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A Comprehensive Wealth Tax

DAVID SHAKOW* AND REED SHULDINER**

I. INTRODUCTION

Income conventionally is defined as the sum of consumption and any change in net worth. This definition highlights three likely bases for a tax: income, consumption, and net worth. Tax rates can be applied to essentially any base (or combination of bases) to raise the revenue that government requires.

The current U.S. federal tax system is based mainly on what is called an income tax.¹ While the definition of income given above is not used uniformly by the U.S. income tax system—for example, the tax system generally waits for property to be sold before it takes account of a change in value—the income tax relies to a significant degree on the income of taxpayers as its base. As for alternative bases, in the past 30 years there has been considerable discussion of a consumption tax that might replace the income tax. Little serious work has contemplated replacing the income tax with a wealth tax. Our project is to describe what a wealth tax might look like and what its (primarily distributional) consequences might be.

The wealth tax that we describe consists of a flat rate tax on most categories of wealth. Exemptions ensure that low wealth individuals would pay no tax. The wealth tax also includes a tax on earned income (generally referred to as “wages”). The wage component can be viewed as a tax on human capital, consistent with a complete definition of wealth, or as a quasi-independent wage tax. The wage tax also would have only one rate.

We find that the wealth tax leads to a distribution of taxes over most of the income range that is roughly the same as the current income tax. Based on the data we have analyzed so far, the combined

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¹ The other major source of federal revenue is the payroll tax used to fund Social Security and Medicare.

taxes produce a significantly greater burden than does the income tax on very low income individuals and produce a significantly lesser burden on very high income individuals. We find the lower burden on higher income individuals a disturbing feature of the tax. We view the results so far, however, as only preliminary. We strongly suspect that the data we used omits substantial amounts of wealth owned by upper income individuals. Thus, we expect future work is likely to show increased taxes would be paid by upper income individuals under a properly structured wealth tax.

II. WHY CONSIDER A WEALTH TAX?

There are essentially two reasons for a careful consideration of a wealth tax. First, one might consider a wealth tax to be superior to both the current income tax and to widely considered alternative taxes, such as a consumption tax. Second, even if the wealth tax is, for one reason or another, an inferior tax, nevertheless, consideration of the wealth tax may provide useful insight on other taxes. In particular, the similarity between the wealth tax and the income tax sheds light on the income tax.

For purposes of comparing the wealth tax with its alternatives, we adopt the standard framework for evaluating tax systems, and consider effects on equity, efficiency, and administrability. We recognize that, theoretically, these considerations blend together within the framework of a social welfare function, but believe that, as a practical matter, the separation is useful. The following Subsections discuss the merits of a wealth tax under these criteria.

A. *Equity*

The classic equitable justification for the income tax is that a tax should be based on ability to pay and income is the best measure of ability to pay.² On the face of it, however, a person's wealth appears to be as fair a basis for distributing a tax as her income. Both greater wealth and greater income clearly are correlated with greater ability to pay. In fact, income from capital and wealth are flip sides of the same concept. Income from capital is simply the increase in value of the stock of wealth.

Another justification used for the income tax is that it is a form of a benefits tax.³ A person's income is dependent on society's infrastructure that supports economic activity. Hence, those who earn more

² See, e.g., David F. Bradford, *Untangling the Income Tax* 149-51 (1986).

³ See *id.* at 150.

income reasonably can be asked to provide greater support for society's infrastructure. A wealth tax can be justified along the same lines. A person's ability to accumulate and protect wealth is dependent on society's infrastructure just as much as is his ability to earn income. Thus, wealth provides a reasonable basis for taxation.

Those who find an income tax attractive from a theoretical standpoint might prefer a wealth tax to an income tax because, in the real world, it is very difficult for an income tax to measure income accurately. Indeed, if all capital produced the same yield, an ideal wealth tax would be equivalent to an ideal income tax. Since capital produces widely divergent yields, a wealth tax still can be viewed as equivalent to an income tax levied on the average income from capital, rather than on the actual income realized from that capital.

A wealth tax also taxes capital that is not productively employed. Thus, a wealth tax can be viewed as a tax on potential income from capital. With respect to human capital, taxes based on potential earnings are rejected in order not to tax people on what they could earn if they choose to earn less than they are able. Putting aside practical considerations, such an approach offends our sense of respect for individual freedom. The arguments against taxing potential income from inanimate capital are much weaker. If two people earn \$20,000 per year in salary, but one has \$100,000 stuffed in a mattress, it does not seem unreasonable to say that the one with the cash in the mattress has a greater ability to pay a tax than the other.

A wealth tax should be compared not only to the income tax, but also to a possible consumption tax. An equitable basis for a consumption tax is that consumption measures the value that members of society extract from society.⁴ If that is the correct basis for allocating the tax burden, an income tax is wrong, since income reflects what people contribute to society. A consumption tax also is believed by some to be more equitable because it does not discriminate between people who choose to consume early and those who choose to consume later in life.⁵ People who feel strongly about these arguments are unlikely to be in favor of a wealth tax because it suffers from the same weaknesses in this regard as does its cousin, the income tax.

A major criticism of consumption taxes is that the most obvious forms of consumption taxes, such as sales taxes, seem to be inherently regressive since the percentage of income devoted to consumption de-

⁴ See William Andrews, *A Consumption-Type or Cash Flow Personal Income Tax*, 87 *Harv. L. Rev.* 1113, 1165-66 (1974); Edward J. McCaffrey, *The Uneasy Case for Wealth Transfer Taxation*, 104 *Yale L.J.* 283, 339 (1994).

⁵ See Bradford, note 2, at 162-66.

creases as income and wealth increase.⁶ Realistic consumption tax structures have been developed, however, that impose a progressive tax rate structure on a person's annual consumption.⁷ Thus, some have argued that consumption taxes are not inherently more regressive than income taxes.⁸ Nevertheless, many of the consumption tax proposals that seem to be politically most acceptable are significantly less progressive than the income tax.⁹ The potential strength of the wealth tax over the consumption tax is that it may be able to achieve progressivity with a flat rate structure.

Progressivity in the income tax primarily comes from two sources. First, progressivity is achieved by exempting income under a certain level. The current income tax exempts a basic level of income through the combination of the standard deduction and the personal exemption.¹⁰ Second, the income tax has progressive rates, beyond the implicit zero bracket inherent in an exemption amount.¹¹

Progressivity is defined generally as an increase in the average tax burden with increased income.¹² Once one moves away from the income tax, an obvious question is whether progressivity should be defined according to some other base, such as wealth or consumption.

⁶ The sentence in the text appears to be internally inconsistent, since it starts with the assumption that consumption is the correct tax base yet it tests regressivity against a base of income or wealth. In fact, most discussions of the progressivity of a consumption tax assume that something other than consumption (generally, income) should be the base against which the progressivity of the tax is measured. Bradford, note 2, at 162 (discussing equity of a consumption tax in terms of income).

⁷ See, e.g., Bradford, note 2, at 319 (discussing consumption-oriented modification of the income tax base).

⁸ *Id.* at 3 ("Consumption taxes are often thought to be regressive; in fact, they can be as progressive as one wants"). An alternative line of argument is that the proper comparison is not made on an annual basis, but over a lifetime, and that when so viewed, a flat rate consumption tax is lifetime proportional, not regressive. See, e.g., James M. Poterba, *Lifetime Incidence and the Distributional Burden of Excise Taxes*, 79 *Am. Econ. Rev.* 325 (1989). We intend to explore the lifetime issue more fully as we develop this project.

⁹ E.g., William G. Gale, *Building a Better Tax System: Can a Consumption Tax Deliver the Goods?*, 95 *TNT* 218-95 (Nov. 7, 1995), available in LEXIS, Tax Analysts File. ("Although the flat tax is more progressive than a VAT, it is more regressive than the current system").

¹⁰ IRC §§ 63, 151.

¹¹ IRC § 1. Progressivity also is achieved through the earned income credit. IRC § 132. We treat the earned income credit, however, as independent from the income tax. In theory, there is no reason why a wealth tax could not be combined with a similar earned income tax credit. Additionally, progressivity currently is achieved through a variety of provisions that provide benefits for lower income individuals that are phased out for higher income individuals. See, e.g., IRC § 21 (dependent care credit), § 24 (child tax credit), § 25A (Hope and lifetime Learning credits), § 151(d) (phaseout of personal exemption), § 219 (individual retirement account), § 221 (deduction for interest on educational loan), § 408A (Roth IRA).

¹² It is also possible to define progressivity in terms of marginal rates, but it seems more useful to us to define it in terms of average rates.

For now, however, we continue to use income as the base against which progressivity is measured. We are not entirely comfortable with using income as the base for defining progressivity. In particular, if one accepts that wealth is the correct base on which to impose a tax, there seems to be little reason that a wealth tax should be judged against income.

Accepting both the definition and desirability of progressivity, we believe a reasonably structured wealth tax can achieve progressivity by income class that is comparable to that of the income tax. We say "reasonably structured" because we are certain that an appropriate combination of rates and exemptions can make a wealth tax as progressive as an income tax. Comparable arguments are made for a consumption tax. What we view as potentially special about a wealth tax is that we believe it can be structured as a flat rate tax, and still have the benefits of progressivity beyond what the credits provide.

The intuition behind our belief that suitable progressivity can be achieved with a single (nonzero) rate is that substantial income from wealth effectively goes untaxed under the current income tax system. We think it quite reasonable to believe that much of that low-taxed wealth is held by the wealthiest (or, if you will, the highest income) individuals. Hence, one of the primary questions is whether, by bringing these assets into the system, we have made our *base* sufficiently progressive, at least as compared to the current income tax, that a flat rate tax on wealth (coupled with appropriate exemptions and a flat rate tax on wages) can yield progressivity comparable to the current income tax. Our expectation has been that, if such progressivity can be achieved, the wealth tax may be preferable to the current income tax from a fairness perspective because it is likely to apply more uniformly within wealth (and income) classes.

Another way to express this intuition is to say that, as adjusted gross income (AGI)—the primary measure of income in the current income tax—increases, wealth increases disproportionately. Some idea of the relationship between net worth, earned income, and AGI can be obtained from Figures 1 through 3.¹³ Figures 1 and 2 show net worth and earned income as a percentage of AGI by AGI category.¹⁴ Figure 2 is the same as Figure 1 except that it only includes data on individuals with AGI greater than \$15,000.

¹³ The data in these figures comes from the 1995 Survey of Consumer Finance (SCF). See Section V for a description of the SCF. See Section VII.A. for a discussion of net worth. See Subsection VII.B. for a discussion of the definition of earned income. Figures 13 and 14 in the Appendix show aggregate figures for net worth and earned income by AGI category.

¹⁴ The percentages shown in Figures 1 through 3 are computed as weighed averages of the percentage for each individual within an AGI class.

FIGURE 1
NET WORTH, TAXABLE NET WORTH, AND EARNED INCOME AS A PERCENTAGE OF AGI

FIGURE 2
NET WORTH, TAXABLE NET WORTH, AND EARNED INCOME AS A PERCENTAGE OF AGI AGI > \$15,000

As can be seen from the figures, earned income slowly but steadily declines as a fraction of AGI. After a precipitous fall in the \$1,000 to \$15,000 range of AGI, net worth steadily increases as a percentage of AGI. The increase becomes quite steep between the \$100,000 to \$200,000 category and the \$200,000 to \$500,000 category and then drops somewhat for those with AGI over \$500,000. Also shown in Figures 1 and 2 is taxable net worth as a percentage of AGI. Taxable net worth is defined as net worth minus housing equity up to \$1 million. As the graphs show, housing becomes less important as net worth increases.

Figure 3 adds an additional line, net worth as a percentage of earned income. Since earned income is very close to AGI, the line closely tracks the line for net worth as a percentage of AGI. Net worth as a percentage of earned income significantly diverges from net worth as a percentage of AGI only for individuals with AGI over \$1 million.

Since the wealth tax described here consists of two flat rate components, a tax on wages and a tax on capital, it follows from Figures 1 through 3 that the tax on wages, standing alone, would be a regressive tax when measured against AGI while the tax on capital would be progressive. Since we can vary the relative contributions of each component of the tax (by varying their rates), we are able to achieve any measure of progressivity between that arising solely from a wage tax and that arising solely from a tax on capital.¹⁵ In either case, further progressivity can be achieved by providing for a credit or exemption.¹⁶

B. Efficiency

Efficiency refers to the effects of a tax system on the smooth functioning of a market economy. Any realistic tax system interferes with a pure market economy by altering prices and hence altering decisions that participants in the market would have made absent a tax system.¹⁷ Economists evaluate the effects of a tax system to see how seriously the tax system interferes with economic decisionmaking. They also try to determine whether the tax system encourages decisions that are good for the economy.

To explore the efficiency of a wealth tax, we first consider some of the characteristics of a wealth tax. We then compare the wealth tax to its primary alternatives, an income tax and a consumption tax.

¹⁵ Additional progressivity could be achieved by applying negative tax rates to wages.

¹⁶ See Section V for a discussion of credits and exemptions.

¹⁷ Taxes that do not vary with behavior, such as head taxes, usually are seen as efficient. Generally, however, they are not viewed as fair or practical.

FIGURE 3
NET WORTH AND EARNED INCOME AS A PERCENTAGE OF AGI AND NET WORTH AS A
PERCENTAGE OF EARNED INCOME BY AGI CATEGORY (AGI > \$15,000)

We argue below that a wealth tax differs from other taxes on capital primarily in its lump sum nature. Before characterizing the wealth tax, however, it is helpful to look at the difference between an ex ante wealth tax and an ex post wealth tax.

1. *Ex Ante vs. Ex Post Wealth Taxes*

An ex ante wealth tax is a tax on wealth measured at the beginning of each period while an ex post wealth tax is imposed on wealth measured at the end of each period.¹⁸ Generally, the difference between the two taxes is unimportant for two reasons.¹⁹ For one thing, under certain conditions described below, the two taxes generate identical outcomes. More importantly, if the taxes are imposed on a periodic basis, they can be made entirely equivalent.

a. *One-Period Wealth Tax*

Consider first the one-period wealth tax. Assume an individual has a fixed pool of savings, S , that she plans to invest. She expects a return of z on her savings, where z may be a safe rate of return or may be a random variable representing a risky return. The amount of her investment does not affect the rate of return. If subject to an ex ante wealth tax at a rate τ_w , she would be able to invest, after tax:

$$S \times (1 - \tau_w) \tag{1}$$

At the end of the investment period, she would have available to consume:

$$S \times (1 - \tau_w) \times (1 + z) \tag{2}$$

By contrast, with an ex post wealth tax, she would be able to invest the entire S . At the end of the investment period, prior to tax, she would have:

$$S \times (1 + z) \tag{3}$$

After tax, she would be able to consume:

$$S \times (1 + z) \times (1 - \tau_w) \tag{4}$$

Expressions 2 and 4 are always equal. Subject to the qualifications discussed below, the ex ante and ex post wealth taxes produce identical outcomes from the viewpoint of the taxpayer.²⁰

¹⁸ Although it need not be the case, we assume the tax is payable when the wealth is measured.

¹⁹ The discussion in the text assumes that the tax is proportional and that the tax rate does not change over time.

²⁰ From the viewpoint of the government, the two taxes are not necessarily identical because in the case of the ex ante tax, the government can choose to invest the revenues in any manner available to it, while in the case of the ex post tax, the government's tax revenues depend on the outcome of the investment. Essentially, the ex post tax makes the government a partner in the taxpayer's investment. In theory, the government could make

While the *ex ante* and *ex post* wealth taxes produce identical outcomes, they obviously do not produce identical tax payments. Since the tax payments are different, particularly where the return is risky, it may seem unintuitive that the *ex ante* and *ex post* wealth taxes produce identical outcomes. In particular, in the *ex ante* case, the tax paid is certain, while in the *ex post* case, the tax paid is uncertain, depending on the outcome of the risky return. The question, however, is not whether the tax paid is the same, but whether the ultimate after-tax outcome is the same. The reason the outcome is the same is quite simple. The *ex post* tax captures a fixed percentage of both initial wealth and the return from the investment. The *ex ante* tax directly captures the same fixed percentage of initial wealth. In addition, since the *ex ante* tax has to be paid up front, it reduces the size of the investment, thus reducing the same fixed percentage of the return as with the *ex post* tax.

As mentioned above, the conclusion that the taxes are identical must be qualified in at least two ways. First, the *ex ante* and *ex post* taxes are not the same if there are net additions or subtractions to savings during the period from sources other than investment earnings. In particular, net additions to savings during the taxable period, such as from saved wages, escape the *ex ante* tax, while net subtractions from savings, such as due to consumption out of savings, escape the *ex post* tax.

Second, the two taxes do not treat *inframarginal* returns identically.²¹ In particular, the excess of the *inframarginal* returns over the *marginal* returns (the “*excess inframarginal returns*”) is treated just like additions to savings out of wages. *Excess inframarginal* returns escape an *ex ante* wealth tax, but are taxed as part of wealth by an *ex post* wealth tax. The following example shows the difference in treatment between *ex ante* and *ex post* wealth taxes.

Example 1: *T*, who has \$1,000 in savings, has a unique opportunity to invest in a project. The project is expected to have a 100% return. The most that *T* can invest in the project is \$1,000, although he could invest less. If he invests the full \$1,000, he will have \$2,000 at the end of the period. *T* also can borrow and lend at the market rate of 10%. If there is an *ex post* 10% wealth tax, *T* will pay \$200 at the end of

the *ex post* tax equivalent to the *ex ante* tax by selling the taxpayer's investment short and investing the proceeds in its preferred investment. Alternatively, the government could make the *ex ante* tax equivalent to the *ex post* tax by investing the tax proceeds in the same investment as the taxpayer.

²¹ As discussed more fully below, *inframarginal* returns are above-market returns available in limited amounts to particular investors on particular projects.

the period, and be left with \$1,800. If there is an ex ante tax, T will pay \$100 up front, leaving only \$900 for the investment. T , however, can borrow \$100 to pay the tax, and, therefore, invest a full \$1,000 in the project. At the end of the period, T will have wealth of \$2,000 from the project, but will owe \$110 on the loan used to pay the ex ante tax. After paying off the loan, T will be left with \$1,890. Thus, T will be better off under the ex ante, rather than the ex post tax.

While it is clear from the example that the ex ante and ex post wealth tax impose different burdens on inframarginal returns, it is worth exploring the nature of the difference. It is straightforward to show that the ex ante wealth tax is equivalent to an ex post wealth tax that exempts the excess inframarginal return.²² The following example illustrates the point.

Example 2: T 's \$2,000 ex post wealth in *Example 1* can be divided into three components: the original investment (\$1,000), the marginal return (\$100), and the excess inframarginal return (\$900). A 10% wealth tax that exempted the inframarginal return would collect \$110. T would be left with \$1,890, exactly the same amount as under the ex ante wealth tax.

With either tax, if the tax is imposed in future periods, the excess inframarginal return becomes part of the subsequent tax base to the extent that it is not consumed. In summary, in the case of a one-period tax, the ex ante and ex post taxes are very similar, but not identical.

