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The Logic of Deterrence: Corporate Tax Shelters

MARK P. GERGEN*

I. INTRODUCTION

This Article argues that the government’s current strategy for deter-
ring corporate tax shelters can be effective. The strategy involves
monitoring tax shelter activity, blacklisting new shelters when they are
identified, and pursuing users of blacklisted shelters through promot-
ers of the shelters along side more conventional audit techniques. I
show that monitoring and enforcement can create a strong self-limit-
ing dynamic in the corporate tax shelter market. If users and promotor-
ers of a tax shelter anticipate that government detection of a shelter
will lead to a crackdown that potentially affects all users, they have a
strong incentive to limit the volume of the shelter’s distribution to re-
duce the risk of detection.

I use a rational choice model of the behavior of promoters and
users to flesh out this commonsensical point. I extend the model to
examine the ramifications of the conflict of interests between and
among promoters and users, the response of users of a shelter to
blacklisting, and the social benefit from deterring corporate tax shel-
ters. I also explore whether anti-abuse standards are likely to have
the undesirable effect of inducing taxpayers to expend greater re-
sources to cloak abusive transactions without reducing the incidence
of such behavior, and the social cost of the Service pursuing border-
line or weak cases.

I do not argue that current enforcement efforts are adequate. I
claim only that they can be made effective with reasonable effort. We
have come a long way since the early and mid-1990’s. Promoters of
aggressive tax strategies had happy prospects a decade ago. Taxpayers
won some major cases involving aggressive tax strategies.1 Congress
rebuffed Treasury when it sought legislation to shut down abusive inter-

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1 Cottage Savings Ass’n v. Commissioner, 499 U.S. 554 (1991); Esmark, Inc. v. Commissi-
oner, 90 T.C. 171 (1988), aff’d, 886 F.2d 1318 (7th Cir. 1989).
2 Treasury was well aware of the COLI problem by 1990. See Treasury Dep’t, Report to
the Congress on the Taxation of Life Insurance Company Products (1990). Legislation was
proposed in 1991. S. 632, 102d Cong. (1991); see also Carole King, Sen. Pryor to Reintro-

255
classic tax shelter in the genus of *Knetsch*. The reform work by Treasury in the hot areas of partnerships and financial products was in the form of mammoth regulatory projects, which almost always applied prospectively. The mindset of the times is illustrated by the fact that corporations that had been considering COLI in early 1990 rushed to close the deal because they feared legislation but expected that existing deals would be grandfathered. COLI transactions boomed after Congress failed to enact reform legislation.

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3. *Knetsch v. United States*, 364 U.S. 361 (1960). In a COLI shelter, a corporation pays the premiums to fund a life insurance policy that covers much of its workforce through a combination of loans against the policy's cash value, death benefits, and dividends. The premiums, interest, and fees the corporation pays are expected to exceed the death benefits it collects but the deduction of interest and fees yields a net tax benefit. The policies cover much of the workforce to avoid a cap on policy loan interest enacted to limit the abuse of key man, corporate-owned life insurance. IRC § 264(a)(4), (e)(1) (eliminating interest deduction on policies in excess of $50,000). The tax craft in the large, leveraged COLI policies lies in working around rules that were designed to prevent precisely this type of interest arbitrage. IRC § 264(d)(1) (allowing deduction of interest only if no part of premiums are paid by borrowing on the policy in four of first seven years). Judge Schwartz's opinion in *In re CM Holdings, Inc.*, 2000-2 USTC 50,791 (D. Del. 2000), is an intelligent and lucid dissection of the Mutual Benefit Life Insurance Co. (MBL) policy circa 1990.


6. In 2000, the Service reported that it had identified 85 cases of leveraged COLI and was investigating 50 more cases. David Katz, *The COLI Wars*, CFO, The Magazine for Senior Financial Executives, Jan. 1, 2001, at 87. Lindy Pauli estimated eventually there would be 100 cases involving $6 billion in taxes. Testimony of the Staff of the Joint Comm. on Tax’n Concerning Interest and Penalties and Corporate Tax Shelters Before the Senate Comm.
The world has changed. The government aggressively and successfully pursued COLI deals. Promoters were forced to divulge customer lists. The government has won all three litigated cases relying on general anti-abuse principles. Over 100 cases remain in the pipeline. Firms seduced by Merrill Lynch into CINS in 1989 and 1990 met a similar fate. Merrill was forced to disclose the 11 sinners and the government has won all three litigated cases. Since the late 1990’s, the government has acted pre-emptively when it learns of a new abusive strategy by issuing a notice of its intention to challenge the strategy. It has been helped in this endeavor by informants who tell it about

on Finance 17 (Mar. 8, 2000), 2000 TNT 47-13, Mar. 9, 2000, available at LEXIS, Tax Analysts File. Many of these cases involve companies with household names. All involve years prior to 1996 when the law was changed.


