only taxable investments. For them, the 5% return on exempt bonds is less than the 7.5% return they would receive on taxable bonds.

Suppose, though, that state and local governments are so eager to issue bonds that wealthy taxpayers alone cannot clear the market—that is, they cannot purchase all the exempt bonds that are offered. In Diagram 2, wealthy taxpayers are willing to hold $Q_{50\%}$ bonds. At this quantity, wealthy households only require a 5% return on exempt bonds. State and local governments, though, are willing to offer far more than this. State and local governments will therefore offer to pay an interest rate high enough to persuade average taxpayers to hold their bonds. The market will eventually clear at $Q_{tot}$. 
At $Q_{tot}$, the interest rate will reflect an implicit tax at the tax rate applicable to the marginal buyers. In the example, the return is 7.5%. Since all bonds must pay the same return, inframarginal wealthy taxpayers holding exempt bonds will be implicitly taxed only at the lower rate applicable to average taxpayers. They will earn 7.5% on tax exempt bonds, compared with 5% after-tax on taxable investments. Wealthy taxpayers now have a surplus in the amount of the dotted rectangle. This area represents the excess of the 7.5% that these taxpayers receive over the 5% they would require to hold the exempt bonds. Obviously, high-bracket taxpayers will hold only exempt bonds. Thus, the existence of exempt bonds reduces the overall progressivity of the tax system.

More generally, suppose that income up to $N$ is taxed at $t_1$, while income above $N$ is taxed at $t_2$. Wealthy taxpayers face marginal rates of $t_1$, and average taxpayers face marginal tax brackets of $t_2$. Certain items of tax preference are exempt. Taxpayers choose what proportion, $E$, of their portfolio to allocate to exempt bonds. The return on taxable bonds is $i$. The market for exempt bonds clears with average taxpayers in bracket $t_1$, so that pre- and post-tax returns on exempt bonds are $i(1-t_1)$, compared with pre-tax returns of $i$ on taxable bonds.

Average taxpayers earn $i(1-t_1)$ on both taxable bonds and exempt bonds. Diagram 3 illustrates the returns on various portfolios as the proportion of exempt bonds, $E$, varies from 0 to 1. The returns available to average taxpayers are illustrated by the horizontal line “Normal Tax (average).” The after-tax return on all portfolios is the same, regardless of the level of $E$.

Average taxpayers will be in the same position as the identical taxpayers in the previous section. They will be indifferent between any of the possible portfolios available to them. At least some average taxpayers will hold exempt bonds, otherwise the market would not be clearing at $i(1-t_1)$. Whatever their portfolio mix, though, average taxpayers will pay an effective marginal and average tax rate of $t_1$.

Wealthy taxpayers, in contrast, will receive different returns depending on the level of exempt bonds they hold. On a taxable bond, a taxpayer in the $t_2$ bracket receives a pre-tax return of $i$, and an after-tax return of $i(1-t_2)$, for an effective marginal tax rate of $t_2$. With an exempt bond, the same

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21. To be precise, assume that any possible portfolio leaves all taxpayers in their respective marginal brackets, so that portfolio decisions occur entirely within such bracket.

22. $\frac{i(1-t_2)}{i} = t_2$. 

wealthy taxpayer receives $i(1-t_i)$ exempt from tax, resulting in an effective tax rate of $t_i$.  

These after-tax returns for the wealthy are illustrated in Diagram 3 by the line “Normal Tax (wealthy).” This return is clearly highest for a portfolio consisting entirely of exempt bonds, as indicated by the point $R^*$. Wealthy taxpayers will hold only tax-exempt bonds, and will pay a rate of $t_i$. The introduction of exempt bonds will have transformed the tax system from a progressive rate-structure to a flat rate-structure.

Those tax analysts who do not reject preferences on efficiency grounds must therefore consider whether incentives create unacceptable unfairness. Among these scholars, all agree that the imposition of restrictions on tax incentives will reduce the effectiveness of those incentives. Some believe

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23. In addition to money income of $i(1-t_i)$, the taxpayer has $i\tau_i$ of implicit income, for a total of $i$. The only tax paid on this income is the implicit tax $i\tau(i)$ for an effective tax rate of $t_i$: 

$$ \frac{i\tau_i}{i(1-t_i)+i\tau_i} = t_i. $$
that tax preferences can sensibly coexist with restrictions on their use.\footnote{24} Others have criticized all anti-shelter legislation that retains tax preferences while limiting their availability.\footnote{25} Congress, they argue, must make a choice. If Congress wishes to use tax incentives as a policy tool, it must tolerate the reduced progressivity that results. If tax preferences create an unacceptable break for the affluent, then progressivity can be restored only by foregoing the use of preferences.

Both groups would presumably endorse a system in which preferences were supplemented by rules that restore equity without reducing the effect of incentives. The next sections will examine measures to combat the ill-effects of tax incentives.

II. Remedies that Trade Off Equity and Efficiency

Many academic tax analysts believe that a supplementary tax on exempt income will reduce the incentive effect of the exemption. Congress seems to share this concern. At present, most exempt bonds are not subject to the principal anti-avoidance device now in place, the AMT. Only private activity bonds, which are issued by states and localities to finance certain private enterprises, are covered by the AMT.\footnote{26} Congress presumably fears that corrective taxes will raise the cost of borrowing by states and municipalities and is willing to tolerate some inequity to achieve the desired incentive effect.

Some corrective taxes would in fact raise the required rate on exempt obligations. Suppose, for example, that Congress imposed a uniform surtax on all holders of exempt bonds. Such a tax would be paid both by high- and low-bracket taxpayers. Since even marginal bond-holders would pay such a tax, those borrowers would demand a higher rate of return on exempt bonds. This would raise the cost of borrowing by local governments. The effects of such a tax are illustrated in Diagram 4.

A uniform surtax could reduce inequity only by driving low-bracket taxpayers altogether out of the exempt market. This would inevitably reduce the number of local bonds that were issued. If high-bracket taxpayers were a relatively large part of the bond market, reduced demand might

\footnote{24. Shaviro, supra note 4, at 1259–60 (anti-shelter devices reduce effect of preferences, but may be justified); Shaviro, supra note 2, at 95–102 (same).

25. Bankman, supra note 4, at 48–49 (rejecting anti-shelter devices); Peroni, supra note 4, at 1–6 (endorsing repeal of preferences); Zelenak, supra note 4, at 588–89 (rejecting anti-shelter devices).

still leave a net subsidy to local bonds, without too great an impact on the number of local bonds traded.

