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A MINIMALIST APPROACH TO CORPORATE INCOME TAXATION

*Herwig J. Schlunk**

AN ever-shrinking hallmark of our federal income tax system is the apparent double taxation of some, but not all, business income. That is, some business income ultimately flows to the human shareholders of C corporations. These corporations pay corporate income tax on the taxable income they generate. Then, as and when such corporations distribute their after-corporate-income-tax income to their human shareholders (or equivalently, as and when their human shareholders sell their shares in such corporations), the human shareholders pay individual income tax on the amounts so distributed (or equivalently, on their capital gains).

In this paper, I will characterize the subset of business income that is more or less inescapably subjected to apparent double taxation and will defend the propriety of imposing apparent double taxation on such subset. Further, I will characterize the subset of business income that is more or less never subjected to double taxation and will defend the propriety of exempting most of such subset from double taxation. In particular, I will argue that, as a positive matter, the subset of business income that is more or less inescapably subjected to apparent double taxation can be described as all income generated by a small class of self-created intangible assets that I call “ephemeral intangible assets”: a class that includes the very ephemeral goodwill, going concern value and workforce-in-place, as well as the slightly less ephemeral trademarks and trade names. I will also argue that the subset of business income that is more or less never subjected to double taxation can usefully be described as all income generated by all other assets. Then, I will argue that, as a normative matter, there is a defensible reason for the corporate income tax and hence an apparent double tax to be imposed on the income generated by ephemeral intangible assets, and that this same reason applies to other self-created intangible assets as well. I will further argue that there is a defensible reason for double taxation not to be imposed on the income

* Professor of Law, Vanderbilt University Law School. This paper was inspired by, and is both a response to and an elaboration of, a very fine article by Robert Cassanos entitled *Single Taxation of Publicly Traded Entities*, 99 TAX NOTES 1663-1681 (2003). In addition, I would like to thank Mr. Cassanos for helpful comments on an early draft of this paper. I would also like to thank Daniel Shaviro and David Bradford for giving me the opportunity to present a draft of this paper at the New York University School of Law's Colloquium on Tax Policy and Finance.

generated by assets other than self-created intangible assets. Thus, to the extent that the corporate income tax is currently imposed on some income generated by assets other than self-created intangible assets (and it currently is imposed on some such income), the tax law should be amended to repeal such imposition. And, to the extent that the corporate income tax is currently not imposed on some income generated by self-created intangible assets (and it currently is not imposed on some such income), the tax law should be amended to ensure such imposition.

This paper is divided into six sections. The first section contains a simple numerical illustration of the effects of asset taxation: it demonstrates how the imposition of an income tax on the returns generated by a productive asset affects the fair market value of such asset and, as a consequence, the fair market value of the inputs that are used to create such asset. The second section examines certain efficiency consequences of asset taxation. In particular, it contrasts two potential regimes of asset taxation: one in which the income generated by different productive assets is made subject to a wide range of tax rates, and another in which the income generated by different productive assets is made subject to a more narrow range of tax rates. The second section demonstrates that a regime of the former type may well induce taxpayers to behave less efficiently than a regime of the latter type. Because of this it would not be irrational for a government that has enacted a regime for taxing the income generated by productive assets to view favorably all amendments to its regime that have the effect of narrowing the range of tax rates imposed on such income, and to view unfavorably all amendments to its regime that have the effect of widening the range of tax rates imposed on such income.

The third section switches focus from a tax regime that taxes differently the income generated by different productive assets, to a tax regime that taxes differently the income generated by a single productive asset, where such difference is determined by the legal form of the entity that uses and/or owns the asset. The current Federal income tax regime is one such regime: income generated by a productive asset that is either used or owned by a taxable corporation may be subject to both the corporate income tax and the individual income tax; income generated by a productive asset that is neither used nor owned by a taxable corporation is only subject to the individual income tax. In such a regime, a not at all surprising phenomenon can be expected to occur: taxpayers will attempt to use and/or own productive assets in such a way that the most favorable possible tax rules apply to them. Thus, taxpayers have developed ownership structures that allow taxable corporations to use and/or own productive assets but that keep the income generated by such assets out of the reach of the corporate income tax.

The fourth section recognizes a limit on the ability of taxpayers to keep the income generated by productive assets out of the reach of the corporate income tax. In particular, ephemeral intangible assets are frequently incapable of being either used or owned by any taxpayer other than a

taxable corporation. Therefore, it is not generally possible to develop ownership structures that can keep the income generated by ephemeral intangible assets out of the reach of the corporate income tax. The fifth section argues that this is a good thing. It notes that the apparent double taxation of income generated by ephemeral intangible assets is effectively at most single taxation. Thus, such apparent double taxation serves a very useful function: it creates some measure of parity between the taxation of ephemeral intangible assets and the taxation of other productive assets. Or phrased in the language of the second section, the apparent double taxation serves to insure that a more narrow range of tax rates is imposed on productive assets than would be the case if, for example, ephemeral intangible assets could generally be owned outside of taxable corporate solution. (Unfortunately, since self-created intangible assets other than ephemeral intangible assets can generally be owned outside of taxable corporate solution, they are not necessarily similarly subject to beneficial apparent double taxation.)

The sixth section contains some suggestions for policy makers. While the current regime for taxing the income generated by productive assets—a regime that rather rationally imposes a relatively narrow range of tax rates on such income—may be more the product of dumb luck and taxpayer self-help than of sound policy, it is in its effects not an entirely bad regime. Thus, it should not be discarded in favor of a tax regime (such as one featuring complete corporate integration) that would make it easier for taxpayers to achieve the rather extreme effective income tax rate of zero. Rather, the current regime should be amended to better ensure that income generated by productive assets other than self-created intangible assets is as rarely as practicable made subject to double taxation, but that income generated by self-created intangible assets is as often as practicable made subject to double taxation. Such amendments can be incremental, or not. For incrementalists, I offer some obvious suggestions. For example, in the case of productive assets other than intangible assets, Congress and the IRS should tolerate and even encourage the use of taxpayer ownership structures designed to keep the income generated by such assets out of the reach of the corporate income tax. On the other hand, in the case of self-created intangible assets, Congress and the IRS should do everything within their power to prevent the income generated by such assets from escaping the reach of the corporate income tax. For nonincrementalists, I offer an alternative structure for entity income taxation.

I. A SIMPLE NUMERICAL ILLUSTRATION OF THE EFFECTS OF ASSET TAXATION

Suppose that Bubba is a potential owner of a given productive nonfinancial asset. Bubba knows that the asset can only be created by making use of a fixed quantity of real resources: in this case, one year of Sissy's labor. Bubba also knows that the asset, once created, will produce an

annual pre-tax real output of 10 in perpetuity. That is, the asset will produce a fixed amount of an undifferentiated consumer good, called "stuff," and that amount of stuff can be sold at a price of 10.¹ Finally, all relevant markets are competitive: Bubba must compete with other potential owners of productive assets for the right to buy the given asset and Sissy must compete with other potential creators of productive assets for the right to create the given asset. Under these predicates, what determines the amount that Bubba is willing to pay for the asset? One factor that enters into the determination is interest rates. Thus, by fiat, I will set the after-tax market interest rate in my economy equal to 10% (with a flat term structure). A second factor that enters into the determination is the income tax rules that apply to the asset and/or to Bubba as the owner of such asset.

To illustrate, assume that all periodic cash flows generated by the asset are exempt from income taxation in Bubba's hands.² In addition, assume that Bubba is not entitled to any cost recovery (such as depreciation or amortization) prior to the ultimate disposition of the asset. If so, Bubba will be willing to pay 100 for the asset. Moreover, if Bubba turns out to be the marginal owner of the asset, the asset will have a cost (and an initial fair market value) of 100. See Table 1, which illustrates the first five years of the asset's life and includes, as a Year Five pre-tax cash flow, the then residual value (100) of the asset's remaining future pre-tax cash flows.

TABLE 1: TAX-EXEMPT ASSET OWNED DIRECTLY BY
ULTIMATE BENEFICIAL OWNER

Year	Pre-Tax Cash	After-Tax Cash	Discount Rate	Value of Owner Cash
0	(100.00)	(100.00)	1.00	(100.00)
1	10.00	10.00	1.10	9.09
2	10.00	10.00	1.21	8.26
3	10.00	10.00	1.33	7.51
4	10.00	10.00	1.46	6.83
5	110.00	110.00	1.61	68.30
NPV				0.00

Of course, even if Bubba will be the ultimate beneficial owner of the asset, that does not necessarily mean he will be the legal owner of the asset. That is, for a variety of reasons, Bubba may choose or indeed be required to own the asset indirectly. So assume that the asset either must, or in any event will, be legally owned by a taxable corporation. And assume, as before, that the asset's periodic cash flows are exempt from income taxation in the hands of the asset's legal owner, which is now a

1. In economic jargon, this means that Bubba is a "price taker" when it comes to selling the asset's output.

2. Although some municipal bonds are currently subject to a complete tax exemption, I am not aware of any *productive* asset that enjoys such tax treatment. Accordingly, this discussion is purely illustrative.

corporation. But, assume that amounts distributed by such corporation to the asset's beneficial owner, that is, Bubba, are not tax exempt. Rather, these amounts are taxed at a uniform 15% rate.³ Under these assumptions, it follows that Bubba will be willing to pay 85 for the asset. Moreover, if Bubba (through a taxable corporation) turns out to be the marginal owner of the asset, such asset will have a cost (and an initial fair market value) of 85. In tax argot, the income tax imposed on Bubba, the ultimate marginal beneficial owner of the asset, has been capitalized into the cost (or fair market value) of the asset. See Table 2, which illustrates the first five years of the asset's life and includes, as a Year Five pre-tax cash flow, the then residual value (100) of the asset's remaining future pre-tax cash flows.

TABLE 2: TAX-EXEMPT ASSET OWNED BY CORPORATION

Year	Corporate Pre-Tax Cash	Corporate After-Tax Cash	Owner Tax	Owner After-Tax Cash	Discount Rate	Value of Owner Cash
0	(85.00)	(85.00)	0.00	(85.00)	1.00	(85.00)
1	10.00	10.00	(1.50)	8.50	1.10	7.73
2	10.00	10.00	(1.50)	8.50	1.21	7.02
3	10.00	10.00	(1.50)	8.50	1.33	6.39
4	10.00	10.00	(1.50)	8.50	1.46	5.81
5	110.00	110.00	(16.50)	93.50	1.61	58.06
NPV						0.00

Of course, the periodic cash flows generated by most productive assets are not, in the hands of their legal owners, exempt from income taxation. Thus, assume that if Bubba owns the asset, he will be taxed at a 30% rate on the periodic cash flows it generates. In addition, assume that the tax law allows Bubba no depreciation or other cost recovery prior to the asset's disposition.⁴ In this case, Bubba, as the owner of the asset, would report annual taxable income of 10 and would be required to make annual income tax payments of 3 (30% of 10). Such tax payments will reduce the value of the asset in Bubba's hands, and so will depress the price he is willing to pay for it. Indeed, under these assumptions, Bubba will only be willing to pay 70 for the asset. See Table 3.

3. In order to avoid the complexities posed by deferral, I will assume that the same 15% rate applies even to after-tax amounts that the corporation could distribute but chooses to retain. If I relaxed this assumption, Bubba as the beneficial owner of the asset would potentially achieve higher after-tax cash flows than those illustrated in Table 2 and would, as a consequence, be willing to pay more for the asset.

4. For example, the current income tax treatment of land follows this pattern.

TABLE 3: PERIODIC CASH FLOWS TAXED: NO DEPRECIATION ALLOWANCE

Year	Pre-Tax Cash	Tax	After-Tax Cash	Discount Rate	Value of Owner Cash
0	(70.00)	0.00	(70.00)	1.00	(70.00)
1	10.00	(3.00)	7.00	1.10	6.36
2	10.00	(3.00)	7.00	1.21	5.79
3	10.00	(3.00)	7.00	1.33	5.26
4	10.00	(3.00)	7.00	1.46	4.78
5	110.00	(33.00)	77.00	1.61	47.81
NPV					0.00

Not surprisingly, if Bubba either chooses or is required to own the asset indirectly through a taxable corporation, the amount he is willing to pay will be further depressed. Thus, suppose that taxable corporations pay tax at a marginal rate of 30% on the taxable income generated by the asset, and that Bubba must additionally pay tax at a 15% rate on the after-corporate-income-tax amounts distributed to him. In such case, Bubba will only be willing to pay 59.50 for the asset. See Table 4.

TABLE 4: CORPORATE OWNERSHIP OF ASSET: PERIODIC CASH FLOWS TAXED; NO DEPRECIATION ALLOWANCE

Year	Corporate Pre-Tax Cash	Corporate Tax	Corporate After-Tax Cash	Owner Tax	Owner After-Tax Cash	Discount Rate	Value of Owner Cash
0	(59.50)	0.00	(59.50)	0.00	(59.50)	1.00	(59.50)
1	10.00	(3.00)	7.00	(1.05)	5.95	1.10	5.41
2	10.00	(3.00)	7.00	(1.05)	5.95	1.21	4.92
3	10.00	(3.00)	7.00	(1.05)	5.95	1.33	4.47
4	10.00	(3.00)	7.00	(1.05)	5.95	1.46	4.06
5	110.00	(33.00)	77.00	(11.55)	65.45	1.61	40.64
NPV							0.00

The availability of cost recovery allowances, such as depreciation deductions, will affect the amount that Bubba is willing to pay for the asset. To see this, assume that an amount spent to purchase the asset can be recovered through five-year straight-line depreciation.⁵ Maintaining the assumption that Bubba faces a 30% income tax rate, and adding the assumption that the income tax is refundable (or equivalently, that Bubba has sufficient taxable income from sources other than the asset to be able to make current use of any taxable loss created by the depreciation deductions), Bubba will be willing to pay 90.61 for the asset. See Table 5.

5. It is worth noting that the asset illustrated in the text does not, in an economic sense, depreciate. Thus, any depreciation allowance, including in particular the five-year straight-line depreciation allowance in the illustration, is so-called "accelerated depreciation." Current tax law provides for a myriad of different types of accelerated depreciation.

TABLE 5: ACCELERATED DEPRECIATION

Year	Pre-Tax Cash	Tax	After-Tax Cash	Discount Rate	Value of Owner Cash
0	(90.61)	0.00	(90.61)	1.00	(90.61)
1	10.00	2.44	12.44	1.10	11.31
2	10.00	2.44	12.44	1.21	10.28
3	10.00	2.44	12.44	1.33	9.34
4	10.00	2.44	12.44	1.46	8.49
5	110.00	(27.56)	82.44	1.61	51.19
NPV					0.00

On the other hand, if Bubba either chooses or is required to own the asset indirectly through a taxable corporation, he will only be willing to spend 73.76 on its purchase. See Table 6.⁶

TABLE 6: CORPORATE OWNERSHIP;
ACCELERATED DEPRECIATION

Year	Corporate Pre-Tax Cash	Corporate Tax	Corporate After-Tax Cash	Owner Tax	Owner After-Tax Cash	Discount Rate	Value of Owner Cash
0	(73.76)	0.00	(73.76)	0.00	(73.76)	1.00	(73.76)
1	10.00	1.43	11.43	(1.72)	9.71	1.10	8.83
2	10.00	1.43	11.43	(1.72)	9.71	1.21	8.03
3	10.00	1.43	11.43	(1.72)	9.71	1.33	7.30
4	10.00	1.43	11.43	(1.72)	9.71	1.46	6.63
5	110.00	(28.57)	81.43	(12.22)	69.21	1.61	42.98
NPV							0.00

Finally, consider the fastest of all modes of accelerated depreciation. Thus, assume that the tax code allows the entire cost of creating or acquiring the asset to be immediately deducted.⁷ Again, assume that Bubba is able to make use of the tax loss created by such deduction, and so is able to turn such tax loss into immediate cash in the form of a tax refund. Under this assumption, Bubba will once again be willing to pay 100 for the asset, which is not surprising given the well-known congruence of immediate deductibility and tax exempt returns. See Table 7.