9 Katz, note 6, at 87.


The strategy is made possible by the elective nature of basis adjustments when a partner withdraws from a partnership. Here is how it is done: Find an asset that predictably yields artificial tax income because it has a slow cost recovery schedule. Create a partnership with a partner in need of a tax loss and a tax-indifferent partner. Depending upon the exit strategy, it also may be necessary to add a straw partner. Allocate the artificial tax income to the tax-indifferent partner. It withdraws or sells its interest, recognizing an artificial tax loss in the amount of the artificial gain. If no basis adjustment is made, the partnership is left with a high-basis, low-value asset that can provide an artificial capital loss for the partner in need of the same. Merrill’s CINS exploited a rule in old temporary installment sale regulations that allowed a taxpayer to elect ratable basis recovery on contingent-interest debt regardless of the actual repayment schedule. Former Temp. 15A.453-1(e), 46 Fed. Reg. 10708, 10711 (Feb. 4, 1981).

new aggressive strategies, sometimes even passing on offering documents. Starting in 2000, the Service has compiled notices of abusive transactions into a blacklist. Corporate taxpayers who use a blacklisted strategy must disclose it. Promoters of a blacklisted strategy must keep a list of investors.

These measures have not killed the corporate tax shelter market. Investment banks, accounting firms, and others continue to concoct and market aggressive new strategies. Blacklisting has stopped some transactions but it has not proven to be a complete purgative. Government sources tell me that they have identified a significant number of uses of the BOSS strategy, which was blacklisted in Fall 1999. Blacklisting did not dissuade First Union from staking billions


14 Temp. Reg. § 301.6112-1T.

18 Notice 99-59, 1999-2 C.B. 761. The transaction BOSS relied on old case law and regulations to take inconsistent positions: first, that securities distributed to shareholders as a dividend were valueless because the securities were pledged to secure a corporate debt; and second, that repayment of the same debt by the corporation, which freed the securities from the debt, was not a dividend to them because the shareholders were not personally liable. The upshot was to give the shareholders an artificial capital loss on the stock. See McKinnon, note 17, at A1; Lee A. Sheppard, Another Corporate Tax Shelter, Another Tax Court Decision, 85 Tax Notes 1229 (Dec. 6, 1999).

BOSS followed on the heels of a strategy designed to duplicate losses that was made possible by the failure to treat the assumption by a corporation of a contingent liability as boot. A third strategy from the early 1990’s exploited cases in the partnership area holding
IRS officials report disappointment with the volume of disclosure in 2001. To stimulate disclosure in December 2001 they offered to waive the negligence penalty for shelters disclosed within 120 days. Apparently still disappointed with the response, in March 2002 they proposed legislation tightening the reporting requirements and heightening penalties.

More could be done to strengthen the government's hand in identifying and pursuing abusive shelters. There are loopholes in the reporting requirements for as-yet-unlisted transactions and no that contingent liabilities were not liabilities under § 752 to create an artificial capital gain in order to preserve a capital loss that otherwise might expire. Salina P'ship v. Commissioner, 80 T.C.M. (CCH) 686 (2000). A fourth strategy that surfaced in the summer of 2000 creates an artificial loss in a partnership by understating the value of a liability the partnership assumes in conjunction with the contribution of an asset of near-equal true value. See Notice 2000-44, 2000-2 C.B. 255.

19 SunTrust Banks tattled to the Federal Reserve Board on First Union's financial accounting for a LILO to gain a step in the battle for Wachovia Corp. See Jane Seccombe, Banks' Merger Dispute Grows; SunTrust Asks Fed to Probe First Union Accounting Methods, Winston-Salem J., July 4, 2001, at 1. LILOs are a variation on a sale-leaseback. The taxpayer leases property, almost always from a foreign entity, prepaying almost the entire rent with money borrowed from a third party. It leases the property back to the owner for a stream of rental payments sufficient to service the debt. A LILO is used rather than a sale-leaseback because the amortization schedule on the rent prepayment on the head lease is faster than the depreciation schedule on foreign-use property. In the form targeted by the government, the deal is structured so the cash flows cancel out, other than the cash the foreign entity pockets up front, and there is no risk to any party, other than the tax law risk.

