

Expensing for Extraordinary Returns

By Calvin H. Johnson

Calvin H. Johnson is a professor of law at the University of Texas. He wishes to thank Tom Neubig for his comments on an earlier draft of this article.

Copyright 2007 Calvin H. Johnson.
All rights reserved.

In his article "Expensed Intangibles Have a Zero Effective Tax Rate . . . NOT!" *Tax Notes*, Sept. 10, 2007, p. 959, *Doc 2007-19296*, 2007 TNT 176-51, Tom Neubig, the director of Ernst & Young's quantitative economics and statistics section, argues that expensing yields a zero effective tax rate only for normal returns, available anywhere. Results like zero effective rates do not apply for expensing to extraordinary returns, he argues, for instance returns from those unique opportunities whose return rate has not yet been beaten down by the competitive market. When interim returns cannot be reinvested, he finds that expensing results in effective tax rates in the high 20s. The standard wisdom, which Neubig attacks, is that yield exemption (zero tax rate) and expensing are equivalent within constant tax rates, with expensing often generating negative tax rates better than mere yield exemption.

I defend here the standard wisdom and argue that Neubig's assumptions are misleading. Even when the returns from investing are extraordinary and unique, pretax or "soft money" investing is indeed as valuable as the combination of yield exemption and posttax or "hard money" investing. The key to understanding the point is that hard money investing is ordinarily smaller than the amount invested under expensing or soft money investing by the amount of tax imposed at entry. The tax at entry is a real cost that reduces the funds available for investment, so it thus reduces the amount invested, absent special circumstances. The usual special circumstances in which expensing is not as good as yield exemption are not investment returns at all, but returns to entrepreneurial labor or talent, for which yield exemption is a highly inappropriate baseline.

Even more importantly, investments occur within a matrix of debt, and our tax treatment of debt turns the taxation of investments into a negative tax. Negative tax rates on expensed investments subsidize investments that would not be made in the absence of tax, and waste precious capital. The overwhelming need is not to increase the generosity of taxation of investments within our treatment of debt, but to bring the tax burden up to zero. The real problem facing the tax system is ending negative taxes, not reducing the tax on investment deeper into the negative range.

Expensing Equals Yield Exemption

The standard wisdom that Neubig attacks is the Cary Brown thesis¹ that expensing is equivalent to yield exemption.

Equation (1) describes the terminal value of \$100 income invested under a tax regime that does not tax profit or returns. Like all income taxes, however, the regime taxes the \$100 even though it is invested, so that only hard money or posttax amounts can be invested:

Yield Exemption With Hard Money Investing:
(1) $\$100 * (1-t) * (1+r)^n * (1-0)$.

The \$100 in equation (1) is just a unit of measurement of the income. The t is the tax rate of tax imposed on the income before or with the investment, and the $(1+r)^n$ is just the growth under the logic of compound growth at rate r for period n . The $(1-0)$ at the end just says there is a zero tax on the yield.

Equation (2) describes the terminal value of \$100 income invested under a tax regime that allows expensing but no yield exemption. Because of the expensing, the investor can invest the full \$100 income without being reduced by tax and thus can do soft money or pretax investing:

Soft Money Investing: (2) $\$100 * (1-0) * (1+r)^n * (1-t)$

The second term just says that that is no tax before the investment of the income. The last term says that full tax at t is imposed on the full terminal value because, given expensing, the investor has previously recovered all his basis.

The commutative law of multiplication decrees that the order in which multiplied terms are stated does not matter. If t and growth $(1+r)^n$ are the same in the comparison of tax regimes, the after-tax results of equation (2), soft money investing or expensing, and equation (1), yield exemption with hard money investing, are exactly the same.

The equivalence of equations (1) and (2) applies even if $(1+r)^n$ is at a level approaching miraculous. Assume that anything invested will grow by 10,000 times within n weeks, just enough to make it to the next tax year. With 35 percent tax, equation (1) (yield exemption) becomes

$$(1A) \$100 * (1-35\%) * 10,000 = \$650,000$$

and expensing becomes

$$(2A) \$100 * 10,000 * (1-35\%) = \$650,000$$

Yield exemption and soft money expensing are the same here (and both are pretty good for a short investment). The commutative law of multiplication does not lie.