6. In order to generate Table 6, I made two additional assumptions. First, although the corporation has no taxable income in the first four years (the depreciation allowance for the asset exceeds the cash generated by the asset), I assumed that the amounts distributed by the corporation are fully subject to tax at Bubba's 15% rate. This would occur if the corporation has taxable income from sources other than the asset. Second, I assumed that Bubba does not annually realize any part of the loss he experiences with respect to his corporate equity. That is, under my assumptions, the value of Bubba's equity will predictably fall from 73.76 to 59.50 over the course of the five-year period, a fact that would lead an astute shareholder to attempt to annually sell and repurchase his shares, thus realizing a potentially useful taxable loss. (The wash sales rules would, of course, prevent Bubba from recognizing his losses in any too direct way.) Note that the net effect of each of these assumptions is to depress the amount of after-tax cash generated by the asset. Thus, in the absence of these assumptions, Bubba would be willing to pay somewhat more than 73.76.

7. As will be discussed *infra*, ephemeral intangible assets are generally taxed in this manner.

TABLE 7: COST OF ASSET SUBJECT TO IMMEDIATE EXPENSING

Year	Pre-Tax Cash	Tax	After-Tax Cash	Discount Rate	Value of Owner Cash
0	(100.00)	30.00	(70.00)	1.00	(70.00)
1	10.00	(3.00)	7.00	1.10	6.36
2	10.00	(3.00)	7.00	1.21	5.79
3	10.00	(3.00)	7.00	1.33	5.26
4	10.00	(3.00)	7.00	1.46	4.78
5	110.00	(33.00)	77.00	1.61	47.81
NPV					0.00

Not surprisingly, if Bubba either chooses or is required to own the asset indirectly through a taxable corporation, he will be willing to pay only 85. See Table 8.

TABLE 8: CORPORATE OWNERSHIP OF ASSET SUBJECT TO IMMEDIATE EXPENSING

Year	Corporate Pre-Tax Cash	Corporate Tax	Corporate After-Tax Cash	Owner Tax	Owner After-Tax Cash	Discount Rate	Value of Owner Cash
0	(85.00)	25.50	(59.50)	0.00	(59.50)	1.00	(59.50)
1	10.00	(3.00)	7.00	(1.05)	5.95	1.10	5.41
2	10.00	(3.00)	7.00	(1.05)	5.95	1.21	4.92
3	10.00	(3.00)	7.00	(1.05)	5.95	1.33	4.47
4	10.00	(3.00)	7.00	(1.05)	5.95	1.46	4.06
5	110.00	(33.00)	77.00	(11.55)	65.45	1.61	40.64
NPV							0.00

What do these results tell us? To evaluate them, it is important to remember that each of the "various" assets described above is economically identical and, indeed, could be nothing more than a possible incarnation of a single asset, differentiated from every other incarnation solely by the applicable tax rules. Thus, *the entire difference* in the amounts that Bubba is willing to pay for these assets and hence, provided that Bubba is directly or indirectly the marginal owner of these assets, in the cost and initial fair market value of these assets is a result of the tax rules that are applied to them.

Moreover, the ultimate fair market value of the given asset simply reflects the asset-specific allocation of its real output—its social value—between the government and its non-governmental beneficial owners. To illustrate, note that in every case, the social value of the asset, given my assumption of 10% after-tax market interest rates, is exactly 100. If the real output generated by the asset is exempt from income tax, it should be intuitively clear that the government shares not one whit in the asset's social value. Thus, not surprisingly, Table 1 illustrates that such asset will have a fair market value of 100; the asset's entire social value accrues to non-governmental beneficial owners. If, on the other hand, the real output generated by the asset is uniformly taxed at a 15% rate, it should be

intuitively clear that the government has allocated to itself 15% of the asset's social value. Indeed, Table 2 confirms that such an asset will have a fair market value of 85. That is, when 15% of the asset's social value of 100 is allocated to the government, exactly 85 remains to non-governmental beneficial owners. (Table 3 repeats this analysis with a uniform 30% income tax rate; Table 4 repeats it with a uniform 40.5% income tax rate.)

When allowances for accelerated depreciation enter into the analysis, the exact allocation of an asset's social value between the government and its non-governmental beneficial owners generally ceases to be intuitively obvious. Nonetheless, such an allocation continues to exist. Moreover, as illustrated in Tables 5, 6, 7, and 8, the actual allocation continues to exhibit some features that comport with intuition. Thus, the fraction of the social value of a given asset that is allocated to the government is never negative, at least so long as the allowance for depreciation does not exceed the actual cost of the asset. (In the limit, when the entire cost of the asset is immediately deducted, the fraction of the social value allocated to the government is zero. See Table 7.) In addition, the fraction of the social value of a given asset that is allocated to the government can never exceed the nominal tax rate effectively imposed on the marginal beneficial owner of the asset. (In the limit, when the degree of acceleration of the depreciation slows down to zero, the fraction of the social value allocated to the government is exactly the effective nominal tax rate of the marginal beneficial owner of the asset. See Tables 2, 3 and 4.) Finally, the fraction of the social value of a given asset that is allocated to the government falls as the degree of acceleration of depreciation increases. Compare, for example, Tables 3, 5, and 7.

II. THE CONSEQUENCES OF DIFFERENTIAL ASSET TAXATION

What implications does the foregoing have for tax policy? From a societal standpoint, none of these "various" assets is any better or any worse than any other. That is, each asset generates exactly the same real output without otherwise increasing or decreasing the society's store of productive resources. Thus, one might conclude that a government which has the maximization of real output as its primary objective would have no reason to prefer one tax treatment to another. It could simply announce a possibly asset-specific tax rule for every asset. The announcement would lead to an instantaneous one-time adjustment to the fair market value of every asset. This adjustment would capitalize the effect of the tax rule applicable to such asset. Concomitantly, the announcement would lead to an instantaneous one-time adjustment to the wage that any given laborer could charge for one year of her labor. If all went well, in spite of such one-time adjustments, the asset would continue to be created and productively employed, and so would continue to generate the same real output it would have generated absent the government's announcement. Of course, the allocation of social wealth would generally

be altered (in particular, the shares of the government and of the various laborers would change), but the aggregate level of social wealth would not be. All in all, this is a reasonably happy story.

Unfortunately, it is not a terribly realistic one. Not all societal resources are used to create assets that produce output for extended periods of time. That is, some or even most societal resources are used to create goods that are immediately consumed. Thus, in keeping with the numbers used in my illustrations, suppose that Sissy's labor could be used to create not only the productive asset in question, but also a consumption good with an identical social value of 100. Under this assumption, and again assuming a competitive market, Bubba, who is a potential buyer of Sissy's labor and who intends to use such labor to create the consumption good, will pay Sissy a wage of 100. Why?

Following the methodology used in Section 1, Bubba will pay an amount for Sissy's labor equal to the net present value of all of the after-tax cash directly or indirectly generated by the consumption good Sissy creates. This after-tax cash consists of two components: the after-tax sales proceeds Bubba will realize upon selling the good to an ultimate consumer, and the tax savings Bubba will realize by virtue of any cost recovery deductions he receives with respect to his payment to Sissy. By hypothesis, Bubba's sale of the good generates a single immediate pre-tax cash flow of 100, which for income tax purposes is a fully taxable gross receipt. If Bubba is assumed to pay tax at a 30% marginal rate, the net present value of this cash flow is 70. It follows that Bubba will pay 100 to Sissy if, and only if, such entire payment is immediately deductible. Only in that case will Bubba's cost recovery deductions generate tax savings with the requisite net present value of exactly 30. Fortunately, under current tax rules, Bubba's entire payment to Sissy is indeed immediately deductible, either as an ordinary and necessary compensation expense or as the cost of goods sold. Thus, as advertised, Bubba will pay Sissy a wage of 100.

Of course, this means that Sissy will prefer having her labor used to create the consumption good rather than the productive asset, unless the tax treatment afforded to the productive asset is one—such as the one illustrated in Table 1 or Table 7—that denies any participation by the government in the social value of such asset.⁸ Consequently, a positive amount of participation by the government in productive assets will, all else being equal, affect the margin between consumption and savings/investment (that is, the creation of productive assets). For example, if Sissy's labor can create either a consumption good with a social value of

8. Note that the government will still garner revenue from the mere fact of the asset/good's creation, even though it does not "participate" in the social value of the asset/good itself. The reason is that the wages paid to Sissy to create the asset/good are fully taxable (since Sissy has no tax basis in her human capital). The question at hand is not this revenue, which the government will get no matter how Sissy's human capital is employed. The question at hand is whether the government *additionally* participates in the social value of the asset/good.

95 or a productive asset with a social value of 100, but an initial fair market value of 90.61 (because the tax rules illustrated in Table 5 apply), she will choose the former. This choice results in a real decline in social well-being: a social value of 95 is created when a social value of 100 is possible. Obviously, such an inefficient allocation of societal resources—in this case Sissy's labor—is not a good thing. But it is not a surprising thing either: it is well-known that an income tax (as opposed to a consumption tax) promotes consumption at the expense of savings/investment.

Unfortunately, an inefficient allocation of societal resources can occur even when Sissy's labor will be used to create a productive asset, irrespective of the tax rules that are applied to the income produced by various productive assets. For example, suppose that Sissy's talents are such that her labor cannot be used to create any consumption good at all. In this case, it is nonetheless possible that Sissy would substitute the creation of a socially inferior, but privately superior, productive asset for the creation of a socially superior, but privately inferior, one. Indeed, suppose that Sissy can create either an asset with a social value of 95, which is taxed according to the rules set forth in Table 1 (that is, the returns generated by the asset are tax exempt), or an asset with a social value of 100, which is taxed according to the rules set forth in Table 5 (that is, the asset is subject to five-year straight-line depreciation). If Sissy creates the former asset, she will be paid a wage of 95; if she creates the latter, she will be paid a wage of only 90.61. All else being equal, she will choose to create the former. Thus, once again there is an inefficient allocation of societal resources. This inefficiency results from the mere existence of tax rules that impose different effective tax rates on the income generated by different productive assets.

In general, the potential social loss due to any given laborer's preference (as illustrated in the case of Sissy above) for creating productive assets that are subject to the lowest possible effective income tax rates is greatest when there is a widely varying range of possible effective income tax rates. Thus, suppose that Sissy can create either of two productive assets: the first with a social value of 60 is subject to the tax rules set forth in Table 1; the second with a social value of 100 is subject to the tax rules set forth in Table 4. Under these predicates, Sissy will earn a wage of 60 if she creates the first asset, and a wage of 59.50 if she creates the second. Thus, she will create the first asset, at a private gain of 0.50 and a social loss of 40. On the other hand, if the range of effective income tax rates were slightly smaller, Sissy would not find it in her self-interest to substitute the socially inferior asset for the socially superior asset. Hence, the social loss would disappear entirely.

What is true for a single laborer may well also be true for laborers in the aggregate. Consider the following simulation. Suppose an economy consists of 375 laborers, each of whom can create only productive assets. Suppose that each laborer can create exactly two different such assets. And, suppose that all productive assets have social values of 100, 90, 80,

70, or 60. To create a uniform distribution of laborers, suppose that twenty-five laborers have the skills required to create either one asset which has a social value of 100 or a second asset which also has a social value of 100; twenty-five laborers have the skills required to create either one asset that has a social value of 100 or a second asset that has a social value of 90; twenty-five laborers have the skills required to create either one asset that has a social value of 100 or a second asset that has a social value of 80; and so on. (There are fifteen possible combinations of asset values in all.) Thus, the maximum possible amount of social value that can be created is 32,500. This amount will be created if each and every one of the 125 laborers who is capable of creating an asset with a social value of 100 chooses to do so; and if each and every one of the 100 laborers who is not capable of creating an asset with a social value of 100 but who is capable of creating an asset with a social value of 90 chooses to do so; and so on.

Now suppose that the returns generated by productive assets are taxed at one of five possible effective tax rates: 0%, 10%, 20%, 30%, and 40%. Suppose further that such effective tax rates are spread uniformly across the 375 laborers. For example, of the twenty-five laborers who have the skills required to create either an asset that has a social value of 100 or an asset that has a social value of 90, one laborer faces a tax rate of 0% with respect to the asset that has a social value of 100 and a tax rate of 0% with respect to the asset that has a social value of 90, one laborer faces a tax rate of 0% with respect to the asset that has a social value of 100 and a tax rate of 10% with respect to the asset that has a social value of 90, and so on. (There are twenty-five possible combinations.) Table 9 illustrates the choices that will be made by the twenty-five laborers who have the skills required to create either an asset that has a social value of 100 or an asset that has a social value of 90. As can be seen, ten of these laborers either will or potentially will⁹ choose to create an asset that is socially inefficient. Such inefficient choices will result in an aggregate social loss of 95.

9. It turns out that one laborer will be indifferent between the two assets. Accordingly, I assume there is a 50% chance that she chooses the one and a 50% chance that she chooses the other. From this it follows that the social value she creates is 95, rather than either 90 or 100.

TABLE 9: INEFFICIENT CHOICES UNDER WIDELY VARYING TAX RATES (100/90)

			Private Value of Asset with Social Value of 90				
			0% tax	10% tax	20% tax	30% tax	40% tax
			90	81	72	63	54
Private Value of Asset	0% tax	100	100	100	100	100	100
	10% tax	90	95	100	100	100	100
with Social Value of 100	20% tax	80	90	90	100	100	100
	30% tax	70	90	90	90	100	100
	40% tax	60	90	90	90	90	100

Of course, an identical table can be generated for all fifteen sets of twenty-five laborers. The summary of such tables is presented in Table 10. Note that fifty-five laborers either will or potentially will make inefficient choices under this tax rate structure, and that the aggregate social loss from such inefficient choices is 730.

TABLE 10: AGGREGATE INEFFICIENT CHOICES UNDER WIDELY VARYING TAX RATES

Possible Assets	Bad Choices	Social Loss
100 and 100	0	0
100 and 90	10	95
100 and 80	6	110
100 and 70	3	75
100 and 60	1	20
90 and 90	0	0
90 and 80	9	85
90 and 70	5	90
90 and 60	2	45
80 and 80	0	0
80 and 70	8	75
80 and 60	4	70
70 and 70	0	0
70 and 60	7	65
60 and 60	0	0
Total	55	730

Suppose now that the government narrows the set of possible effective income tax rates that are applied to productive assets. Thus, any asset that had been taxed at a 0% effective rate will henceforth be taxed instead at a 10% effective rate, and any asset that had been taxed at a 40% effective rate will henceforth be taxed instead at a 30% effective rate. I assume that the 375 laborers have exactly the same opportunity sets as before, except to the extent that such opportunity sets are impacted by the altered tax regime. Table 11 illustrates the choices that will be made by the twenty-five laborers who have the skills required to create either an asset that has a social value of 100 or an asset that has a social value of 90. As can be seen, eight of these laborers will continue to choose to

create an asset that is socially inefficient. And the aggregate social loss resulting from such inefficient choices will be 80.