20 Hearing on Abusive Corporate Tax Shelters Before the Senate Finance Comm., 107th Cong. (Mar. 21, 2002) (preparation of Larry R. Langdon, Comm'r Large & Mid-Size Bus. Div.), 2002 TNT 56-20, Mar. 22, 2002, available at LEXIS, Tax Analysts File. Of the 272 disclosures from 99 different taxpayers reported in 2001 with respect to year 2000 returns, only 64 involved blacklisted transactions. In the same year there were 945 registration statements under § 6111. B. John Williams, chief counsel, testified that the Service has sought information from 30 promoters but has been stymied by their failure to cooperate.


A corporate taxpayer is required to report a transaction that yields significant tax savings if the transaction is of a type identified by the Service as a tax avoidance transaction or if the transaction displays at least two of five indicia of a tax shelter and it does not come within one of four exceptions for "plain vanilla" transactions. Temp. Reg. § 1.6011-4T(b), as amended by T.D. 8961, 2001-35 I.R.B. 194 (Aug. 27). The five indicia are a (1) condition of confidentiality, (2) contractual protection against loss of tax benefits, (3) over $100,000 in promoter's fees, (4) over $5 million difference in tax and book income, and (5) the tax benefit required the participation of a party with a different tax position than the taxpayer. Temp. Reg. § 1.6011-4T(b)(3)(i), as amended by T.D. 8961, 2001-35 I.R.B. 194 (Aug. 27). Indicia one and two are formal and therefore can be easily avoided. Fees can be disguised to avoid three. The four exceptions for plain vanilla transactions are: a trans-
sanctions are specifically provided for violating the reporting requirements.\(^2\) The sanctions for engaging in an abusive transaction are not severe—disgorgement of the tax benefit with interest,\(^2\) the 20% negligence penalty,\(^2\) and sometimes denial of deduction of actual expenses.\(^2\) The Service is understaffed and underfunded. Three recent pro-taxpayer decisions in the United States Courts of Appeals break a long string of victories by the government in tax shelter cases.\(^2\)

My model of the corporate tax shelter market is in the tradition of rational choice and expected utility analysis. Work in this tradition on tax law noncompliance began with a simple model in which the only strategic actor was the taxpayer.\(^2\) The analysis has been extended to action entered into in the ordinary course of business in which the taxpayer reasonably would have participated irrespective of the U.S. tax benefits; a transaction entered into in the ordinary course of business for which there exists a "generally accepted understanding" that the tax treatment is allowable; a transaction for which the taxpayer reasonably determines there exists no reasonable basis under U.S. tax law for denying any significant portion of the tax benefits; and a published exception. Temp. Reg. § 1.6011-4T(b)(3)(ii), as amended by T.D. 8961, 2001-35 I.R.B. 194 (Aug. 27). The "reasonable basis" exception has the potential to consume the rule if it can be satisfied by obtaining a no-reasonable-basis opinion from the promoter.

\(^2\) The preamble to the regulations states that nondisclosure may affect the determination of good faith and the application of the accuracy-related and fraud penalties. T.D. 8877, 2000-1 C.B. 747, 747.

\(^2\) The interest rate is the federal short-term borrowing rate plus 3% to 5%. IRC § 6621(a), (c). The 5% rate applies if the underpayment in a period exceeds $100,000 and begins to run with the letter of proposed deficiency or deficiency notice. IRC § 6621(c)(3).

\(^2\) IRC § 6662. The negligence standard requires that there be at least a "reasonable basis" for a position or that a position be taken with "reasonable cause and [in] good faith." Reg. § 1.6662-3(b)(1), (a). The 20% penalty was imposed in In re CM Holdings, Inc. 2000-2 USTC § 50,791 (D. Del. 2000); Compaq Computer Corp. v. Commissioner, 113 T.C. 214, 225 (1999), rev'd, 277 F.3d 778 (5th Cir. 2001); Saba P'ship v. Commissioner, 78 T.C.M. (CH) 684, 723 (1999), vacated, 273 F.3d 1135 (D.C. Cir. 2001); ASA Investerings P'ship v. Commissioner, 76 T.C.M. (CH) 325, 335 (1998), aff'd, 201 F.3d 505 (D.C. Cir. 2000); and ACM P'ship v. Commissioner, 73 T.C.M. (CH) 2189, 2229 (1997), aff'd in part and rev'd in part, 157 F.3d 231 (3d Cir. 1998). In no case has the 75% fraud penalty been assessed. See IRC § 6663. Generally, tax avoidance (as opposed to evasion) is held fraudulent only if the transaction reported is a sham or if there is other exceptional misbehavior.