Diagram 4

However, if high-income taxpayers are a relatively small part of the market, an exemption plus a surtax could have the perverse effect of raising the rate paid by localities above the level of taxable bonds. Such a tax will impose a higher tax on the “exempt” holdings of 25% taxpayers than on their taxable holdings.

III. TWO PROPOSED REMEDIES

The income that high-bracket taxpayers receive from exempt or tax-favored assets will be taxed implicitly at the rate applicable to the marginal holder of those assets. Tax incentives can thus reduce the true effective tax rate on high-bracket taxpayers. This Section proposes two straightforward responses to this problem. First, the current system of tax-exemptions could be supplemented by a surplus tax on tax-exempt income in the amount of the difference between the implicit tax actually paid and the progressive rate that Congress wishes to impose. Second, the use of exemptions could be abandoned in favor of the use of credits. Tax analysts have not seriously
considered either a surplus tax or credits, yet I believe these measures can entirely eliminate, without efficiency loss, the unfair advantage that high-income taxpayers obtain from exempt bonds.

A. Surplus Taxes

1. Real Tax Avoidance

The surplus-tax mechanism is best understood by analogy to the well-known phenomenon of price discrimination. The surplus that high-bracket taxpayers receive on tax-exempt bonds is merely one example of a phenomenon that occurs in almost every market. The marginal participant in any market receives no surplus. Marginal buyers pay the highest price they are willing to pay, while marginal sellers receive the lowest price they are willing to accept. In the usual market setting, this surplus could be eliminated only if the market were not competitive and the party on the other side of the market had perfect information about reservation prices. For example, suppose that Diagram 5 represents the widget market. Diagram 5 resembles Diagram 2, the market for exempt bonds with two tax brackets. Prices consist of dollars rather than percent interest rates. Instead of taxpayers, who supply capital in the form of loans, this market has widget-makers, who supply widgets. Instead of states, who demand loans, there are consumers of widgets. If widgets were supplied by a number of competing firms, the equilibrium price would be $7.50. As in the exempt bond market, suppliers with a low reservation price—$5—would earn surplus, or economic profits, as shown by the shaded rectangle.

Suppose, however, that the only market for widgets was a single buyer, or widget monopsony. Firms could either sell their output to the widget monopsony or shut down. Suppose further that the widget monopsony had perfect information about the prices that firms were willing to accept. It could therefore offer to pay each widget producer its reservation price, or the lowest price it was willing to accept. This would transfer the surplus earned by some firms to the widget monopsony.

27. Zelenak, for example, suggests only that the solution is to lower the supply of preferences. Zelenak, supra note 4, at 542–43.
In practice, the circumstances needed to produce perfect price-discrimination are extremely rare. First, few parties know, as a price discriminator must, the reservation price of others. Even if a participant had this information, it would seldom be able to take advantage of it. Most markets have more than one participant on each side. If a non-monopsony buyer tried to extract surplus by refusing to pay more than a supplier’s reservation price, the supplier would simply look for another customer.

The requirements of price discrimination are, in a sense, met in the tax treatment of exempt bonds. The analogy is not exact: the market itself is competitive. The government, however, like a price discriminator, is in a position to extract surplus. Taxpayers are required to pay their tax bills, so the government is like a monopoly. The government, of course, does not have all the information about individual reservation prices for supplying capital. But it does have the information it needs about the source of the surplus under consideration here—the differences in marginal tax rates.

Using information about marginal tax rates, the government can design a surplus tax that will wholly restore the progressivity of the Code to its pre-incentive level. To accomplish this, the surplus tax should leave high-bracket taxpayers with an after-tax return on exempt items equal to the return on non-exempt items. In the example from the previous section, wealthy taxpayers should be subject to a surplus tax amounting to the 2.5% surplus on income from exempt sources. To achieve this, the surplus should be set at 33 1/3% of exempt income. For example, consider a high-
bracket taxpayer who invested $100 in exempt bonds. He would receive income of $7.50 from these. This income would still be exempt from the normal tax, but would be subject to a surplus tax of $2.50. This would leave an after-tax return of $5, the same as if the $100 had been invested in taxable bonds. More generally, to make the after-tax return on exempt items equal to the return on non-exempt items, \(i(1-t_2)\), the surplus tax, \(t_s\), should equal \([t_2-t_1]/(1-t_1)\).\(^{28}\)

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\text{Diagram 6}
\]

In Diagram 6, the line “Normal Total” indicates the tax rate that would be paid by the wealthy in the absence of a surplus tax. The surplus tax is constructed to bring the tax rate to exactly the level that applies to fully taxable bonds.

28. General Proof:
1. \(i(1-t_1)(1-t_2)=i(1-t_2)\)
2. \((1-t_2)=(1-t_2)/(1-t_1)\)
3. \(1-(1-t_2)/(1-t_1)=t_s\)
4. \((1-t_2)/(1-t_1)=t_s\)
5. \([t_2-t_1]/(1-t_1)=t_s\).
2. Effect on Bond Market

With a surplus tax, equity and incentive effects need not conflict. A surplus tax will have no effect on the demand for exempt bonds, since it will by definition be levied on surplus. This can be seen by again comparing the surplus tax and price discrimination. The price discriminating monopsony described earlier pays the lowest price it can without causing the supplier to drop out of the market altogether. At a price of $7.50, the low-cost suppliers had a surplus of $2.50; at a price of $5 they have none. Some may first see a puzzle here. In the absence of a surplus why should anyone remain in the market? The answer lies in the fundamental nature of marginal decisionmaking. As long as there is any surplus, the supplier will continue to produce. If the price drops from $7.50 to $6.00 to $5.50, surplus drops but the supplier does not shut down. Suppliers continue to produce as the price gets infinitely close to $5.00 and the surplus gets infinitely small.

3. Taxpayer Morale

Tax incentives do create some actual inequity, but they create the appearance of even greater inequity. The appearance of unfairness results from the invisibility of implicit taxes. A taxpayer who holds an exempt bond pays an implicit tax at the rate otherwise applicable to the market-clearing taxpayer. This implicit tax may be smaller than the rate applicable to the taxpayer, but generally it will still be substantial. Yet since conventional accounting methods disregard implicit taxes, the taxpayer appears to be avoiding taxes altogether.