²² The relationship between the ex ante and ex post tax can be shown algebraically. Assume an individual has an opportunity to invest an amount S at an inframarginal return g . The individual can borrow and lend at the marginal rate r . For convenience, assume that the individual has initial wealth equal to S . If there is an ex ante wealth tax at a rate τ_w , the ex ante tax liability is:

$$T^a_0 = S \times \tau_w \quad (1)$$

where the subscript 0 indicates the time of the payment and the superscript a indicates the ex ante tax. If the individual borrows to pay the tax, the tax liability at Time 1 is:

$$T^a_1 = (1 + r) \times S \times \tau_w \quad (2)$$

If there is an ex post wealth tax at the same rate, then after investing S at rate g , T owes:

$$T^p_1 = S \times (1 + g) \times \tau_w \quad (3)$$

The superscript p indicates the ex post tax. Rewriting the equation, one obtains:

$$T^p_1 = (1 + r) \times S \times \tau_w + (g - r) \times S \times \tau_w \quad (4)$$

Substituting:

$$T^p_1 = T^a_1 + (g - r) \times S \times \tau_w \quad (5)$$

The final term is the excess inframarginal return multiplied by the tax rate. Thus, the ex post tax, T^p_1 , is equal to the ex ante tax adjusted for the earlier payment, T^a_1 , plus a tax on the excess inframarginal return.

b. Periodic Wealth Tax

The more important case is where the wealth tax is imposed over multiple periods. With a periodic wealth tax, the differences between an ex ante and ex post tax essentially evaporate. Since the beginning of each period is also the end of the prior period, the differences between the two wealth taxes arise only for the first and last periods. In particular, an ex ante wealth tax captures inherited wealth, while an ex post wealth tax captures assets remaining at death (that is, amounts bequeathed or wealth at the termination of the tax). Since an ex ante wealth tax could treat death as the beginning of the final taxable period and an ex post wealth tax could treat birth as the end of the first taxable period, the two taxes could be made identical. Given the similarity between ex ante and ex post wealth taxes, we do not always distinguish between the two.

In any case, a periodic wealth tax exempts wealth that is both earned and consumed during the taxable period. It is worth noting that the shorter the taxable period, the less wealth can escape the tax through consumption. In this Article, we assume an annual wealth tax, although a shorter period could be used.²³

2. Wealth Taxes as Lump Sum Taxes

The key to understanding the economic effect of a wealth tax is to understand its nature as a quasi lump sum tax. As discussed below, the tax is lump sum in the sense that given the decision to save, the tax does not depend on the return from the investment.²⁴ The tax is not lump sum in the sense that the amount of the tax depends on the amount that the individual chooses to save rather than consume.

To see the quasi lump sum nature of the tax, consider a simple model with an ex ante wealth tax (remembering the general equivalence between ex ante and ex post wealth taxes). Assume that T earns y at time zero. T must make a decision to consume some or all of his earnings and to save any amount not consumed. Consumption is immediate and there is an ex ante wealth tax at a rate τ_w on any amount not consumed. It is clear that the wealth tax increases the price of future consumption relative to current consumption and has the effect

²³ In theory, one could adopt a continuous wealth tax. See Jeff Strnad, *Periodicity and Accretion Taxation: Norms and Implementation*, 99 Yale L.J. 1817 (1990) (discussing the optimal taxable period under the income tax). There is no necessary connection between the frequency of valuation and the frequency of collection or filing. For example, one could have a tax based on average end-of-month valuations, with annual filing, and quarterly payment of estimated tax.

²⁴ The statement in the text ignores investments in human capital, which may or may not be taxed at the same rate depending on the human capital portion of the tax.

of discouraging savings. In this regard, the wealth tax acts like an income tax.²⁵

On the other hand, consider the decision as to how to invest. The individual must pay a fixed charge, $\tau_w \times W$, irrespective of how the individual chooses to invest his wealth. In this sense, it is a lump sum tax and lump sum taxes are efficient in that they do not distort prices and, therefore, economic decisions.²⁶

The quasi lump sum nature of the wealth tax is explored more fully in the following comparison between the wealth tax and income and consumption taxes.

3. *Comparison of Wealth Taxes With Income and Consumption Taxes*

In order to compare the effect of wealth taxes on capital, it is useful to divide income from capital into several categories: the real risk-free return, the return to risk, and inframarginal returns.²⁷ In addition, although not strictly a return to capital, the taxation of inflationary returns needs to be examined. Except where specifically noted, the following discussion assumes that the tax in question is proportional, that is, the effects of progressivity are ignored.

a. *Real Risk-Free Return*

Consider first a world where all capital yields the same certain real rate of return r . In such a world, an income tax would burden income from capital at the statutory rate. A consumption tax, on the other

²⁵ A wealth tax reduces the return to savings and hence increases the price of future consumption relative to current consumption. Therefore, people would tend to substitute away from future consumption towards current consumption (the substitution effect). On the other hand, a wealth tax also increases the amount of savings required to fund any given level of future consumption (the income effect). Thus, a wealth tax, like an income tax, may increase the level of savings. See generally Anthony B. Atkinson & Joseph E. Stiglitz, Lecture 3: Taxation, Savings and Decisions Over Time, in *Lectures on Public Economics* 62 (1980).

²⁶ To be more precise, there will be no substitution effect, although there may be a wealth effect. The wealth effect, however, does not carry with it an excess burden or dead-weight loss. Given, however, the presence of other distortions in the economy, including the wealth tax itself, it cannot be said that it is necessarily more efficient not to distort the investment decision.

²⁷ Although it is standard in the literature to speak of the real risk-free return, generally it is not possible to invest at a real risk-free rate. For example, a one-year U.S. Treasury bill may have near zero default risk, but it has inflation risk. Moreover, the riskiness of the Treasury bill depends on the desired timing of consumption and on the other assets held by the individual. For example, if the individual desires to use the proceeds of the investment in less than or more than one year, the Treasury bill also has interest rate risk. See Atkinson & Stiglitz, note 19, at 102-04.

hand, would impose no burden on capital.²⁸ The consumption tax does not burden savings because when a taxpayer chooses to defer consumption, he also is permitted to defer tax on the deferred consumption. The value of the tax deferral is exactly equal to the extra tax imposed on the deferred consumption.²⁹

A wealth tax, like the income tax, imposes a tax on capital. As argued above, the wealth tax is best viewed as a lump sum tax on capital. If the rate of return r is constant, the wealth tax τ_w operates exactly like an income tax τ_w according to the following relationship:

$$t_i = \frac{(1 + r)}{r} \times t_w \text{ OR } t_w = \frac{r}{(1 + r)} \times t_i.^{30}$$

²⁸ Generally, under a consumption tax, a tax is imposed on consumption out of investment earnings, but, as explained below, there is no burden from the tax. Depending on implementation, a consumption tax may burden pre-existing capital. The fact that a consumption tax does not burden capital is well-known in the literature. See, e.g., Bradford, note 2, at 162-66; William D. Andrews, A Consumption-Type or Cash Flow Personal Income Tax, 87 Harv. L. Rev. 1113 (1974); Joseph Bankman & Thomas Griffith, Is the Debate Between an Income Tax and a Consumption Tax a Debate About Risk? Does it Matter?, 47 Tax L. Rev. 377 (1992); Michael Graetz, Implementing a Progressive Consumption Tax, 92 Harv. L. Rev. 1575 (1979); Alvin C. Warren, Jr., How Much Capital Income Taxed Under an Income Tax Is Exempt Under a Cash Flow Tax?, 52 Tax L. Rev. 1 (1996) [hereinafter Capital Income]; Alvin C. Warren, Would a Consumption Tax Be Fairer Than an Income Tax?, 80 Yale L.J. 1081 (1980).

²⁹ The fact that a consumption tax does not burden capital can be shown algebraically. Consider, a person who has S dollars that he can consume currently (time 0) or invest for one period (time 1). Assume that there is a consumption tax at the tax-inclusive rate τ_c . For a discussion of the difference between a tax-inclusive and tax-exclusive rate, see note 31. If spent now, the person has the following consumption C and tax liability T :

$$C_0 = S \times (1 - \tau_c)$$

$$T_0 = S \times \tau_c.$$

If saved for one year, the amount available for spending increases by a factor of $(1 + r)$, for total savings of $(1 + r) \times S$. The individual then has consumption and tax liability of:

$$C_1 = (1 + r) \times S \times (1 - \tau_c)$$

$$T_1 = (1 + r) \times S \times \tau_c.$$

By substitution:

$$C_1 = C_0 \times (1 + r)$$

$$T_1 = T_0 \times (1 + r).$$

Thus, the amount available for consumption at Time 1 is exactly the quantity $(1 + r)$ multiplied by the amount available at time 0. In other words, deferred consumption increases at the rate of return, with no diminution for taxes. Thus, there is in effect no burden on savings.

Put another way, the amount of the tax liability increases only by the rate of return, and therefore the tax savings from deferring consumption exactly pays for the tax on the incremental consumption from savings.

³⁰ The factor of r adjusts for the fact that the wealth tax is on the entire wealth, while the income tax is only on the yield. The factor of $(1 + r)$ adjusts for the fact that the ex ante wealth tax is paid one period earlier than the income tax.

Where the rate of return is not constant, the two taxes diverge. In particular, as the risk-free rate rises (falls), the wealth tax becomes a decreasing (increasing) proportion of the income from the asset. One implication of the lump sum nature of the wealth tax is that individuals will become more sensitive to changes in the interest rate, because the tax will not blunt the effect of the change. These results are easy to see with a series of examples.

Example 3: Assume that T earns \$100 that he either must spend this year or save and spend next year on consumption. Any amounts saved earn interest at 10%.

Income Tax: Under a 40% income tax, T pays \$40 in taxes and can consume \$60 currently or save the \$60. If he saves the \$60, he earns \$6 and pays an additional tax of \$2.40 on the interest. His consumption then is \$63.60, 6% more than he could have consumed in the first period. His return on savings is reduced from a 10% pretax rate to a 6% after-tax rate (a 40% reduction corresponding to the 40% income tax).

Consumption Tax: Under a 40% (tax-inclusive) consumption tax, T can consume \$60 currently and pay tax of \$40.³¹ Alternatively, T can save the \$100, leaving him with \$110 after earning a year's interest. He then can consume \$66, paying a tax of \$44. By saving, T increases his after-tax consumption by the full 10% rate of return. Therefore, the consumption tax does not burden savings.

Wealth Tax (With Wage Tax): Assume a 3.64% wealth tax combined with a 40% wage tax.³² T has \$60 to spend currently on consumption or to save for the following period. If he spends the \$60 currently, there is no wealth tax burden. If he saves it, he pays a wealth tax of \$2.18, leaving \$57.82 after taxes. After earning interest of \$5.78, T has savings of

³¹ A tax can be stated on either a tax-inclusive or tax-exclusive basis. Income taxes generally are stated on a tax-inclusive basis (that is, the tax base includes the funds used to pay the tax). Sales taxes generally are stated on a tax-exclusive basis (the tax base excludes the funds used to pay the tax). For convenience, the consumption tax in the example is stated on a tax-inclusive basis. The equivalent tax-exclusive rate would be 67%. The tax-exclusive rate τ_{ex} can be stated in terms of the tax-inclusive rate τ_{inc} according to the following formula:

$$\tau_{ex} = \frac{\tau_{inc}}{(1 - \tau_{inc})}$$

We state the wealth tax on a tax-inclusive basis.

³² $3.64\% = .10/(1 + .10) \times .40$.

\$63.60, only 6% more than he could have consumed in the first period. His return from savings has been reduced 40% by the wealth tax, just as with the 40% income tax.

Wealth Tax With Higher Interest Rate: Assume the same facts as above, except that the pretax yield increases to 20%. If T saves \$60, he owes the same \$2.18 in taxes. His \$57.82 in savings earns interest of \$11.56, leaving him with \$69.38 after tax, 16% more than he could have consumed in the first period. Both the pretax return and the after-tax return rise by the same 10 percentage points.

The conclusion that a consumption tax does not impose a burden on savings depends on the assumption that the tax is not progressive. If the tax is progressive, the tax generally can be decreased by smoothing consumption over the taxpayer's lifetime. Correspondingly, the tax would tend to increase as consumption was lumped into fewer periods.³³

The discussion above assumes idealized versions of the taxes. An actual tax will not behave as described for several reasons. For example, actual income taxes depend heavily on the realization doctrine and usually have preferential rates for capital gains. Thus, the effective rate on savings may be far lower than the statutory rate. Moreover, the effective rate of tax generally differs depending on the form of the investment, the holding period, and other factors. Consumption and wealth taxes are generally not dependent on the realization doctrine. Actual tax systems are also likely to exempt certain forms of capital or expenditure. A wealth tax will have varying difficulty in valuing various types of investments, which is likely to lead to different effective rates on different investments.

The first row of Table 1 summarizes the results for the real risk-free return.

³³ A progressive consumption tax can have the characteristic that it does not burden investment if the tax provides an appropriate averaging mechanism. Further conditions are required for this conclusion. One is that tax rates remain constant over time. See, e.g., Michael J. Graetz & Deborah H. Schenk, *Federal Income Taxation: Principles and Policies* 306-08 (3d ed., 1995) (discussing conditions under which expensing is equivalent to exemption of income from capital). Moreover, the conclusion that a consumption tax does not burden capital does not apply to inframarginal returns, as discussed below.

TABLE I
COMPARISON OF VARIOUS TAXES ON CAPITAL

<i>Type of return to capital</i>	<i>Ideal indexed income tax</i>	<i>Unindexed income tax without loss offset</i>	<i>Consumption tax</i>	<i>Wealth tax</i>
Normal real risk-free return (r)	Taxed at statutory rate	Taxed at statutory rate subject to equalization, capital gains, etc.	No tax (tax offset by the value of expensing)	Lump sum tax; can be viewed as equivalent to income tax at a rate of $\tau_w \times (1 + r)/r$
Risk premium	Taxed, but can offset tax by increasing pretax risk	Potentially heavily taxed due to lack of loss offsets	No tax burden	Not taxed
Excess infra-marginal returns	Taxed (by assumption, cannot gross up)	Taxed (often lightly due to deferral and capital gains)	Taxed (cannot invest tax savings at infra-marginal rate)	Not taxed
Inflationary return	Not taxed (indexed basis)	Taxed at statutory rate (unindexed basis)	No tax (basis equals zero)	Not taxed
Evenness of taxation of different forms of capital	Even	Uneven; problems with depreciation, inflation, realization, capital gains	Generally more even; not worried about depreciation, realization, etc.	Generally even, but can be serious valuation problems

b. *Return to Risk Bearing*

i. *An Income Tax*

Matters become more complicated when returns to risk are considered. Consider first an income tax with full loss offsets. Assuming no response to the tax, an income tax burdens risk premia and reduces the variance of risky outcomes.³⁴ Since the tax reduces risk, however, a rational taxpayer can respond to the income tax by shifting investments from safe to risky assets without increasing the risk of his portfolio beyond that originally desired. Such a shift can fully offset the tax on the risk premium. Thus, if taxpayers respond optimally to the income tax, the effect of an income tax is to tax only the risk-free rate and neither to tax the risk premium nor reduce the after-tax riskiness of the portfolio.³⁵

Example 4: Assume that in addition to a safe investment yielding 10%, there is a risky investment that has an expected yield of 20%. In particular, an investment of \$100 has an equal likelihood of yielding either \$50 or \$190.³⁶

Pretax Position: Assume further that prior to the imposition of the tax, *T* chose to save \$100 and invest one-half of his portfolio in the safe asset and one-half in the risky asset.³⁷ Thus, if *T* is lucky, *T* has income of \$50 and total assets of \$150.³⁸ If *T* is unlucky, *T* has a loss of \$20 and his assets decrease to \$80.³⁹ *T*'s expected return is \$15 for an expected rate of return of 15%.⁴⁰

³⁴ The classic discussion of risk bearing under an income tax is Evsey D. Domar & Richard A. Musgrave, Proportional Income Taxation and Risk-taking, 38 Q.J. Econ. 388 (1944). For a modern treatment, see Atkinson & Stiglitz, note 25, at 97-127.

³⁵ For explications of this point, see Noël B. Cunningham, 52 Tax L. Rev. 17, 29-40 (1996); Warren, Capital Income, note 28, at 4-13. The pretax level of risk can be maintained by increasing the proportion of risky assets by a factor of $1/(1 - \tau)$, where τ is the tax rate. Although the effect of the income tax on the risk premium and on the net level of risk can be fully offset by increasing the proportion of risky assets, the taxpayer may choose to accept a lower or higher level of risk. In particular, the income tax has a wealth effect that may lead to a greater or lesser desired level of after-tax risk. An income tax decreases (increases) the level of risk taken by the individual depending on whether the wealth elasticity of demand for the risky asset is positive (negative). See Atkinson & Stiglitz, note 25, at 106.

³⁶ The return is either a negative 50% or a positive 90%. The expected payoff is \$120 for a 20% return.

³⁷ In theory, the amount that *T* chooses to invest in the risky asset depends on the relative returns of the safe and risky assets and *T*'s tolerance for risk.

³⁸ $\$150 = (.5)(\$100)(1 + .10) + (.5)(\$100)(1 + .90)$.

³⁹ $\$80 = (.5)(\$100)(1 + .10) + (.5)(\$100)(1 - .50)$.

⁴⁰ $\$15 = (.5)(\$50) + (.5)(-\$20)$.

Income Tax Without Portfolio Adjustment: Assume a 40% income tax. If *T* is lucky, he has pretax income of \$50, pays a tax of \$20, and has after-tax income of \$30. If *T* is unlucky, he has a pretax loss of \$20, receives a tax refund (or a reduction of tax against other earnings) of \$8 and has an after-tax loss of \$12. *T*'s expected after-tax return is \$9 for an expected rate of return of 9%. *T*'s pretax expected rate of return is reduced 40% (from 15% to 9%) by the 40% income tax.

Income Tax With Portfolio Adjustment: Assume *T* adjusts his portfolio in response to the income tax, increasing his risky investment to \$83.33 and decreasing his safe investment to \$16.67. If *T* is lucky, he has pretax income of \$76.67, pays a tax of \$30.67, and has after-tax income of \$46. If *T* is unlucky, he has a pretax loss of \$40, receives a tax refund of \$16, and has an after-tax loss of \$24. *T*'s expected after-tax return is \$11, for an expected rate of return of 11%. Relative to his pretax position, *T*'s expected return is reduced by 4 percentage points, which is equal to the tax rate of 40% multiplied by the 10% safe return.

The result in *Example 4* depends on certain key assumptions. First, the income tax must be proportional. Second, the tax must permit losses to be fully offset against other income and provide for refunds if taxable income is less than zero.⁴¹ By contrast, the current income tax is progressive and imposes severe restrictions on losses.⁴² Thus, the current income tax can impose a severe penalty on risky investments. In addition, the necessary portfolio adjustment to offset the risk effects of the income tax may require borrowing or increasing the level of borrowing. Thus, the argument depends on taxpayers being able to borrow freely at the risk-free rate.⁴³

⁴¹ The requirement of full loss offsets can be thought of as an extension of the proportionality requirement to the negative income range.