TABLE 11: INEFFICIENT CHOICES UNDER NARROWLY VARYING TAX RATES (100/90)

			Private Value of Asset with Social Value of 90				
			10% tax	10% tax	20% tax	30% tax	30% tax
			81	81	72	63	63
Private Value of Asset	10% tax	90	100	100	100	100	100
	10% tax	90	100	100	100	100	100
with	20% tax	80	90	90	100	100	100
	30% tax	70	90	90	90	100	100
Social Value of 100	30% tax	70	90	90	90	100	100

Again, an identical table can be generated for all fifteen sets of twenty-five laborers. The summary of such tables is presented in Table 12. Only thirty laborers will or potentially will make inefficient choices under the modified tax rate structure, and the aggregate social loss from such inefficient choices will fall by approximately 50%, to 360.

TABLE 12: AGGREGATE INEFFICIENT CHOICES UNDER NARROWLY VARYING TAX RATES

Possible Assets	Bad Choices	Social Loss
100 and 100	0	0
100 and 90	8	80
100 and 80	0	80
100 and 70	0	0
100 and 60	0	0
90 and 90	0	0
90 and 80	8	70
90 and 70	4	40
90 and 60	0	0
80 and 80	0	0
80 and 70	6	50
80 and 60	0	0
70 and 70	0	0
70 and 60	4	40
60 and 60	0	0
Total	30	360

While this simulation supports the proposition that applying a narrowly varying range of effective tax rates to productive assets may well lead to fewer inefficient choices than applying a widely varying range of rates, it does not prove that it must be so. The benefit that was achieved by narrowing the range of possible effective tax rates was that fewer laborers found it in their self-interest to substitute the creation of a socially inferior productive asset for the creation of a socially superior productive asset. This result is robust so long as this kind of substitution is the only

possible kind. But as I have already noted, it is not. Some laborers will be able to substitute the creation of a consumption good for the creation of a productive asset. Thus, the elimination of the 0% effective tax rate with respect to certain productive assets will induce some laborers to substitute the creation of a socially inferior consumption good for the creation of a socially superior productive asset. On the other hand, the elimination of the 40% effective tax rate with respect to certain productive assets will induce some laborers to substitute the creation of a socially superior productive asset for the creation of a socially inferior consumption good.

It is hard to predict the net effect of these offsetting substitutions. To run a simulation along the same basic lines of the one above, assume that there are 125 laborers, each of whom can create either a single productive asset or a single consumption good. Assume that productive assets have social values of 100, 90, 80, 70, or 60, and that consumption goods likewise have social values of 100, 90, 80, 70, or 60. Assume that exactly five laborers have the skills required to create either a productive asset with a social value of 100 or a consumption good with a social value of 100; that exactly five have the skills required to create either a productive asset with a social value of 100 or a consumption good with a social value of 90; and so on. Finally, assume that productive assets are initially burdened with effective tax rates of 0%, 10%, 20%, 30%, or 40%, and that these rates are spread uniformly across the laborers under consideration. Under these assumptions, twenty-four laborers either will or potentially will make socially inefficient choices (uniformly, choosing to create an untaxed consumption good when a socially superior, albeit taxed, productive asset could have been created), which inefficient choices will lead to an aggregate social loss of 350. See Table 13. In that table, the vertical axis shows the potential productive asset and the horizontal axis shows the potential consumption asset that can be created by given sets of five laborers; the inner boxes then report how many of such laborers either make or potentially make socially inefficient choices and what the aggregate social loss resulting from such inefficient choices will be.

TABLE 13: INEFFICIENT CHOICES BETWEEN PRODUCTIVE ASSETS AND CONSUMPTION GOODS UNDER WIDELY VARYING TAX RATES

		Social Value of Possible Consumption Good				
		100	90	80	70	60
Social Value	100	0 for 0	4 for 35	3 for 50	2 for 45	1 for 20
	90	0 for 0	0 for 0	3 for 30	2 for 40	1 for 30
Of Possible	80	0 for 0	0 for 0	0 for 0	3 for 30	2 for 40
Productive	70	0 for 0	0 for 0	0 for 0	0 for 0	3 for 30
Asset	60	0 for 0	0 for 0	0 for 0	0 for 0	0 for 0

Now suppose that the government narrows the set of possible effective tax rates applied to productive assets. Thus, any asset that has been taxed

at a 0% effective rate will henceforth be taxed instead at a 10% effective rate, and any asset that has been taxed at a 40% effective rate will henceforth be taxed instead at a 30% effective rate. I assume that the 125 laborers have exactly the same opportunity sets as before, except to the extent that such opportunity sets are impacted by the altered tax regime. Only one laborer who previously made a socially efficient choice now potentially makes a socially inefficient choice: this laborer previously created an untaxed productive asset with a social value of 100, but is now indifferent (since such asset is taxed at a 10% effective rate) between creating such asset and creating an alternative consumption good with a social value of 90. On the other hand, three laborers who previously either made or potentially made socially inefficient choices now either make or potentially make socially efficient choices. For example, one laborer was previously indifferent between creating a productive asset with a social value of 100 but subject to a 40% effective tax rate and creating a consumption good with a social value of 60. This laborer, when confronted with merely a 30% effective tax rate, clearly prefers to create the socially efficient productive asset. See Table 14, which summarizes the simulation. Twenty-three laborers either will or potentially will make inefficient choices, and the aggregate social loss from such choices is 290.

TABLE 14: INEFFICIENT CHOICES BETWEEN PRODUCTIVE ASSETS AND CONSUMPTION GOODS UNDER NARROWLY VARYING TAX RATES

		Social Value of Possible Consumption Good				
		100	90	80	70	60
Social Value	100	0 for 0	5 for 40	3 for 50	2 for 30	0 for 0
	90	0 for 0	0 for 0	3 for 30	2 for 40	0 for 0
of Possible	80	0 for 0	0 for 0	0 for 0	3 for 30	2 for 40
Productive	70	0 for 0	0 for 0	0 for 0	0 for 0	3 for 30
Asset	60	0 for 0	0 for 0	0 for 0	0 for 0	0 for 0

Thus, under my predicates, a government that narrowed the range of effective tax rates that it applied to the income generated by productive assets would see a benefit in the form of an increased amount of efficient taxpayer behavior, not just on the part of taxpayers who were constrained to create only productive assets, but even on the part of taxpayers who were capable of creating either productive assets or consumption goods. Of course, this demonstration is not proof that every narrowing of the range of effective tax rates applied to productive assets must inevitably lead to efficiency gains; pathological fact patterns could be devised where the opposite is true. Nonetheless, it does provide support for the proposition that a government could and, in the absence of conflicting data, should choose to impose a relatively narrow range of effective tax rates on the income generated by productive assets.

Indeed, there is a second reason for a government to make such choice: the imposition of widely varying effective tax rates on the income gener-

ated by various productive assets can have detrimental consequences above and beyond the inefficient behavior so far described. In particular, Bubba, the purchaser of the productive asset created by Sissy, may find it in his interest to change, dispute, or perhaps even misrepresent the tax character of such asset in order to garner a lower effective income tax rate. For example, suppose that productive assets are burdened with effective tax rates ranging from 0% to 40%. And suppose that the asset that Sissy creates is, or at least is generally believed to be, an asset that is subject to a 40% effective tax rate. If such asset has a social value of 100, it follows that Bubba will pay Sissy a wage of exactly 60 to create such asset (or, in the alternative, will acquire such asset from Sissy for a purchase price of exactly 60 after Sissy has created such asset). That is, the entire burden of the 40% effective tax rate is imposed on Sissy; Bubba simply adjusts the wage or purchase price he pays to insure himself of a 10% after-tax return.

However, once Bubba owns the asset, he has an opportunity to increase his return by generating a small windfall. In the best possible case, he might assert that the asset is not in fact one of the type that makes it subject to a 40% effective tax rate, but rather one that is of the type that makes it subject to a 0% effective tax rate. If Bubba can sustain this assertion, then the asset he purchased for 60 magically mutates in his hands to an asset with a value of 100.¹⁰ Moreover, this potential windfall may induce Bubba to expend real resources to help insure that he can sustain his assertion. For example, he may expend real resources to actually change the character of the asset. Or he may expend real resources hiring accountants and lawyers to create and defend clever arguments as to why the asset's character really is one that qualifies it for a 0% effective tax rate. And so on. If, as I assume to be the case, none of these expenditures affects the real output generated by the asset, it follows that all of these expenditures are socially wasteful.

In the limit, if Bubba is confronted by a potential windfall of 40, he will be willing to waste up to 40 of real resources in his effort to secure such windfall. Similarly, whatever the size of the potential windfall, Bubba will be willing to waste real resources up to such amount in his effort to secure the windfall. In particular, if Bubba is confronted by a smaller potential windfall, he will be willing to waste a smaller amount of real resources. Since any narrowing of the range of effective tax rates imposed on productive assets will inevitably decrease the size of Bubba's potential windfall, it follows that a mere narrowing of such range will generally lead him to waste smaller amounts of real resources in his recharacterization efforts. And that, without more, is a good thing.

10. It is possible to view Bubba's windfall as coming either at the expense of the government or at the expense of Sissy.

III. KEEPING INCOME OUT OF TAXABLE CORPORATE SOLUTION

One particular rule that, in part, determines how income generated by some productive assets is taxed can and inevitably will have a significant "behavioral" effect in addition to the ones set forth in the preceding section. This is the rule that imposes a corporate income tax on certain income earned by a taxable corporation. Thus, suppose that Sissy can create an asset with the economic characteristics discussed in Section 1. As can be seen from Tables 1 and 2, if such asset generates income that is tax-exempt, Sissy will earn a higher wage or equivalently will be able to sell her asset for a higher price—in either case 100, rather than 85—by creating such asset for or selling such asset to any taxpayer other than an equity-funded taxable corporation. And as can be seen from Tables 3 and 4, if such asset generates income that is fully taxable, Sissy will earn a higher wage or will be able to sell her asset for a higher price—in either case 70, rather than 59.50—by creating such asset for or selling such asset to any taxpayer other than an equity-funded taxable corporation. And so on. In each and every case Sissy will earn a higher wage or will be able to sell her asset for a higher price by creating the given productive asset for, or by selling the given productive asset to, any taxpayer other than an equity-funded taxable corporation. It follows that an equity-funded taxable corporate potential purchaser/user of such asset will not be able to purchase/use it unless either (1) there is no potential purchaser/user of such asset that is not an equity-funded taxable corporation, or (2) if there is a potential purchaser/user of such asset that is not an equity-funded taxable corporation, the equity-funded taxable corporate potential purchaser/user can find a way to pay for its purchase/use of such asset without resorting to equity funding. While Section 4 will demonstrate that the first of these conditions applies to certain assets, it does not apply in general. Fortunately, in most cases where the first condition does not apply, the second condition does. That is, an equity-funded taxable corporate potential purchaser/user of Sissy's asset will generally have little difficulty finding a way to pay for its purchase/use of such asset without resorting to equity funding.

For example, suppose that Sissy's asset is subject to the tax rules illustrated in Tables 3 and 4. And suppose that Bubba Co., an equity-funded taxable corporate potential purchaser/user of the asset is interested not so much in having legal title to such asset but rather in being able to use such asset in its business. Bubba Co. must find a way to pay Sissy 70, or in any event the equivalent of 70, in order to successfully compete with a potential purchaser/user of such asset that is not an equity-funded taxable corporation. I assume without loss of generality that Sissy is willing to accept an income stream that has a net present value of 70, in lieu of a

single cash payment of 70.¹¹ If so, Bubba Co. can accomplish its goal of being able to use the asset by leasing the asset from Sissy. Since the asset generates for its user fully taxable cash flows of 10 per annum, Bubba Co. as the user of the asset will be able to afford to make fully deductible lease payments in any amount up to 10 per annum. Moreover, since lease payments in any lesser amount will not provide Sissy with an income stream of the requisite net present value, it follows that Bubba Co. will be required to make lease payments of exactly 10 per annum. Note that this lease agreement ensures that all income that is generated by Sissy's asset will stay safely out of the reach of the corporate income tax, notwithstanding the fact that Bubba Co., a taxable corporation, makes use of such asset in its business.

Would anything change if Bubba Co. cared not only about being able to make use of Sissy's asset in its business, but also about having legal title to such asset? Suppose Bubba Co. believes that the limitations placed on its use of the asset in a purchase agreement will be less onerous than the limitations placed on its use of the asset in a lease agreement. While this would surely be a rational belief if Bubba Co. used equity financing to purchase the asset, it may or may not be a rational belief if Bubba Co. uses debt financing. And as already noted, Bubba Co. must use debt or debit-like financing, because equity financing will permit it to pay no more than an insufficient amount—59.50—for the asset. Fortunately, Bubba Co. can pay the required 70 if it resorts to debt financing. I assume without loss of generality that Sissy is willing to accept, in lieu of a single cash payment of 70, a note that has a net present value of 70.¹² If so, Bubba Co. will offer and Sissy will accept a note that has a principal amount of 70 (payable in the infinite future) and that pays annual interest at a rate of 14.29% or, equivalently, in the amount of 10 per annum. Bubba Co. will be able to afford to make such fully deductible interest payments because, as the owner and user of the asset, it will receive the asset's fully taxable cash flows of 10 per annum. Moreover, Bubba Co. will be required to make such payments because payments in any lesser amounts will not provide Sissy with a note of the requisite net present value. Importantly, the illustrated debt-financed purchase of Sissy's asset allows Bubba Co., a taxable corporation, both to own such asset and to make use of such asset in its business, but ensures that all income that is generated by such asset will stay safely out of the reach of the corporate income tax.

11. If not, Bubba Co. must find an investor, Sassy, who has 70 of cash available for investment and who is willing to exchange such cash for an income stream that has a net present value of 70. Bubba Co. must then persuade Sassy to buy the asset from Sissy in exchange for 70 of cash, and to allow Bubba Co. to use the asset in exchange for an income stream that has a net present value of 70.

12. If not, Bubba Co. must find an investor, Sassy, who has 70 of cash available for investment and who is willing to use such cash to purchase a note with a net present value of 70. Bubba Co. must then persuade Sassy to buy the asset from Sissy in exchange for 70 of cash, and to sell the asset to Bubba Co. in exchange for a note with a net present value of 70.