A surplus tax will not wholly eliminate the apparent inequity that results from incentives. If all taxpayers are identical, none will receive surplus, and a surplus tax would be pointless. Yet holders of exempt bonds will pay no explicit taxes, and so the tax system will still appear horizontally inequitable. This apparent inequity could be reduced by a surtax that was higher than needed to extract surplus. Such a surtax, though, would necessarily reduce the size and thus the effectiveness of the exemption. For example, suppose that, in the previous example, state and local bond income was exempt from the 25% normal taxes, but subject to a 10% surplus tax. The rate of return would be set so that after taxes, it equaled the 7.5% paid on fully taxable bonds:

\[ x(1-.1)=7.5 \]
\[ x=8\% \]

This return, 8%, would be less than the market return but more than the return with a full exemption.
With income differences, high-bracket taxpayers earn a surplus. Since a surplus tax collects revenues, it increases the apparent as well as the real tax paid by wealthy taxpayers. But a surplus tax will not wholly eliminate the appearance of unfairness, since it will not convert implicit taxes to monetary taxes. As Diagram 6 illustrates, the implicit-tax line is unchanged by the surplus tax. In the example, wealthy taxpayers subject to a surplus tax appear to pay a tax rate of $2.5 \div 7.5$, or $\frac{1}{3}$. This is more than the 0% rate they appear to pay without a surplus tax, but less than the statutory rate of 50%. Implicit taxes remain at a level of 25%. Implicit taxes, and perceived inequity, could be reduced by a surplus tax on high-bracket taxpayers in excess of the surplus they receive. Perceived equity would increase, though, because high-bracket taxpayers would be driven altogether out of the market for exempt bonds.

4. Extension to Depreciation

A well-designed surplus tax would be levied only on income from items of tax preference. Which items would be included?

Most of the items subject to the AMT involve accelerated recovery of capital costs. The most important of these is accelerated depreciation, or the Accelerated Cost Recovery System ("ACRS"). ACRS permits taxpayers to take deductions for the cost of assets at a time before the cost (or depreciation) occurs. Because a deduction now is worth more than a deduction later, this accelerated depreciation lowers the effective tax on income from the asset.

The basic principle of a surplus tax can be extended to these cases. The basic principle is the same: The tax should equal the difference in tax rates over the lower rate. However, because the subsidy is based on the time value of money rather than on a single period deduction, the calculations are considerably more complex.

30. This number is higher than the true surplus tax rate because implicit income, as well as implicit taxes, are excluded.


32. See generally id. § 168 (1988 & Supp. V 1993). Accelerated capital recovery is also one of the principal motives for other anti-shelter provisions such as the passive loss rules. See id. § 469 (1988 & Supp. V 1993); see generally Peroni, supra note 4, at 7–14 (endorsing repeal of preferences).

5. Debt-Financed Preferences

Tax incentives by themselves may cause inequity. With debt finance, these inequities can mushroom into abuse. Surtaxes, however, can provide a straightforward solution to the problem.

Suppose that two taxpayers, Wealthy and Average, are in different tax brackets, $t_2$ and $t_i$. The return on taxable bonds is $i$, and on tax-exempt bonds is $i(1-t_i)$. Average lends Wealthy $1$ at an interest rate of $i$ to purchase tax-exempt bonds. The interest payment $i$ is taxable to Average, so Average is in the same after-tax position as if he purchased tax-exempt bonds. The total cost of the transaction for Wealthy is the interest payment $i$, while the benefit is the interest received $i(1-t)$ and the tax deduction for the interest. The interest payment $i$ is deductible to Wealthy at a rate of $t_2$, for a total deduction of $it_2$. The total received by Wealthy is $i(t_2-t)$. Since Wealthy is in a higher bracket than Average, this is a positive number. Suppose, for example, that the interest rate on taxable bonds is 10%, while the interest rate on tax-exempt bonds is 7.5%. Average is in a 25% tax bracket, while Wealthy is in a 50% bracket. Each has $1$ to invest. If Wealthy invests directly in taxable bonds, he receives a return of 5%, while in tax-exempt bonds he receives 7.5%. Average receives a return of 7.5%, in either taxable or exempt bonds.

Now suppose that Average lends Wealthy money, and Wealthy uses this money to buy tax exempt bonds. Average receives taxable interest, and so will presumably demand 10%, for an after-tax yield of 7.5%. Wealthy must pay out 10% in interest; he receives in return a deduction of the 10% at his 50% tax rate, and tax-exempt interest of 7.5%. He thus makes a net profit of 2.5% on the deal. In the absence of other taxes or restrictions, then, all tax-exempt bonds will end up nominally in the hands of wealthy taxpayers, even though they may be financed by loans from average taxpayers.

Section 265(a) of the current Code deals with this problem by flatly prohibiting the deduction of interest used to finance tax exempt investments. This solution creates complex tracing problems. If a taxpayer has a large portfolio, partly financed by debt, the debt must be allocated to exempt or nonexempt investments, a time consuming and complex process which places a premium on sophisticated tax planning. It may even be

34. $i(t_2-t)+it_2-i=(t_2-t_2)$.
35. $.1(1-.50)=.05$.
36. $10(.5)+7.5-10=2.5$.
possible to avoid section 265(a) altogether. In a short sale of a stock, a taxpayer promises to deliver a share of stock at a future date in return for receiving the current share price today. By selling short another security, a taxpayer can achieve the equivalent of a loan without incurring debt for tax purposes.

Suppose, however, that the interest on the transaction was subject to the surtax described above. Wealthy will pay a surtax of $33\frac{1}{3}\%$ on the $7.5\%$ exempt interest, or $2.5\%$. His tax benefits are now only $2.5\%$, which exactly eliminates his arbitrage profits, and he ends up with no windfall from the deal.

6. Implementation

a. Changing Interest Rates

The discussion up to this point has assumed that the interest paid by exempt and taxable bonds differs by a fixed amount. In fact, however, the rate differential changes constantly. This change raises several issues for the design of a surtax.

If interest rates change, the tax system must provide a continually updated set of surtax rates. This requirement poses no obstacle to a surtax scheme. The periodic calculation of the spread between exempt and taxable interest would be merely a small extension of the current tax system in which the IRS regularly publishes a list of applicable interest rates to be used in various provisions regarding imputed interest.

If interest-rate differentials have fluctuated over the holding period of a bond, the tax system must also stipulate a date as of which the surtax amount should be calculated. The surplus that the taxpayer receives depends on the price he paid for the asset. This in turn implies that the size of the surplus tax should be calculated as of the date of purchase. Any practical surtax scheme, then, must match each sale to the date of its purchase. Like the periodic calculation of interest differentials, this requirement demands no innovation in tax administration. Many tax rules, such as capital gains holding periods, and even many basis calculations, require that an asset, upon sale, be matched to a particular date of purchase.