¹Cary Brown, "Business-Income Taxation and Investment Incentives," in *Income, Employment and Public Policy: Essays in Honor of Alvin H. Hanson* 300 (1948).

For retirement accounts, soft money investing is usually even better than yield exemption. Tax rates tend to drop in retirement, and taxpayers can also plan for distribution in temporarily low rate years. If we assume realization in a 20 percent tax rate year, expensing becomes

$$(2C) \$100 * 10,000 * (1\%-20\%) = \$800,000$$

which is better than yield exemption at a *mere* \$650,000. Indeed, Roth IRAs, which give only a yield exemption, are usually not all that exciting.

The algebraic description of yield exemption in equation (1) definitely assumed that \$100 income became a \$65 investable amount by reason of a 35 percent tax imposed on the income with or before the investing. Tax is a real cost and you can ordinarily not get into an investment in an income tax system without paying it. Costs, including upfront tax costs, do not go away lightly.

But If Tax Does Not Reduce Investable Amount

If you can ignore the upfront cost of t in making the investment in equation (1), however, then yield exemption looks quite good. Indeed if you know in advance that the 10,000-fold miracle is going to happen, it's rational to invest the full \$100 income unreduced by tax and find some other way to pay the \$35 upfront tax. Under the assumption that you fund the upfront tax by borrowing it, the terminal value of yield exemption under the equation (1A) assumption is \$1 million less \$35 and pocket change worth of interest, which expensing cannot match.

Neubig's analysis assumes that the upfront tax cost has no impact on the \$100 invested. He has the same amount invested in his comparisons, whether there is upfront tax or soft money investing. That is misleading. He states awkwardly that the soft money investing benefits in a way that makes it seem unlikely that the amount of investment will depend on upfront tax: For expensing to equal a zero effective tax rate, he states, the investor must reinvest the tax savings in the investment. To say that hard money investing reduces the amount invested and that expensing will require a reinvestment of the tax savings to be like yield exemption are really saying the same thing in different forms — the mathematics of the comparison is the same. But the "reinvestment" rubric makes it sound hard and unusual that the amount invested will be sensitive to tax, whereas the argument that upfront taxes are real costs makes it seem natural that the money must cover the upfront costs before the net can be invested. The sensitivity of the investment to the real upfront tax cost is the more reasonable assumption.

When the investor does not know in advance his \$100 will grow by 10,000 times in weeks, Neubig's assumption is unreasonable. For pure risk or luck, one should be especially skeptical that the upfront tax cost will be covered from outside the investment. Thus let us assume the 10,000-fold investment is a bet like a lottery ticket. Assume that overall in a big pool 11,999 out of 12,000 bets at \$100 become worthless and only 1 in 12,000 pays off. The expected value of the lottery ticket is thus negative at the outset. Investors like to brag about their big hits and

ignore the losses. Still, the payoff is *only* 10,000 to 1 when the win happens only once in 12,000. With a negative expected value, there is no reason to think the investor would pay for the upfront tax by borrowing from outside the bet, even if he buys the ticket on a lark. Banks also do not like to finance speculations in the nature of lottery tickets because they reasonably believe that they will be stuck with a bad loan for most of the outcomes and get their money back only in the rare case that the bet pays off. If all the investor is doing is assuming risk and winning by luck, the natural assumption is that the upfront tax cost will reduce the bet.

The clearest case in which the investor will know beforehand that the 10,000-fold investment is a good one, so as to pay for the tax from outside the investable amount, is when the return is not to investment at all. When the taxpayer is putting in entrepreneurial talent and time, for example, the return he makes is not just a return to investment but rather a return to labor. Hedge fund managers, for example, get a carried interest without the investment of anything by them, and their multimillion-dollar carried interests are ordinary salary returns, no different from a plaintiff lawyer's or ball-players' share of the gate. Taxing those labor returns at a zero rate or under an equivalent tax regime is highly inappropriate. As we move toward a consumption tax mode, it is especially important to tax the big salary returns that are consumable for luxuries at the very highest tax rates. High-level, top-hat consumption is the single best source of government revenue. Yield exemption for labor or salary returns is not a normative base line from which to judge a tax regime.