⁴² Losses are limited by both taxable income and the capital loss limitation. IRC §§ 1, 1211. In both cases, the loss may be eligible to be carried over to other years (with deferral if carried forward). IRC §§ 170, 1211. Even if allowed, losses may be less valuable due to the progressive tax structure, which tends to overtax gains relative to losses, particularly in the absence of income averaging. IRC § 1 (progressive rate structure). Compare IRC §§ 1301-1305 (repealed) (income averaging for all taxpayers), with IRC § 1301 (income averaging for farmers). The realization requirement and reduced rates for capital gains mutes the effect of the income tax on risk. IRC § 1(h). In addition to IRC § 1211, there are many other provisions that restrict losses. See, e.g., IRC § 469 (passive loss limitations).

⁴³ Cunningham, note 35, at 37-39.

ii. A Consumption Tax

A consumption tax generally imposes no burden on either a risk-free return or a risky return. The analysis parallels the analysis for the risk-free return: Whether the return is risk-free or risky, the tax saved by deferring consumption exactly pays for the tax later due on the deferred consumption so long as the deferred tax is invested with the same return as the deferred consumption.⁴⁴

Example 5: As in *Example 4*, there is a risky investment with an equal likelihood of returning either negative 50% or positive 90%. The expected return on the investment is 20%. Assume a 40% tax-inclusive consumption tax. *T* has \$100 that he can either spend currently or save and spend in the next period. If *T* chooses to consume this period, *T* could consume \$60, paying a tax of \$40.

If *T* chooses to save and invests in the risky asset, he has either \$50 or \$190 available for consumption (and payment of taxes). If he is lucky, he could consume \$114 (paying tax of \$76). If he is unlucky, he could consume \$30 (paying tax of \$20). His expected consumption, therefore, is \$72.⁴⁵ Thus, his expected return is 20%, unreduced by the tax.

As in the case of the income tax, the no-burden result relies on proportional rates. Unlike the income tax, the assumption of loss offsets is unnecessary because consumption is always positive.⁴⁶

iii. A Wealth Tax

A wealth tax imposes no burden on risky investments beyond that imposed on safe investments. Thus, while a wealth tax discourages savings, it does not distort the decision as between safe and risky investments. The argument is simple and follows directly from the lump sum nature of the tax. Consider a taxpayer who has a pool of wealth *W*. She can invest the wealth in either a safe or risky asset. In either

⁴⁴ The algebraic proof is essentially the same as in the risk-free case. See note 29. *T* is considering spending one dollar on consumption currently or in one year. There is a consumption tax at the rate τ_c . If spent now, *T* pays a tax of τ_c and consumes $(1 - \tau_c)$. If saved for one year, the amount available for spending increases to $(1 + z)$, where z is a random variable representing the risky return. If the savings then are spent in full, the is be $(1 + z)\tau_c$ and the amount left for consumption is $(1 + z)(1 - \tau_c)$. The amount available for consumption, after tax, increases by exactly the ex post rate of return. Thus, there is no tax burden on savings.

⁴⁵ $\$72 = (.5)(\$114) + (.5)(\$30)$.

⁴⁶ While consumption is always positive, it may be less than an exemption amount, which may have the effect of discouraging risktaking.

case, however, she will have an identical tax liability, $\tau_w \times W$. Thus, the tax is a fixed cost and does not distort her decision.⁴⁷ Moreover, since the amount of the wealth tax is independent of the outcome of a risky investment, there is no reduction in risk and no incentive or opportunity to shift into the risky asset without increasing the overall level of risk. Since an ex post wealth tax is equivalent to an ex ante wealth tax, an ex post wealth tax also imposes no burden on risky investments beyond that imposed on safe investments.

The effect of the various taxes on risky investments is summarized in the second row of Table 1.⁴⁸

c. *Inframarginal Returns*

The analysis above assumed that the investor could freely adjust the amount of his investment in different assets without changing the rate of return on the assets; in other words, that all investments were marginal investments. The assumption of marginal investments is quite reasonable for most investors most of the time. For example, if an individual is considering an investment in a bank deposit, a mutual fund, a publicly traded stock, or publicly traded bonds, the individual generally can invest as much as she likes without having a measurable effect on the rate of return on the investment. On the other hand, there are other investment opportunities where it is reasonable to assume that an above-market return is available on a limited basis. For example, an individual may be aware of a unique business opportunity requiring a relatively fixed amount of capital.⁴⁹ Individuals are assumed to fully invest in an inframarginal investment until, on the margin, it has become a marginal investment. How common inframarginal returns are is an empirical question.⁵⁰

The analysis of income and consumption taxes changes once inframarginal returns are taken into account. The analysis of the wealth tax, however, remains unchanged. As explained below, both income

⁴⁷ More precisely, there is no substitution effect, although there may be a wealth effect.

⁴⁸ See page 516.

⁴⁹ We suspect that many such unique opportunities are better viewed as returns to labor than returns to capital. For example, William Gentry and Glenn Hubbard suggest that inframarginal returns are associated with "rents to ideas, managerial skill, or market power." William M. Gentry & R. Glenn Hubbard, *Distributional Implications of Introducing a Broad-Based Consumption Tax*, 11 *Tax Pol'y and the Economy* 1, 6 (1997). The first two categories that Gentry and Hubbard list are returns to human capital, not inanimate capital.

⁵⁰ See, e.g., *id.* at 22-24 (attempting to look at the distribution of inframarginal returns by comparing the value of q , the ratio of the market value of an asset, to its replacement cost for households, at different income levels).

and consumption taxes generally burden inframarginal returns. A wealth tax generally leaves inframarginal returns untaxed.

i. An Income Tax

As an initial matter, an income tax captures a fixed percentage of any return, whether marginal or inframarginal. In the case of risky returns, taxation of the risk premium can be avoided effectively by shifting investment from the safe asset to the risky asset. By assumption, however, a taxpayer already has chosen to invest the maximum amount in inframarginal investments.⁵¹ Therefore, there are no further opportunities to shift investments from marginal to inframarginal investments. Thus, the inframarginal investment bears the full burden of the tax.

ii. A Consumption Tax

A consumption tax does not burden investment (either risk-free or risky) because the tax savings from deferring consumption grows at the same rate as the deferred consumption. Thus, the consumption tax does not burden savings so long as there is an opportunity to invest the deferred tax liability at the same rate as the deferred consumption. With an inframarginal investment, the taxpayer already has chosen to invest the maximum amount in the inframarginal investment. Thus, the tax savings can be invested only at the lesser marginal rate. As a result, the tax savings is insufficient to fund the tax due on the deferred consumption and part of the return from the inframarginal investment must be used to pay the tax.⁵²

⁵¹ Even if the taxpayer wishes to consume currently and not save, she can invest in the inframarginal investment by borrowing.

⁵² Assume that marginal investments earn at a rate r and that there is a single inframarginal investment available that earns at a rate $g > r$. Assume further that the most that can be invested in the inframarginal investment is $S \times (1 - \tau_c)$. Consider, as in note 29, an individual who has S to invest. He can spend either $S \times (1 - \tau_c)$ currently (paying $S \times \tau_c$ in taxes) or save S . If he saves S , however, the most he can invest in the inframarginal investment is $S \times (1 - \tau_c)$. The remaining $S \times \tau_c$ must be invested in the marginal investment. Thus, after one period, he has:

$$(1 + g)S \times (1 - \tau_c) + (1 + r)S \times \tau_c$$

The expression can be rewritten as:

$$[(1 + r)S \times (1 - \tau_c) + (1 + r)S \times \tau_c] + (g - r)S \times (1 - \tau_c).$$

The terms in the brackets are the marginal returns on the saved consumption and the saved taxes. As before, the marginal return on the deferred taxes is just sufficient to pay the tax on the marginal return on the deferred consumption. The term after the bracket is the excess inframarginal return on the deferred consumption. By assumption, there is no excess return on deferred taxes. As a result, part of the excess return on the deferred consumption must be used to pay taxes. In particular, the excess rate of return would be reduced by a factor of $1 - \tau_c$.

Example 6: Assume that there is a 40% tax-inclusive consumption tax. *T* has a unique opportunity to invest up to \$60 with a yield of 25%. Any further savings yield only the market rate of 10%. *T* decides to defer \$60 of consumption, investing the \$60 in the unique investment. His decision to defer his consumption frees up \$40 that otherwise would be due in current taxes. He invests the \$40 in saved taxes at the market rate.

T earns \$15 on the \$60 inframarginal investment and \$4 on the \$40 marginal investment. Thus, at the end of the period, he has \$119.⁵³ With \$119, he can consume \$71.40 and pay taxes of \$47.60.⁵⁴ By saving, he increases his consumption by only \$11.40 (19%), rather than \$15 (25%). Thus, the consumption tax burdens his excess inframarginal return.⁵⁵

iii. *A Wealth Tax*

Unlike the consumption or income tax, the wealth tax does not tax excess inframarginal returns. The argument is simple and again follows from the lump sum nature of the wealth tax. An *ex ante* wealth tax imposes the same burden whatever the return from the investment. Thus, if a taxpayer has an opportunity to invest in an inframarginal project, his tax liability from the project is exactly the same as it would be if he invested in a marginal project. No additional liability is generated by the excess return from the inframarginal investment.

Another way to see that an *ex ante* wealth tax imposes no burden on the excess return is to consider an inframarginal investment funded entirely by debt. Assuming perfect debt markets, the interest cost on the debt equals the marginal yield. Thus, the net income from the project equals the excess return from the project. Since, however, the project is entirely debt-funded, the net worth of the project is zero and no tax is due. Thus, it is clear that there is no tax burden on the excess return.

One could argue that the analysis above is incorrect. In particular, the net worth of a fully debt-funded inframarginal project is positive, not zero. Its value is the present value of the excess return. The opportunity to invest in an inframarginal project is an intangible asset

⁵³ $\$119 = (\$60 \times 1.25) + (40 \times 1.10)$.

⁵⁴ $\$47.60 = 40\% \times \119 .

⁵⁵ The inframarginal investment returns 25%, while the marginal investment returns only 10%. His excess return is, therefore, 15% or \$9. A 40% tax on \$9 is \$3.60, which is precisely the amount by which the tax has reduced his earnings. See note 52.

with positive value. A perfect wealth tax would tax such an intangible asset in the same manner as any other asset. The argument is that there are no inframarginal returns, only intangible assets that are not valued properly and taxed. No practical wealth tax, however, could include such intangible assets in its base. Thus, as a practical matter, if not a theoretical matter, the argument that a wealth tax will not tax inframarginal returns is correct.

The argument, so far, is based on an *ex ante* and not an *ex post* wealth tax. As shown above, a single period *ex post* wealth tax is not equivalent to a single period *ex ante* wealth tax with respect to inframarginal returns.⁵⁶ An *ex post* wealth tax includes excess inframarginal returns in the tax base. The difference between the *ex ante* and *ex post* wealth tax disappears, however, where the tax is periodic. With a periodic tax the excess inframarginal return, not taxed in the period in which it is earned, enters the tax base for future periods. If the excess inframarginal return is consumed in the period earned, it escapes the wealth tax entirely. In this regard, the treatment of excess inframarginal returns is identical to the treatment of wages.

The treatment of inframarginal returns by the various taxes is summarized in the third row of Table 1.⁵⁷

d. Inflation

Properly speaking, inflation is not a return to capital. Many taxes, however, fail to distinguish between real and inflationary increases in value and, in effect, treat inflation as part of an asset's yield. Absent proper adjustments, an income tax treats inflation as a taxable return. Generally, inflation is not a problem for either a consumption tax or a wealth tax.⁵⁸

⁵⁶ See Subsection I.L.B.1.

⁵⁷ See page 516.

⁵⁸ The discussion in the text concerns mismeasurement of the tax base due to inflation. Inflation also causes structural problems for many taxes. In particular, whenever the computation of tax liability is based on a fixed number of dollars, real tax liabilities vary with inflation. For example, inflation causes the value of personal exemptions and the size of tax brackets to shrink in real terms. The problem, often referred to as "bracket creep," is easily solved by indexing the brackets and other fixed dollar amounts. The Code is mostly, but not entirely, indexed to protect against bracket creep. Compare IRC § 1(f) ("official" tax brackets fully indexed), with IRC § 151(d) (tax bracket caused by phaseout of personal exemptions incompletely indexed). To the extent that a consumption or wealth tax had brackets, exemptions, credits, or similar fixed dollar amounts, indexing of such amounts would be necessary. See generally Reed Shuldiner, *Indexing the Tax Code*, 48 *Tax L. Rev.* 537 (1993).

Inflation also causes problems if there are delays between measurement of the tax base and payment of taxes. Such problems are relatively unimportant and relatively easy to control for so long as the rate of inflation is low or moderate.

i. An Income Tax

The computation of income from capital, whether in the form of gain or loss, or in the form of periodic returns or deductions, generally can be made only by reference to dollar amounts from prior periods. Unless those dollar amounts are adjusted for inflation, the computation of income contains an amount that represents the effect of inflation. While it is possible to adjust the computation of income to compensate for inflation ("indexing"), doing so is complex. Due in part to that complexity, the Code has never indexed income. Many provisions of the Code, such as preferential rates for capital gains⁵⁹ and accelerated depreciation⁶⁰ have been justified, at least in part, as ad hoc corrections for inflation.

Example 7: *T* purchases a share of stock for \$100, selling it one year later for \$110. In the intervening year, there has been 6% inflation. Under an unindexed income tax, *T* has \$10 income, the difference between the amount received on sale and the purchase price. Stated in current dollars, however, *T*'s investment in the property, is not \$100, but \$106. In other words, in terms of *T*'s ability to purchase goods and services, *T* needs \$106 dollars today to be as well off as he was if he spent the \$100 one year ago. *T*'s real income is only \$4, the difference between the amount realized on sale and the adjusted purchase price. The income tax could be indexed by increasing *T*'s basis in the property to \$106 to reflect the intervening inflation.

ii. A Consumption Tax

Generally, a consumption tax does not need to be indexed for inflation because the tax base is determined only by reference to current dollars. For example, a sales tax is imposed on the current sales price. With a cash flow type tax, the tax base is current receipts minus the amount currently saved. In either case, there is no need to resort to concepts such as basis measured in dollars from a prior period.

Example 8: As in *Example 7*, *T* purchases a share of stock for \$100 and sells it after one year for \$110. *T* immediately uses the proceeds from the sale for consumption. Assume that there has been intervening inflation of 6%. In the first year, *T* would be permitted to deduct the \$100 purchase. No

⁵⁹ See, e.g., IRC § 1(h).

⁶⁰ See, e.g., IRC § 168.

adjustment is needed for inflation because the purchase is current. In the second year, *T* would include the \$110 of consumption. Again, no adjustment is needed for inflation because the sale is current. While the effect of inflation would increase his tax liability in nominal terms by 6%, his real liability would be unaffected by inflation because he would be able to pay the tax in inflated dollars.

iii. *A Wealth Tax*

Generally, as with a consumption tax, a wealth tax does not need to be indexed for inflation because the tax base is determined only by reference to current dollars. The only information that generally is required is the current value of assets and liabilities; no reference need be made to historical values.

Example 9: *T* purchases the same share of stock as in *Example 7*. *T* would have taxable wealth of \$100 in the first period, and taxable wealth of \$110 in the second period. As a result of inflation, his nominal tax liability would be 6% higher in the second period. His real liability would be unaffected by inflation because he would pay the tax in inflated dollars.

The treatment of inflationary returns by the various taxes is summarized in the fourth row of Table 1.⁶¹

e. *Summary*

The pure form of all income, consumption, and wealth taxes, burden capital. There are, however, significant differences in how each taxes capital. An income tax taxes risk-free and inframarginal returns, but generally does not tax returns to risk. An income tax also may encourage greater risktaking as taxpayers act to offset the tax. A consumption tax burdens neither the risk-free return nor returns to risk, but, as with the income tax, taxes inframarginal returns. Finally, a wealth tax imposes a lump sum tax on capital that can be viewed as a tax on the risk-free rate of return, but imposes no burden on either risky or inframarginal returns. Thus, if it is believed important to tax inframarginal returns, the wealth tax is a relatively unattractive form of taxation.

⁶¹ See page 516.

The pure forms of the various taxes are likely to be neither politically nor administratively feasible. Thus, the choice between the taxes will depend on the compromises that must be made in order to enact an administrable tax. For example, the income tax is much more sensitive to inflation than is the wealth or consumption tax. Thus, if inflation is a problem, wealth and consumption taxes may be relatively more attractive than income taxes.

4. *Administrability*

A wealth tax has both obvious administrative problems and obvious advantages. The primary administrative difficulty is that a wealth tax requires that assets be valued on an annual basis. While many valuation problems could be solved, there is no question that substantial problems would remain. One useful way to consider the significance of the valuation problem is to examine the percentage of all assets that are easy or hard to value. To get a feel for this issue, we use figures from the Federal Reserve's Flow of Funds accounts, which attempt to identify all assets in the economy.⁶²

Table 2 divides up assets held by individuals into categories that seem easy, medium, or hard to value. Table 3 looks more specifically at the assets that are likely to be included in a wealth tax. We treat assets as easy to value if different people valuing those assets generally would reach more or less the same number in making the valuation. For example, shares traded on a stock exchange are easy to value. This is a reasonable conclusion, although valuing a large block of such stock occasionally might raise issues that would make that particular block more difficult to value. We treat assets as of medium difficulty to value if we generally would expect different people valuing those assets to reach roughly the same number, although we would not expect the numbers to be exactly the same. We treat an asset as hard to value if we would not be surprised that two people making a valuation of the asset came up with numbers that were significantly different. In making these evaluations, we take into account the amount one reasonably might expect to spend valuing an asset given the value of the asset.

Although we have no data on the valuation of consumer durables, we expect they generally are difficult to value, given the likely costs of valuation compared to value. Any reasonable wealth tax is likely to exempt consumer durables below a threshold.⁶³ For purposes of this

⁶² Board of Governors of the Federal Reserve System, Guide to Flow of Funds Accounts (1993) [hereinafter Flow of Funds].

⁶³ See Subsection III.D. for a fuller discussion of the treatment of consumer durables.

TABLE 2
ASSET TOTALS FROM FLOW OF FUNDS ACCOUNTS—1994

	\$billions	Percent of Total Assets
Tangible assets	9,500	33.1
Owner-occupied housing	7,282	25.4
Consumer durable goods	2,218	7.7
Total Financial Assets	19,169	66.9
Deposits	3,157	11.0
Foreign deposits	19	0.1
Checkable deposits and currency	564	2.0
Time and savings deposits	2,224	7.8
Money market fund shares	351	1.2
Credit market instruments	1,930	6.7
Open market paper	47	0.2
U.S. government securities	913	3.2
Treasury	782	2.7
Savings bonds	180	0.6
Other Treasury	602	2.1
Agency	131	0.5
Municipal securities	502	1.7
Corporate and foreign bonds	353	1.2
Mortgages	116	0.4
Corporate equities	3,071	10.7
Mutual fund shares	1,052	3.7
Security credit	109	0.4
Life insurance reserves	520	1.8
Pension fund reserves	4,948	17.3
Investment in bank personal trusts	699	2.4
Equity in noncorporate business*	3,405	11.9
Miscellaneous assets	277	1.0
Total Assets	28,669	100.0

* Includes direct investment in real estate other than owner-occupied housing

Source: Board of Governors of the Federal Reserve System, Flow of Funds Accounts of the United States, 1991-1999 (Mar. 10, 2000), tbl. B.100 (Balance Sheet of Households and Nonprofit Organizations), available at <<http://www.bog.frb.fed.us/releases/z1/Current/data.htm>> (visited May 23, 2000).

analysis, we include one-half of consumer durables and rate consumer durables as being of medium difficulty.