38. \[
\frac{[t_r-t_1]}{(1-t_1)}=(.50-.25)/.75=33\frac{1}{3}\%.
\]

39. \[
i(1-t)([t_r-t_1]/(1-t_1))=i(t_r-t_2)-it_2=-it_1.
\]

40. \[
i(1-t_1)=i+it_1=0.
\]
b. Establishing Surplus Tax Amount

The discussion so far has assumed that all bonds are risk-free, so that any difference in the return on exempt and non-exempt bonds must be attributable to their tax treatment. The surtax could thus be computed simply by subtracting the interest on tax-exempt bonds from the interest on taxable bonds.

However, in practice most debt is subject to various risk factors. Different interest rates on different bonds therefore reflect differences in risk as well as differences in tax treatment. To arrive at the correct surtax amount, the return on exempt bonds must be subtracted from the return on taxable bonds of comparable risk.

The need to match bonds to those of comparable risk complicates the process of calculating surtaxes. Some sources of risk are common to private and public bonds. For example, any debt instrument whose interest is stated in nominal terms is subject to the risk of inflation. Any debt instrument which bears a fixed interest rate, even one indexed to inflation, is subject to the risk that the real interest rate will change. Other sources of risk, though conceptually similar for public and private bonds, are in practice difficult to compare. Both public and private bonds are subject to default risk. For example, corporate cash flows are like tax revenues, so that the ratio of interest to gross revenues for a firm bears a resemblance to the ratio of interest to tax receipts for a government. The predictors of default in the two cases are not, however, readily comparable. A given ratio of interest to cash-flow may predict one level of default risk for corporations and another for governments.

Because of the multitude of risk factors that contribute to rate differences, the IRS is unlikely to be able to calculate the surtax amounts with complete precision. Nonetheless, the degree of error would seem to be no greater than that found in similar Code provisions, such as the imputed interest rules.\footnote{See I.R.C. \textsection 1274 (1988 & Supp. V 1993) (Original Issue Discount). Pursuant to this authority, the IRS regularly issues tables of interest rates. \textit{E.g.}, Rev. Rul. 94-36, 1994-23 I.R.B. 4.}

c. Surplus Taxes when Exempt Income Is Not in a Single Bracket

The basic surplus plan assumed that the tax-exempt income of each taxpayer was subject to a single marginal rate. The analysis is only slightly more complicated when not all exempt income is in a single bracket. The

surtax can be implemented by a stacking convention in which exempt income is attributed in sequence to the highest applicable bracket. To continue the earlier example, suppose that the taxable return is 10%, while the exempt return is 7.5%. High-bracket taxpayers—those in the 50% bracket—should therefore pay a surtax of 33 1/3%. Suppose further that the tax rates change at $50,000; that is, the system imposes a rate of 25% on income up to $50,000 and 50% on income above that level. A taxpayer earns $60,000, of which $20,000 is from exempt sources. The first $10,000 of exempt income should be attributed to the 40% top bracket, and thus subject to the surtax. The next $10,000, though, should be attributed to the 20% bracket, and thus no surtax should apply.

B. Credits

A surplus tax takes the present system of exemptions as given and corrects the problems it creates. The same result can be reached by abandoning the use of exemptions altogether and using a different mechanism to provide tax incentives: the taxable credit. Suppose that, instead of exempting the interest on state and local bonds, the federal government offered a tax credit, c, on the interest from a dollar’s worth of state and local bonds. If the return on state and local bonds was x, taxpayers would include in their income the interest and the credit, for a total of x+c. Taxpayers would calculate taxes due at applicable marginal rates. Average taxpayers would therefore owe taxes of tx+c(t-1).42

The market equilibrium rate of interest on credit bonds would be i−c.43 For both wealthy and average taxpayers, the after-tax return would be i(1−t).44 Suppose, for example, that the federal government offers a tax credit of c=2.5% on the interest from state and local bonds. If x were the return to credit bonds and average taxpayers were taxed at 25%, they tentatively would owe taxes of 25% of their income, x+2.5, less

\[
\begin{align*}
42. & \quad t(x+c)-c \\
& \quad = tx+ct-c \\
& \quad = tx+c(t-1).
\end{align*}
\]

\[
\begin{align*}
43. & \quad \text{In the market equilibrium, the after tax return to tax-preferred bonds should equal the return to taxable bonds:} \\
& \quad x-[tx+c(t-1)]=(1-t)i \\
& \quad x-tx+ct+c=(1-t)i \\
& \quad x(1-t)+c(1-t)=(1-t)i \\
& \quad x=i-c.
\end{align*}
\]

\[
\begin{align*}
44. & \quad (x+c)(1-t) \\
& \quad = (i-c+c)(1-t) \\
& \quad = i(1-t).
\end{align*}
\]
the credit, 2.5¢. Their after-tax income would be the monetary interest, $x$, less their taxes, which must in turn equal their after-tax return on taxables. If the return on taxable investments were 0%, the return on credit bonds would be 7.5%, leaving them with 7.5¢.

Wealthy taxpayers would also have income of $x+2.5$, but would be taxed at 50%, and tentatively would owe taxes of 50% of their income, less the credit, 2.5¢. Their after-tax income would be the monetary interest, $x$, less their taxes, which must in turn equal their after-tax return on taxables, 5%, leaving them with 5¢. The market for state and local bonds would look like Diagram 1 under the assumption of an exemption, although the line representing individual willingness to hold bonds would include both average and wealthy taxpayers.

A system of credits could also be used to correct the effects of ACRS. The equivalent of a given level of ACRS could be obtained by a credit of the net present value of the excess depreciation deduction. The use of a credit rather than a deduction would obviate the need for surtaxes, and a credit may be a simpler remedy than a surtax for the problems created by ACRS.

C. Summary

Tax analysts have never seriously considered surplus taxes as a remedy for the inefficiency associated with tax incentives. Between 1969 and 1978, a surplus tax on enumerated preference income was in force. This

45. \[0.25(x+2.5)-2.5.\]
46. \[x-0.25(x+2.5)-2.5.\]
47. \[x-0.25(x+2.5)-2.5=(1-0.25)(10)\]
\[(x+2.5)-0.25(x+2.5)=(1-0.25)(10)\]
\[(x+2.5)(1-0.25)=(1-0.25)(10)\]
\[x+2.5=10\]
\[x=7.5.\]
48. \[0.50(x+2.5)-2.5.\]
49. \[x-0.50(x+2.5)-2.5.\]
50. \[x-0.50(x+2.5)-2.5=(1-0.5)(10)\]
\[(x+2.5)-0.5(x+2.5)=(1-0.5)(10)\]
\[(x+2.5)(1-0.5)=5\]
\[x=5.\]
51. Weiss, supra note 33.
52. In the Senate Finance Committee version of the Tax Reform Act of 1969, this flat-rate supplementary tax was imposed at a 5% rate with a $30,000 exemption and a deduction for taxes paid. S. REP. NO. 552, 91st Cong., 1st Sess. 7, 112-13 (1969), reprinted in 1969 U.S.C.C.A.N. 2027, 2033, 2143-44. Major changes were made on the Senate floor. The applicable rate was raised to 10%, but the tax base was redefined to be preference income minus other federal taxes. 115 CONG. REC. 38, 297-300 (1969). The Conference Committee accepted in essence the
surplus tax was not of the form suggested here, and needed changes. But no tax analysts have supported such a surtax,\textsuperscript{53} and instead of revision, the surplus tax was replaced by the current AMT.