Would anything change if the asset that Sissy creates is not the asset illustrated in Tables 3 and 4, but is rather the asset illustrated in Tables 5 and 6? That is, the asset still produces fully taxable cash flows of 10 per annum, but now is subject to an allowance for depreciation as well. Under these predicates, Bubba Co., a taxable corporate potential purchaser of the asset, would not be able to successfully compete with potential purchasers of the asset that are not taxable corporations unless it were able to pay a purchase price of 90.61. Can it structure a note of such net present value for Sissy? The answer, again, is yes, provided only that Bubba Co. has taxable income from sources other than the given asset that it can offset with the various deductions that will flow from its purchase of the asset. Specifically, Bubba Co. will offer and Sissy will accept a note that has an initial principal amount of 90.61, that pays interest at an annual 14.29% rate, and that is partially self-amortizing during the first five years so that the remaining principal amount after five years is 70. Assuming that Bubba Co. purchases the asset with such a note, Bubba Co.'s income tax return during the first year in which it owns the asset will include three items related to its purchase: (1) a fully taxable cash flow of 10 generated by Bubba Co.'s use of the asset; (2) a fully deductible depreciation allowance of 18.12 (based on five-year straight-line depreciation of the purchase price of 90.61); and (3) a fully deductible interest expense of 12.94 (based on 14.29% interest payable on a principle amount of 90.61). Thus, Bubba Co. will return a net taxable loss of 21.06, which will entitle it to reduce its tax payments by an aggregate amount of 6.32 (based on its 30% tax rate). When the dust settles, Bubba Co. will have generated 3.38 of after-tax cash (10 from its use of the asset and 6.32 from its tax savings, less 12.94 of interest paid), which it will use to retire a like amount of Sissy's note. Meanwhile, Sissy will receive a fully taxable interest payment of 12.94, resulting in 9.06 of after-tax cash (given her 30% tax rate), as well as a tax-free return of capital of 3.38, for a net of 12.44 of after-tax cash, exactly the amount required. See Table 5. And this happy story will repeat itself in subsequent years.

Thus, once again, Bubba Co., a taxable corporation, is able both to own and to make use of Sissy's asset in its business without thereby causing any income generated by such asset to be subject to the corporate income tax.¹³

13. This is not quite true. As the owner of the asset, Bubba Co. is sitting on a sort of ticking time bomb. After five years have elapsed, it owns an asset with a tax basis of 0 and a fair market value of 90.61 (this value results since, if the asset were sold, the purchaser would once again be entitled to five-year straight-line depreciation). Thus, if Bubba Co. sold the asset, it would be required to pay a tax bill of 27.18 (30% tax rate imposed on a gain of 90.61) and would be left with 63.43 of after-tax proceeds, an insufficient amount to retire the 70 outstanding on its acquisition indebtedness. To be sure, Bubba Co. appears to have no reason to sell this asset. After all, it would need to spend an after-tax amount of 70 to buy an alternative asset that produces fully taxable cash flows of 10 per annum and is not subject to any allowance for depreciation. See Tbl. 3. These are precisely the characteristics that Sissy's asset will have after five years have elapsed. Still, Bubba Co. might be "economically compelled" to sell such asset. For example, Bubba Co. may decide to exit the line of business for which it acquired the asset, or it may otherwise no longer be an

But there is a potential fly in the ointment. Whenever a productive asset enters corporate solution, whether by purchase or lease, extreme care, above and beyond what has so far been illustrated, must be taken to ensure that there is absolutely no possibility of corporate taxable gain or loss. The reason is that not every (indeed, not any) productive asset looks like the asset I described in Section 1, since real-world productive assets generate cash flows that are subject to at least some measure of uncertainty. This uncertainty will cause a careless corporate owner or lessee of a typical productive asset to experience taxable gain or loss with respect to its ownership either of the asset itself or of a leasehold interest in the asset.

To illustrate, suppose without loss of generality that Sissy's asset is a nondepreciable asset that will generate, with equal probability, either fully taxable cash flows of 0 per annum or fully taxable cash flows of 20 per annum. For the sake of simplicity and also without loss of generality, suppose that human beings are risk neutral. If so, Sissy's asset will have an initial fair market value of 70. See Table 3. Accordingly, Bubba Co. can enter into a purchase agreement pursuant to which it purchases Sissy's asset in exchange for a note that has a principal amount of 70 (payable in the far future) and that promises to pay interest at a rate of 14.29% or, equivalently, in the amount of 10 per annum. Assuming Bubba Co. is solvent, such note has the requisite net present value of 70, and hence should satisfy Sissy.

However, in spite of using a note to purchase Sissy's asset, Bubba Co. will not be able to avoid having taxable gain or loss. Thus, if Sissy's asset is revealed to be a success, its fair market value will rise to 140, and Bubba Co. will have an unrealized but ultimately taxable gain of 70. On

efficient user of the asset (and hence a user capable of generating the maximum fully taxable cash flow of 10 per annum). Under such circumstances, Bubba Co. will need to dispose of the asset, and when it does, it will generate a gain that is subject to the corporate income tax. Thus, at last a quantum of income has potentially been generated that, if in fact generated, will be subject to the corporate income tax. Fortunately, this quantum of income is not interesting from an analytical standpoint. Any purchaser of the asset will face this same quantum of income and, provided depreciation recapture is taxed at ordinary income rates, this same amount of tax upon a disposition of the asset. (No double tax is implicated in the case of Bubba Co.'s sale of the asset since the after-tax proceeds of selling the asset will be insufficient to retire Bubba Co.'s acquisition indebtedness, and hence will not be available for distribution to Bubba Co.'s equity owners). In other words, this potential tax will not place a taxable corporation at any particular disadvantage in such corporation's efforts to purchase the asset.

Notwithstanding a lack of disadvantage, it is unlikely that either a taxable corporation or some other user of the asset will be the actual purchaser (that is, legal owner) of the asset. The most tax efficient way for this particular asset to be owned is by someone who simply leases the asset to its ultimate user (whether a taxable corporation or not), and who thus need not be concerned with remaining the high-value user of the asset. For such a taxpayer, the possibility of ever realizing depreciation recapture income would disappear. Moreover, if Bubba Co. entered into a lease agreement with such a taxpayer (in this case, in exchange for its use of the asset, Bubba Co. would once again simply agree to make lease payments of 10 per annum for as long as it uses the asset), such lease would restore the nirvana in which no income generated by the asset would ever be exposed to the corporate income tax.

the other hand, if Sissy's asset is revealed to be a dud, its fair market value will fall to 0, and Bubba Co. will have an unrealized but ultimately taxable loss of 70. Moreover, so long as Bubba Co. chooses not to realize its unrealized gain or loss with respect to Sissy's asset, it will generate either taxable operating income of 10 per annum or a taxable operating loss of 10 per annum, as the case may be. In general, the generation of such taxable income or gain will result in Bubba Co.'s being required to pay a positive amount of tax and its shareholders being required to pay an additional positive amount of tax, while the generation of such taxable loss will result in Bubba Co.'s reporting a possibly unusable net operating or capital loss, and its shareholders reporting an additional possibly unusable capital loss.

The potential asymmetric treatment of both Bubba Co.'s and its shareholders gains and losses creates an incremental hurdle that Bubba Co. must overcome in order to successfully compete for the purchase of Sissy's asset. Fortunately, there is a simple solution. Moreover, it is a solution that is likely to be demanded by Sissy. Recall that Bubba Co.'s payments under the note it tenders to Sissy have a net present value of 70 *assuming Bubba Co.'s solvency*. In the instant case, there is no reason for Sissy to assume any such thing. In particular, Sissy will observe that if the asset turns out to be a dud, Bubba Co. will not generate any positive cash flow, and so will not be able to make its promised interest payments.

How will Bubba Co. respond? It will placate Sissy by entering into a hedging transaction with Sassy, a wealthy investor. Under the terms of the hedging transaction, Sassy will pay Bubba Co. 10 per annum if and only if Sissy's asset turns out to be a dud, and Bubba Co. will pay Sassy 10 per annum if and only if Sissy's asset turns out to be a success. (Sassy will be willing to enter into this transaction because she is risk neutral.) Thus, if the asset turns out to be a dud, Bubba Co. will receive no annual cash flow by virtue of its use of the asset, but will receive an annual fully taxable payment of 10 from Sassy, and so will be exactly able to make an annual fully deductible interest payment of 10 to Sissy. On the other hand, if the asset turns out to be a success, Bubba Co. will receive an annual fully taxable cash flow of 20 by virtue of its use of the asset, will make an annual fully deductible payment of 10 to Sassy, and therefore will be able to make an annual fully deductible interest payment of exactly 10 to Sissy. Consequently, it turns out that the hedging transaction that Bubba Co. enters into to placate Sissy also solves its tax dilemma. Bubba Co. will not report any net amount of either capital gain or loss or operating income or loss by virtue of its ownership of Sissy's asset.¹⁴ Once again, the reach of the corporate income tax has been reduced to

14. Bubba Co. will, of course, have assets with unrealized appreciation or depreciation in its corporate solution. For example, if Sissy's asset turns out to be a dud, Bubba Co. will have an unrealized loss with respect to such asset. However, it will have an equal and offsetting unrealized gain with respect to it hedge. Nor are these unrealized gains and losses problematic: Bubba Co. need not and generally will not be allowed (by Sissy and Sassy) to realize the one unless it simultaneously realizes the other.

nothing.¹⁵

Finally, a few words are in order about exceptionally large assets (in terms of fair market value), such as power plants or refineries and airplanes. The sheer size of such assets will generally cause them to migrate into corporations that are by and large publicly-traded and therefore taxable. However, this does not mean that such assets must in whole or in part be equity-funded. Notwithstanding their size, power plants, refineries, and airplanes are essentially generic assets. In other words, any entity with sufficient capital can own or operate them. That single feature will assure the availability of debt financing. A bank or syndicate of banks will be willing and able to loan a corporation the funds required to build, create, or purchase such an asset because, in the event of default, the bank or syndicate of banks will be able to foreclose on the asset and sell it without any significant diminution of value to another potential owner or operator. Thus, even in the case of exceptionally large assets, the foregoing analysis holds, and the reach of the corporate income tax is nothing.¹⁶

IV. THE REPORT OF THE DEATH OF THE CORPORATE INCOME TAX IS SOMEWHAT EXAGGERATED

Section 3 demonstrates that for any given productive asset there is generally no tax impediment to having a taxable corporation like Bubba Co. make use of such asset in its business. The mere fact that a taxable corporation makes use of such asset is not inconsistent with the fact that appropriate financing structures will keep *all* income generated by such asset from ever being subject to the corporate income tax. This is surely a good thing because it establishes tax parity for the whole class of assets that can, in the absence of tax considerations, be used either inside of or outside of taxable corporate solution. Taxable corporations are not placed at a disadvantage with respect to making use of such assets, provided they are willing to engage in appropriate planning.

What the foregoing section does not demonstrate is that the corporate income tax is dead. The corporate income tax, or so-called double taxation, may continue to be relevant for those productive assets that cannot

15. An identical structure can be used, in the case where Bubba Co. chooses to lease rather than buy Sissy's asset, to keep net unrealized gains and losses with respect to its leasehold interest in such asset out of corporate solution. Moreover, in the case of a lease, other structures can accomplish the same result. In particular, Bubba Co. could enter into a lease agreement that called for payments that perfectly reflect the asset's cash flows. (This same strategy could not be applied in the case of Bubba Co.'s note because a note that promised such volatile interest payments would generally fail to be treated as a debt instrument for income tax purposes.) Alternatively, Bubba Co. could (theoretically) enter into a lease agreement that each party could terminate and/or renegotiate at will (instantaneously).

16. Note that it does not matter if the banks that finance a corporation's purchase of an exceptionally large asset are themselves taxable corporations. The reason is that they, in turn, will obtain the funds that enable them to make the loan from other lenders, including bond holders and depositors who are not themselves taxable corporations.

be purchased or used by any purchaser or user other than an equity-funded taxable corporation. For such assets, equity-funded taxable corporations need not compete with potential purchasers or users that are not equity-funded taxable corporations. Accordingly, they can be content to purchase such assets at the prices set forth in Tables 2, 4, 6 and 8, instead of at the prices set forth in Tables 1, 3, 5, and 7. Those prices, of course, assume either that a positive amount of corporate tax will be paid (Tables 4 and 6) or equivalently that a positive amount of individual tax will be paid that would not have been paid but for the asset's residence in taxable corporate solution (Tables 2 and 8).

How can it be that a given productive asset cannot be purchased or used by any purchaser or user other than an equity-funded taxable corporation? I will approach this question obliquely by relaxing a condition I have heretofore imposed in my analysis. I have so far supposed that Bubba Co., when it makes use of Sissy's productive asset, generates exactly the same cash flows as does every other potential user of the asset. From this condition it follows that Sissy is the one who reaps the entire benefit of the asset's cash flows. She can choose to keep such cash flows by using the asset herself, or she can pit potential users of the asset against one another until they agree to turn over all (but perhaps an infinitesimal amount of) such cash flows to her. Indeed, it is precisely because Sissy reaps the entire benefit of the asset's cash flows that it is "easy" for Bubba Co. to make use of the asset without ultimately incurring any tax liability: Bubba Co. does not in any of the foregoing discussion ever earn any real income!

What happens if this condition fails to hold? For example, suppose without loss of generality that Sissy's asset is the one that is generally described in Tables 3 and 4. But, suppose that exactly one potential taxable corporate purchaser/user of such asset, namely Bubba Co., is able to squeeze from the asset not a cash flow of 10 per annum, but rather a cash flow of 11 per annum. In such case, Bubba Co. may offer and Sissy will accept a lease agreement pursuant to which Bubba Co. will receive the right to use the asset and Sissy will receive a lease payment of 10 (plus perhaps an infinitesimal amount) per annum. The reason Bubba Co. will offer to pay this amount should be clear: it is the least amount that none of Bubba Co.'s competitors can match. The reason Sissy will accept a payment of this amount should be equally clear: it is the most she will be offered. However, as soon as Sissy and Bubba Co. enter into this lease agreement, Bubba Co. has obligated itself to pay a positive amount of corporate income tax. That is, Bubba Co. will yearly as the user of the asset receive a fully taxable cash flow of 11 and as the lessee of the asset make a fully deductible lease payment of 10. The net effect of these items is positive cash flow and positive taxable income of 1 per annum. Bubba Co. is at last a taxpayer.

Of course, if Bubba Co.'s use of Sissy's asset generates positive cash flow and positive taxable income, it follows that Bubba Co. must own an

equity-financed asset (necessarily other than Sissy's asset) with a positive fair market value. Moreover, since Bubba Co. does not appear to have paid any amount for the purchase of such asset, it would seem to be the case that the entire fair market value of such asset represents unrealized appreciation. From Table 4 it follows that the amount of such unrealized appreciation is 5.95 (provided that every other potential purchaser of such asset is an equity-funded taxable corporation that is not entitled to any depreciation allowance with respect to such asset).¹⁷ But what exactly is such an asset? An obvious candidate is Bubba Co.'s only apparently "new" asset. When Bubba Co. enters into the lease with Sissy, it becomes the owner of a new asset called a "leasehold interest in Sissy's asset." Yet, it would be incorrect to say that Bubba Co.'s leasehold interest in Sissy's asset has positive value. To see this, it is merely necessary to consider what would happen if Bubba Co. tried to sublease Sissy's asset or, in the alternative, sell its leasehold interest in Sissy's asset. In the former case, no sublessee would be willing to pay rent of more than 10 per annum, since that is the maximum amount of cash flow any sublessee could generate by making use of the asset. And in the latter case, no purchaser would be willing to pay more than 0 for the leasehold interest, since that is the maximum amount of real income any purchaser could generate by leasing the asset from Sissy under the terms of Bubba Co.'s lease. In either case, any supposed value embedded in the leasehold interest in Sissy's asset would vanish as soon as Bubba Co. attempted to realize it.