Deposits generally are recorded at their current value and should be easy to value. There are markets for most U.S. government and municipal securities, and that should make them easy to value. There is trading in many corporate and foreign bonds. It should be easy to determine the value of a debt instrument rated by credit agencies. Although we do not have data on the extent of bonds that do not fit these criteria, we do not believe it is very great.

It is possible to make tentative valuations of mortgages based on the projected cash flow of the instrument. It would be improvident, however, to value the mortgage without some determination of the

TABLE 3
ASSETS LIKELY TO BE TAXED UNDER A WEALTH TAX

	<i>Amount included in base (\$billions)</i>	<i>Percent of Base</i>	<i>Difficulty of Valuation</i>		
			<i>Easy</i>	<i>Medium</i>	<i>Hard</i>
Consumer durable goods	1,109	7.4		7.4	
Foreign deposits	19	0.1	0.1		
Checkable deposits and currency	564	3.7	3.7		
Time and savings deposits	2,224	14.8	14.8		
Money market fund shares	351	2.3	2.3		
Open market paper	47	0.3	0.3		
Savings bonds	180	1.2	1.2		
Other treasury	602	4.0	4.0		
Agency	131	0.9	0.9		
Municipal securities	502	3.3	3.3		
Corporate and foreign bonds	353	2.3	2.3		
Mortgages	116	0.8		0.8	
Corporate equities	3,071	20.4	17.7	2.7	
Mutual fund shares	1,052	7.0	7.0		
Security credit	109	0.7		0.7	
Life insurance reserves	520	3.5	3.5		
Investment in bank personal trusts	699	4.6	4.6		
Equity in noncorporate business*	3,405	22.6		15.1	7.5
Total	15,053	100.0	65.9	26.6	7.5

* Includes direct investment in real estate other than owner-occupied housing

value of the underlying property, and, in some cases, the creditworthiness of the debtor. We have classified mortgages therefore as of medium difficulty in valuing.

In the case of corporate equities, publicly traded stock accounts for about 87% of the current market value of shares outstanding.⁶⁴ Accordingly, 87% of the category is easy to value. We believe that the remainder of this category should present medium valuation difficulties. The valuation of such interests is a fairly common necessity under the estate tax and the Service has set guidelines that should be used in that process.⁶⁵ While there certainly are situations where the valuation process sparks significant controversy, we think that, on the whole, guidelines such as those set out by the Service in the past would put the valuations made into a reasonably narrow band.

Mutual fund shares are issued by one of two types of funds. Open-end funds generally have net asset values determined on a daily basis.

⁶⁴ Estimate of the Flow of Funds Section of the staff of the Federal Reserve Board. Telephone conversation with Al Teplin of that staff, May 17, 2000.

⁶⁵ Rev. Rul. 59-60, 1959-1 C.B. 237, amplified in Rev. Rul. 83-120, 1983-2 C.B. 170.

Most closed-end funds are traded on an exchange and have quoted prices for their values.⁶⁶ Accordingly, these should be easy to value.

Valuation of security credit is similar to the valuation of mortgages, except that the determinative issue is usually the creditworthiness of the debtor. We classify them of moderate difficulty to value. Trustees of bank personal trusts could be required to report the value of such trusts to the beneficiaries, which should make them easy to value. There is a wide range of assets in noncorporate businesses (partnerships and other unincorporated businesses), few of which are easy to value.⁶⁷ We tentatively have characterized two-thirds of noncorporate business assets as moderately difficult to value and one-third as hard to value.

Given our division of the assets into the three categories, we estimate that 66% of assets would be easy to value and 7.5% of assets would be hard to value.⁶⁸

One helpful aspect of the wealth tax is that the rate of tax on net worth is relatively low, 1.57% in our base case. This means that, while valuation problems might exist, they might not create the practical problems that at first might appear to arise. For example, a disagreement about the value of stock in the range of a \$20,000 difference between the taxpayer and the administrator translates into an argument over \$314 of tax when the tax is 1.57%. Thus, one can speculate that, as long as the tax administrators do not take too idiosyncratic a view of valuation, relatively few disagreements over value would be worth taking beyond an administrative level.⁶⁹

The fact that the wealth tax is structured with a single rate has clear administrative advantages. One of the thorny issues in a progressive income tax is to whom to attribute any given item of income. Progressive consumption and wealth taxes raise similar issues. A single tax rate substantially lessens such issues because the amount of tax to be collected generally is unaffected by the identity of the taxpayer.

⁶⁶ Richard B. Stephens, Guy B. Maxfield, Stephen A. Lind & Dennis A. Calfee, *Federal Estate and Gift Taxation* ¶ 4.02[3][d] (7th ed., 1997).

⁶⁷ Although noncorporate businesses have some easy-to-value assets such as bank deposits and traded securities, their main assets are trade receivables, equipment and software, inventories, and real estate. See Flow of Funds, note 62, tbl. B.102. Trade receivables are monetized in commercial markets and can be valued with some accuracy. Studies suggest that real estate can be appraised with errors that vary from 3% to 10% of value, depending partly on the skill of the appraiser and partly on the type of real estate involved (residential, raw land, and the like). See Richard A. Graff & Michael S. Young, *The Magnitude of Random Appraisal Error in Commercial Real Estate Valuation*, 17 *J. Real Est. Res.* 33 (1999), which includes a summary of prior research in the area.

⁶⁸ See Table 3 on page 528.

⁶⁹ The statement in the text ignores the effect of a current valuation on future valuations. To the extent that a current valuation was precedent for the future, the stakes could be considerably higher.

Unfortunately, even if there is only one nonzero rate, there is also an implicit or explicit zero rate in any realistic tax system. Those under the exemption level, and perhaps foreign persons and exempt entities face the zero rate.⁷⁰ Thus, for example, there is an incentive to vest ownership (or taxpaying status) in a person who has an unused exemption amount. As long as the exemption amounts are modest, however, taxpayers generally would not find major tax planning initiatives worthwhile. Moreover, it is always possible to reduce exemptions for dependents to reduce the opportunity to shift wealth.⁷¹

The use of a single rate also potentially offers significant advantages for collection of the tax. When the tax rate is independent of the owner of an asset, any holder of the asset can be made liable for the wealth tax without regard to the true beneficial owner. For example, if one wished to include the value of defined benefit retirement accounts in the wealth tax base, it would be possible to impose the tax on the retirement plan rather than the individual beneficiaries whose interests in the plan may be quite contingent. Of course, by doing so, we potentially tax individuals who might be entitled to an exemption. Thus, care must be exercised in choosing when to impose tax at other than the taxpayer level. The problem of the exemption could be dealt with by treating the tax as a withholding tax and imputing the assets and the tax payment to the beneficiaries. Treating the entity level tax as a mere withholding tax, however, might significantly reduce the administrative advantage of imposing the tax at the entity level.

Even where the identity of an owner and the value of his interest is clear, it may be advantageous to collect the tax at source. Thus, for example, banks could pay the tax with respect to deposits. Whether such a system would be politically feasible is, of course, another question.

Corporations probably raise the most serious collection and valuation issues. We assume that, at the very least, corporations would continue to be used as tax collection vehicles. Thus, the tax on some portion of a corporation's value would be collected at the corporate level. The tax could be collected on the value of the equity in the corporation or on all value, including value owned by debtholders. A second issue is how the value of the corporation would be determined. One possibility would be to value all assets and liabilities of the corpo-

⁷⁰ We have not made any serious attempt so far to deal with foreign persons or exempt entities. The failure to do so does not represent a belief that such questions are unimportant. To the contrary, we believe that they must be dealt with in any realistic proposal.

⁷¹ In the context of the income tax, shifting to dependents is limited by, among other provisions, the elimination of exemptions for dependents, IRC § 151(d), limitations on standard deductions for dependents, § 63(c), and the "kiddie tax," IRC § 1(g). Of the three provisions, only the kiddie tax responds to shifting due to progressive rates.

ration. Another way would be to value all interests in the corporation.⁷² It seems likely that valuing the interests in publicly traded corporations would prove to be administratively superior to valuing the assets. It is likely that the decision would go the other way for privately held corporations.

It is worth noting that there would be collateral effects to the decision as to how to value the corporation. For example, imagine a corporation that had substantial contingent tort liabilities. It is likely that it would be impossible (and probably undesirable) to tax the tort victims on their contingent claims. It might be seen, therefore, as desirable to deny the tortfeasor a deduction. If the corporation were valued as the sum of its assets and liabilities, it would be possible to treat certain liabilities as nondeductible. If, however, the corporation were valued by reference to the value of its shares, the contingent liability implicitly would be deductible.⁷³

We also need to determine whether the wealth tax paid by the corporation is a final tax or a mere withholding tax. Given the flat tax rate, we think it would be sensible to treat the tax as a final tax, which also would have the effect of taxing foreign persons and exempt organizations on their stock ownership.

The wealth tax described here is unlike the current estate and gift tax, and indeed, we do not consider whether the estate and gift tax should be preserved in a world in which a wealth tax replaces the income tax. Given the different purposes of the two taxes, there is no necessary relationship between the enactment of a wealth tax and the repeal of the estate and gift tax. Moreover, since the bases of the wealth tax and the estate and gift tax are similar, enactment of the wealth tax would make enforcement of the estate and gift tax much easier. Certain classes of transactions that people engage in to avoid the estate and gift tax generally are not relevant to a wealth tax since the transfer of assets from one person to another would not affect the application of a uniformly applied wealth tax (except to the extent the transferee is an untaxed individual (such as a foreigner) or is protected from tax by credits).

⁷² For articles discussing the possibility of using the market value of corporations to determine the corporate income for purposes of the corporate income tax, see Joseph Bankman, *A Market Value Based Corporate Income Tax*, 68 *Tax Notes* 1347, 1348-49 (Sept. 11, 1995); Michael S. Knoll, *An Accretion Corporate Income Tax*, 49 *Stan. L. Rev.* 1, 4-16 (1996).

⁷³ Of course, it would be possible to add certain liabilities back into the value of the corporation. Doing so, however, would substantially complicate administration.

III. THE WEALTH TAX BASE

A major issue in designing a wealth tax is the definition of wealth. The following Subsections discuss possible components of taxable wealth that we considered separately.

A. *Financial Holdings*

There is little question that financial holdings would be a core part of the base of a wealth tax. This category includes investment securities and bank accounts. Financial holdings are likely to be the easiest category of assets to subject to a wealth tax.⁷⁴

B. *Businesses*

We would expect that those who own businesses would be taxed on their value although the treatment of business owners raises a number of problems. First, small businesses are likely to be some of the most difficult assets to value. Second, as discussed below, small businesses raise some of the thorniest questions in determining whether income is from labor (which would be taxed under our wage tax) or capital (which would be exempt).

An obvious question is whether there should be any special rules for small businesses. Two separate arguments justify special treatment of small businesses. First, as an administrative matter, it may be difficult and inefficient to include the assets of very small businesses, particularly where the assets may be hard to distinguish from what may be excluded personal assets. Second, it may be viewed as desirable to subsidize small businesses by imposing a reduced tax on them. For example, the current income tax permits small businesses to expense up to \$20,000 in equipment purchases per year.⁷⁵ By analogy, it would be possible to exempt a specified amount of new equipment purchases from the wealth tax. Special valuation rules also could be employed to reduce either the administrative or tax burden on small businesses. For purposes of our estimations, we assume that there are no special rules for small businesses.

C. *Other Investment Assets*

Real estate investments and other nonsecurity investments (such as collectibles—the proverbial Rembrandts in the vault) presumably also would be subject to tax. As the investment becomes less fungible, val-

⁷⁴ We assume that municipal bonds would be included as taxable financial assets.

⁷⁵ IRC § 179. The figure in the text is for 2000. The § 179 limit is scheduled to increase in stages until it reaches \$25,000 in 2003.

uation questions arise of the type previously discussed in connection with the administrability of a wealth tax system.⁷⁶

D. Consumer Durables

When the Rembrandt is moved into the parlor, the question of taxing it becomes more complicated. It is not feasible to tax the value of every asset owned by individuals. We hope to avoid many of the practical aspects of this issue by including some general exemptions in the structure of the tax.⁷⁷ We do not favor, however, a blanket exemption for consumer durables. Our justification for taxing some consumer durables is two-fold. First, the line between consumer durables and investment assets is often ambiguous. An unlimited exemption for consumer durables would put great pressure on the difference. Second, if the picture on the parlor wall is worth \$10 million, it is reasonable to tax it regardless of the owner's intention in buying it. We imagine that a realistic wealth tax would exempt a certain amount (maybe \$10,000-\$50,000) of consumer durables. We have not, however, built an explicit consumer goods exemption into our numerical estimates because our data set, the Survey of Consumer Finances, does not contain detailed information about each respondent's consumer goods. We believe that the consumer goods (furniture, kitchenware, and the like) that are omitted from the survey responses are probably similar to the kind and amount that would be exempt under an actual wealth tax. Thus, in effect, we consider an exemption for consumer durables to be built into the data.

E. Retirement Assets

The current income tax gives special treatment to retirement savings.⁷⁸ A politically realistic wealth tax is likely to do the same. The rationale for the favorable income tax treatment derives from the country's retirement policy and has nothing to do with income tax policy. These same considerations are likely to dictate favorable treatment for retirement savings under a wealth tax.

Accordingly, for our base case, we assumed that assets held in qualified retirement accounts would not be subject to the net worth portion of the wealth tax. We also assumed that amounts contributed to retirement accounts would be excluded from the wage tax and that amounts withdrawn from retirement accounts would be taxable as

⁷⁶ See Subsection II.B.4.

⁷⁷ See text accompanying note 113.

⁷⁸ See generally IRC §§ 401-418E (qualified plans), § 219 (deduction for individual retirement account contributions).

wages. Given the flat rate of the wage tax, the treatment in the base case is essentially equivalent to denying a deduction for retirement contributions and excluding all amounts received from a retirement account from the wage tax.⁷⁹ Differences between the two treatments would arise if the tax rate in the year of contribution differed from that in the year of distribution or if the contribution limit was not properly adjusted as between the two possible approaches.

While our base case assumes that retirement accounts would continue to be tax-free, we also tried to estimate the wealth tax assuming a positive rate on retirement accounts. While aggregate numbers on retirement assets are available, it is difficult to obtain accurate figures on an individual basis. With aggregate figures, it is possible to make a reasonable estimate of the revenue that could be collected with a tax on retirement assets, but not to distribute the tax by income or wealth groups. Moreover, it is impossible to take into account the reduction in revenue due to the use of tax credits that otherwise would be unusable.

F. Life Insurance

For term life insurance, the taxable asset generally would be the value of paid, but unaccrued, premiums. Thus, for example, assume a taxpayer has an annual premium of \$1,000 and pays the premium on April 1, the beginning of the policy period. As of December 31, the approximate value of his contract would be \$250, the premium for the remaining three months of the contract. Given the relatively small value of such contracts, we suspect it would not be worthwhile including term life insurance in the wealth tax base, particularly at the level of the individual contract holder. In some cases, a term life policy may be substantially more valuable. For example, term insurance policies frequently guarantee continued insurance without the need for subsequent medical examinations.⁸⁰ Such a right can be quite valuable for someone with declining health. Even within a single year, a holder of insurance whose health has significantly declined owns a valuable asset. Any attempt to value life insurance based on the health of the insured would likely pose serious valuation problems and be

⁷⁹ The treatment in the base case is equivalent to the treatment of a traditional deductible IRA. IRC § 408. The alternative treatment is equivalent to the treatment of a Roth IRA. IRC § 408A.

⁸⁰ Term policies also frequently provide for a level payment for five, ten, or twenty years. With such policies, the price of the insurance generally is overstated for the early periods and understated for the later periods. Thus, after the first payment or so, the owner of the policy has a valuable right to continue to purchase insurance at a below-market rate. The aggregate value of such rights is not likely to be that significant.

poorly received by the public. It is unlikely, therefore, that we would wish to tax individuals in such circumstances.

If it was believed desirable to tax term life insurance contracts, it would be much simpler to tax the contracts at the company level.⁸¹ Taxing at the company level could be accomplished by denying a deduction for reserves. If the wealth tax on corporate assets were imposed at the corporate level, denying a deduction for reserves would be straightforward. If the wealth tax on corporate assets were imposed at the shareholder level, a surrogate tax on the policyholder could be imposed as a excise tax on the life insurance company's reserves. In either case, we would expect the incidence of the tax to be on the policyholders.

Whole life policies, however, represent a significant source of wealth. According to Table 2, life insurance reserves are \$505 billion, or 1.8% of assets. Currently, income on life insurance reserves generally is not taxed.⁸² In the base case, we include the cash value of whole life insurance. For reasons of administrability and politics, it may be preferable to impose the tax at the life insurance company level.

G. Housing

The income tax gives favorable treatment to home ownership. Even in 1986, when many sacred cows were slaughtered, the favorable treatment of home ownership emerged essentially unscathed.⁸³ We think that it is unrealistic to base a wealth tax on the assumption that homes would be taxed like other assets. The exact scope of the exemption, however, is open to question. The two basic approaches are to exclude the gross value of housing or to exclude the value of housing net of mortgage liabilities. Excluding the net value of housing is equivalent to excluding both the home and the mortgage from the tax base.⁸⁴ Within the two basic approaches, it is possible to provide for a variety of limitations, such as a cap on excluded housing, a cap on

⁸¹ The problem of term life insurance is essentially the same as with any other prepaid contract. Examples would include automobile and homeowner's insurance, magazine subscriptions, and tuition.

⁸² IRC § 101.

⁸³ With the possible exception of the \$1 million cap on acquisition indebtedness, the limitations on home mortgage interest imposed by the Tax Reform Act of 1986, Pub. L. No. 99-514, § 511, 100 Stat. 2085, 2244, and revised by the Omnibus Budget Reconciliation Act of 1987, Pub. L. No. 100-203, § 10,102, 101 Stat. 1330, 1330-84, probably are better seen as attempts to prevent the home mortgage interest deduction from expanding in light of the general disallowance of personal interest, rather than attempts to actually cut back on the deduction. See IRC § 163(h).

⁸⁴ Since the home is an asset, excluding it from the tax base reduces tax liability. Since the mortgage is a liability, excluding it from the tax base increases tax liability.

excluded mortgages, or a limitation on the number of qualified residences.

For our base case, we exclude only the *net* value of homes and limit the exclusion to \$1 million. Thus, for example, if an individual had a home with a fair market value of \$250,000 and a mortgage of \$200,000, \$50,000 of the value of the home would be excluded. This is equivalent to excluding the home and the mortgage from the wealth tax. If the individual had a home worth \$6 million with a mortgage of \$2.4 million, she would be permitted to exclude \$1 million of the net value of the home. In other words, she would exclude the \$2.4 million mortgage and \$3.4 million of the value of the home, including in her wealth tax base only the remaining \$2.6 million in net value of the home.