Credits have received somewhat more attention than surplus taxes. Some analysts, primarily comprehensive tax base theorists, have advocated credits. Thus, they regard credits as less objectionable than deductions but less desirable than a comprehensive tax base.\textsuperscript{54} The tax law itself has increasingly used credits rather than deductions, but primarily in those provisions that are social welfare measures rather than tax incentives.\textsuperscript{55} Instead of turning to surplus taxes or credits, the current tax system attacks preferences through various devices intended to restrict the use of preferences. The next Section explores what is perhaps the most important of these devices, the AMT.

IV. THE ALTERNATIVE MINIMUM TAX

The alternative minimum tax\textsuperscript{56} imposes a minimum average tax rate

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54. See, e.g., SURREY, supra note 9, at 97–100.


56. See I.R.C. § 55 (1988 & Supp. V 1993). It appears that the AMT was considered seriously for the first time in 1969. At that time, the Treasury Department recommended a minimum tax applied to a base broadened to include various items of preference. TAX REFORM STUDIES AND PROPOSALS, supra note 1, at 13–14. The expanded base subject to the minimum tax was taxable income plus four items of tax preference. These tax preferences were (1) the interest on state and local bonds, (2) the then tax-exempt appreciation of property donated to charity, (3)
on all income, including preference income. The current AMT is imposed on a base called "alternative minimum taxable income," which in essence consists of taxable income with many tax preferences added back in. Taxpayers calculate a tentative minimum tax, which is alternative minimum income multiplied by a special rate, currently 26% for individual taxpayers on income up to $175,000 and 28% on income over $175,000. Taxpayers must pay the greater of the regular tax or the tentative minimum tax.

Congress is evidently concerned that the AMT may reduce the effectiveness of those incentives which are included in the alternative tax base. This concern is evidenced by the fact that interest on private activity bonds issued by localities is subject to the tax, whereas interest on bonds issued for governmental purposes is not. In this section I will demonstrate that this problem is not as acute as it might seem.

Like a surplus tax, the AMT can sometimes affect taxpayers without changing market equilibrium. The neutrality of the AMT results from an overlooked feature of the AMT: Under many circumstances, the AMT is equivalent to a limit on preference income. The AMT can, therefore, sometimes reduce apparent inequity without any adverse effects.

Unlike a surplus tax, though, the end the AMT is most suited to advance is not the actual fairness of the tax system. For this purpose, the surplus tax is preferable. The problem with the AMT is simple: The tax imposed bears no relation to the spread between the market-clearing bracket and the taxpayer's marginal bracket.

the excluded portion of capital gains, and (4) the percentage depletion in excess of basis. The rate structure of this tax was designed to yield a tax, when applied to the expanded tax base, equal in amount to the tax payable on twice as much income under the ordinary regime. Taxpayers would have had to pay the higher of the normal tax or this alternative tax. In effect, no more than 50% of income could be excluded from tax.

57. Specifically, alternative minimum taxable income is the "taxable income of the taxpayer for the taxable year (A) determined with the adjustments provided in section 56 and section 58, and (B) increased by the amount of the items of tax preference described in section 57." I.R.C. § 55(b)(2) (1988).


60. Id. § 56(b)(1)(C)(iii) (1988).
A. Basic Mechanics: The AMT as a Limit on Preference Income

The AMT is often contrasted with the limit on preference income, another device to control preferences.61 Oddly, perhaps, in many situations the AMT is equivalent to a limit on preference income. From this similarity flows most of the AMT’s effects.

To examine how the AMT works, begin by assuming all taxpayers are identical and all income is from capital.62 Under the normal tax, all taxable income is subject to a uniform rate, t. In the absence of the AMT, the pre-tax interest rate paid to exempt bonds would be i(1–t). Under the AMT, taxpayers calculate a tentative minimum tax in which all income, including exempt income, is taxed at \( t_m \), which is lower than t. Taxpayers pay the greater of the amount due under the AMT or the normal tax.63

Perhaps surprisingly, this AMT will usually have no effect on the equilibrium return to exempt bonds. Instead, it will simply place a limit on the number of exempt bonds a rational taxpayer would hold. Consider an individual who owns a mixed portfolio of taxable and exempt bonds. The average pre-tax return on this portfolio is an average of the pre-tax return on taxable bonds, i, and exempt bonds, x, weighted by E, the share of each type of bond in the taxpayer’s portfolio.64

If the portfolio is subject to the normal tax, the average after-tax return will be a weighted average of the return to exempt bonds and the after-tax return to taxable bonds.65 This return is shown in Diagram 7 by the line labeled “Normal Tax.” If the AMT applies, the after-tax return will be a weighted average of the return on exempt and non-exempt bonds, all subject to the minimum tax rate.66 These returns are indicated by the line labeled “AMT.”

61. As an alternative to the AMT, the Nixon Treasury in 1969 proposed a limit on permitted preferences. If total enumerated preferences exceeded 50% of an individual’s gross income plus preferences, the excess of preferences was taxed. STAFF OF HOUSE COMM. ON WAYS AND MEANS, 91ST CONG., 1ST SESS., TAX REFORM PROPOSALS 69, 81 (Comm. Print 1969) (prepared by the U.S. Treasury Dep’t). A similar proposal, changing only the list of preference items, was adopted by the House of Representatives. H.R. REP. NO. 413, supra note 1, at 78–79, reprinted in 1969 U.S.C.C.A.N. 1645, 1725–26. Some tax analysts have proposed replacing the AMT with a limit on preference income. Coven, supra note 53, at 1094–95.

62. Preferences raise more acute problems when taxpayers are in different brackets than when they are in a single bracket. The AMT operates as a limit, though, in both cases, and it is easier to begin by examining the AMT under the assumption of identical taxpayers.