But, if it is not the leasehold interest in Sissy's asset that appreciates, what is it? To answer this question, it is necessary to ask what it is about Bubba Co. that makes it possible for Bubba Co. to squeeze cash flow of 11 per annum from an asset that will only generate cash flow of 10 per annum for every other potential user. Only one possible answer exists; Bubba Co. must possess some *firm-specific resource* that interacts positively with Sissy's asset. For example, Bubba Co. may have a workforce-in-place that is uniquely qualified to hyper-efficiently use Sissy's asset. Or it may have a unique constellation of other assets, a so-called going concern value, that will mesh peculiarly well with her asset. Or it may have goodwill: a reputation, perhaps embedded in a trademark or trade name, that enables it to sell the output generated by Sissy's asset for a greater price than anyone else can. But it must have something! And it is *that* something, rather than the leasehold interest, that is Bubba Co.'s appreciated asset.

17. Bubba Co.'s equity value appears to increase by 5.95 at the precise moment that it enters into the lease with Sissy. That is, such lease enables Bubba Co. to earn taxable income of 1 per annum, and after paying tax of 0.3 (30% of 1) per annum, to distribute a taxable dividend of 0.7 per annum. If Sassy, a marginal shareholder of Bubba Co., receives such taxable dividend of 0.7 per annum, she will pay tax of 0.105 (15% of 0.7) per annum with respect to it, and will thus obtain after-tax cash of 0.595 per annum. Under the assumptions used in this paper, such a stream of cash has a fair market value of 5.95.

This revelation must spawn a follow-up question. If Bubba Co.'s appreciated asset, and hence the asset that ultimately causes it to realize positive amounts of taxable income and pay positive amounts of corporate income tax, is some sort of ephemeral intangible asset, should it not be possible either (1) to keep ownership of such asset out of corporate solution or (2) to have a corporation finance its purchase of such asset without resorting to equity? In other words, should it not be possible to reprise the discussion contained in Section 3 with only a single modification: the asset that Sissy creates is not some unidentified asset but rather a specific ephemeral intangible asset?

Keeping ownership of an ephemeral intangible asset out of corporate solution is easier said than done. For one thing, it is not generally meaningful to say that Sissy creates some sort of *divided* interest—an interest that she could in a legal sense retain and lease to Bubba Co.—in Bubba Co.'s workforce-in-place or going concern value or goodwill. Yet, it is not utterly impossible to imagine such a thing. For example, Sissy could sell her labor to Bubba Co. for a wage that reflects her marginal product and simultaneously enter into a "lease" agreement with Bubba Co. pursuant to which she would stand ready to provide her labor to Bubba Co. for some period of time (at a wage that reflects her then-marginal product) in exchange for a periodic payment (a sort of retainer). The sale would be nothing more than a typical sale of at-will employment; the lease would arguably be a lease of Sissy's divided interest in Bubba Co.'s workforce-in-place. Similarly, Sissy could sell her machinery repair services to Bubba Co. for a fee that reflects the marginal product of such services and simultaneously enter into a "lease" agreement with Bubba Co. pursuant to which she would stand ready to provide her machinery repair services to Bubba Co. for some period of time (at a fee that reflects the then-marginal product of such services) in exchange for a periodic payment (a sort of retainer). Again, the sale would be nothing more than a typical sale of repair services, but the lease would arguably be a lease of Sissy's divided interest in Bubba Co.'s going concern value.

Finally, albeit with significantly more complexity, it is even theoretically possible for Sissy to retain a divided interest in Bubba Co.'s goodwill. For example, and without loss of generality, suppose that Sissy generates a portion of Bubba Co.'s goodwill by providing customer support services that are above and beyond what a customer typically expects. The provision of these incremental services leads the customer to expect to receive similar incremental services in the future. Accordingly, in the future, the customer will be willing to pay for such incremental services—in the form of a higher price for some underlying product—whether she actually receives them or not. The excess of the higher price over the ordinary price is the return on "Sissy's portion" of Bubba Co.'s goodwill. Thus, in order for Sissy to keep a divided interest in her portion of Bubba Co.'s goodwill, she must sell Bubba Co. her ordinary customer support services for a wage or fee that reflects the marginal

product of such services and simultaneously enter into a contract with Bubba Co. pursuant to which she agrees to provide extraordinary incremental customer support services in exchange for both a current wage or fee that reflects the immediate marginal product of these services and a deferred wage or fee that reflects the excess price Bubba Co. will be able to charge in the future as a result of Sossy's current provision of extraordinary incremental customer support services. By this mechanism, Sossy would obtain a contractual right to receive the return on "her portion" of Bubba Co.'s goodwill, and would thus own a divided interest in such goodwill.

Given the tax advantages that generally accrue from keeping the ownership of valuable assets out of corporate solution, why are sales of labor or of maintenance services or of customer support services to taxable corporations not structured as I have just suggested? The reason is that while workforce-in-place, going concern value, and goodwill are valuable assets from Bubba Co.'s "aggregate" perspective, Sissy's "divided interest" in the first and Sussy's "divided interest" in the second and Sossy's "divided interest" in the third are generally valueless. In the case of workforce-in-place, what matters to Bubba Co. is not that Sissy remains available for employment for any particular period of time, but rather that some critical mass of employees remains available for employment for a period of time sufficient for Bubba Co. to find replacement employees as necessary. In the case of going concern value, what matters to Bubba Co. is not that Sussy remains available to repair its machinery for any particular period of time, but rather that some critical mass of its machinery remains in good repair for a period of time that is sufficient for Bubba Co. to find replacement machinery in good repair as necessary. And in the case of goodwill, what matters to Bubba Co. is not that Sossy has made possible some specifically identifiable future "excess" return, but rather that some person or persons have made such an "excess" return possible .

Thus, in the case of workforce-in-place and going concern value, Bubba Co. can rely on probabilities—the law of large numbers—to create such valuable intangible assets. It follows that Bubba Co. is not required to make any payment beyond the ordinary fair market value wage to Sissy and the ordinary fair market value fee to Sussy in order to obtain "ownership" of their divided interests in such assets. Moreover, it follows that Bubba Co. *will* obtain ownership of their divided interests in such assets. In the case of goodwill, the mechanism will be different but the result will be the same. Now Sossy will rely on Bubba Co.'s inability to sufficiently accurately attribute any part of the sales price of any future sales to Sossy's contribution to goodwill to demand from Bubba Co. an immediate rather than a future payment for such contribution. Thus, Sossy will not go uncompensated for her contribution to Bubba Co.'s goodwill; her wage or fee will reflect the fact that she is contributing to it. However, her receipt of such wage or fee will be accompanied by a complete trans-

fer of the ownership of her divided interest in such goodwill to Bubba Co. Thus, once again, Bubba Co. *will* obtain ownership of the entirety of Sossy's divided interest in goodwill.

Note that my description of the creation of workforce-in-place and going concern value, but not my description of the creation of goodwill, smacks of spontaneous generation. Can there really be such spontaneous generation of valuable assets? Of course not. Without the existence of Bubba Co., the legion of Sissys and Sussys would interact, if at all, in the "spot market." Indeed, for centuries, this was the only way in which the legions of Sissys and Sussys did interact. And it was not efficient. In that world, certain valuable assets—among them workforce-in-place and going concern value—never came into existence. Moreover, many other valuable assets—among them Sissy's labor and Sussy's labor—were condemned to uses other than the highest and best. Why? Because the highest and best use for most labor is idiosyncratic: it requires the interaction of such labor with highly specialized capital; the highly specialized capital cannot in general be employed without incremental training; the incremental training requires risky investment that few potential laborers are willing or able to make (will the highly specialized capital exist when training is completed?); accordingly, the highly specialized capital is not in general created (since there will be no laborers capable of employing it).

To overcome this unhappy state of affairs, the firm came into being. By taking certain capital and labor out of the spot market, the firm allowed each to become somewhat more specialized and thus to attain a higher and better use. The time and effort that such capital and labor had previously spent on transacting in the spot market could be devoted to a more productive end: becoming incrementally more specialized. This allowed both the capital and the labor to achieve higher returns. It was a win-win situation; however, it had its limits. A skilled laborer's interest in investing her time and effort to learn to optimally use a firm's specialized capital was limited so long as there was no assurance that such capital would remain available for her to use. And no assurance existed, since every firm's existence as a going concern was subject to a myriad of contingencies *having nothing whatever to do with its business*. The reason for this unfortunate situation was that prior to the advent of the corporation, all firms were sole proprietorships or general partnerships. And under the applicable law, the sole proprietor or any single partner—or worse still a successor in interest (for example, an heir or a creditor)—could generally cause the firm to be summarily dissolved. Pursuant to such dissolution, the specialized capital would be scattered to the four corners of the earth and the skilled laborer's investment would be wasted.¹⁸

18. Of course, it is possible for sole proprietorships and general partnerships to provide employees with assurances as to their long-term existence. Indeed, certain general partnerships (such as law firms, accounting firms, and investment banks) have long employed a standard model for providing such assurances. This model involves combining contractual guarantees of firm existence (that is, the partners contractually agree that

The development of the corporate form of doing business changed all that. The sentinel innovation of the corporation was that ownership interests in a corporation could change hands without affecting the legal existence or operations of the corporation. That is, if an owner retired, she could sell her shares to some third person, and the corporation would continue to exist and operate as if nothing had happened. If an owner died, her heirs would succeed to her shares, and again the corporation would continue to exist and operate as if nothing had happened. If an owner became insolvent, her creditors would succeed to her shares, and again the corporation would continue to exist and operate as if nothing had happened. Thus, where a sole proprietorship or a general partnership was potentially vulnerable to dissolution, the corporation would merrily continue on its way. This assurance of firm existence induced laborers to increase their investment in “firm specific” human capital; such capital was no longer as subject to the whims of fickle owners or their successors.

Moreover, just as the introduction of the corporate form of doing business induced more laborers to increase their investments in firm specific human capital, it also induced more firm owners to increase their investments in firm specific nonhuman capital. The quintessential firm specific nonhuman capital assets are precisely the ephemeral intangible assets: workforce-in-place, going concern value, and goodwill. None of these assets is generally capable of existing apart from the firm to which they belong. Thus, when the menu of entities for conducting business consisted only of sole proprietorships and general partnerships, ephemeral intangible assets were in understandably short supply; it made no sense for firm owners to invest in assets that could easily be destroyed by the whims of other firm owners or their successors. Only when the menu of entities for conducting business was expanded to include corporations did ephemeral intangible assets truly proliferate.¹⁹ Accordingly, ephemeral intangible assets were historically owned disproportionately by corporations.²⁰

All of this means that it is incorrect to view ephemeral intangible assets as springing spontaneously into existence. Rather, their creation was made possible solely by the founding of a firm, and was historically greatly facilitated by the founding of a specific kind of firm, namely a corporation. Thus, when a corporation’s founders invest their time and

neither they nor their successors will seek to dissolve the firm) with financial guarantees of firm existence (that is, the partners agree to permanently invest a significant amount of capital). Still, this model has never gained currency outside of the realm of businesses having essentially exclusively owners who are actively involved in the business. Thus, the model has proven quite limited in its application.

19. See, e.g., Margaret Blair, *Locking in Capital: What Corporate Law Achieved for Business Organizations in the Nineteenth Century*, 51 UCLA L. REV. 2 (2003).

20. As already noted, certain partnerships—primarily, law firms, accounting firms and investment banks, but also some manufacturing concerns such as Du Pont de Nemours (which was a successful partnership for many years prior to its formal incorporation)—were capable of generating and did generate ephemeral intangible assets.

money in founding activities—at a minimum coordinating or hiring someone to coordinate the various business assets that will be employed by the corporation—part of what they are purchasing with their investment must be the corporation's initial store of ephemeral intangible assets: its initial workforce-in-place and going concern value. Moreover, since ephemeral intangible assets are the only assets that historically could not readily come into existence but for the founding of a corporation, these were in fact the *only* assets that tax savvy founders purchased with their investment.²¹

To return to the matter at hand, does the foregoing history shed any light on whether taxpayers *in the modern world* can readily keep ephemeral intangible assets out of taxable corporate solution? It does, and they can, but only up to a point. The lesson of the proffered history is that ephemeral intangible assets generally will not arise absent the existence of firms that are organized in such a way that they can outlive their various owners. Historically, the only firms that satisfied this criterion were organized as (taxable) corporations. In the modern world, however, firms that are organized as S corporations, limited partnerships, and, of course, limited liability companies, also satisfy this criterion. Thus, being a separate taxable entity is no longer a prerequisite to the easy generation of ephemeral intangible assets.

Nonetheless, it is still a quasi-prerequisite. Current tax law imposes strict limits on the number (and sometimes on the type) of owners that an S corporation, a partnership, or a limited liability company can have before such entity will be classified, solely for federal income tax purposes, as a taxable corporation.²² As a practical matter, such limits do not prevent such entities from creating ephemeral intangible assets, but they do severely limit the potential growth in value of such ephemeral intangible assets in the hands of such entities. That is, as the value of an entity's ephemeral intangible assets grows, so too does the value of its ownership interests, and in general so will the number of its owners. Eventually, such entity will cease to be an entity that qualifies as anything other than a taxable corporation. Thus, the strategy of attempting to avoid all effects of double taxation by housing all businesses in entities other than taxable corporations will not be successful under current law.

However, recall that there is a second way to avoid the effects of double taxation. If a taxable corporation's purchase of an asset is financed without resorting to equity, it is generally possible to keep all income generated by such asset out of the reach of the corporate income tax. Therefore, the question is, can a taxable corporation finance its "purchase" of ephemeral intangible assets either with debt or with some

21. As noted in Section 3, it is generally not tax efficient to have the corporation own assets that can be owned by others. Thus, any assets that are required by a corporation's business but that can be owned by someone other than the corporation will generally be leased by the corporation. It follows that the founder's investment should not be used to purchase such assets.

22. See generally I.R.C. § 1361 (West 2005); I.R.C. § 1.7704-1 (West 2005).

exotic type of non-equity financial instrument? The answer is that it can, but again, only to a point. Thus, without loss of generality, consider the financing dilemma faced by the founders of a corporation that will require 100 of capital for the “purchase” of its initial quantum of workforce-in-place and going concern value (that is, it will require 100 of capital above and beyond that which will be used to purchase its machinery and equipment and patents and so on). The corporation’s founders, but for tax considerations, generally would be indifferent as to whether their ownership interests are called debt or equity or a combination of the two. But third-party lenders will not be similarly indifferent.