Our base case represents a significant reduction in the exclusion permitted under current law. Under current law, taxpayers generally are permitted to deduct interest on home mortgages of up to \$1 million⁸⁵ and are permitted to exclude the entire amount of imputed income from home ownership. The equivalent treatment under a wealth tax would be to exclude mortgages up to \$1 million from the tax base and to exclude the entire gross, not net, value of homes. If we adopted such treatment in the wealth tax, a homeowner with a \$250,000 home and \$200,000 mortgage would be able to exclude the entire \$250,000 gross value of his home and still use the \$200,000 mortgage to offset other wealth. Similarly, a homeowner with a \$6 million home and a \$2.4 million mortgage would be permitted to exclude the entire \$6 million home from the tax base while still using \$1 million of the mortgage to offset other assets.

Although we have not chosen to follow the example of the income tax, we recognize that there are both equity and efficiency arguments in favor of excluding housing while still permitting a deduction for home mortgages. Limiting the exclusion to net housing wealth penalizes individuals who finance a home purchase with a mortgage. Such a penalty is disturbing for reasons that can be described as both horizontal and vertical equity. From the viewpoint of horizontal equity, it makes no sense to impose different tax liabilities on two individuals merely because one has borrowed against her home and the other has borrowed against some other asset. From the viewpoint of vertical equity, wealthier individuals are more likely to be able to fund home purchases out of equity or by borrowing against other assets. Thus, the exclusion of mortgage debt would tend to reduce the progressivity of the tax structure. Moreover, given the (self-imposed) constraint of a flat wealth tax, the ability to compensate for the exclusion is limited.

⁸⁵ IRC § 163(h).

From the viewpoint of efficiency, any tax-induced shift from mortgage debt to nonmortgage debt would be expected to represent an efficiency loss to society.

We provide estimates of the wealth tax under several alternative assumptions including a scenario meant to mimic current law and a scenario without any special treatment of housing.

H. Liabilities (Other Than Mortgage Debt)

The wealth tax is intended to be a tax on net worth, not on gross wealth. Thus, the fair market value of liabilities generally should be deductible from the tax base. In certain cases, it is likely that liabilities would receive special treatment. For example, as discussed above, home mortgage debt is excluded in the base case.⁸⁶ Also, it is likely to be desirable to adopt special valuation rules for many types of debt.⁸⁷ For example, consumer debt is likely to be valued at face.⁸⁸ Finally, as discussed below, special rules are likely to be required for contingent liabilities.

I. Contingent Assets and Liabilities

Many assets are difficult to value because they represent highly contingent claims. For example, a tort victim may have a valuable contingent claim against a tortfeasor without even being aware of the claim. It would be impractical to include such claims in the tax base. At the same time, the tortfeasor will have an identical contingent liability, which may be only slightly easier to value than the contingent claim. The obvious solution is to ignore both, thus, generally insuring the correct tax base, if not necessarily the correct taxpayers.

⁸⁶ Home mortgage debt should be included to the extent that it exceeds the fair market value of the home.

⁸⁷ Historically, with the income tax, there has been a much greater willingness to accept debt at face value. In recent years, there has been a push towards finding methods to value debt more accurately. Even, in complex transactions, however, there is a preference for set valuation rules rather than true fair market value. See, e.g., IRC § 1274 (generally permitting taxpayers to value assets based on an above-market interest rate and, in the case of a below-market interest rate, only increases the rate to the federal borrowing rate). For a more recent example, see the special valuation rules for valuing certain debt contributed to a FASIT. IRC § 860I.

⁸⁸ A separate decision would have to be made as to whether holders of consumer debt would be required to include the asset at face or at fair market value. For example, if holders of distressed consumer debt were required to include such debt at face value, the likely revenue loss on the consumer side from overstated liabilities would be made up by increased liability on the holder side. Such treatment, however, would raise the cost of consumer debt and may be politically unattractive. Of course, under current law, taxpayers generally cannot deduct interest on consumer debt while holders must include the interest, and there seems to be little pressure to change this result.

There are several problems, however, with simply ignoring contingent claims and liabilities. First, doing so requires identifying those assets and liabilities that are too contingent to value. Holders would have an incentive to argue that the claims are too contingent to value, while those with liabilities would argue that they are sufficiently fixed to take into account.⁸⁹ Presumably, rules could be developed to clarify the line between contingent and noncontingent claims. Second, where one side of a transaction was a foreign person or otherwise not a taxpayer, ignoring the contingent claim/liability would not be neutral.

Finally, ignoring the contingent claim would not work if the assets of a corporation were valued by reference to the value of the interests in the corporation. Failing to include the claims in the wealth tax bases of the holder of the claim would reduce the tax base.

J. Human Capital and the Wage Tax

As an initial theoretical matter, there does not appear to be any reason to treat human capital differently from any other source of wealth. A tax system that taxed only inanimate wealth and failed to tax human capital would make little sense from either an equity or efficiency point of view. From an equity standpoint, such a tax would discriminate against savers to an unacceptable degree.⁹⁰ Compare, for example, *Spendthrift* and *Saver*. *Spendthrift* earns \$200,000 per year and spends it all on riotous living (or for that matter on pious contemplation). *Saver* earns only \$50,000 per year and by living frugally saves \$20,000. After 10 years, *Spendthrift* has accumulated nothing and, assuming a 5% rate of return, *Saver* has accumulated about \$260,000. If the wealth tax were designed with a modest credit of \$1,900 and was intended to replace both the personal and corporate income taxes, it would require a rate of about 5.7%.⁹¹ At that rate, *Spendthrift* would owe nothing and *Saver* would owe about \$14,800, more than 100% of his income from his savings. Such a result is absurd. From an efficiency point of view, such a high rate on wealth would act as a severe disincentive to save.

We therefore turn to human capital, an important category of wealth that does not show up on most balance sheets. Taxing human capital raises all sorts of questions. Measuring human capital is fraught with difficulties. We assumed that it would be wrong, or at

⁸⁹ Similar problems under the current income tax are muted by the requirement of economic performance before accruing a liability. IRC § 461(h).

⁹⁰ We use the term "savers" to refer to people who invest in inanimate capital. Education is an example of a investment in human capital.

⁹¹ See Table 11 on page 555.

least unacceptable, to tax people (such as academics?) based on how much income they could earn if they conducted themselves according to their most profitable use. Therefore, we chose to tax human capital measured by the amount of income actually earned by the taxpayer. Of course, considerations of administrability dictate such a solution, even if moral and political considerations did not.

We considered taxing human capital, as so evidenced, based on two alternative structures. Under a simple structure, we would look at how much a person earns and translate that amount into a figure for human capital based on a uniform capitalization measure. For example, if we concluded that salaries represent a 15% return on (nondepreciating) human capital, then human capital would equal 6.7 times each person's salary. Hence, we would tax salaries at 6.7 times the rate otherwise applied to wealth. For example, using this 15% assumption, we could tax all other wealth at 2% and salaries at 13.3%. Whatever the justification for the simplified method, it is in effect a flat-rate wage tax.

A more sophisticated approach to human capital would take into account not only the current return on a person's human capital but also the expected useful life of the human capital asset. Thus, if we are really trying to measure human capital, we would rightly conclude that a healthy 25-year old making \$40,000 has more human capital than a 65-year old making \$40,000.

Obviously, these two approaches have very different effects on the burden a wealth tax would impose on taxpayers of different ages. The method chosen would depend on one's justification for choosing a wealth tax. A purist might argue that wealth is the appropriate base, human capital is part of wealth, and the value of human capital should be measured as accurately as possible. On the other hand, if one felt that income was the right base on which a tax should be imposed, one nevertheless might choose a wealth tax with respect to assets other than human capital because of the great difficulty in trying to measure the income from those other assets. Since, however, wages are generally easy to measure, one could apply an income tax directly to wages.⁹² Even if one believed that wealth was a better measure of ability to pay than income when dealing with inanimate wealth, one still might believe that wages were a better measure of ability to pay than a more accurate measure of human capital. Thus, for example, one might be happy to dispense with the realization requirement for inanimate capital, but not for human capital.

⁹² Except where the context makes it clear otherwise, we use the term wages to refer to all forms of earned income.

At least for now, we decided to use a straight wage tax in lieu of a more complicated capitalization method. First, any more complex system would have to use a very limited amount of data in order to determine the value of each individual's human capital. The most likely approach would use only the individual's age and his earned income for the year to determine his human capital. Such a system likely would be seen as highly arbitrary and unfair. In addition, any system that imposed different tax rates based on age would increase administrative costs.⁹³ Second, we believe that there are serious limitations on the ability to borrow against human capital. Therefore, a realization-based system is likely to be fairer than a system that taxes based on future earning potential.

Essentially, therefore, our "wealth" tax consists of two taxes, a tax on earned income and a tax on inanimate wealth. We refer to the tax on earned income as a wage tax. We refer to the tax on inanimate wealth as a tax on net worth. Collectively, we refer to the taxes as a wealth tax. Having two essentially separate taxes means that, for any given revenue target, it is possible to vary the tax between a pure wage tax and a pure inanimate wealth tax by varying the respective tax rates.

Whatever method is chosen for capitalizing wages, the co-existence of a wage tax and net worth tax poses what could be a serious administrative problem with our wealth tax. The consequence of opting for a wealth tax in respect of inanimate assets is that the income from those assets is not taxed. Specifically, the earnings from a business would not be taxed to the owner, although the salary he received from the business would be. It is, however, notoriously difficult to distinguish the salary of a business owner from the return the owner gets from owning the business.

Of course, the problem of distinguishing earned and unearned income is not unknown under the income tax. For example, for closely held C corporations, it is necessary to distinguish between deductible salary and nondeductible dividends.⁹⁴ Under current law, in theory, the self-employment tax should be imposed only on earned income, yet no attempt is made to distinguish between earned and unearned income of sole proprietors. Similarly, § 911 is supposed to be an exclusion only for earned income of U.S. taxpayers resident abroad.⁹⁵

⁹³ For example, an age-based system also generally would provide an incentive to defer compensation to a later year with a smaller multiplier.

⁹⁴ Interestingly, with a wealth tax, the Service would find it was on the other side of the traditional salary versus dividend dispute.

⁹⁵ Prior to 1981, a maximum tax rate applied to earned income. Former IRC § 1348, repealed by The Economic Recovery Tax Act of 1981, Pub. L. No. 97-34, § 101, 95 Stat. 172, 183. Congress repealed § 1348 when it lowered general tax rates.

Nevertheless, given the high stakes under the wealth tax, we would expect the problem to be more troublesome.

There are, however, countervailing factors that may limit the extent to which a taxpayer's ability to characterize salary as dividends or retained earnings can be used to avoid the wealth tax. In particular, one of the most common ways that businesses are valued is by reference to the present value of the earnings of the business. Thus, if a taxpayer recharacterizes salary as a dividend or retained earnings, the additional net profits potentially will increase the valuation of the business not merely by the amount of the earnings, but also by the present value of a stream of income equal to the earnings.⁹⁶

Whether, given the effect on valuation, it would remain in the taxpayer's interest to characterize the salary as a dividend would depend on a variety of factors including the relative rates as between the wage and net worth taxes, the expected life of the business, and the discount rate used to value the business. An example may help clarify the issue.

Example 10: *T* is the sole shareholder and employee of a corporation that is engaged in a service business with no tangible assets. The business produces \$10,000 of profit before payment of wages. Assume that net worth was taxed at 1.5% and wages were taxed at 15%. Assume that the business was valued for purposes of the net profit tax by discounting its earnings stream at 6%.

If the business pays wages of \$10,000 to *T*, he would have a wage tax liability of \$1,500. Since the net profits of the business are zero, the business would have a valuation of zero and there would be no net worth tax on the business.

If the business pays a dividend of \$10,000, *T* would have no wage tax liability. The net profits of the business, however, will have increased to \$10,000. If it is assumed that the business will produce annual earnings of \$10,000 for an expected life of 10 years, the business would be valued at \$73,601 and *T* would owe a net worth tax of \$1,104.⁹⁷ By treating his salary as a dividend, *T* would have reduced his net tax liability by \$396 (26%).

If, however, it was assumed that the income would continue for 15 years, the value of the business would increase to \$97,122 and the net worth tax would increase to \$1,457, a

⁹⁶ We are grateful to Professor James Repetti for pointing out to us the interplay between wages and the value of a business discussed here.

⁹⁷ \$73,601 is the present value at 6% of \$10,000 per year for 10 years. $\$1,104 = \$73,601 \times 1.5\%$.

savings of only \$43 (4%). If it was assumed that the income would continue for 20 years, the value of the business would increase to \$114,699 and the net worth tax would increase to \$1,720, \$220 more than the wage tax (15%).

IV. AN OVERVIEW OF A WEALTH TAX

Before we examine a wealth tax based on disaggregate data, we use aggregate data to get an overview of what a wealth tax might look like. In this Section, we look at the rates that would be required if a wealth tax replaced either the current personal income tax or both the personal and corporate income taxes. We offer rates using a variety of wealth tax bases.

For these computations we use the wealth data from the Federal Reserve's Flow of Funds data shown in Tables 2 and 3.⁹⁸ For data on earned income, we use estimates drawn from the Internal Revenue Service's Statistics of Income.⁹⁹ We assume no exemptions or credits.¹⁰⁰ Estimates of personal and corporate income taxes also are taken from the Statistics of Income. All data is for 1994.

Aggregate personal income tax collections for 1994 were approximately \$538 billion.¹⁰¹ Aggregate corporate tax collections were approximately \$138 billion.¹⁰² Combined collections were therefore \$676 billion. The necessary rate on net worth depends on essentially three variables: the size of the asset base, the rate on earned income, and the taxes being replaced. Table 4 shows the necessary tax rate on net worth under various combinations of these parameters.

The broadest tax base, including all assets and liabilities in the household sector, is shown in Row 1.¹⁰³ Assuming no wage tax, a rate of 2.8% on net worth would be required to replace the individual and

⁹⁸ See pages 527-28.

⁹⁹ IRS Statistics of Income 1994: Individual Income Tax Returns (1997) [hereinafter SOI]. Our estimate of earned incomes include wages and salaries, pensions, net business and professional income, one-half of partnership and subchapter S income, and unemployment compensation.

¹⁰⁰ Although we assume no exemptions or credits, the SOI includes data only on filers. Id. at 19. Thus, we implicitly exempt low income individuals from the wage portion of the wealth tax.

¹⁰¹ There are a variety of different definitions of the taxes paid in the SOI. We use "total income tax" and then add back in "earned income credit used to offset income tax before credits." See id. at 36 tbl. 1.3, col. 2. Total income tax includes the alternative minimum tax. Id. at 128.

¹⁰² See IRS, Statistics of Income Bull. 214 tbl. 17 (fiscal year 1994 corporate tax collections of \$154,205 million), 216 tbl. 18 (fiscal year 1994 corporate tax refunds of \$16,251 million) (Summer 1999).

¹⁰³ The "broadest base" could be expanded further by the addition of assets owned by nonprofits and foreign persons.

TABLE 4
TAX RATES BASED ON AGGREGATE WEALTH
(NO EXEMPTION PROVIDED)

Description of included assets and liabilities A	Net worth in base (billions) B	Base as % of all assets and liabilities C	Required tax rate on net worth			
			Individual & corporate		Individual only	
			Without wage tax D	With 15% wage tax E	Without wage tax F	With 15% wage tax G
1 All assets and liabilities included	\$24,230	100	2.8	0.6	2.2	0.04
2 Line 1 minus pensions and life insurance	18,870	78	3.6	0.8	2.9	0.1
3 Line 2 minus housing assets and mortgages, and one-half of consumer durables	13,571	56	5.0	1.1	4.0	0.1
4 Line 3 with mortgage liabilities included	10,475	43	6.5	1.4	5.2	0.1

corporate income taxes, and 2.2% for the personal income tax only. With a 15% wage tax, the rate on net worth would drop to .6% and .4% for the personal income tax only. These rates are quite low. They are unrealistic, however, because of the likelihood that the base would be considerably narrower.

The next smaller base would exclude net pensions and life insurance. This exclusion reduces the base from about \$24.2 trillion to about \$18.9 trillion, 78% of the full base. Due to the reduction in base, the required rates on net worth to replace both taxes increase to 3.6% with no wage tax and .8% with a wage tax.

If homes, home mortgages, and one-half of consumer durables are removed from the base, the base falls to \$13.6 trillion, 56% of the full base, and the required rates on net worth increase to 5% without the wage tax and 1.1% with the wage tax. Finally, if home mortgages are included in the base, the base is further reduced to \$10.5 trillion, 43% of the full base. The required rates on net worth would increase further to 6.5% and 1.4%, without and with the wage tax, respectively.

The results in this Section are necessarily very rough. Most significantly, they do not take into account personal exemptions or credits, the presence of which could increase rates substantially. Nevertheless, they are useful in giving a preliminary idea of the amount of outstanding assets and the rates necessary to replace income taxes.

In the next Section, we describe the data set that we use to look at wealth on a disaggregate level, the Survey of Consumer Finance. In

the following Sections, we examine a wealth tax based on that data set.

V. THE DATA SET—THE SURVEY OF CONSUMER FINANCES

In order to study the wealth tax on an individual level, rather than on a purely aggregate level, we need information on individual wealth holdings. The most comprehensive source of such information is the Survey of Consumer Finances (the "SCF"), which is compiled by the Federal Reserve Board every three years.¹⁰⁴ In this Article, we use data from the 1995 survey. The SCF is designed to be used for studying wealth. So, while a part of the sample is chosen randomly, the SCF also uses information from high-income tax returns to identify a fuller sample of high-wealth taxpayers.

The SCF compiles extensive information on each respondent in the sample. A respondent is generally the economically dominant individual in a household. A household is divided into two parts, the "primary economic unit" ("PEU"), which can be a group much larger than would be included on a tax return, and others ("non-PEU members"). In general, PEU members include the core family in the household. Non-PEU members include boarders, servants, economically independent children living at home, and others.

Respondents are asked for information including value about assets in many different categories. They are asked for basic demographic data, such as the ages of the head or heads of the household. They are asked for some tax information, including filing status (married, single, filing separate returns), and AGI (the item on a tax return that is likely to come closest to a relatively pure definition of income). They are not asked, however, for information about their taxable income or how much tax they pay. Detailed information is collected for those in the PEU; summary information is collected for those not in the PEU.

The 1995 SCF reports information from 4,299 respondents. For each respondent, the survey reports the answers to approximately 2,500 questions.¹⁰⁵ The actual interviews took from about five min-

¹⁰⁴ The SCF is available on the Federal Reserve Board's Web site at <<http://www.bog.frb.fed.us/pubs/oss/oss2/95/scf95home.html>>. We use the term SCF both to refer to the actual survey and to refer to the office in the Federal Reserve Board that is responsible for the survey. The meaning should be clear from the context. The primary description of the survey, including the definition of all variables, is contained in Arthur Kennickel, Federal Reserve Board Codebook for 1995 Survey of Consumer Finances (Codebook), available at <<http://www.bog.frb.fed.us/pubs/oss/oss2/95scf95home.html>>. For further discussions of the methodology used in conducting the survey, see the papers available at <<http://www.bog.frb.fed.us/pubs/oss/oss2/method.html>>.

