

Taxation and Valuation

by Leonid A. Levin

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In this article, Levin explores the difficulty of evaluating the tax base.

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Introduction

The greatest harm from highway robbers lies not in seized wallets but in inhibited travel. Similarly, incentives for tax-reducing strategies put much sand in the wheels of the economy. Demands to replace our monumental tax code with a simple, graceful one that does not distort economic incentives heat up periodically in political debate, but those dreams never materialize.

A fundamental obstacle, not yet well understood in the economic literature, is the impossibility of objectively evaluating the tax base — such as assets or income. One can see this even in toy examples, for instance in trying to assess the value of a position in chess: Great masters' assessments will all differ. (Here, computer theory can add an insight not provided by classical economics tools.)

A way around that obstacle is to avoid evaluations by expressing the tax in natural units, not in cash. For publicly traded corporations, these could be corporate shares. I discuss a simple (postcard-sized in all details) corporate tax system that avoids any distortion of incentives. (Tax tools meant to influence corporate policies should be set as explicit separate taxes or credits, open to public scrutiny, not hidden between lines of an

incomprehensible tax code.) Roughly, the system is to periodically take a $t \cdot i$ fraction of shares to auction, with t being the tax rate and i being the interest rate. It replaces all income taxes on publicly traded corporations, their subsidiaries, and shareholders.

One way to view this is that tax on income invested in the public sector is deferred — treated as interest-bearing debt. This obviates the need to determine which part of the corporate value is untaxed income: All of it is, if investments into the public sector are pretax and divestments taxed, or, as in our equivalent but simpler case, vice versa. The interest rate is defined via specially designed bonds, so that the whole system can be shown precisely equivalent to a flat tax on investment return. Note that taxing the return directly is impossible: It would invite manipulation of stock market prices.

The main feature is that nothing corporations and investors do can change their tax ($t \cdot i$ fraction of shares), so they would do business the same way they would without taxes.

Cash Taxes Cannot Avoid Distortion of Incentives

Taxes have major costs beyond the revenue they collect — for example, deadweight loss from distorted incentives, compliance costs, and enforcement costs. The report of the 2005 President's Advisory Panel on Federal Tax Reform mentions a trillion-dollar annual waste. Countless attempts to alleviate these effects invariably only shifted the distortions from one place to another.

Here is the key observation: Modern economics, based on classical game theory, assumes rational optimization of some consistent, legally definable values such as assets or their

growth (that is, income). This, however, fails to recognize the infeasibility of consistent valuations and other types of optimal, rational behavior in many games (much more so in real life).¹

For instance, one approach to playing chess is to understand how to compute the positions' value, and to choose each move to maximize it. The value must be consistent across a move — that is, it must agree with the best value of the next position one move can achieve. Indeed, each position does have such a consistent $\{\pm 1, 0\}$ value: One side has a winning strategy or both have a draw. Just keep moving to positions of the same value. What a silly way to pass the time!

What makes chess fun is the exponential computation any consistent strategy is proven to require. I argue that any feasible legal definition of the tax base value will be inconsistent with taxpayers' motives and thus cause distortions. (Taxing any feasibly defined gain in chess positions would change the game entirely.) But there are unusual yet neat, sound, and practical ways around the problem.

A Corporate Tax Code on a Postcard

First, the market-clearing interest rate i is set via Treasury inflation-protected securities bonds designed so that either side — Treasury and a publicly traded corporation (PTC) — could unilaterally get any desired bond exposure at that rate. Treasury must absorb all differences between supply and demand by buying those bonds back at the (inflation-adjusted) purchase price or issuing more. But Treasury can change i at will (with due notice so customers can buy or sell bonds before the new rate takes effect). So

Treasury also, by controlling the supply and demand, can keep its desired bond exposure.

The PTC tax rate t is just set by the law.² It should agree with the effective private sector rate, to keep the net capital flow between the PTCs and the private sectors tax revenue neutral.

Now, the full PTC tax code:

At regular dates (also on in-dividend dates), PTCs give the IRS to auction a $t \cdot i$ fraction of external (held outside the PTC sector) shares. They buy back shares for this or issue more. External shares are registered in a separate pool: Auctioned shares dilute only this pool, not PTC-owned shares.

Going public turns the cost basis of prior shares tax deductible. But it triggers a conversion tax: giving the IRS (to auction) options to buy a fraction t of shares at the strike price totaling all corporate income tax to date. (Similar "strike price credits" can be used later for other taxes — for example, foreign taxes under U.S. treaties.) Reverting to private, a company can establish its shares' cost basis, b , by giving the IRS put options for a fraction t of its shares at strike price b .

Bond-like securities with no voting rights can be taxed similarly if they are tradable in fractions. But a simpler equivalent tax is to charge their proceeds the interest $t \cdot i$, compounded for the entire time the security was held outside the PTC sector.