Generally, a third-party lender will not be willing to finance the corporation’s “purchase” of workforce-in-place and going concern value for at least two reasons. First, the returns that the corporation will generate from its “purchase” of such ephemeral intangible assets are generally exceedingly uncertain; indeed, such returns will be 0 in the not at all unlikely event that the corporation flops (as most new businesses do).²³ While “equity” investors may not shy away from such volatile returns, third-party lenders generally will. Second, in the event of default, the third-party lender would not be able to foreclose on the assets that the corporation “purchased” with its loan; even if the corporation’s ephemeral intangible assets have some value, albeit less than the amount necessary to repay the entire loan, the third-party lender would be unable to reach such value since any attempt by the corporation to distribute or sell these assets would generally result in their destruction. Thus, the third-party lender, in spite of making a terribly risky loan, cannot receive any security for the loan.²⁴

Because no third party lender would make a loan to finance the corporation’s “purchase” of ephemeral intangible assets, federal income tax law, at least in theory, also precludes the founders from financing the purchase with debt.²⁵ And in practice it largely does so as well, since most of the corporation’s debt capacity will—per the techniques described in Section 3—have been exhausted by the purchase of other assets. Thus, taxpayers determined to keep any income generated by ephemeral intangible assets out of the reach of the corporate income tax must resort to other strategies. In particular, two have superficial promise. First, the corporation could attempt to “hedge” the income gener-

23. Note that the returns that will be generated by the corporation’s assets, other than ephemeral intangible assets, will not be relevant to a potential lender since, pursuant to the discussion in Section 3, all such returns will have been pledged to other lenders.

24. The lender, as a general corporate creditor, could and would try to recover some value by way of the bankruptcy process. In particular it would generally attempt to arrange a sale of the corporation’s entire business as a going concern, as such a sale would generally preserve the value of the corporation’s ephemeral intangible assets. While that route would give it a way to recover the value of the corporation’s ephemeral intangible assets, the generally high cost of the bankruptcy process makes it a relatively unsatisfactory way of achieving a recovery.

25. In a standard debt-equity analysis, the fact that no third party would be willing to make a loan would be damning.

ated by its ephemeral intangible assets. If successful, such a hedge would convert the ephemeral intangible assets' very volatile income stream into a far less volatile one that could be financed with third-party debt.²⁶ While certainly conceivable, the required hedge would necessarily be a hedge of the corporation's "net income" or "overall profitability." As such, the corporation would not generally be allowed to deduct any required payments under the hedge, since these payments would be made to a person who is, in essence, an equity owner of the corporation.²⁷ Thus, this stratagem would fail to sweep the income generated by the corporation's ephemeral intangible assets out of taxable corporate solution.

Second, taxpayers could resign themselves to the fact that they cannot sweep all income generated by ephemeral intangible assets out of taxable corporations, and settle for sweeping only some such income out. There are a number of ways of doing this, of which I will briefly sketch three. First, a third-party loan could be used to finance both the purchase of a tangible asset and the "purchase" of an ephemeral intangible asset. Under the terms of this loan, fixed interest payments would be due in amounts that are based on the returns generated by the tangible asset and contingent interest payments (that are not, without reason, frequently referred to as "equity kickers") would be due according to some formula that is deemed to track the returns generated by the ephemeral intangible assets. Second, a third-party loan could be combined with a hedging transaction that purported to hedge something other than net income or overall profitability but that nonetheless, due to perfect planning, tracked such measures reasonably closely. Finally, an existing corporation, whose equity value exactly equaled the value of its ephemeral intangible assets could use the proceeds of a third-party loan to redeem some of its equity.²⁸ Depending on the size of the corporation and the size of the loan, such loan might be virtually risk-free, notwithstanding the volatility generally associated with the returns generated by ephemeral intangible assets and notwithstanding the corporation's inability to offer the lender any such assets as security for the loan.²⁹ While each of these transactions, and variations on their themes, would (and do) have the effect of removing from the reach of the corporate income tax some part of the income generated by ephemeral intangible assets, they are far from perfect. Consequently, even with relatively sophisticated tax planning, some

26. See *supra* § 3.

27. Cf. I.R.C. § 1221(b)(2) (West 2006).

28. This strategy only works well if the redemption is from a tax-exempt shareholder rather than from my posited marginal taxable shareholder. Otherwise, the corporation achieves its interest deductions that will offset its future income from the ephemeral intangible assets only at the cost of its shareholder realizing an immediate taxable capital gain.

29. For example, the ephemeral intangible assets owned by The Coca Cola Company may well have a value in excess of 100 billion dollars. A billion-dollar unsecured loan to The Coca Cola Company, the proceeds of which were used solely to redeem a like amount of equity, might well be virtually risk-free.

or even most of the income generated by such assets is currently subject to the corporate income tax.

V. THE TAXATION OF INTANGIBLE ASSETS

Under current law, amounts spent to “purchase,” or perhaps more accurately, to “self-create” intangible assets, ephemeral or otherwise, are generally subject to immediate deduction.³⁰ For example, consider again a typical way in which goodwill is created: Bubba Co.’s provision through Sossy of extraordinary customer support services to purchasers of Bubba Co.’s wares. When Bubba Co. provides such extraordinary and presumably particularly pleasing services, the recipients of the services are likely to gossip approvingly about Bubba Co. This favorable publicity makes it likely that additional persons will purchase Bubba Co.’s wares. Moreover, when the original purchasers again find themselves needing wares of the type sold by Bubba Co., they are likely to fondly remember Bubba Co.’s extraordinary customer support services and therefore to turn to it to purchase the additional wares. Thus, Bubba Co.’s extraordinary customer support services with respect to certain of its wares will result in increased future sales, and increased future profits. In other words, the amount that Bubba Co. spent on the support of the wares it originally sold was spent not only on the purchase of current support services, but also on the purchase of a small amount of “goodwill.” Federal income tax law, for better or worse, takes no notice of this dual character of Bubba Co.’s expenditure. Thus, the entire amount spent on the support of Bubba Co.’s wares will be immediately deducted as an “ordinary and necessary business expense.”

Moving from quintessential ephemeral intangible assets to a slightly less ephemeral (hence, a quasi-ephemeral) intangible asset, namely Bubba Co.’s reputation as embodied in its trademarks and trade names (to the extent that such embodiment can meaningfully be separated from Bubba Co.’s goodwill), the tax treatment remains the same. To illustrate, the prototypical way in which value is transferred to trademarks and trade names is through advertising. Advertising, of course, does not come cheap: Bubba Co. will incur significant expenditures both to develop and to place its advertisements. What is the effect of these expenditures? Some individuals who see Bubba Co.’s ads may be induced to buy its wares immediately. And some individuals, whether or not they are induced to buy its wares immediately, will store the advertising message in their memories. To the extent that they do, and to the extent that they subsequently desire wares of the type made by Bubba Co., they will be more inclined to buy Bubba Co.’s wares in the future. Thus, Bubba Co.’s expenditure on advertising will generate not only immediate sales and

30. If and when such intangible assets are purchased in the more usual sense of the word “purchase,” amounts spent on such intangible assets are not subject to immediate deduction, but instead are subject to fifteen-year straight-line amortization. See I.R.C. § 197 (West 2004). This will be discussed *infra*.

immediate profits, but also future sales and future profits. In other words, the amounts that Bubba Co. spends on advertising are spent not only to generate immediate sales, but also to purchase a tiny piece of a trademark or a trade name or simply of "goodwill." Nevertheless, federal income tax law takes no notice of this dual character of Bubba Co.'s advertising expenditures. Rather, the entire amount spent on advertising can be immediately deducted.³¹

Finally, moving out of the realm of ephemeral or quasi-ephemeral intangible assets to other self-created intangible assets, the tax treatment again remains the same. For example, if Bubba Co. in the ordinary course of its business cobbles together a customer list, as inevitably it will, all of its expenditures related to such cobbling will be immediately deducted as ordinary and necessary expenses of doing business, and the customer list will simply emerge as a "costless" by-product of such expenses. Or, suppose that Bubba Co. incurs expenditures on research and development, specifically with an eye to creating a valuable intangible asset embodied in a patent, a copyright, a secret process, or some other asset. In such case, Bubba Co. will by statutory fiat be entitled to an immediate deduction, notwithstanding the obviously "capital" nature of such expenditures.³²

Of course, not all intangible assets are subject to this rather favorable tax treatment. For example, as discussed in Section 4, when a new business is founded, amounts are spent on the salaries of those individuals who will assemble the initial workforce, machinery, intellectual property, and so on. These expenditures are generally directly responsible for creating the business's initial workforce-in-place and going concern value. To the extent that it is clear that these expenditures are connected with the founding of a new business, as opposed to the expansion of an existing business, they will be classified as "start-up" expenditures, which are subject to capitalization and, at the taxpayer's election, straight-line amortization over a five-year period.³³ In such case, depending on whether or not the start-up business is housed in a taxable corporation, the resulting intangible assets would be taxed either in the manner illustrated in Table 5 or in a manner similar to that illustrated in Table 6.³⁴

31. See I.R.C. § 162 (West 2004).

32. See *id.* § 174 (West 2005).

33. See *id.* § 195.

34. In the case of a newly-formed taxable corporation, it is unlikely that such corporation could immediately convert the losses created by accelerated depreciation into cash. Thus, unlike in Table 6, the corporation would generally only be able to distribute 10 per year of cash during the first five years. However, since it is also unlikely that such corporation will have either current or accumulated earnings and profits during such first five years, the entire amount distributed would generally be received tax-free by the corporation's shareholders. Finally, for some portion of the second five year period (slightly less than three years, if the corporation has no income-producing assets other than its start-up intangible assets), the corporation is still unlikely to pay taxes, since its net operating loss carry forward will shield its income. In such years, however, it will have current earnings and profits. Accordingly, its shareholders will be subject to taxation with respect to the amounts it distributes. If Table 6 is modified to take these changes into account, it turns

Finally, in addition to intangible assets created by start-up expenditures, certain intangible assets are created by other expenditures that are not immediately deductible. These are intangible assets “created by” depreciable assets. For example, consider the productive asset illustrated in Tables 5 and 6. This asset is subject to five-year straight-line depreciation; however, the asset does not actually depreciate. Or does it? Suppose, in fact, that the asset actually loses 20% of its initial value during each of the first five years after its purchase. In that case, after five years, it has no remaining value, but its cash flows live on. How can this be? Quite simply, the original productive asset has been converted into (that is, has created) an ephemeral intangible asset, presumably goodwill! It follows that the taxation of this particular quantum of goodwill is accurately illustrated in Tables 5 and 6.

Returning to intangible assets other than start-up assets, or assets that are created by depreciable assets, the fact that the “purchaser” of such assets is entitled to an immediate deduction of the amount spent to “purchase” such assets might lead one to conclude that the tax treatment of such assets will proceed as illustrated in Tables 7 and 8. That is, if an asset generates a perpetual pre-tax cash flow of 10 per annum, if the “purchaser” of the asset has sufficient income to be able to make current use of the tax deduction associated with the asset’s “purchase,” and if the other assumptions set forth in Section 1 apply, then a purchaser of the asset, other than an equity-funded taxable corporation, would be willing to spend up to 100 to purchase such asset, and a purchaser of the asset that is an equity-funded taxable corporation would be willing to spend up to 85 to purchase such asset. Unfortunately, each of these conclusions, while not entirely wrong, is incomplete.

As discussed in Section 4, in the case of an ephemeral intangible asset created by a taxpayer other than a taxable corporation, the asset likely will, in the long run, find itself in taxable corporate solution, at least in the case where it has increased sufficiently in value. Its creator will presumably take this likelihood into account. One possibility is that the ephemeral intangible asset will enter taxable corporate solution in a so-called nonrecognition transaction.³⁵ In this case, as the name implies, the creator of the asset will not recognize any taxable income as a result of the transfer of the asset into taxable corporate solution. In addition, the asset’s tax basis will be unaffected by the transfer: it will remain at 0. Thus, the taxable corporate transferee will not receive any amortization deductions with respect to the asset. As can be seen in Table 15, under the additional assumption that the asset is contributed to a taxable corporation at the end of the fifth year after its creation, the creator will be willing to spend up to 90.68 to create it.

out that the intangible asset created would have an initial fair market value of 75.81, rather than 73.76.

35. See I.R.C. § 351 (West 2004).

TABLE 15: INTANGIBLE CONTRIBUTED TO TAXABLE CORPORATION

Year	Corporate Pre-Tax Cash	Corporate Tax	Owner Pre-Tax Cash	Owner Tax	Owner After-Tax Cash	Discount Rate	Value of Owner Cash
0	—	—	(90.68)	27.20	(63.48)	1.00	(63.48)
1	—	—	10.00	(3.00)	7.00	1.10	6.36
2	—	—	10.00	(3.00)	7.00	1.21	5.79
3	—	—	10.00	(3.00)	7.00	1.33	5.26
4	—	—	10.00	(3.00)	7.00	1.46	4.78
5	—	—	10.00	(3.00)	7.00	1.61	4.35
6	10.00	(3.00)	7.00	(1.05)	5.95	1.77	3.36
7	10.00	(3.00)	7.00	(1.05)	5.95	1.95	3.05
8	10.00	(3.00)	7.00	(1.05)	5.95	2.14	2.78
9	10.00	(3.00)	7.00	(1.05)	5.95	2.36	2.52
10	110.00	(33.00)	77.00	(11.55)	65.45	2.59	25.23
NPV							0.00

Alternatively, the ephemeral intangible asset can enter taxable corporate solution in a taxable transaction. For example, a taxable corporation can purchase the entire business of which such asset is a part. The creator of the asset will recognize taxable income as a result of the transfer of the asset. In exchange for this recognition, the asset's tax basis in the taxable corporation's hands will increase to its fair market value. The taxable corporation will then be able to amortize the tax basis on a fifteen-year straight-line basis. In this case, the amount the creator is willing to spend to create the asset depends on the amount the taxable corporation is ultimately willing to spend to purchase it. That, in turn, will depend on how the corporation finances the purchase. Per the discussion in Section 4, the most likely scenario is that the corporation will be unable to use anything other than equity financing. In such case, the corporation will be willing to spend 68.34 on such asset.³⁶ (This can be demonstrated by substituting fifteen-year straight-line depreciation for five-year straight-line depreciation in Table 6 above.) That, in turn, means that the creator of the asset will be willing to spend up to 89.43 to create it, assuming that the asset is sold to a taxable corporation five years after its creation. See Table 16.

36. If the corporation uses 50% equity financing and 50% debt financing for its acquisition of the ephemeral intangible assets (not for the acquisition of the business as a whole; recall that all assets other than ephemeral intangible assets are assumed to be acquired with debt financing), it will pay up to 75.45 for such assets. If the corporation manages to use 100% debt financing for its acquisition of the ephemeral intangible assets, it will pay up to 82.56 for such assets.

TABLE 16: INTANGIBLE SOLD TO TAXABLE CORPORATION

Year	Corporate Pre-Tax Cash	Corporate Tax	Owner Pre-Tax Cash	Owner Tax	Owner After-Tax Cash	Discount Rate	Value of Owner Cash
0	—	—	(89.43)	26.83	(62.60)	1.00	(62.60)
1	—	—	10.00	(3.00)	7.00	1.10	6.36
2	—	—	10.00	(3.00)	7.00	1.21	5.79
3	—	—	10.00	(3.00)	7.00	1.33	5.26
4	—	—	10.00	(3.00)	7.00	1.46	4.78
5	—	—	78.34	(13.25)	65.09	1.61	40.42
NPV							0.00

Just as the results illustrated in Table 7 require some modification if they are to properly illustrate the tax treatment of an intangible asset that is created by a taxpayer other than a taxable corporation, the results in Table 8 must be modified if they are to properly illustrate the general tax treatment of an intangible asset that is created by a taxable corporation. To explain why, recall that the discussion in Section 3 led to the conclusion that no income generated by productive assets, other than certain intangible assets, will ever—given appropriate tax planning—be subject to the corporate income tax. Nevertheless, the discussion in Section 4 led to the conclusion that the corporate income tax is not dead, because there is no general ability to keep the income generated by certain ephemeral intangible assets out of its reach. Thus, taken together, the conclusion is that while there may not be a lot of taxable income that will inexorably find itself subject to the corporate income tax, there will be some. That simple fact can change the whole calculus of Table 8.