64. \( R = E \times + (1-E)i \), where E is the percentage of the portfolio invested in exempt bonds and x is the return on exempt bonds.

65. \( R_m = [E \times + (1-E)i(1-t_m)] \).

66. \( R_m = [E \times + (1-E)i(1-t_m)] \).
For a portfolio of all taxable bonds, the AMT will leave a higher after-tax return than the normal tax. The advantage of the lower AMT rate outweighs the disadvantage of its broader base. Under the normal tax, a portfolio consisting entirely of taxable bonds will yield an after-tax return of $i(1-t)$. Under the alternative minimum tax, the after-tax return on the same portfolio will be $i(1-t_m)$. These points are illustrated on the left horizontal axis, where $E=0$. Since $t_m$ is by construction lower than $t$, the AMT is here lower, and thus yields a higher return, than the normal tax.

For a portfolio of exempt bonds, the normal tax will be less burdensome than the AMT. The higher normal rate is no disadvantage, since all of the taxpayer's income is excluded from the narrower base. Under the normal tax, a portfolio consisting only of exempt bonds has a return that was provisionally labeled $x$ while under the AMT the return is $x(1-t_m)$. Regardless of what $x$ is, the after-tax return is clearly higher under the normal tax than under the AMT. The right horizontal axis illustrates these returns.

The lines connecting returns on a wholly exempt portfolio to the after-tax returns with a fully taxable portfolio illustrate the returns on portfolios
that combine exempt bonds and taxable bonds. As the percent of exempt
bonds increases, the advantage of the AMT diminishes, and at some point,
$E_1$, the two taxes are equal. Past this point, the normal tax becomes more
favorable to taxpayers. Taxpayers, of course, would prefer the lower tax,
while the Code naturally insists on the higher tax. The dotted line
depends on the applicable tax is paid.

The best portfolio, indicated by the highest point on the dotted line,
depends on the return on exempt bonds. Under present assumptions, this
return must be the same as the return after normal taxes on taxable bonds.
If the return were less, exempt bonds would be a bad investment in both
the normal tax regime and the AMT regime. This would not be an
equilibrium, since equilibrium in the capital market requires that the best
portfolio containing at least some exempt bonds pay exactly the same
return as the after-tax return on a portfolio of taxable bonds. If the pre-tax
return on taxable bonds were not higher than that of exempt bonds, no one
would hold taxable bonds. The AMT will not change the return on
exempt bonds, but will instead place a ceiling on the percentage of any
taxpayer’s portfolio comprised of exempt bonds.

No rational taxpayer will ever pay the AMT: Any portfolio to which
the AMT applies will have a lower return than any to which the normal
tax applies. This may at first be surprising, since the lower rate on the
AMT would seem at times to compensate for its broader base. Some tax-


68. Geometrically, the best portfolio is the highest point on the dotted line, which depends on
the slope of the “Normal Tax” line, which in turn depends on $x$. The graph shows this line is
flat, with $x$ equal to $i(1-t)$; in other words, it assumes that exempt bonds pay the same after-tax
return as taxable bonds. As stated above, if the return were less, exempt bonds would be a bad
investment in both the normal-tax regime and the AMT regime. Geometrically, the “Normal
Tax” line would slope down, and the highest point on the dotted line would be the all-taxable
portfolio. Again, the graph shows this line is flat, with $x$ equal to $i(1-t)$; in other words, it
assumes that exempt bonds pay the same after-tax return as taxable bonds.

69. This result is suggested in Shaviro, supra note 2, at 102-03.
return as taxable bonds, \( i(1-t) \). But this price would not be an equilibrium, since it would produce surplus for taxpayers holding portfolios subject to the normal tax, who then would bid down the price. A taxpayer foolish enough to hold a portfolio consisting entirely of exempt bonds would pay the AMT rate of \( t_m \) on top of the implicit tax rate \( t_i \). Thus, taxpayers will avoid portfolios to which the AMT would apply. This implies that the return to exempt bonds will still be \( i(1-t) \).\(^{71}\)

With identical taxpayers, then, no rational taxpayer will ever pay the AMT, nor will the AMT change the return on exempt bonds. The net effect of the AMT will be to place a cap on the amount of exempt bonds any taxpayer holds in a portfolio. In this manner, the AMT is equivalent to the limit on preference income.

B. The Neutrality of the AMT

The AMT operates as a limit on the number of tax-preferred items that a taxpayer can rationally hold. The AMT would thus seem to lower the demand for exempt bonds, thereby raising the interest that states and localities would have to pay on those bonds. Surprisingly, though, the AMT may affect neither the demand for exempt bonds nor their pre-tax return.

The imposition of a limit on the amount of a good that consumers can purchase can, in many circumstances, lower the demand for and thus raise the price of the good. The market for tax exempt bonds, however, is characterized by a special kind of demand. In most markets, consumers hold the exact amount of a good at which the price of the good is equal to the utility they receive. In the exempt bond market, though, taxpayers are indifferent over a wide range of possible portfolios. Prior to the imposition of the AMT, taxpayers in a given bracket will probably hold different levels of exempt bonds. When the AMT is imposed, taxpayers with exempt

\(^{70}\) To see this geometrically, suppose that exempt bonds, before the minimum tax, paid more than \( i(1-t) \). The holder of a portfolio of exempt bonds could improve his return by purchasing a small amount of taxable bonds. In effect, he would be moving towards the right from the vertical axis on the line segment “Normal Tax.” If \( x \) were not equal to \( i(1-t) \), this segment would be sloped upwards, indicating an increasing after-tax return under the applicable normal tax. Not until \( EI \) grew large enough that the AMT line intercepted the “Normal Tax” line would the AMT apply. But this higher return is obviously not at equilibrium. Such higher-than-market returns increase demand for exempt bonds, thus bidding up their price and lowering their return. In equilibrium, then, the return to exempt bonds should be \( i(1-t) \), and the line indicating after-tax returns under the normal tax should be flat.
holdings high enough to trigger the AMT will want to sell some of their exempt bonds. As long as a sufficient number of other taxpayers are below the AMT threshold, this sale of exempt bonds will have no effect on the return to such bonds.