¹⁰⁵ The actual survey consists of more than 2,500 questions, but many answers are not on the public use data set because of privacy concerns.

utes to a little over nine hours. The average interview lasted about 100 minutes.¹⁰⁶

Of course, the accuracy of the information collected is subject to many questions. Problems range from sampling error to a respondent's unwillingness to reveal sensitive private information, to response bias. Many of the answers are missing. In the case of missing answers, answers are imputed based on the remaining answers. Obviously, the imputation process is another source of error.¹⁰⁷

The SCF is designed to estimate the wealth holding of the entire U.S. population. In order to do so, the Federal Reserve Board estimates a set of weights, one for each respondent. The weights add up to 99,010,458, the number of households in the United States in 1994. Thus, each observation is intended to represent a different number of households. The average weight is 23,031, with a range from 7 to 69,337. The median weight is 25,504.¹⁰⁸ The estimation of the weights introduces further errors into the process.¹⁰⁹

Privacy concerns place further restrictions on the SCF. In order to get people to agree to be interviewed, the Federal Reserve Board promises strict confidentiality. In addition, the use of tax return data to select possible respondents introduces further restrictions on public release of the data. In order to assure confidentiality, the Federal Reserve Board takes a number of steps, some of which are disclosed and some of which are not. Disclosed steps include deleting specified variables from the public-use data set,¹¹⁰ switching answers between respondents, changing answers, setting answers to missing, top- or

¹⁰⁶ See Variable X7398 (length of interview in seconds).

¹⁰⁷ In addition to introducing possible bias, the imputation process also means that conventional estimates of standard errors are incorrect. To enable users to estimate standard errors, the SCF provides five estimates for each imputed value. Thus, the SCF dataset consists of five full sets of answers to each question. Each set is referred to as an implicate. For the work reported here, we generally have used only the first implicate. Use of only the first (or any other) implicate should provide unbiased estimates.

¹⁰⁸ See Variable X42000.

¹⁰⁹ In addition to adjusting standard errors for errors introduced by estimation of missing values (see note 107), it is necessary to adjust standard errors for the imprecision of the weights. Each implicate has its own set of estimated weights. In addition, the Federal Reserve Board provides an additional 999 replicate weights that can be used to further refine estimates of standard deviations. We do not report standard errors in this Article.

¹¹⁰ Examples of variables that are not in the public data set include whether the respondent was chosen randomly or from the high-income sample, specific dates (such as the purchase date of a residence or the respondent's birth month), the make and model of automobiles, many sample design variables, and the location of residence.

bottom-coding variables,¹¹¹ and reducing the number of categories in an answer.¹¹²

Obviously, there are severe limitations to the data. Whatever its limitations, however, the SCF is acknowledged to be the best data set available for information on wealth holdings. Thus, we are unapologetic about our decision to use it. On the other hand, it is important to keep its limitations in mind when evaluating our results.

VI. DESIGN OF THE TAX

As we discussed above, the basic structure of our wealth tax is a flat tax on earned income combined with a flat tax on net worth. A pure flat tax is, however, unacceptable from an equitable point of view (and probably administratively as well). Any significant socially acceptable type of tax must provide some type of exemption. The exact form of an exemption is less certain. There are essentially two possible exemption structures. One is an exemption that relates to a particular category of asset. The other is an exemption that applies to a tax return or to an individual. A realistic tax system is likely to combine both types.¹¹³

The easiest exemption to justify is one aimed at the individual's overall wealth (including earned income). Since the premise of the wealth tax is that wealth is a good measure of how well-off an individual is, presumably those with the least wealth are worst-off and, therefore, should benefit from an exemption. Thus, the exemption should be tied to individuals' wealth and not to the particular assets they prefer to hold. Such an exemption is the equivalent of the personal exemption and standard deduction in the current income tax, provisions that add significant progressivity to the income tax.

An individual exemption presents a variety of design issues. The first is whether there should be separate exemptions for the wage and net worth portions of the tax or a single combined exemption. For

¹¹¹ For example, number of children not living with the respondent is top-coded at 10. SCF, note 104, Variable X5910. The number of inheritances or substantial gifts is top-coded at 5. *Id.* Variable X5801.

¹¹² For example, law degrees, medical degrees, and certain other doctorates are combined into a single answer. *Id.* Variable X5905. Similarly, the practice of law is combined with, among other professions, barbers and parking lot operators.

For a discussion of the steps taken to prevent disclosure and the implication of those procedures, see Arthur Kennickel, (Nov. 1997); G. Fries, B. Johnson, R.L. Woodburn, *Analyzing the Disclosure Review Procedures for the 1995 Survey of Consumer Finances*, (Sept. 1997), Multiple Imputation and Disclosure Protection: The Case of the 1995 Survey of Consumer Finances, both available at <<http://www.bog.frb.fed.us/pubs/oss/oss2/method.html>>.

¹¹³ In a progressive tax structure, it is important whether an exemption is styled as a deduction or a tax credit. With a flat tax rate the difference is not important.

example, it would be possible to exempt the first \$5,000 of earned income and the first \$40,000 of net worth. There seems to be no reason, however, that someone with, for example, \$5,500 in wages and no assets should be paying tax, while someone with \$40,000 in assets and \$5,000 in wages is entirely exempt. Rather, it would be fairer to integrate the two exemptions. The easiest way to do so is through a unified tax credit that can be applied against the sum of the two taxes.

The next step is to determine the filing unit and how the credit would be adjusted for family size. The approach we suggest provides for joint filing and a two-level exemption. A larger exemption is provided for one or two heads of household and a smaller exemption is provided for each member of the family. At this stage, our goal is to pick numbers that exempt many of the same wage-earning families as the income tax currently exempts.¹¹⁴ The figures we use for our base case are a \$1,500 credit for one or two heads of a household and a \$400 credit for each member of the household (including the heads of household).¹¹⁵ We use alternative figures to explore the effect of the exemption level on progressivity and tax rates. We treat the credit as nonrefundable.

Table 5 compares the income and wealth tax imposed on low-income taxpayers assuming the above-mentioned wealth tax credits and the personal exemption and the standard deduction in the income tax. For an individual or family earning \$15,000 a year in salary and no substantial assets, and an assumed wealth tax rate of 18% on wages, the wealth tax is generally substantially less than the current income tax. For example, for a married couple with one child, the income tax liability would be \$218 and the wealth tax liability would be zero. For a single parent with one child, the income tax liability would be \$960 and the wealth tax liability would be only \$400.

The joint return structure means that there might be a marriage bonus, but could not be a marriage penalty.¹¹⁶ The marriage bonus arises when a person with precredit tax liability in excess of the credit

¹¹⁴ We speak of wage-earning families because we are aware that our wealth tax would cause some retired families with low income but high wealth to be taxed. Also, we have not taken into account some welfare-like provisions of the current income tax, notably the earned income credit.

¹¹⁵ Measured against the 15% rate bracket, the 1994 personal exemption of \$2,450 was worth \$367.50. The 1994 standard deduction for an individual was worth \$570; for married filing jointly, it was worth \$476.25 per person; for a head of household, it was worth \$840. We use 1994 numbers because 1994 is the year for which we model our wealth tax.

¹¹⁶ We speak in terms of married couples, but are not committed to any particular definition of couples eligible to file a joint return. The SCF includes both spouses and partners in the definition of the primary economic unit. Arthur B. Kennickell, Martha Starr-McCluer & Anita E. Sunden, *Family Finances in the U.S.: Evidence From the Survey of Consumer Finances*, Federal Reserve Bull. 23 (Jan. 1997).

TABLE 5
COMPARISON OF INCOME AND WEALTH TAX FOR LOW
INCOME TAXPAYERS

<i>Marital status</i>	<i>Children</i>	<i>Income tax</i>	<i>Wealth tax</i>
Single	0	\$1,320	\$800
Single	1	960	400
Married	0	578	0
Married	1	218	0
Married	2	0	0

Taxpayers are assumed to have \$15,000 in salary and no assets.

Income tax is for 1994 and assumes the standard deduction.

Wealth tax assumes 18 % rate on wages, a credit of \$1,500 per head of household, and a credit of \$400 per person.

marries someone with precredit tax liability less than the credit. Under the base case, the maximum marriage bonus is \$1,900.¹¹⁷ We do not propose a structure with a marriage bonus out of a belief that a bonus is a desirable attribute of a tax structure, but rather because the bonus flows from the progressive nature of the tax (through the exemption) combined with the belief that joint filing is a useful administrative device (particularly with regard to net worth), a marriage bonus is preferable to a marriage penalty, and a marriage bonus at the level specified is not seriously objectionable.¹¹⁸

The wealth tax structure also raises issues of income and asset shifting within the family. So far we have not focused on the issue of shifting. Assuming that the wealth tax is like the current income tax where, in general, children are treated as separate taxpayers, there would be an incentive to shift some assets to a child's name. Given the limited size of the credit, and the flat rate once the credit is ex-

¹¹⁷ By contrast, under the income tax, the maximum marriage bonus was \$6,540.72. The maximum marriage bonus was reached when a single person earning between \$166,801 and \$167,700 married an individual with no income. Over that range, the couple's standard deduction increased from \$3,800 (single standard deduction) to \$6,350 (joint standard deduction), and their personal exemptions increased from \$1,323 (one exemption with 46% phased out) to \$4,900 (two exemptions without phaseout). In addition, the married couple gets the advantage of expanded 15%, 28%, and 31% brackets. The estimate takes into account only the rate structure, personal exemptions (including phaseout), and the standard deduction. By taking into account losses or itemized deductions, the marriage bonus can be made indefinitely (and unrealistically) large. Figures for the income tax are for 1994, the year for which we model the wealth tax.

¹¹⁸ If it were desirable to lower the marriage bonus, it would be possible to provide a combined credit that is less than twice the individual credit. Such a change would be likely to create many more marriage penalties than it would reduce marriage bonuses. The only way to prevent either a marriage penalty or a marriage bonus is to require separate filing. Even then, separate filing requirements could be avoided easily by shifting assets between wife and husband, thus, in effect, reintroducing the marriage bonus *de facto* if not *de jure*.

ceeded, shifting to children does not appear to be a particularly important issue. It is possible that rules would have to be developed, like the rules in the current income tax, that restrict exemptions from being used on multiple returns.¹¹⁹ Rules equivalent to the so-called kiddie tax would not be required because of the flat rate.¹²⁰

Exemptions for categories of assets are harder to justify than individual exemptions. If the purpose of the exemption is to help people who are less well-off, it is generally more efficient to target such individuals directly by reference to their level of wealth, rather than indirectly by reference to their choice of assets. Thus, for example, it may be that poor people are more likely to own mobile homes, and thus, one could target relief to poor people by exempting mobile homes, but such an approach is likely to be less effective than simply targeting poor people directly.¹²¹ In addition to being an inferior means of targeting an exemption, exempting specific assets is often inefficient because it distorts an investor's choice of assets. For example, an exemption for mobile homes would encourage people to live in mobile homes despite the fact that they would prefer to rent an apartment.

Nevertheless, a realistic system is likely to exempt certain assets for a variety of reasons. First, it may be that while, in general, wealth is a good proxy for well-being, it is not a perfect proxy and can be improved upon by using additional indicia. For example, the medical expense deduction often is justified on the ground that people in bad health have lower welfare than people in good health. An exemption under the wealth tax for, say, durable medical equipment could be justified on the same ground.

Second, exemptions for assets can be supported to encourage their purchase. Exemptions for housing and for pension assets can be justified under this rubric.¹²² As indicated earlier, we do not think it likely that owner-occupied residences would be taxed like other assets and, for our base case, we have exempted net housing equity up to \$1 million.¹²³ We also assumed that pension reserves would be the subject of special treatment. In our base case, we exempt pension assets. Our

¹¹⁹ See, e.g., IRC § 62 (dependent standard deduction), § 151 (denial of exemption to dependents).

¹²⁰ IRC § 1(g) (taxing children's income over a threshold amount at their parent's marginal rate).

¹²¹ Sales taxes often exempt food and clothing as a means of making the tax less regressive. In the context of sales taxes, a justification for exempting certain goods, rather than providing a taxpayer exemption is that absent a system of taxpayer returns, it is difficult to provide exemptions to individuals.

¹²² Exempting assets to encourage their purchase is more in the nature of an efficiency than an equity rationale.

¹²³ IRC § III.G.

model leaves open the possibility that a tax at a rate less than 100% of the regular tax might apply to pension assets.¹²⁴

Finally, assets may be exempt for administrative reasons. In this regard, we assume an exemption for most consumer durables.¹²⁵ Assets also may be exempt because they are too difficult to value. For example, some contingent tort claims may be considered too difficult to value.

VII. RESULTS—WHAT A U.S. WEALTH TAX MIGHT LOOK LIKE

In this Section, we use the SCF to compute aggregate figures for earned income and net worth. Using these figures and our figures for personal credits, we provide estimates of tax rates that would be sufficient to replace either the personal income tax or both the personal and corporate income taxes in the United States. We then explore alternative ways to raise the same amount of revenue

A. *Net Worth and Its Components*

The SCF collects information on net worth. Table 6 contains a list of major categories of assets and liabilities along with the household mean for each category and the estimated total for all households. Except for the last two lines of Table 6, all data in the table are for members of the primary economic unit only. Table 7 contains data for members of the household who are not members of the primary economic unit. The data from Table 7 is summarized in the penultimate row of Table 6 and is included in the total net worth figure in the last row of Table 6.

Total net worth is estimated to be \$19 trillion, of which only .95% is from non-PEU members. Putting aside non-PEU members, gross assets are about \$22.8 trillion and liabilities are about \$3.9 trillion for net worth of \$18.8 trillion.¹²⁶

As can be seen from Table 6, financial assets are \$6.7 trillion, about 29% of gross assets. The remaining 71% of gross assets consists of nonfinancial assets, the most important categories of which are pri-

¹²⁴ At present, our estimate of pension assets, particularly in defined benefit plans, is quite weak. In future research, we intend to use sources from outside the SCF to estimate total reserves and use the information in the SCF to allocate aggregate resources among participants.

¹²⁵ See Subsection III.D. for a fuller discussion of the treatment of consumer durables.

¹²⁶ Our definition of net worth is generally the same as that used by the SCF with two exceptions. First, the SCF includes certain types of liquid retirement accounts, including IRAs, Keoghs, and other retirement plans with cash values. The estimate in Table 6 includes no retirement wealth. Second, the SCF, apparently for historical reasons, includes bonds at face value. We include bonds at fair market value.

TABLE 6
NET WORTH DATA — PRIMARY ECONOMIC UNITS

<i>Description</i>	<i>Mean</i>	<i>Total (billions)</i>	<i>Percent of gross assets or liabilities</i>
Assets			
Financial Assets			
Liquid Accounts (checking, savings), Money market and call accounts)	\$13,261	\$1,313	5.8
Certificates of deposit	5,094	504	2.2
Mutual funds other than money market)	11,733	1,162	5.1
Stocks	14,081	1,394	6.1
Bonds (other than savings bonds)	6,427	636	2.8
Savings bonds	1,208	120	0.5
Cash value of life insurance	6,582	652	2.9
Other managed assets	5,821	576	2.5
Other financial assets	2,991	296	1.3
Total Financial Assets	67,198	6,653	29.2
Nonfinancial Assets			
Vehicles	11,283	1,117	4.9
Primary residences	74,845	7,410	32.5
Investment real estate	28,238	2,796	12.3
Business interests	44,782	4,434	19.5
Other nonfinancial assets	3,701	366	1.6
Total Nonfinancial Assets	162,850	16,124	70.8
Total Assets	230,048	22,777	100.0
Liabilities			
Mortgages (including home equity loans)	26,891	2,662	67.4
Other lines of credit	219	22	0.5
Other real estate debt	6,020	596	15.1
Credit card balances	1,428	141	3.6
Installment debt	4,407	436	11.1
Other debt	917	91	2.3
Total Debt	39,882	3,949	100.0
Net worth			
Assets-liabilities from PEU	190,166	18,828	
Net worth of non-PEU members	13,008	181	
Total net worth		19,009	

Source: SCF-Authors' computations

Except as indicated, includes assets and liabilities from primary economic units only.

Mean is computed per household, not per individual.

mary residences (\$7.4 trillion, 32.5%), business interests (\$4.4 trillion, 19.5%), and investment real estate (\$2.8 trillion, 12%).

The primary category of liabilities is home mortgages (and home equity lines of credit), which total \$2.7 billion or 67% of liabilities. Other real estate debt totals \$0.6 trillion (15%) and installment debt is \$0.4 trillion (11%).

The figures for net worth do not include any estimates of retirement wealth. Our preliminary estimate of retirement wealth based on the

TABLE 7
NET WORTH DATA — NON-PEU MEMBERS

<i>Description</i>	<i>Mean*</i>	<i>Total (billions)</i>
Assets		
Bank accounts and savings bonds	\$2,581	\$ 36
Primary residences	1,404	20
Vehicles	5,238	73
Other assets	7,665	107
Total assets	16,888	235
Liabilities		
Mortgages	235	3
Other debts	3,645	51
Total debts	3,880	54
Net worth		
Assets-Liabilities	\$13,008	\$181

Source: SCF - Authors' computations

Includes only people not part of a primary economic unit.

* Mean is per household, including the assets and liabilities of all members of the household who are not members of the primary economic unit.

SCF is \$3 trillion. We know this figure to be too low.¹²⁷ By contrast, the flow of funds estimate for pension fund reserves is \$4.9 trillion.¹²⁸

B. Wages and Other Earned Income

Data on wages and other forms of earned income are included in Table 8. The first part of the table contains information on members of the primary economic unit and the second part has information on those who are not members of the primary economic unit. In the aggregate, members of the primary economic unit have earned income of \$4.1 trillion. Nonmembers have aggregate earned income of \$172 billion, approximately 4% of total earned income.

Wages and salaries represent 79% of earned income among members of the primary economic unit. Business and profession income and pension income each represents approximately 10% of earned income. Among individuals that are not part of the primary economic unit, the percentage of income from pensions goes up to 13% and the percentage from business and professional sources drops to 2.5%. Wage and salary income takes up the slack, increasing to 84%.

¹²⁷ Our current estimate includes IRAs, Keoghs, defined contribution plans, and estimates of the present value of future retirement benefits from defined benefit plans for those who are currently employed. Our estimate does not include the value of retirement benefits from defined benefit plans in current pay status. Obviously, so far we have failed to include a substantial source of retirement wealth.

¹²⁸ See Table 2, on page 527.

TABLE 8
EARNED INCOME DATA

<i>Description</i>	<i>Mean</i>	<i>Total (billions)</i>	<i>Percent of income</i>
Earned Income of PEU Members			
Wages and salaries	\$33,028	\$3,270	79.1
Business and professional income	4,123	408	9.9
Unemployment compensation	170	17	0.4
Alimony receipts	205	20	0.5
Welfare	351	35	0.8
Pension income	4,092	405	9.8
Other income	82	8	0.2
Alimony payments	(312)	(31)	-0.7
Total Income-PEU	\$41,739	\$4,133	100.0
Earned Income of non-PEU members			
Wage and salary income	\$10,414	\$145	84.4
Pension and social security income	2,939	41	13.1
Business and professional income	306	4	2.5
Total Income—Non-PEU members	\$13,659	\$190*	100.0
Total Earned Income of all people		\$4,322*	

Source: Authors' computations

Mean is computed per household, not per individual.