This code replaces corporate income tax on PTCs, their subsidiaries, and all taxes on their shareholders' dividends and capital gains. It distorts no incentives: Boosting post- and pretax values is the same. Its enforcement and compliance costs are minimal. It requires no complicated regulations, except those unrelated to taxes — say, protecting minority shareholders. Impossibility to hide or delay liability lowers tax

¹Economists do now recognize, besides grain, land, and coal, the relevance of another commodity: information. I doubt all fully realize how subtle this concept is, but even a cursory attention to it has brought progress. Yet one more factor — intelligence — must be acknowledged. Even with full and perfect information, the IRS couldn't match all taxpayers in intelligence, and thus in the ability to evaluate assets. Lacking that ability, the IRS acts like a bull in a china shop, vandalizing our economic life.

²Some wishful thinking: The U.S. Constitution requires fair compensation for private property taken for public use. This seems to imply spending taxes to fairly benefit the taxpayers — for example, giving them a tax-weighted say in approving public spending levels. Then they would do a better job than Congress in setting tax rates optimal for growth.

rates. A steady trickle of auctioned shares might even have some stabilizing effect on the stock market. This equity interest tax (EIT) emulates the t -rate tax on (real) return³: Market pressures would keep the variable i close to return rates.

The precise match with tax on return is clearer via EIT's equivalent but a bit more cumbersome variant: EIT*. It differs from EIT like IRAs differ from Roth IRAs: All investments (from the private sector) are income tax deductible and divestments are subject to income tax (both at rate t ⁴). Then the entire stock market capitalization V would be untaxed income, with the deferred tax $t \cdot V$ on it — an enormous loan from Treasury. To finance it, Treasury can sell bonds and pay interest $i \cdot t \cdot V$ on them, compensated by EIT* (proceeds from the $i \cdot t$ flow of auctioned shares). Similarly, any company can spend this loan (deferred tax) on bonds, the interests on which would compensate its EIT*. The net expense is $t \cdot r$, to update the bond portfolio as the company's worth grows by its return r .

Just One Issue in a Broader Scope

The tools discussed work only for the PTC sector. The point is that the failure of all persistent tax reform efforts had a cause that while fundamental can be circumvented in important cases. The above tools cannot add grace to taxes on closely held business or personal earnings. Yet those, too, have aspects that can benefit from reforms. Some widely discussed examples are below.

Dividends and capital gains taxes have low rates but apply largely to income already taxed at the corporate level. This is widely criticized. Making dividends (paid from taxed income) tax free and allowing companies to deduct capital losses (up to their per-share taxed income) on share repurchase would be more consistent than lower tax rates on dividends, capital gains, and corporate income.

Gifts and estates also should avoid double taxation. Stock market income and gifts received can be excluded because they should have been

fully taxed already. The rest, instead of a large standard deduction, can get a tax credit for all income taxes the donor ever paid.

Taxes on medical expenses penalize deductibles in medical insurance. Needlessly low deductibles make one careless with expenses,⁵ which is widely blamed for skyrocketing medical costs. To rectify this tax-induced distortion, out-of-pocket insurance-approved medical costs (such as deductibles, co-payments, and coinsurance) could be reported by insurance and be fully tax deductible.

Many other concerns and ideas would, of course, resurface with the tax reform drive heating up again. For example, taxing residential rent expense depresses population mobility. (As they say, "When a tenant marries the landlord, the national income shrinks.")

The topic of the publicly traded sector is just one of a great many, but it is a large one, assuring that at least some significant improvements are achievable. ■

At regular dates (also on in-dividend dates), PTCs give the IRS to auction a $t \cdot i$ fraction of shares. They buy back shares for this or issue more. Subsidiaries, wholly owned by PTCs, pay no tax. A *partial subsidiary*, owned in part by PTCs, pays the respective part of its tax to its PTC owners, not to the IRS, or have some equivalent protection from double-taxation.

Not voting bond-like securities can be taxed similarly if they are tradable in fractions. But a simpler equivalent is to tax their proceeds at a $(1 - e^{-st})$ rate where s is the sum of daily interest rates for the entire time the security was held outside the PTC sector.

³ The return cannot be taxed in cash based on stock prices, lest firms manipulate the market, undermining its integrity.

⁴ Personal tax is progressive. But it can be viewed as a flat rate t applied after deducting typical living expenses which grow sublinearly with earnings.

⁵ The insurance effect is diffusion of responsibility. This agrees with the general liberal ideology which reasons that because society absorbs much of the rewards of one's success, it should also absorb much of the pains of one's failure. Otherwise, people would have a suboptimal risk tolerance. The conservative counterargument seems to be that while three lefts make a right, two wrongs do not. General tax policies should be neutral on those issues.