Consider the following example. Suppose that an economy is made up of two types of taxpayers, As and Bs, each of whom has assets of $100. The total value of all outstanding bonds is thus $200. Suppose that the total value of outstanding tax-exempt bonds is $80, or 40% of the capital market. The tax rate is 25%, the pre-tax return on taxable bonds is 10%, and the return on tax-exempt bonds is 7.5%. In the absence of any limits, taxpayers would rationally hold any combination of taxable and exempt bonds. Suppose that, before limits, type As hold no exempt bonds, and type Bs hold $80 worth of exempt bonds. All taxpayers receive an after-tax return of 7.5% on their portfolio. However, their monetary tax payments differ widely. Type As receive $10 in fully taxable income and pay a monetary tax rate of 25%. Type Bs receive $2 in taxable income and $6 in tax-exempt income, for a total of $8. They pay monetary taxes of 25% on the $2 in taxable income for a total of 50%. For AMT purposes, they would be treated as paying a tax rate of 6.25%.72

Consider the effects of imposing an alternative minimum tax. Suppose that the AMT is 10%. If type Bs continue to hold their original portfolio, they will be subject to double taxation on their exempt bonds. They already pay an implicit tax on these bonds, and will now pay an explicit tax as well. Type Bs will therefore reduce the level of exempt bonds in their portfolio to a point where, for AMT purposes, they pay a tax rate of 10%. This requires that they hold no more than two-thirds of their portfolio in exempt bonds.73 When type Bs initially reduce their portfolio of exempt

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72 \( \frac{50}{8} = .0625 \) or 6.25%.
73 Their monetary tax rate (that is, their money taxes over their money income) must at least equal the AMT rate. More generally

\[
1. \quad t_m = \frac{(1-E)it}{i(1-t)E+(1-E)0}
\]

\[
2. \quad t_m = \frac{it-Eit}{iE-itE+i-iE}
\]

\[
3. \quad t_m = \frac{it-Eit}{-itE+i}
\]

\[
4. \quad t_m = \frac{(1-E)it}{i(1-t)E}
\]

\[
5. \quad (1-tE)t_m = t(1-E)
\]

\[
6. \quad t_m-tEt_m = t-E
\]
bonds by selling some, there is downward pressure on the price of exempt bonds. If, however, the price should actually drop, the return on exempt bonds will rise above the return on taxable bonds. Since type As are nowhere near the region in which the AMT applies, they will purchase these exempt bonds, forcing the price back up. In the new equilibrium, type As will hold the exempt bonds which type Bs divested, and the return on both exempt and taxable bonds will be unchanged.

Under many circumstances, then, the AMT will not increase the interest rate that local governments must pay to borrow. Unlike a surplus tax, though, the AMT will sometimes increase the exempt interest rate. In the example above, of course, the AMT was relatively low. Type Bs needed to sell only a few bonds, and type As could purchase these bonds without themselves incurring any AMT. If the AMT is raised, however, type Bs will have to sell more shares, and type As will eventually be unable to purchase all of these shares while staying below the AMT threshold.

C. Real Tax Avoidance

Real inequities arise from preferences only in a progressive tax system. The basic effect of the AMT is to limit the amount of exempt bonds that rational taxpayers will hold in their portfolio. This mechanism can reduce the basic unfairness that results from tax exemptions. The AMT cannot, however, wholly eliminate unfairness, since it does nothing to tax the surplus gains on those bonds which wealthy taxpayers can hold.

The basic operation of the AMT with two normal tax brackets is essentially the same as with only one normal tax rate. The AMT rate is the same for both wealthy and average taxpayers. The AMT rate is

\[ t - t_E = t - t_m \]

\[ E = \frac{t - t_m}{t(1 - t_m)} \]

Thus, in the present case:

\[ E = \frac{.25 - .10}{.25(1 - .10)} \text{ or } E = \frac{.15}{.225} \text{ or } E = \frac{2}{3} \]

74. Under the current AMT this assumption is essentially correct, although the AMT now has two brackets: 26% and 28%. I.R.C. § 55(b)(1)(A)(i) (Supp. V 1993). High- and middle-income taxpayers also receive different exemption amounts. See id. § 55(d) (1988 & Supp. V 1993). However, this has no effect on the rate. In terms of the diagram, different exemption amounts simply shift the kinked line "Normal Tax (wealthy)" to the left.
lower than the lowest tax bracket, $t_1$, but is imposed on a broader base that includes items of tax preference. After-tax returns under the AMT for all taxpayers are illustrated in Diagram 8 by the line labeled "AMT."  

A taxpayer in either bracket holding a portfolio consisting entirely of taxable bonds would prefer the AMT to the normal tax. Under the AMT, average after-tax return would be $i(1-t_m)$ for taxpayers in either class. The tax would be lower than both the $i(1-t_1)$ applicable to average taxpayers and the weighted average of $i(1-t_1)$ and $i(1-t_2)$ applicable to wealthy taxpayers under the normal tax. Consequently, the after-tax return for both groups would be higher than under the normal tax.

In theory, an AMT regime could use a rate between the two brackets, but this would have the peculiar effect of leaving low-bracket taxpayers permanently in the AMT regime. The current AMT rates of 26% and 28% are less than the corresponding normal-bracket rates for income over $36,900. Compare id. § 55(b) (1988 & Supp. V 1993) with id. § 1 (1988 & Supp. V 1993). They are, however, higher than the lowest bracket of 15%, but the market almost surely clears no lower than taxpayers with $36,900 in taxable income.

Under the AMT, after-tax returns are:

$$R = (1-E)i + E(i(1-t_1))(1-t_m).$$

Diagram 8
As the proportion of exempt bonds increases, the AMT becomes less and less favorable, and eventually provides a lower after-tax return than the normal tax. The choices facing average taxpayers are the same as when there were no wealthy taxpayers. Under the normal tax, the after-tax return for average taxpayers is \( i(1-t) \), shown by the line "Normal Tax (average)," at which taxpayers pay the less advantageous of the two taxes. For all-taxable portfolios, the normal tax will apply; when the proportion of exempt bonds rises, the AMT eventually becomes effective. These choices are indicated by the dotted line. A rational average taxpayer would be willing to hold any of a number of portfolios, all with relatively high proportions of taxable bonds, to which the normal tax applies. These portfolios, all of which provide an after-tax return of \( i(1-t) \), are shown by the portion of the line "Normal Tax (average)" representing all taxable bonds between the point where \( E=0 \) and \( E_i \).