* Total does not sum due to rounding

C. Household Data

Tables 9-11 contain data on household structure. The basic unit used by the SCF is the PEU. The SCF defines a PEU as "an economically dominant single individual or couple (married or living as partners) in a household and all other individuals in the household who are financially dependent on that individual or couple."¹²⁹ For the most part, we adopted the SCF's household structure.

Table 9 indicates that there are 99 million households or PEUs. Of these, 41 million have a single head of household and 58 million have two heads of household.¹³⁰ We consider a family to be all members of the PEU. Families in the SCF dataset have from one to nine members (including the head or heads). The average family size is 2.4 people.

In addition to the PEUs, we have minimal information on other people living in the household who are not members of the PEU. Table 10 summarizes the non-PEU members. There are 13.9 million households that have members who are not members of the PEU.

As shown in Table 10, in 74% of the cases, or 10.3 million households, there is only a single non-PEU member and, a fortiori, only one head of household. With respect to the 3.6 million households with more than one non-PEU member, we have not been able to deter-

¹²⁹ See Codebook, note 104.

¹³⁰ That is, a household is considered to have two heads if the economically dominant individual has a spouse or partner.

TABLE 9
DEMOGRAPHICS—PRIMARY ECONOMIC UNITS

Distribution of Head of Households

<i>Number of head of households</i>	<i>Number of households</i>	<i>Percent</i>
Households with single head	41,107,561	42
Households with two heads	57,902,897	58
Total Households	99,010,458	100
Number of head of households	156,913,355	

Family Size

<i>Number of people in PEU</i>	<i>Number of households</i>	<i>Percent</i>
1	30,097,718	30.4
2	33,594,316	33.9
3	14,141,795	14.3
4	13,150,212	13.3
5	5,145,853	5.2
6	2,065,094	2.1
7	480,849	0.5
8	268,955	0.3
9	65,665	0.1
Total households	99,010,458	100.0
Total number of people	236,540,986	
Average number per family	2.39	

mine the family structure of the non-PEU members. In the absence of such information, we arbitrarily decided that if there are additional non-PEU members, they consist of a family with two heads. There is, in general, no reason to believe that our assumption is true. To the contrary, it might well be equally valid to assume that all non-PEU members were independent individuals. Nevertheless, for the time being, we report our results under the assumption that all non-PEU members within a household constitute a single family. Under these assumptions, there are a total of 17.5 million heads of household and an average family size of 1.35 persons.

Given the information that we have on family structure and given the credit that we adopt of \$1,500 per head of household and \$400 per family member (including heads), we can estimate the maximum credits permitted under the wealth tax. The estimate is a maximum because it assumes that all credits are fully utilized. Given that the credits are nonrefundable, not all credits would be utilized.¹³¹ As shown in Table 11, based on 255 million people and 174 million heads of households, the maximum credit would be \$364 billion. Given that the combined personal and corporate income taxes collect \$676 billion, the potential credit cost is substantial.

¹³¹ When we estimate taxes, below, we provide an estimate of credits actually used.

TABLE 10

DEMOGRAPHICS—PEOPLE NOT MEMBERS OF PRIMARY ECONOMIC UNITS

Distribution of Head of Households

<i>Number of head of households</i>	<i>Number of households</i>	<i>Percent</i>
Households with single head	10,254,871	74
Households with two heads	3,644,080	26
Total households	13,898,951	100
Number of head of households	17,543,030	
Households w/o non-PEU members	85,111,507	

Family size

<i>Number of people not in PEU</i>	<i>Number of households</i>	<i>Percent of non-PEU households</i>	<i>Percent of all households</i>
0	85,111,507		86.0
1	10,254,871	73.8	10.4
2	2,623,929	18.9	2.7
3	880,753	6.3	0.9
4	110,369	0.8	0.1
5	29,029	0.2	0.0
Total Households with non-PEU members	13,898,951	100.0	14.0
Total number of people	18,731,609		
Average number per household (with one or more)	1.35		

TABLE 11

DEMOGRAPHICS — CREDITS

Number of people living in PEUs	236,540,986
Number of people not living in PEUs	18,731,609
Total number of people	255,272,594
Number of head of households in PEUs	156,913,355
Number of head of households 's not living in PEUs	17,543,030
Total number of head of households	174,456,385

<i>Credit type</i>	<i>Amount of credit</i>	<i>Number of credits (millions)</i>	<i>Total credit cost (billions)</i>
Head of household	\$1,500	174	\$262
Family member	400	255	102
Total			\$364

Total credit cost assumes all credits usable against tax liability.

D. Base Case Tax

Based on the above, we would like to provide an estimate of the tax rates for a wealth tax that would be necessary to raise sufficient revenue to replace the personal and corporate income taxes. Unfortunately, we still have not fully specified the tax. Since the wealth tax has two parameters, the tax rate on net worth and the tax rate on wages, there is an infinite number of combinations of these two rates

that would raise the requisite revenue. Table 12 shows combinations of rates for the wealth tax that would raise sufficient revenue to replace either the individual income tax or both the individual and corporate income taxes.

TABLE 12
COMBINATIONS OF WAGE TAX AND NET WORTH TAX RATES

<i>Wage Tax Rate</i>	<i>Net Worth Rate to Replace</i>	
	<i>Individual and Corporate Taxes</i>	<i>Individual Tax Only</i>
0.00	5.7	4.7
1.00	5.6	4.5
2.00	5.4	4.4
3.00	5.2	4.2
4.00	5.0	4.0
6.00	4.8	3.8
6.00	4.6	3.6
7.00	4.4	3.4
8.00	4.2	3.2
9.00	3.9	2.9
10.00	3.7	2.7
11.00	3.4	2.4
12.00	3.1	2.2
13.00	2.9	1.9
14.00	2.6	1.6
15.00	2.3	1.3
16.00	2.0	1.1
17.00	1.8	0.8
18.00	1.5	0.5
19.00	1.2	0.2
20.00	0.9	-0.1
21.00	0.6	-0.6
22.00	0.3	-1.2
23.00	0.0	-1.8
24.00	-0.4	-2.6
25.00	-0.9	-3.5

For example, if the wage tax rate were set at 18%, in order to replace both taxes, the rate on net worth would have to be 1.5%. If only the individual tax were to be replaced, the rate on net worth would need to be only .5%. At the extremes, if there were no wage tax, the net worth rate would have to be 5.7% to replace both taxes (4.7% for individual only), and if there were no net worth tax, the wage tax rate would have to be 23% for both taxes (19.6% for individual only).

Figure 4 provides in a graphical format the same information as in Table 12.

FIGURE 4
COMBINATIONS OF NET WORTH AND AND WAGE TAX RATES NECESSARY TO REPLACE TAXES SHOWN (ISO-REVENUE LINES)

The lines shown on the graph are iso-revenue lines; each point on a line would raise the same overall wealth tax.¹³² In particular, for any revenue target R , wage base W , and net worth base NW , the relationship between the tax rate on net worth τ_{NW} and the tax rate on wages τ_W would satisfy the following equation:

$$t_{NW} = \frac{R}{NW} - \frac{W}{NW} \times t_W$$

It is the presence of nonrefundable credits that causes the iso-revenues to be convex. As tax rates move to the extreme points, more people are in an excess credit position, thus permitting a revenue target to be reached with lower tax rates. For example, assume that there were only two individuals, one with lots of net worth and the other with lots of wages. As long as both tax rates are sufficiently large, both individuals would be taxable and, hence, both individuals would be able to utilize their respective credits. If, however, only net worth (or wages) were taxable, only the individual with net worth (wages) would be taxable and eligible to use her credit. Thus, at the extremes, the use of credits would fall by one-half.

At this stage in our research, we have not settled on a unique combination of net worth and wage tax rates to recommend. Nevertheless, we feel it is useful to suggest a reasonable pair of rates that can be used as our base case. For this purpose, we settled on the requirement that the wealth tax raise approximately the same amount from both capital and labor as do the taxes being replaced. We do not have a strong justification for this requirement, but feel that it is a reasonable starting point.

We note that one of the clear advantages of a consumption tax over the income tax is that the consumption tax generally does not burden savings, while the income tax does.¹³³ Like the income tax, the wealth tax places a burden on savings. What is relevant from an efficiency point of view is the relative marginal burdens of the wealth tax versus the income tax on capital. Our requirement that the two taxes raise the same revenue from capital, therefore, does not guarantee that they have the same efficiency cost. Nevertheless, given that the wealth tax burdens capital more uniformly than does the income tax, we suspect, but are not able to prove, that so long as the aggregate tax burden on capital under the wealth tax is no greater than the aggregate tax burden on capital under the income tax, the efficiency loss

¹³² The iso-revenue lines are convex to the origin (that is, they are bowed out away from the origin). If there were no credits, the iso-revenue lines would be straight lines.

¹³³ See the discussion of taxes on capital in Subsection II.B.

under the wealth tax will be no greater than the efficiency loss under the income tax.

Another advantage in setting the base case so that the proportion of the wealth tax that falls on capital is the same as for the income tax is that it makes the two taxes more nearly comparable. We would like to determine whether the progressivity of the wealth tax (as measured against AGI) comes from a more uniform taxation of capital, or whether it comes from a heavier average taxation of capital. By linking the wealth tax to the income tax in this way, we are more confident that the progressivity we measure does not come from a heavier average taxation of capital.

To determine the burden the current income tax imposes on capital (as opposed to labor), we look separately at the individual and corporate income taxes. For the individual income tax, we base our calculations on summary statistics of the income of taxpayers and the taxes they paid for 1994¹³⁴, the year about which the SCF panel was questioned, rather than a more elaborate model based on data for a sample of representative individuals. We then make some simplifying assumptions to calculate the tax's burden on labor. Since our data is summarized by the AGI of taxpayers, we first assume that taxpayers in a single AGI class have the same tax profile—specifically, that they pay tax at the same rate. This assumption is obviously inaccurate, but we think the classes are narrow enough that the assumption does not seriously distort our results. We then try to determine what percentage of the AGI of taxpayers in each class can be considered income from labor. This obviously includes wages. We also include all income from sole proprietorships, including professional practices. (We treat income from businesses and professional practices reported in the SCF as wages for purposes of our analyses.) In fact, income from some businesses and professional practices includes a component derived from the capital invested in the enterprise. In the case of income from partnerships (or S corporations), the SOI data shows that, of about \$107 billion¹³⁵ net income (less deficit) of partnerships in 1995, over \$37 billion came from services.¹³⁶ For our initial analyses, we ascribe 75% of income from partnerships and S corporations to wages. Using these figures, we determine a percentage of AGI derived from labor.

An influential model by Arnold Harberger argues that the corporate income tax is a uniform burden on all capital, not just capital

¹³⁴ Statistics of Income, note 99.

¹³⁵ \$178.7 billion net income, less deficit of \$71.8 billion.

¹³⁶ \$49.6 billion of net income, less \$12.1 billion deficit. This data comes from Timothy Wheeler, IRS, Statistics of Income 1995: Partnership Returns 43, 54-66 tbl.1 (1997).

invested in corporate form.¹³⁷ Some would restrict the burden of the corporate tax to capital invested in corporate form.¹³⁸ That issue does not affect our analysis, which is concerned solely with the question of whether capital or labor is burdened. Attacks that are more serious for our purpose come from those who argue that the corporate tax can be shifted to labor.¹³⁹ These analyses would shift part of the burden of the corporate tax away from capital. In an important work, Joseph Pechman summarizes various opinions on the incidence of the corporate tax.¹⁴⁰ Under most views, all of the corporate tax burdens capital.¹⁴¹ Under some alternatives, however, as much as one-half of the tax is shifted away from capital.¹⁴² For purposes of our initial analysis, we assume that 75% of the corporate tax is a burden on capital.¹⁴³ With the assumptions above, we find that the total burden of the two income taxes falls on capital to the extent of 28% and on labor to the extent of 72%.

If we constrain the wealth tax so that the wage portion raises 72% of the revenue, we have a unique solution. We find that we can raise the amount raised by the individual and corporate income taxes with tax rates of 17.7% on wages and 1.57% on net worth. We refer to this combination of rates as the base case.

If we sought only to replace the individual income tax, the relative amounts of tax on labor and capital would change. We estimate that approximately 84% of the personal income tax falls on labor. Using that constraint, we find that we could raise sufficient revenue to re-

¹³⁷ Arnold C. Harberger, *The Incidence of the Corporation Income Tax*, 70 *J. Pol. Econ.* 215 (1962).

¹³⁸ Joseph A. Pechman, *Who Paid the Taxes, 1966-85*, at 32 (1985).

¹³⁹ See, e.g., Harvey S. Rosen, *Public Finance* 436 (4th ed. 1995); Richard A. Musgrave & Peggy G. Musgrave, *Public Finance in Theory and Practice* 387-89 (5th ed. 1989); see also Anthony B. Atkinson & Joseph E. Stiglitz, *Lectures on Public Economics* 178 (1980) ("The Harberger analysis provides considerable insight into the different factors at work, but it is premature to draw the firm conclusion. . . ." that capital bears at least the full burden of the corporate income tax.)

¹⁴⁰ Pechman, note 138.

¹⁴¹ *Id.* at 35-37.

¹⁴² *Id.*

¹⁴³ The CBO has used "three corporate tax incidence variations in recent years, sometimes treating the tax as borne by owners of capital, sometimes treating the tax as borne by labor . . . and sometimes allocating the tax half to labor and half to capital." Michael J. Graetz, *Paint-By-Numbers Tax Lawmaking*, 95 *Colum. L. Rev.* 609, 642 (1995). Jeffrey Kwall argues that because "stock ownership tends to be concentrated among high-income individuals," those individuals with higher incomes tend to bear the incidence of the corporate tax. Jeffrey L. Kwall, *The Uncertain Case Against the Double Taxation of Corporate Income*, 68 *N.C. L. Rev.* 613, 635 (1990) (citing ALI, *Federal Income Tax Project*, Subchapter C, *Proposals on Corporate Acquisitions and Dispositions and Reporter's Study on Corporate Distributions* 328 (1982), *Joint Comm. on Tax'n, Federal Income Tax Aspects of Corporate Financial Structures* 57 (1989)).

place the personal income tax with tax rates of 17.1% on wages and .75% on net worth.

E. Alternative Designs of the Wealth Tax

In this Subsection, we examine how rates would change under various alternatives to the base case. We examine the effects of altering the net worth base and changing the level of the exemptions. For purposes of this Subsection, we assume that the wealth tax would replace both the personal and corporate income taxes. Except as otherwise indicated, we also assume that the wage portion of the tax would raise 72% of the revenue. All of the rates discussed below are shown in Table 13.

TABLE 13
TAX RATES UNDER ALTERNATIVE SCENARIOS

<i>Description of Base</i>	<i>Net worth rate</i>	<i>Wage rate</i>
Base case	1.57	17.7
Full inclusion of housing	1.26	17.4
Same — keep net worth tax at base rate	1.57	16.0
Exclude housing, permit deduction for mortgages	1.71	17.8
Same — keep net worth tax at base rate	1.57	18.2
Include retirement assets	1.12	17.8
Same — keep net worth tax at base rate	1.57	15.7
Include retirement and housing	0.96	17.6
Same — keep net worth tax at base rate	1.57	14.0
Reduce credits by 50%	1.44	14.5
Double credits	1.75	22.8
Wage tax only	0.00	23.0
Net worth tax only	5.70	0.0

1. Housing

Under the base case, we excluded net housing equity up to \$1 million. We also estimated tax rates under two alternative scenarios. In the first, we assume that housing is fully taxable. That is, we fully include both housing assets and mortgages in the tax base. In the second, we assume that housing is exempt but permit mortgages up to \$1 million to be included in the tax base (that is, to reduce net worth).¹⁴⁴

In the base case, \$4.7 trillion of net housing is excluded.¹⁴⁵ Thus, if housing is fully included, the asset base increases by \$4.7 trillion and

¹⁴⁴ Recall that exempting houses and deducting mortgages is essentially the same treatment as under the current income tax.

¹⁴⁵ Figures for housing do not properly take into account the non-PEU individuals. It is unlikely that the results will change significantly when they are taken into account.

tax rates drop to 17.4% on wages and 1.26% on net worth.¹⁴⁶ If housing assets are exempt, but housing liabilities were included, the amount of the housing exemption would increase to \$7.4 trillion and rates would increase to 17.8% on wages and 1.71% on housing. Thus, the treatment of housing has a significant effect on the necessary tax rates. Finally, if we freeze the tax rate on net worth to the base case rate of 1.57%, the rate on wages would fall to 16% in the no-housing-exclusion case and would rise to 18.2% in the housing-excluded/mortgages-included case.

2. *Retirement*

We would like to estimate the effect of including retirement wealth in the tax base as we make our other estimates. Currently, however, our data on retirement wealth is insufficient at the household level to make such an estimation. We are able to get a rough idea of the effect of excluding retirement wealth by assuming that there is a separate tax on retirement wealth at the same rate as the net worth tax and that no credits are allowed against the retirement tax. As discussed above, our estimate of retirement wealth based on the SCF is \$3 trillion. The estimate for pension fund reserves in the Flow of Funds accounts is \$4.88 trillion. The Flow of Funds estimate, however, does not include amounts in IRAs or Keoghs. According to the SCF, there is \$1.22 trillion in IRAs and Keoghs. Thus, overall, our best estimate of retirement assets is \$5.10 trillion, the sum of the Flow of Funds figure and the SCF figure for IRAs and Keoghs.

At the base case rate of 1.57%, a tax on retirement wealth would raise \$80 billion. If rates on net worth were held constant, the rate on wages could decrease from 17.7% to 15.7%. If we maintained the capital/labor constraint, the rates would be 17.8% on wages and 1.12% on net worth, including retirement wealth.

Finally, if both retirement wealth and housing were included, tax rates would drop to 17.6% on wages and 0.96% on net worth. Alternatively, if we froze the net worth tax at 1.57%, the wage tax could fall to 14.0%.

¹⁴⁶ The scrupulous reader may be puzzled that an increase in an item included in the worth base should cause the tax rate on wages to decrease. The reason is that an increase in any part of the base causes some previously untaxed people to become taxpayers. To the extent they have wages, a portion of their wages is treated as taxed. Thus, an increase in an item that is included solely in net worth causes the base for both parts of the wealth tax to increase, reducing the tax rates required. In a wealth tax with no credit, this would not occur.

3. *Sensitivity of Rates to Credit Level*

As discussed above, the base case includes two personal nonrefundable tax credits, a \$1,500 credit per head of household and an additional per person tax credit of \$400. To test the effect of the level of the credit on tax rates, we compute rates under two alternative scenarios.

Under the low-credit scenario, we decrease both credits by 50% to \$750 and \$200 for the head of household and per person credits, respectively. Tax rates decrease to 1.44% on net worth and 14.5% on wages. Under the high-credit scenario, we double the credits to \$3,000 and \$800. Tax rates increase to 1.75% on net worth and 22.8% on wages.