Suppose that Bubba Co. is a taxable corporation that is also a taxpayer. For example, Bubba Co. financed the purchase of all of its assets other than its initial quantum of workforce-in-place and going concern value with debt, but it financed a purchase of 75.81 of such ephemeral intangible assets with equity.³⁷ After eight years have passed, Bubba Co. will have sheltered as much of the return generated by its start-up expenses as it will be able to. Therefore, its entire annual pre-tax cash flow of 10 now becomes taxable. Accordingly, Bubba Co. can collect the 10 of pre-tax cash flow, pay 3 of corporate income tax (at its 30% tax rate), distribute a fully taxable dividend of 7, and watch its marginal shareholder pay an additional 1.05 of individual income tax (at her 15% tax rate). Alternatively, it can pursue any other strategy that will put the same 5.95 of after-tax value into the hands of its shareholders. And there is an obvious such strategy! It can spend its 10 of annual pre-tax cash on the creation of goodwill, provided that such goodwill generates a perpetual pre-tax cash flow of 1 per annum (that is, the goodwill asset must look exactly like 1/10 of the asset generally described in Section 1). Why? The goodwill expenditure, by virtue of being immediately deductible, will both shelter and use up the entirety of Bubba Co.'s 10 of pre-tax cash. This expenditure,

37. See *supra* note 34.

in turn, will allow Bubba Co. to collect 1 of annual pre-tax cash flow, pay 0.3 of corporate income tax (at its 30% tax rate), distribute a fully taxable dividend of 0.7, and watch its marginal shareholder pay an additional 0.105 of individual income tax (at her 15% tax rate) in perpetuity. Thus, the expenditure provides Bubba Co.'s shareholder with a perpetual annual after-tax cash flow of 0.595. This annuity is worth 5.95.

Therefore, Bubba Co.'s purchase of goodwill is illustrated in Table 8 if, and only if, Bubba Co.'s purchase is not only financed by equity, but by new equity. If instead, Bubba Co.'s purchase of goodwill is financed either out of pre-tax income (as in the prior paragraph) or out of retained earnings,³⁸ the purchase is illustrated in Table 7. In other words, not all equity is identical: new equity bears a cost that old equity does not, namely the entire cost of the ultimate tax on dividends. This result is simply a restatement of the so-called "new view" of dividend taxation.³⁹

VI. POLICY IMPLICATIONS

The universe of productive assets can be broken into three groups. First, there are ephemeral and quasi-ephemeral intangible assets that have as their defining characteristic that they are valueless apart from the business which makes use of them, and must, as a consequence, be owned and financed directly by such business. Second, there are intangible assets other than ephemeral or quasi-ephemeral intangible assets; this group includes all intangible assets that can have a value apart from the business which makes use of them. Consequently, they can be owned or financed by some other business. Third, there are all wholly tangible assets and these, like intangible assets that are not ephemeral or quasi-ephemeral, can generally be owned or financed by a business other than the business which makes use of them.

As is the case with any classification scheme, the boundaries of this scheme can be fuzzy. In particular, it is possible to take the view (as some businesses do) that trademarks and trade names can have independent value and, as a consequence, can be owned by a business other than the business making use of them.⁴⁰ If true, this would move them from the first group to the second. But I think it is not true. The problem with having a trademark or trade name owned by a truly separate business from the one making use of the trademark or trade name is that the user's interests will diverge from the owner's in a way that is not readily amenable to solution. Thus, the user may find it profitable to attempt to make a quick killing by selling inferior merchandise, which attempt will

38. If the purchase is financed out of pre-tax income, Bubba Co. will not in fact report any taxable income, and hence will have no earnings that it can retain. If the purchase is financed out of retained earnings, Bubba Co. will generate a net operating loss, which it can carry back to obtain a refund of its prior tax payments (as it must be able to do in order to make the requisite expenditure).

39. George R. Zodrow, *On the "Traditional" and "New" View of Dividend Taxation*, 44 NAT'L TAX J. 497 (1991).

40. *Geoffrey, Inc. v. S.C. Tax Comm'n*, 437 S.E.2d 13, 15 (S.C. 1993).

wreck the value of the owner's property; in turn, the owner may find it profitable to cease to make any investment in the trademarks or trade names in the hope or belief that the user will directly or indirectly pick up the slack. Inevitably, this ownership structure will lead to the destruction of the trademark or trade name's value.

Somewhat imperfectly, current tax law applies the following basic rules to productive assets (in each case, under the assumptions, including the tax rates, used in this paper). First, ephemeral and quasi-ephemeral intangible assets are generally taxed at an effective rate ranging from 0% to 15%; 0% applies if such asset is created and forever remains outside of taxable corporate solution, as well as if such asset is created inside taxable corporate solution but is financed either by debt or by making use of pre-tax income or retained earnings. On the other hand, 9.32% or 10.57% applies if such asset is created outside of taxable corporate solution but is ultimately transferred into taxable corporate solution. Finally, if such asset is created inside taxable corporate solution and is financed by new equity, 15% applies.⁴¹ Second, intangible assets other than ephemeral and quasi-ephemeral intangible assets are generally taxed at an effective rate of 0%. Such assets, whether created inside or outside of taxable corporate solution, are generally created by immediately deductible expenditures which, in the case of a taxable corporate owner, can effectively be debt-financed (since a creditor will receive a security interest in an asset that it can foreclose upon). Third, tangible assets are generally taxed at an effective rate that is greater than 0% (since costs incurred to create such assets must generally be capitalized and recovered by means of depreciation deductions) but less than 30% (since depreciation deductions are generally accelerated to a greater or lesser degree). Of course, to the extent that such assets are owned by taxable corporations and are financed by new equity, a higher effective tax rate, including perhaps a tax rate in excess of 30%, can apply.⁴²

Applying the reasoning of Section 2 to these results, it is possible to arrive at the conclusion that it would be best if the income generated by productive assets were taxed at effective tax rates that were uniformly somewhat greater than 0% but that were never greater than 30%. That is, it would be best if the extreme effective tax rates—0% on the low side and over 30% on the high side—were banished. This "ideal" can be approached, but not reached, by doing away with statutory provisions or administrative practices that have the effect of expanding or enforcing the application of extreme effective rates. Thus, in the case of intangible assets in general, and of ephemeral and quasi-ephemeral intangible assets in particular, any tax rule that makes it easy to achieve a 0% effective tax

41. There is actually one more possibility: 24.19% applies if such asset is created by an equity-financed start-up corporation.

42. The "new view" analysis applied above to the creation of goodwill can apply as well to the purchase of other assets. In general, if such assets are financed out of pre-tax income or retained earnings, a taxable corporation can afford to spend exactly the same amount for such assets as can a purchaser other than a taxable corporation.

rate with respect to such assets should be abolished, and any tax law change that makes it easier to achieve a 0% effective tax rate with respect to such assets should be resisted. In particular, any attempt to repeal the "classic" corporate income tax regime, with its potential for double taxation, should be resisted. And, in the case of tangible assets, any tax rule that makes it difficult to achieve self-integration with respect to such assets should be abolished, and any tax law change that makes it more difficult to achieve self-integration with respect to such assets should be resisted. In particular, any attempt to limit the classification of financial instruments as "debt instruments" or to limit the tax efficacy of various types of so-called derivatives should be resisted.

Beyond adopting or maintaining such obvious "hands-off" metapolicies, Congress could enact various incremental "improvements" to the code. For example, it could expand the reach of current corporate income tax exemptions for businesses that are deemed to be incapable of owning assets subject to a 0% effective tax rate, thereby preventing the potential imposition of effective tax rates in excess of 30%. The trick is to find businesses that by their very nature are incapable of generating significant amounts of goodwill (or more broadly of creating significant amounts of intangible assets). For example, real estate businesses may generate apparently excess returns because of the location of their real estate, but not because of the presence of goodwill. Accordingly, Congress has taken real estate businesses out of the double tax realm.⁴³ Similarly, certain commodity businesses, particularly businesses engaged in natural resource extraction, are generally incapable of creating significant amounts of intangible assets. Accordingly, Congress has taken businesses engaged in natural resource extraction out of the double tax realm.⁴⁴ Finally, investment businesses, such as mutual funds, are also generally incapable of creating significant amounts of intangible assets.⁴⁵ Accordingly, Congress has taken these businesses out of the double tax realm.⁴⁶ Notwithstanding the obviously undesirable complexity that has accompanied the various Congressional enactments exempting these businesses from the corporate income tax, the results have been appropri-

43. An entity that is engaged solely in the real estate business can qualify as a real estate investment trust, or REIT, and is effectively exempt from the corporate income tax, even if such entity is publicly-traded. See I.R.C. § 856-60 (West 2006).

44. A partnership or limited liability company that is engaged solely in natural resource extraction can qualify as a single-taxed publicly traded partnership, or PTP, notwithstanding the fact that other publicly-traded partnerships are taxed as C corporations. See I.R.C. § 7704(c), (d) (West 2004).

45. The truth of this statement is empirical: close-end mutual funds generally trade at a discount to net asset value, and open-end mutual funds, while not trading at a discount to net asset value, *never* trade at a premium. The reason is presumably that managers, even those adept at "outperforming the market," will take for themselves, in the form of fees, all future outperformance.

46. Regulated investment companies, or RICs, are effectively exempt from the corporate income tax. See I.R.C. §§ 851-55 (West 2006). So are real estate mortgage investment conduits, or REMICs, which are entities that hold portfolios of mortgages. See I.R.C. §§ 860C, 860D (West 2005).

ate. Thus, when Congress discovers other businesses incapable of creating intangible assets, it should consider exempting such businesses from the corporate income tax.

While one can imagine other incremental improvements that Congress could make to the tax code, my preference would be for Congress to eschew incremental approaches and instead take a headlong plunge towards a more coherent policy. My outline for that policy is as follows.

First, however legally organized, any *independent* leasing business would be subject to a single level of tax. For this purpose, a “leasing business” would be defined as a business that is solely engaged in leasing certain types of assets, and an “independent leasing business” would be defined as a leasing business that satisfies certain ownership tests. The single level of tax could theoretically be imposed directly on the business’s owners (by means of income allocation as in the current partnership income tax regime), directly on the business (by means of a “corporate” income tax coupled with a regime allowing corporations to make tax-free distributions), or in combination (for example, by means of a “corporate” income tax coupled with a dividends-paid deduction, with dividends received taxed as ordinary income). The choice would depend in part on considerations that are beyond the scope of this paper: in particular, on whether the government believed that it was appropriate to collect revenue with respect to assets that are directly or indirectly owned by tax-exempt entities and foreign persons. But the choice would also depend on whether the government believed it has any stake in a leasing business’s decision whether to currently distribute income. I believe that the government may have such a stake, for however unlikely it is for a business solely engaged in asset leasing to generate goodwill, it is more unlikely if such business does not generally retain income. Thus, I would adopt the third alternative set forth above, because I believe it would be the most likely to lead to the current distribution of the greatest amount of lease income to a leasing business’s owners. Thus, in conformity with the illustrations in this paper, a leasing business would be taxed as a C corporation, and so would be subject to a 30% tax rate, but it would be allowed a dividends-paid deduction in any amount up to the amount of its undistributed taxable income. In particular, if such business currently distributed all of its taxable income, it would owe no tax. Instead, its shareholders, the recipients of the distributed income, would be taxed on such income as if it were ordinary income. Therefore, they would be liable for a 30% tax on such income.

A leasing business would be allowed to purchase any assets other than ephemeral or quasi-ephemeral intangible assets. In order to finance its asset purchases, it would be allowed to issue any desired mix of debt and equity instruments. (The capital structure is of no interest since a single level of tax will be imposed irrespective of such capital structure.) Importantly, since a leasing business is intended to conduct no business other than asset leasing, it would not be entitled to make use of any of the

assets that it purchases and owns. Instead, it would be required to lease all its assets to third-party users.

In order to be considered an *independent* leasing business, all third-party users of a leasing business' assets would need to be sufficiently independent of the leasing business. Such independence would be determined by means of an ownership test. Thus, a leasing business and an ultimate user of an asset leased from that business would be considered independent if, and only if, the owners of the leasing business and the owners of the ultimate user did not overlap to too great an extent. For purposes of illustration, I will assume that an overlap in ownership of more than 50% (measured after applying liberal attribution rules) will be considered to be too great. Obviously, this is an arbitrary cut-off. To the extent that the government's primary concern is to ensure that leasing businesses deal at arms' length with their lessees, a smaller degree of overlapping ownership would be required. However, to the extent that the government wants to best guarantee that the corporate income tax is only imposed on income generated by ephemeral or quasi-ephemeral intangible assets, a greater degree of overlapping ownership (indeed up to just under 85%) could be tolerated.

Second, every business other than an independent leasing business—henceforth “operating businesses”—would be treated as a taxable corporation. In particular, whether an operating business was legally organized as a corporation, a partnership, a limited liability company, or something else, it would be taxed as a C corporation is currently taxed. It would therefore be liable for a 30% tax on its taxable income. And its shareholders would be liable for a 15% tax on any distributed dividends. In addition, however, each such operating business would be liable for a 15% tax on any after-tax income it did not currently distribute; this tax would be intended as a prepayment of the marginal shareholders' 15% tax on distributed after-corporate-tax income and would therefore be available to such shareholders as a tax credit when such income was actually distributed. The idea is to place a “corporation” and its shareholders in exactly the same position whether the corporation retains after-corporate-tax income or whether it distributes such income and the shareholders reinvest the after-shareholder-tax distributed amount. Accordingly, a corporation's 15% tax on undistributed after-corporate-tax income would never be refundable.⁴⁷ In particular, if a corporation retained after-corporate-tax income in one year, and then had a loss in a subsequent year, the loss would not create “negative after-corporate-tax income” that could be carried back to obtain a refund for taxes paid with respect to prior undistributed after-corporate-tax income. Therefore, the net effect would be that a “corporation” would face a 30% marginal tax rate with respect to all positive and negative income, but would face an additional

47. A shareholder who pays tax on a dividend receipt cannot, in general, carry back subsequent (capital) losses to recover the taxes she paid with respect to the dividend.

15% tax rate with respect to positive after-corporate-tax income not currently distributed.

There would be one exception to this general scheme for taxing operating businesses. To the extent that such a business owned an interest in an independent leasing business, it would succeed to such independent leasing business's dividends-paid deduction. Thus, when the independent leasing business distributed income to the operating business, the operating business would treat the distribution as ordinary income. However, like the independent leasing business, the operating business would be entitled to a dividends-paid deduction as and when it distributed such income to its own shareholders. Naturally, the operating business's shareholders would treat any such distribution as a distribution of ordinary income.