Wealthy taxpayers face a different set of choices. Under a normal tax, wealthy taxpayers, unlike average taxpayers, are not indifferent between all possible portfolios. Instead, after-tax returns for the wealthy increase with the proportion of exempt bonds, and are highest for a portfolio consisting of all exempt bonds. These returns are illustrated by the line "Normal Tax (wealthy)." Under the AMT, in contrast, the best portfolio consists of all taxable bonds. The two schedules are equal at the point labeled \( E_2 \). As always, the Code imposes the less favorable of the two taxes. Thus, the normal tax applies to portfolios with a greater proportion of taxable bonds than \( E_2 \), while the AMT applies to portfolios with a high proportion of exempt bonds. These portfolios, open to wealthy taxpayers, are indicated by the heavy solid line, showing the after-tax return for the higher of the normal tax or AMT. This schedule reaches its highest point at \( E_2 \), which is necessarily higher than \( E_i \). Thus, this best possible portfolio contains more exempt bonds than any of the portfolios that would maximize returns for an average taxpayer. The greater value of exempt bonds to wealthy taxpayers is a natural consequence of the fact that the wealthy taxpayer faces a higher marginal rate under the normal tax. Portfolio \( E_2 \) would clearly be preferable to any other available. In other words, for high-income taxpayers, only a single portfolio, as opposed to any portfolio on a line segment, will maximize returns.

77. Under the normal tax, as before, the higher tax rate applies to income above \( N \). Continue to suppose that both wealthy and average taxpayers have only capital income, and that even a portfolio of all exempt bonds leaves a wealthy taxpayer in the marginal \( t_i \) bracket. Under the normal tax, the after-tax return on the wealthy taxpayer's portfolio is:

\[
R = N(1-t_i) + [(1-E)t - N](1-t_i).
\]
The most important feature of portfolio $E_2$ is its rate of return. The AMT does in fact succeed in lowering the after-tax return to wealthy taxpayers below the return that they would receive in the absence of the AMT. In the absence of the AMT, high-bracket taxpayers pay a rate of $t_1$ on their optimal portfolio of all-exempt bonds. Under the AMT, the best possible portfolio is $E_2$, where the after-tax return under the normal tax equals the after-tax return under the AMT. At this point, under either tax, high-bracket taxpayers pay an implicit tax at rate $t_1$ on exempt bonds. Under the normal tax, wealthy taxpayers pay the statutory rate $t_2$ on taxable bonds. This is necessarily higher than the rate $t_1$ that would apply absent the AMT.

But the AMT does not, and cannot, restore the degree of progressivity that would occur absent the tax exemption for certain bonds. At $E_2$, wealthy taxpayers are still holding some exempt bonds. On these bonds, the only taxes they pay are $t_1$ in implicit taxes. Thus, the average rate on the portfolio is above $i(1-t_2)$, as illustrated in Diagram 8.

D. Taxpayer Morale

The tax exemption for state and local bonds transforms explicit taxes into implicit ones. Holders of exempt bonds in the market-clearing bracket will pay the same tax rate, albeit implicitly, as holders of taxable bonds. But because implicit taxes are hidden, the exemption may create the appearance of inequity, even within a single tax bracket. The AMT is a useful tool for increasing the appearance of a fair tax system. The AMT will limit the percentage of each taxpayer's portfolio invested in exempt assets. This constraint on portfolio composition will have the desirable result of limiting the percentage of each taxpayer's taxes that is paid in implicit taxes, without raising the required return on exempt bonds.

Diagram 9 illustrates the normal tax as the proportion of exempt assets increases. The total normal tax rate is constant, and there is no actual inequity. However, as the proportion of exempt assets increases, implicit taxes rise and the percentage of taxes paid in monetary form drops. The reduced money tax may create the appearance of tax avoidance.

The previous Section described the effects of the AMT when all taxpayers were identical. The AMT had no effect on portfolio return, but merely placed a ceiling on the exempt bonds a rational taxpayer would hold. As a corollary of this, the AMT can limit the appearance of tax avoidance without affecting the basic effectiveness of the tax incentive.
Diagram 9

Diagram 10
In isolation the AMT would produce a constant tax at rate \( t_m \), illustrated by the line labeled "Money AMT" in Diagram 10. On a portfolio consisting entirely of taxable bonds, no implicit taxes would be paid, while on a portfolio consisting of all exempt bonds, implicit taxes would be paid at the normal tax rate \( t \).

When, as under current law, the AMT is combined with a normal tax, the tax that produces the higher monetary revenue is in effect. The normal tax is in effect for portfolios with high levels of taxable bonds; eventually the AMT takes over, at \( E_1 \) in Diagram 10. Implicit taxes are zero with an all-taxable portfolio and then rise to a rate of \( t \). A rational taxpayer, though, will not choose a portfolio with a large proportion of implicit taxes. Total taxes, which are constant as long as the normal tax is in effect, begin to rise when the AMT becomes applicable.

![Diagram 11](image)

The AMT therefore reduces the appearance of tax avoidance.

By restoring public confidence, the AMT may serve a useful purpose even in a tax system where surtaxes have eliminated real inequity. However, two points of caution are in order. First, even the ideal AMT will

impose transactions costs, perhaps significant ones.\textsuperscript{78} Second, a high enough AMT may decrease the demand for tax-preferred items.\textsuperscript{79}

CONCLUSION

Tax incentives have played a controversial role in American tax policy. These incentives are an indispensable part of an efficient tax system. In their current form, however, tax incentives reduce the progressivity of the system. They reduce it less than they appear to, since the value of tax incentives is reflected in the implicit taxes on exempt assets. But if some exempt assets are held by taxpayers who are not in the highest bracket, the implicit tax on the asset will reflect only the lower bracket. Taxpayers who are in the highest bracket will be able to reduce their effective taxes by holding exempt assets.

Both real and apparent unfairness are troublesome, but they are different problems that require separate remedies. Real tax avoidance can be eliminated by either of two measures. A surplus tax can be imposed on tax-preferred income based on the difference between each taxpayer's bracket and the bracket of the taxpayer who clears the market for exempt bonds. Alternatively, incentives can be implemented by providing taxable credits rather than deductions. Neither credits nor a surplus tax would have any effect on the incentive effects of tax preferences. Both surplus taxes and credits would eliminate the vexing problem of tax arbitrage through the use of debt to purchase exempt assets. Both measures could be extended to other tax preferences, such as depreciation, although in these cases credits may prove to be more simple to implement.

But surplus taxes and credits will only partially reduce the appearance of tax avoidance. Public confidence in the fairness of the tax system is better addressed by the AMT, which can restore the appearance of fairness, often without blunting the incentive effects of tax subsidies. The AMT, however, is relatively ineffective as a countermeasure to real unfairness.

Tax incentives cause both real and perceived inequity. Reasonable tax analysts may disagree about whether these inequities, if unavoidable, are justified by the benefits of tax incentives. But few would argue that these inequities should be retained if they can be eliminated without cost. A system of credits or surplus taxes, combined with the AMT, deserves serious consideration.

\textsuperscript{78} Shaviro, \textit{supra} note 2, at 103.
\textsuperscript{79} Id. at 104.