Neubig is right that interim cash flows cannot be reinvested in a nonfungible investment. If the investment is like a patent monopoly or the only necessary bridge across the river, one cannot replicate the high internal rates of return by reinvesting interim cash receipts and one must use more modest external normal return investments instead. It does no good to try to build some more partial bridge or partial patent with the interim cash. If interim cash flows are taxed when received and then put into equilibrium-rate normal returns, equation (2) does not in fact describe the terminal value of the investment. The investor will end up with less than \$650,000. Neubig accurately finds that the pretax return rate goes down by percentages in the high 20s when interim cash flows are taxed and put into hard money normal-return investments. The found impact of interim cash flows depends on the n term used until terminal value (as well as the r rate chosen above normal returns), and the n used for analysis is usually purely arbitrary. As the period n used for analysis grows shorter, the problem of interim cash flows shrinks. Given the ready availability of soft money investments, including advertisements and long-valuable investments in personnel and other business intangibles, it is unfair to assume that no further soft-money investments are available.

Within a Matrix of Debt

More importantly, the message implied by artificially high found effective tax rates is the wrong message to give to the country right now. Investments occur within a matrix of our tax regime for debt. Debt turns positive

tax rates into negative or subsidizing tax rates. Interest is deductible. Taxpayers arrange themselves by constituencies, so that interest is deducted against 35 percent rates, and the interest income on the other side goes to taxpayers who now pay a ceiling tax rate of between 2 percent and 9 percent.² The government loses between 25 cents and 33 cents of revenue for every dollar of interest that is paid by top-rate taxpayers. The U.S. taxation of debt is inconsistent with either equation (1) (yield exemption) or equation (2) (expensing). The tax of debt reduces zero effective tax into negative 25 percent to negative 33 percent rates.³

Negative tax for investment is very poor policy. Negative tax rates lead to investments, in reliance on the negative tax, that make no sense in the absence of tax. We now borrow our marginal capital from the Chinese, and despite the trade and fiscal deficits, we keep borrowing more and more. Negative taxes mean that taxpayers take capital from abroad and waste it on twaddling investments that would make no sense if they had to rely on the real demand and real merit in the absence of tax.

As we move toward a consumption tax, the most pressing need is to end the tax subsidies for senseless investments. To preserve capital, the United States needs to tax dissavings, including dissaving by borrowing, at the high rates appropriate to nonessential, even frivolous, top-tier consumption. Implying that expensed investments bear high rates when they are in fact bearing strongly negative tax rates is simply not helping solve the country's real problems given the underlying matrix of debt financing. The United States needs to become more responsible fiscally, as a nation. Misanalysis implying high rates is not helping us become more responsible.

²The maximum tax paid by creditors receiving interest is best measured by looking to what they will accept in lower interest on explicitly tax-exempt municipal bonds. The implicit tax is the difference between Treasury yields and equal risk municipals of the same term, divided by the Treasury yield. The implicit tax varies considerably with different indexes measuring the yield on AAA general obligation bonds. Using *Wall Street Journal* figures, on Sept. 26, 2007, 30-year Treasury bonds yielded 4.836 percent and 30-year AAA general obligation municipal bonds yielded 4.73 percent and therefore the implicit tax is 2.2 percent $((4.836-4.73)/4.836)$. See http://online.wsj.com/mdc/public/page/2_3021-bondyield.html?modtopnav_2_3010#bondyieldA. Using *Thomson Municipal Market Monitor* for Sept. 25, 2007, the 30-year AAA municipal rates were 4.46 percent and the federal 30-year bond rate was 4.89 percent for an implicit tax of 8.79 percent.

³The inconsistency of debt and expensing equivalents is described in Calvin Johnson, "Tax Shelter Gain: The Mismatch of Debt and Supply Side Depreciation," 61 *Texas L. Rev.* 1013 (1983).