Finally, no formal limits would be placed on the business activities of an operating business. In particular, it could purchase assets, including ephemeral and quasi-ephemeral intangible assets, in its own name. However, in spite of this flexibility, one formal limit would be placed on the way in which an operating business was allowed to finance its operations. The business would be entitled to interest expense deductions only with respect to acquisition indebtedness (including certain nonrecourse indebtedness such as nonrecourse indebtedness secured by inventory or accounts receivable, as such indebtedness effectively substitutes for acquisition indebtedness).⁴⁸

Third, to facilitate transition from the current income tax regime to the proposed income tax regime, all existing operating businesses would be allowed to transfer their tangible assets as well as their purchased intangible assets that are neither ephemeral nor quasi-ephemeral intangible assets to an independent leasing business in a transaction subject to a tax toll charge that is greater than zero but less than the amount of tax that would be due in the event of an arms' length taxable sale of the assets. Mechanically, the operating business would create a subsidiary and would transfer to the subsidiary whatever eligible assets it chooses, subject to such lease terms as it chooses. It would then sell 50% (or more) of such subsidiary to independent third persons, thereby converting the subsidiary into an independent leasing business. The sale would be treated as a taxable event, but the conversion of the subsidiary into an independent leasing business would not be. The tax rate that would be imposed on the sale would equal 15% of the gross proceeds realized. Moreover, if the after-tax proceeds were immediately distributed to the operating business's shareholders, this distribution would be treated as a return of capi-

48. Inventory, and hence accounts receivable, can be purchased with cash received either from the issuance of equity or the issuance of debt. To the extent that it is formally purchased with cash received from the issuance of equity, but is subsequently pledged as security for newly-issued debt, the inventory is effectively purchased (in part) with the cash received from the issuance of such debt.

tal rather than as a dividend.⁴⁹ The reason for imposing such a partial tax on the sale/conversion would be to deny the existing shareholders of the operating business too great a windfall on their creation of the independent leasing business.⁵⁰ The reason for not imposing a full tax on the sale/conversion would be to encourage operating businesses to adopt the alternative business structure.

A simple example should help illuminate the operation of the proposed tax regime. Suppose that Bubba Co. is an operating business that is wholly funded by equity. In each year, Bubba Co.'s business, taken as a whole, generates 100 of fully taxable cash flow. In that case, it follows that Bubba Co.'s equity has a fair market value of 595. See Table 4. Suppose that exactly half of Bubba Co.'s cash flow is generated by tangible assets and/or intangible assets that are neither ephemeral nor quasi-ephemeral intangible assets; the remainder is generated by ephemeral or quasi-ephemeral intangible assets. Thus, prior to the adoption of the proposed tax regime, each of these groups of assets has a fair market value (when embedded in taxable corporate solution) of 297.50.

Suppose, in response to the adoption of the proposed tax regime, Bubba Co. decides to transfer all of its eligible assets to a 50%-owned independent leasing business. Such business would have a fair market value of 350. See Table 3. Thus, Bubba Co. would be able to sell 50% of such business for 175. After the 15% tax toll charge (that is, 26.25) was imposed on Bubba Co.'s sales proceeds, Bubba Co. would be able to distribute 148.75 to its shareholders. This amount is precisely the amount that shareholders valued the portion of Bubba Co.'s business that they no longer directly or indirectly own. Of course, although the sale of 50% of the leasing business produces no windfall, the retention of 50% of the leasing business does. That is, the value that Bubba Co.'s shareholders will receive from the retained 50% of the leasing business is 175, which is greater than the 148.75 that they would have received under prior law.

Once the 50%-owned independent leasing business was created, Bubba Co. would lease such business's assets. Since Bubba Co. generated 100 of fully taxable cash flow per annum prior to adopting its new structure, and since the mere adoption of such structure would have no impact on Bubba Co.'s underlying business, it follows that Bubba Co. and the leasing business, when considered as a whole, will continue to generate 100 of fully taxable cash flow per annum. Moreover, an arms' length arrangement would cause this cash flow to be divided equally between Bubba Co. and the leasing business. That is, the fair market lease rate would be

49. Alternatively, if the operating business was publicly traded, it could distribute 50% (or more) of the subsidiary to its widely-scattered shareholders. Such distribution would be taxed exactly like the sale described in the text.

50. For example, if the nondepreciable asset illustrated in Tables 3 and 4 found itself in taxable corporate solution, such asset's beneficial owners would currently receive 59.50 of value from such asset. However, if the asset could be moved to a single-taxed entity without the imposition of any tax, such asset's beneficial owners would receive value of 70.00 from such asset. No good reason exists to give them so great a windfall.

whatever rate allowed the leasing business to generate exactly 50 of fully taxable cash flow per annum. Suppose, in fact, that Bubba Co. and the leasing business adopt this lease rate. In that case, as illustrated in Table 17, shareholders of Bubba Co. and the independent leasing business would, in the aggregate, receive 64.75 of annual after-tax cash.

TABLE 17: LEASING BUSINESS RECEIVES FAIR LEASE PAYMENTS

	Leasing Business		Bubba Co.	Total
	50% Independent Ownership	50% Bubba Co. Ownership		
base taxable income	25.00	25.00	50.00	100.00
dividends paid deduction	(25.00)	(25.00)		(50.00)
dividends received			25.00	25.00
base taxable income			75.00	75.00
dividends paid deduction			(25.00)	(25.00)
taxable income	—	—	50.00	50.00
corporate income tax	—	—	(15.00)	(15.00)
shareholder ordinary income	25.00		25.00	50.00
shareholder ordinary income tax	(7.50)		(7.50)	(15.00)
shareholder dividend			35.00	35.00
shareholder dividend tax			(5.25)	(5.25)
after-tax cash	17.50		47.25	64.75

If Bubba Co. paid an above-market amount on the lease, so that, for example, the leasing business generated 55 of fully taxable cash flow per annum, shareholders of Bubba Co. and the independent leasing business, viewed in the aggregate, would be better off (they would receive aggregate after-tax cash of 65.27 rather than of 64.75). However, Bubba Co.'s shareholders, viewed separately, would be worse off (they would receive after-tax cash of 46.02 rather than of 47.25).⁵¹ See Table 18. In effect, Bubba Co.'s above-market payment would succeed in moving income from a double-taxed to a single-taxed environment, but would do so only at the cost of harming Bubba Co.'s shareholders (and its managers, to the extent such managers earned performance-based compensation). Accordingly, Bubba Co. would have no incentive to try to shift income in this way.

51. If 1 of pre-tax income is earned by the leasing business, Bubba Co.'s shareholders will receive $(1-x)(1-t_{OI})$ of after-tax cash, where x is the fraction (here 50%) of the leasing business that is independently owned and t_{OI} is the ordinary income tax rate of the marginal shareholder (here 30%). On the other hand, if 1 of pre-tax income is earned by Bubba Co., its shareholders will receive $(1-t_{CORP})(1-t_{DIV})$ of after-tax cash, where t_{CORP} is the corporate tax rate (here 30%) and t_{DIV} is the dividend tax rate of the marginal shareholder (here 15%). Thus, so long as the fraction of independent ownership of the leasing business exceeds the dividend tax rate, Bubba Co.'s shareholders will be worse off by moving income to the leasing business (and similarly will be better off by keeping income out of the leasing business).

TABLE 18: LEASING BUSINESS RECEIVES ABOVE-MARKET LEASE PAYMENTS

	Leasing Business			Total
	50% Independent Ownership	50% Bubba Co. Ownership	Bubba Co.	
base taxable income	27.50	27.50	45.00	100.00
dividends paid deduction	(27.50)	(27.50)		(55.00)
dividends received			27.50	27.50
base taxable income			72.50	72.50
dividends paid deduction			(27.50)	(27.50)
taxable income	—	—	45.00	45.00
corporate income tax	—	—	(13.50)	(13.50)
shareholder ordinary income	27.50		27.50	55.00
shareholder ordinary income tax	(8.25)		(8.25)	(16.50)
shareholder dividend			31.50	31.50
shareholder dividend tax			(4.73)	(4.73)
after-tax cash	19.25		46.02	65.27

On the other hand, if Bubba Co. paid a below-market amount on the lease, so that the independent leasing business generated 45 of fully taxable cash flow per annum, shareholders of Bubba Co. and the independent leasing business, viewed in the aggregate, would be worse off (they would receive aggregate after-tax cash of 64.22 rather than of 64.75), but Bubba Co.'s shareholders, viewed separately, would be better off (they would receive after-tax cash of 48.47 rather than of 47.25). See Table 19. While Bubba Co. may be privately motivated to follow this strategy, the government should not be particularly concerned since its revenues would increase. Moreover, it is unlikely that Bubba Co. would find it in its long-term interest to pursue such a strategy: if it strong arms its independent leasing businesses, investors would cease to be willing to finance such businesses, and thus Bubba Co. would cease to be able to make use of such businesses to finance its own operations. The long term net effect would be that Bubba Co. would be forced to finance its asset acquisitions in more traditional and, from an income tax perspective, generally more expensive ways.

TABLE 19: LEASING BUSINESS RECEIVES BELOW-MARKET LEASE PAYMENTS

	Leasing Business			Total
	50% Independent Ownership	50% Bubba Co. Ownership	Bubba Co.	
base taxable income	22.50	22.50	55.00	100.00
dividends paid deduction	(22.50)	(22.50)		(45.00)
dividends received			22.50	22.50
base taxable income			77.50	77.50
dividends paid deduction			(22.50)	(22.50)
taxable income	—	—	55.00	55.00
corporate income tax	—	—	(16.50)	(16.50)
shareholder ordinary income	22.50		22.50	45.00
shareholder ordinary income tax	(6.75)		(6.75)	(13.50)
shareholder dividend			38.50	38.50
shareholder dividend tax			(5.78)	(5.78)
after-tax cash	15.75		48.47	64.22

Thus, leases between operating businesses and independent leasing businesses should, in general, proceed under arms' length terms. All else being equal, Bubba Co.'s managers would want to make the lowest possible lease payments, so as to maximize both Bubba Co.'s shareholders' returns and their own performance-based compensation. However, by squeezing such lease payments too much, the managers would increase the aggregate cost of the capital used in Bubba Co.'s business and this would generally make it more difficult for Bubba Co. to finance its business in the future.

While this interplay of short-term and long-term incentives would act as a restraint on Bubba Co.'s managers, the managers of the independent leasing business would not necessarily feel similarly restrained. If such leasing business were truly independent, its managers would observe that Bubba Co. would be willing to make lease payments in any amount requested, so long as Bubba Co. had no effective ability to rapidly replace the leasing business's assets. Whether or not Bubba Co. had the effective ability to rapidly replace such assets would depend a lot on the form of the lease. Thus, if Bubba Co. and the leasing business entered into multiple leases covering smallish groups of assets, Bubba Co. would generally not find itself at the mercy of the leasing business. On the other hand, if Bubba Co. and the leasing business entered into a single lease covering the entirety of Bubba Co.'s assets, Bubba Co. might well find itself at the mercy of the leasing business. In such case, the leasing business could successfully request lease payments that not only reflected the fair market value of its own assets, but that reflected the fair market value of some or all of Bubba Co.'s ephemeral and quasi-ephemeral intangible assets as well. Fortunately, this problem is more theoretical than real: as the owner of 50% of the leasing business's stock, Bubba Co. should ulti-

mately retain the ability to ensure that such leasing business does not take unfair advantage. Indeed, it is precisely to facilitate the formation and smooth operation of independent leasing businesses that I set the independence threshold at 50% and would, moreover, consider raising it further still.⁵²

Moving from mechanics to problem solving, my proposed tax regime would solve a number of the problems identified in Sections 3 and 5. First, it would level the playing field for the use of depreciable assets by abolishing the existence of stand-alone single-taxed operating businesses, while allowing all businesses, including taxable corporations, to purchase an unlimited amount of depreciable assets through affiliated entities that are single-taxed, even when such entities are financed in part or in whole with equity. Thus, at the end of the day, there would be no reason for any depreciable asset to be subject to anything other than single taxation.

Second, the proffered tax regime would reduce, but not entirely eliminate, the ability of taxpayers to create productive intangible assets that are potentially subject to taxation at a 0% effective rate. In part, it would do this by abolishing the tax exemption of operating businesses legally organized as partnerships, limited liability companies and S corporations. These entities would all be forced to play by the same income tax rules as C corporations. Moreover, the regime would prevent the only remaining single-taxed entities, that is, independent leasing businesses, from creating intangible assets, since such creation is manifestly not leasing activity. While independent leasing businesses would be allowed to own intangible assets other than ephemeral or quasi-ephemeral intangible assets, they would generally be required to acquire such assets at their fair market value.⁵³ Thus, these assets would be functionally indistinguishable from any other assets subject to depreciation; they would in fact be amortizable.⁵⁴ In particular, such assets would not be undertaxed within the meaning of Section 5.

It follows that all intangible assets would be created by double-taxed operating businesses.⁵⁵ Of course, an operating business could still attempt to create intangible assets in such a way that the assets are effectively untaxed. Thus, rather than financing the creation of such intangible assets through the issuance of new equity, an operating business could try to finance the creation through the issuance of debt. However, this gam-

52. See *supra* note 51 (demonstrating that the independence threshold should not climb to 85%. Moreover, a threshold sufficiently close to 85% would also likely prove problematic in practice).

53. An operating business has no incentive to sell an intangible asset to an affiliated independent leasing business for less than fair market value for the reason illustrated in Table 18 above; while income is ultimately shifted from a double tax to a single tax environment, it is more importantly and more significantly also shifted away from the operating business's owners.

54. See I.R.C. § 197 (West 2004).

55. I ignore the possibility that an individual can create an intangible asset with currently deductible expenditures, since this seems to me to be a relatively insignificant problem.

bit would be unsuccessful since under the foregoing rules, the operating business would be denied any interest deductions that are not attributable to acquisition indebtedness. Alternatively, the operating business could attempt to finance the creation of intangible assets by making use of retained after-corporate-tax income. However, by virtue of the 15% tax that is levied on undistributed after-corporate-tax income, such income will cost the operating business exactly the same amount as would newly-issued equity.⁵⁶ Finally, the operating business could attempt to finance the creation of intangible assets by making use of pre-tax income that has not yet become after-corporate-tax income. The operating business could constantly monitor its pre-tax income and could invest such income in the creation of intangible assets as such income is being generated. This strategy, alas, would continue to be successful: any amount of pre-tax income that is spent in an immediately deductible way will never turn into taxable income, and thus so will never give rise to after-corporate-tax income that is subject, if not distributed, to the 15% tax on undistributed earnings.

Nonetheless, the bottom line is that the proposed tax regime would solve many, although not all, of the problems created by the current inconsistent rules for the taxation of productive assets. Accordingly, I strenuously urge that the adoption of such a regime be given serious consideration.

56. For example, pre-tax corporate income of 100 will produce after-corporate-tax income of 70, but only if such income is immediately distributed. If, instead, the income is retained, the operating business will pay an additional 10.5 of tax as a prepayment of the ultimate shareholder tax on dividend distributions, and thus will have only 59.5 in its coffers. If the operating business now uses this after-corporate-tax retained income to make the maximum possible expenditure with respect to the creation of an intangible asset, it will be able to make an expenditure of exactly 85. The reason is that an expenditure of 85 will generate an immediate deduction of 85 that the operating business can carry back to offset 85 of taxable income from the prior tax period, leading to a tax refund of 25.5. This refund, when combined with the retained cash of 59.5, will finance the expenditure. Thus, 59.5 of retained after-corporate-tax income would allow the operating business to spend exactly the same amount on the creation of an intangible asset as does 59.5 of newly-issued equity. See Tbl. 8.