Under the base case, the potential amount of credits is \$364 billion.¹⁴⁷ Of these potential credits, taxpayers are able to use credits of only \$311 billion. Under the low-credit scenario, credits used would decrease to \$242 billion. Under the high-credit scenario, credits used would increase to \$378 billion.

VIII. DISTRIBUTION OF THE WEALTH TAX

We argued above that under the income tax, large amounts of income from capital are either untaxed or taxed at much reduced effective rates and that as a result, it was possible to replace the income tax with a flat wealth tax and achieve much of the progressivity of the income tax. In this Section, we test that hypothesis.

A central question in distributional analysis is the classification of the taxpaying population. If one felt that economic income was the best indicator of the well-being of a taxpayer, the appropriate question would be how the burdens of alternative tax systems are distributed among various income groups. On the other hand, if wealth is really the best indicator of well-being, distribution should be made on the basis of wealth classes. For that matter, if consumption were the best indicator, distribution should be made based on consumption.¹⁴⁸

Defining the variable is an equally daunting task. Thus, for example, if one were to use wealth as a classification variable, it would be necessary to define what was meant by wealth. The most serious difficulty in defining wealth would be in determining how to treat human capital.

We have not resolved the question of the best classifying variable. Fortunately, in order to answer the question that we posed, we do not need to determine the best classifier. We posited that much of the

¹⁴⁷ See Table 11 on page 555.

¹⁴⁸ The SCF generally does not have data on consumption.

progressivity of the income tax can be replicated by a single rate wealth tax. Thus, the task we set for ourselves is best accomplished by using the same classifying variable as one would use for an income tax.¹⁴⁹ The progressivity of the income tax conventionally is measured using some form of income as the classifying variable. Accordingly, we have chosen to compare the progressivity of the income tax as measured against income to the progressivity of the wealth tax also as measured against income.

Next, we need to define income. For now, we have chosen AGI as our classifying measure. We are aware that extended measures of income frequently are used and are believed to be superior to AGI as classifying variables.¹⁵⁰ Our primary reason for choosing AGI is the constraints imposed by our data. Moreover, we believe that AGI is a reasonable measure, although it is clearly not perfect. We hope to refine our classifying variable in future work.¹⁵¹

As long as we intend the wealth tax to replace the corporate, as well as the personal income tax, we need to find a way to incorporate the corporate tax into our comparative distributions. As mentioned earlier, it has been argued that the corporate income tax is a burden on all investments in capital.¹⁵² To compare the distribution of the wealth tax to the distribution of the combination of the personal and corporate income taxes, we allocate the latter to classes of individuals based on the relative net worth of individuals in each class.¹⁵³

The data on income tax payments by AGI class comes from the IRS SOI publications. We compute the wealth tax using the SCF data under our base case, a 1.57% flat net worth tax combined with 17.7% wage tax. Credits allowed are \$1,500 for heads of household and \$400 for each household member. We distribute that tax according to the AGI figures reported in the SCF.

¹⁴⁹ We understand that the fact that people measure the progressivity of the income tax by reference to income does not, in any sense, mean it is the best measure. Even, however, if we were able to determine the perfect classifier, we still would need to decide the correct level of progressivity given that classifier. Both determinations would require a far more elaborate model than we develop here.

¹⁵⁰ Treasury, the Joint Committee on Taxation, and the Congressional Budget Office each use somewhat different measures of income as classifiers.

¹⁵¹ For example, the SCF contains data on tax-exempt bond holdings. Thus, we could impute exempt interest. Similarly, we could impute income on certain forms of retirement assets and on housing. If we wished to compare the distribution of the income tax and the distribution of the wealth tax, we also would need either to impute income tax figures to the SCF households, or otherwise to distribute income taxes paid by our chosen classifier.

¹⁵² Harberger, note 137.

¹⁵³ We are aware that our method of allocating the corporate tax here is different from the method we used earlier. We intend to resolve this inconsistency in future research.

As with most data in the SCF, the AGI figure in the SCF is self-reported and unverified.¹⁵⁴ Moreover, while in some cases, the AGI refers to a figure on an already filed tax return, in other cases, it refers to a figure on a return that is expected to be filed.¹⁵⁵ We have, however, no reason to believe that there is a systematic bias in the reporting of AGI.

There are additional problems with our analysis. First, the SCF is based on responses with respect to PEUs. By contrast, IRS data is based on the filing of tax returns. A PEU can file more than one tax return. Thus, for example, if a couple reports AGI of \$100,000, we classify them as a single taxpayer with AGI of \$100,000. In fact, however, they may have filed two returns, one with, say, \$80,000 of AGI, and the other with \$20,000 of AGI. The SOI data would classify them accordingly.

We have some ability to split the SCF data into two separate returns. For example, where the PEU is headed by a couple (whether or not married), the SCF asks respondents whether they filed joint or individual tax returns.¹⁵⁶ Where more than one tax return was filed by the couple, we have tried to construct two separate wealth tax returns for the PEU. We have not used these separate returns, however, in the distributional analysis that follows.¹⁵⁷ We also have not attempted to create additional wealth tax returns for other members of the PEU, such as children.

A further problem concerns the non-PEU members. They are about 19 million individuals, not a trivial group.¹⁵⁸ The sketchy information we have shows that they have assets of \$181 billion and earned income of \$172 billion.¹⁵⁹ PEUs consist of 237 million individuals,¹⁶⁰ with net assets of \$19 trillion and earned income of \$4 trillion.¹⁶¹ Thus, non-PEU individuals are about 7% of the population, with 1% of all assets and 4% of all earned income. Non-PEU members would pay wealth tax of \$14 billion in the base case, about 2% of the tax.

¹⁵⁴ Adjusted gross income is reported in Variables X5751, X7651, and X7652 (joint return, separate return for head of household, separate return for spouse/partner, respectively). SCF, note 104.

¹⁵⁵ *Id.* Variable X5744.

¹⁵⁶ The filing of joint returns in the data does not always correspond with marital status. In some cases SCF respondents report themselves as being not married, but filing joint returns.

¹⁵⁷ The information on separate filing is used to compare the number of filing units in the SCF data set to the number of filing units reported by SOI. See Figure 16, Appendix.

¹⁵⁸ See Table 10 on page 555, and text following note 130.

¹⁵⁹ See Table 7 (assets), on page 552, and Table 8 (earned income), on page 553.

¹⁶⁰ See Table 7, on page 552.

¹⁶¹ See Table 6 (assets), on page 551, and Table 8 (earned income), on page 553.

Unfortunately, we have no data on their AGI.¹⁶² Accordingly, we had to estimate AGI for non-PEU members. In order to do so, we have assumed that their AGI is equal to their wage income plus any income that is identified as being within certain categories that are likely to form part of AGI.¹⁶³ Although we would like to be able to refine our measure of AGI, we do not believe that any refinement would have a significant effect on the analysis. Moreover, since non-PEU members generally have low income and assets, any refinement would be likely to have an effect only in the lower AGI categories.

A final point is that the IRS data has no information on those who do not file tax returns. The SCF includes about 20 million nonfilers.¹⁶⁴

A. *Distributional Results*

The graph in Figure 5 shows the distribution of the wealth tax by AGI class.¹⁶⁵ Also included on the graph is the distribution of the personal income tax and the combination of the personal and corporate income taxes.

The main finding is that, from \$15,000 to \$500,000 of AGI, our flat rate wealth tax comes close to reproducing the progressivity of the current income tax, which has explicitly progressive rates. Below \$15,000 of AGI (the "low income range"), the wealth tax is significantly more burdensome than the income tax. We are neither surprised nor disturbed by the level of wealth tax in the low income range. To begin with, it is important to identify low income individuals who would not be taxed more heavily under the wealth tax. As can be seen from Table 5,¹⁶⁶ those with earned income under \$15,000 and no (or small amounts) of taxable wealth are taxed more lightly under the wealth tax than under the income tax. Table 5 shows both the income tax liability and the wealth tax liability for taxpayers with certain combinations of marital status and number of children. The

¹⁶² In addition, as discussed above, where there are multiple non-PEU members in a household, we have no ability to separate them into filing units. Accordingly, we assumed that all non-PEU members in a single household consist of a single filing unit.

¹⁶³ For non-PEU members, the SCF has only two income variables: wages (X6403) and a composite variable of income from other sources (X6415) ("other income"). SCF, note 104. The SCF also has a series of variables that indicates whether other income includes particular types of income. We have included other income in AGI where it includes pensions, interest, dividends, business income, real estate income, or unemployment compensation. In such cases, however, other income also may include other types of income that should not be included in AGI.

¹⁶⁴ There were 137 million filers in the SCF, about 87% of all heads of households being filers. *Id.* Note that we have no data on tax returns filed by non-PEU members.

¹⁶⁵ Additional perspective on Figure 5 can be gained by looking at Figures 15 and 17 in the Appendix, which show aggregate wealth tax and aggregate AGI by AGI category.

¹⁶⁶ See page 548.

FIGURE 5
INCOME TAX VS WEALTH TAX AS PERCENT OF AGI, BY AGI CATEGORY

wealth tax liability is always less than the income tax liability. For example, a married couple filing jointly and taking the standard deduction had an income tax liability in 1994 of \$578, but would have zero wealth tax liability. The greatest wealth tax liability for a taxpayer with \$15,000 of earned income would be for a single individual with no children, who would owe \$800. Under the income tax, however, her liability was \$1,320. Both the income tax data and the wealth tax data exclude the earned income credit, which generally has been excluded from our analysis.

We believe that the wealth tax is greater than the income tax in the low income range because the wealth tax taxes two categories that the income tax may not tax: retired individuals with substantial wealth¹⁶⁷ and wealthy individuals whose income is low because of losses suffered in the current year. We think it is appropriate to increase tax liability on such individuals.

The other region where the wealth tax would have a significantly different distributional effect than the income tax is the region above \$500,000 and particularly above \$1 million of AGI (the "high income range"), where the burden of the wealth tax plummets. We find the behavior of the wealth tax in the high income region disturbing. We are uncertain as to the cause of the drop in the tax burden. One possibility is that the data is flawed. While the SCF makes every effort to obtain a valid high wealth sample, there are inevitable weaknesses in their data.¹⁶⁸ For example, even if Bill Gates responded to their postcard, his answers could not be released in the public data set without inevitable disclosure. It also may be the case that those with high AGI systematically under-report their wealth.¹⁶⁹

¹⁶⁷ As a reminder of what we mean by substantial wealth, note that a single retired person with no wages and \$200,000 of savings would be subject to a tax of \$3,136, but would have a head of household credit of \$1,500 and an individual credit of \$400. Thus, the individual would pay a tax of only \$1,236. A retired married couple with \$200,000 of savings would pay no wealth tax because their credits would be \$3,800. If the United States were to move from an income tax to a wealth tax, one major problem would be how to treat retired people, whose wealth already has been subject to an income tax. This, and a host of other transitional issues, are not considered in this Article.

¹⁶⁸ The SCF sends a postcard to a sample of high income individuals asking for their participation in the survey.

¹⁶⁹ Another problem with the SCF is that it explicitly excludes the very richest individuals. Arthur B. Kennickel, *Using Income Data to Predict Wealth*, (SCF Working Paper, Jan. 1999), available at <<http://www.bog.frb.fed.us/pubs/oss/oss2/papers/wealth.income.6.pdf>>, at 1 ("[the SCF sample] specifically excludes very prominent individuals, including members of the 'Forbes 400'"). For 1996, Forbes reports that the richest 400 people in the United States have wealth of over \$400 billion. Ann Marsh, *The Forbes Four Hundred*, Forbes, Oct. 14, 1996, at 100. According to the SCF, in 1994, the richest 398 people in the United States had wealth of \$99 billion. We tried increasing the wealth of the top 398 persons in the SCF by a factor of four. The effect on the distribution was not large.

We have examined some of the data on a case-by-case basis to see if we can understand the cause of the decline in the burden. In doing so, we found some anomalies that could provide a partial explanation of the results, but such inquiries have been only preliminary.

An example of an anomalous data point is an individual in the SCF who reports \$5 million in AGI. The SCF attributes about \$500,000 of salary to this individual.¹⁷⁰ Where does the other \$4.5 million of income come from? The individual owns a home worth \$160,000, subject to a mortgage of about that amount. The individual has a small checking account and no other assets. Under the weighting system used by the SCF, this data point represents almost 10,000 households, making it a significant point among households in the high income range. Yet, his wealth tax is relatively small, only about 18% of his \$500,000 salary, making it seem that the burden of the wealth tax is relatively light on those with high AGI. Dropping this one data point from the sample improves the results, but only slightly.¹⁷¹ We have identified some other data points that we view as anomalous, but we have not yet formalized the process of handling outliers.

We continue to investigate reasons for the behavior of the wealth tax in this region.¹⁷² Ultimately, if we conclude that the problem is in our design and not in our data, we will consider the possibility of a high-net-worth or high-wage surtax. Hopefully, such a tax could be aimed only at the highest wealth individuals without seriously disturbing the administrative benefits of the tax.

Figures 6-12 contain graphs showing the distribution of the wealth tax under different scenarios. Figure 6 shows the effect of taxing earned income only. As expected, the wealth tax becomes significantly less progressive. It is noteworthy that the tax drops for individuals with over \$1 million of AGI, suggesting that part of the reason the wealth tax is regressive at the highest AGI levels is the drop in earned income in the high income range.

¹⁷⁰ The language in the text is chosen with care. Not all respondents answer all questions in the SCF. To make the SCF useful, and to allow researchers to make reasonable statistical determinations based on its data, some information is imputed to complete otherwise incomplete records. The records indicate when such imputations have been made. Thus, in respect of this record, the \$5 million of AGI is not imputed, but the salary information is imputed.

¹⁷¹ On a number of occasions, we pointed out to the SCF staff data in the SCF that appears anomalous. They have been extremely responsive and where appropriate, have made changes to the data or the codebook. When we pointed out this particular anomaly, they told us that no change would be made. They did not (and, because of the need to keep the identity of the underlying respondents confidential, very possibly could not) explain to us their reasons.

¹⁷² For example, we have considered the possibility of using more detailed tax return data to validate the distribution of AGI in the high income range. The use of the Forbes data discussed in note 169 is another example.

FIGURE 6
INCOME TAX VS WEALTH TAX AS PERCENT OF AGI, BY AGI CATEGORY

Figure 7 shows the effect of a tax on net worth only. The tax does an excellent job of tracking the income tax except in the low income range and the high income range. The high tax rates in the low income range support our theory that there are individuals with low AGI and high wealth. As compared to the base case, the net-worth-only-tax imposes higher burdens on high income individuals.

Figure 8 shows the effect of including all housing. As expected, including housing makes the wealth tax somewhat less progressive, presumably because housing wealth represents a greater proportion of wealth for low and middle income individuals.

Figure 9 shows the effect of excluding housing while permitting mortgages to reduce net worth. Interestingly, the results are almost identical to those of the base case shown in Figure 5. This suggests that permitting a deduction for mortgages while excluding housing would have the detrimental effect of raising marginal rates, while having no appreciable effect on distribution.

Figures 10 and 11 show the effect of lowering and raising the credits respectively. When the credits are cut by one-half, the wealth tax becomes significantly less progressive, indicating that the credits are a substantial source of progressivity. When the credits are doubled, the wealth tax becomes substantially more progressive, while still showing increased average tax liability in the low income range and decreases in the high income range when compared to the income tax.

Finally, Figure 12 compares the personal income tax to a wealth tax that replaces only the personal income tax. Again, the wealth tax does a good job of tracking the income tax, except in the low income and very high income ranges.

FIGURE 7
INCOME TAX VS WEALTH TAX AS PERCENT OF AGI, BY AGI CATEGORY

FIGURE 8
INCOME TAX VS WEALTH TAX AS PERCENT OF AGI, BY AGI CATEGORY

FIGURE 9
INCOME TAX VS WEALTH TAX AS PERCENT OF AGI, BY AGI CATEGORY

FIGURE 10
INCOME TAX VS WEALTH TAX AS PERCENT OF AGI, BY AGI CATEGORY

FIGURE 11
INCOME TAX VS WEALTH TAX AS PERCENT OF AGI, BY AGI CATEGORY

FIGURE 12
INCOME TAX VS WEALTH TAX AS PERCENT OF AGI, BY AGI CATEGORY

IX. CONCLUSION

Our results so far encourage our belief that it is worthwhile to investigate what a flat-rate wealth tax (including an earned income component) might look like in the United States. Whether or not such a tax is ever enacted, a serious consideration of the tax provides insight into the current income tax as well as other potential tax systems.

On an administrative level, we believe that a wealth tax can provide significant simplification. We recognize, however, that there are at least two serious administrative weaknesses to a wealth tax. First, and most obviously, there is the need to value assets and liabilities in order to determine net worth. Second, there is the need to distinguish between a return from capital (which would be tax-free) and a return from labor (which would not be).

As a distributional matter, we are encouraged that, through most of the income range, a flat-rate wealth tax can be at least as progressive (measured against income) as is the current income tax. We would be disturbed by a tax that was significantly less progressive and suspect that there is little political support for a tax that is significantly more progressive. We are troubled, however, by the drop in progressivity in the high income range. We are hopeful that a more detailed examination of the underlying data will allow us to provide a fuller explanation of our reported results.

APPENDIX

ADDITIONAL DESCRIPTION OF THE SCF DATA AND
COMPARISONS WITH SOI DATA.

In this Appendix, we provide additional information on the SCF dataset and comparisons of the SCF dataset and data from SOI.

Figures 13 and 14 show, by AGI category, total net worth and total earned income subject to tax under the base case. Each column in the graphs is divided into primary economic units and non-PEU members.

Figure 15 shows total tax by AGI figures for the personal income tax, the combined personal and corporate income taxes, and the wealth tax (under the base case).

Figure 16 shows a comparison of the number of filing units by AGI categories under different approaches.

The first bar in each set shows the number of filers for the current income tax based on SOI data. The second bar shows the number of primary economic units in the SCF. Where spouses (or partners) in a primary economic unit file separately, the SCF reports their separate AGIs. The third bar uses this data to create separate filing units. Finally, the fourth bar adds in filing units composed [RS: OF?] on non-PEU members.¹⁷³

Figure 17 shows a comparison of the total AGI by adjusted gross income categories. As with Figure 16, the first bar is from SOI data. The second bar includes only primary economic units and treats each primary economic unit as a single filing unit. The third bar divides primary economic units into two filing units when the survey indicates that the spouses (partners) filed separately. Finally, the fourth bar adds in data from non-PEU members.

¹⁷³ None of the bars on the graph corresponds directly to the analysis in the body of the Article. In particular, the main analysis treats the primary economic unit as a single filer, but also treats all non-PEU members in a household as an additional filing unit.

FIGURE 13
TAXABLE NET WORTH BY AGI CATEGORY (BASE CASE)

FIGURE 14
TAXABLE EARNED INCOME BY AGI CATEGORY (BASE CASE)

FIGURE 15
TOTAL TAX BY AGI CATEGORY (BASE CASE)

FIGURE 16
FILING UNITS BY AGI CATEGORY

FIGURE 17
TOTAL ADJUSTED GROSS INCOME BY AGI CATEGORY