\(^2\) Deduction of some or all expenses was disallowed in Winn-Dixie Stores, Inc. v. Commissioner, 113 T.C. 254, 294 (1999), aff'd, 254 F.3d 313 (11th Cir. 2001); Saba P'ship v. Commissioner, 78 T.C.M. (CH) 684, 722-23 (1999), vacated, 273 F.3d 1135 (D.C. Cir. 2001); and IES Indus., Inc. v. United States, 253 F.3d 350, 354 (8th Cir. 2001). The Court of Appeals reversed the Tax Court in ACM to allow Colgate to deduct its loss on the sale of the notes. ACM P'ship v. Commissioner, 157 F.3d 231, 252-60 (3d Cir. 1998).

\(^2\) UPS, Inc. v. Commissioner, 254 F.3d 1014 (11th Cir. 2001); IES Indus., Inc., 253 F.3d 350; Compaq Computer Corp. v. Commissioner, 277 F.3d 778 (5th Cir. 2001).

account for strategic behavior by a tax advisor, the tax collector, and an independent auditor. The design and marketing of abusive tax strategies could be analyzed as a problem of technological innovation with the twist that innovation is socially harmful. A central feature of the phenomenon is the collective action problem that confronts promoters and users of illicit tax strategies with the twist that their problem is to society’s benefit.

II. A SIMPLE MODEL OF THE CORPORATE TAX SHELTER MARKET

A. The Firm-Level Calculus and Some General Issues Regarding the Usefulness of the Model

A rational firm evaluating an illicit over-aggressive tax strategy that considered only the immediate financial implications would weigh the tax savings, \( t \), the cost of executing the strategy, \( c_e \), the probability that the position will be detected by the government, \( P_d \), the probability of an adverse decision upon detection, \( P_a \), and the penalty it would pay on an adverse decision, \( s \), which I treat as a factor of the tax savings. Equation (1) shows the relation among these financial variables. It expresses the expected financial return on execution of the strategy:

\[
t(1 - sP_dP_a) - c_e
\]  

(1)

The firm also might weigh time value considerations, which are a function of the expected after-tax return on the tax savings and the interest rate charged on a tax deficiency. I omit time value considerations throughout this Article because they complicate the analysis without altering its direction. They have mixed effects. A lag between execution expense and realization of the tax savings can be thought of either as an increase in execution cost or a reduction in the tax savings. A lag between tax savings and adverse action can have a positive or negative effect depending on the probability of adverse action and the difference between the rate of return earned on tax savings and the rate of interest paid on a tax deficiency.

A firm that invests in a shelter has several options if the government blacklists the shelter. It may abandon any claim of tax savings from the shelter and recover or deduct its execution costs. It may proceed and then disclose or not its use of the strategy. If its use of the strategy is detected and challenged, it may settle or fight in court. I introduce these options into the analysis in Section III. They unnecessarily complicate matters at this point.

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31 Franzoni, Tax Evasion, note 29.
Individual compliance with the tax law (and the law more generally) significantly exceeds the level that would be expected if compliance was driven by a pure calculus of the financial risks and rewards of noncompliance. Explanations of this phenomenon include risk aversion, a distaste for tangling with the government, and reputational concerns. Most such explanations depend upon the prospect of detection and sanction. The assumption is that people would not comply with the tax law if they faced zero risk of detection or punishment for noncompliance. I model the non-financial costs of an adverse tax decision by multiplying the financial cost on an adverse decision by a factor. This assumes that the non-financial costs bear a linear relationship with the amount of taxes at stake, which is not obvious.

Introducing nonfinancial factors into the calculus raises the general issue of whether the firm is the appropriate unit of analysis. It might be more accurate to model the incentives of agents within the firm who make the key decisions. Corporate managers do not directly bear the financial risks and rewards of engaging in an aggressive tax strategy. The firm's fortunes affects their reputation and compensation. The relation between firm-level effects and agent-level effects

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34 People rationally may fear that if the government detects an underpayment, it will scrutinize past and future tax returns more carefully.
35 Eric Posner, Law of Social Norms: The Case of Tax Compliance, 86 Va. L. Rev. 1781, 1794-96 (2000). Posner explains compliance with social norms generally as a product of people's efforts to signal that they are trustworthy. A comment by Russell Hardin, Law and Social Norms in the Large, 86 Va. L. Rev. 1821, 1824-26 (2000), gently devastates Posner's effort to explain tax compliance in this way. Hardin contrasts norms that are enforced in dyadic, or small-number, relationships (his example is truth telling) from universalistic norms that might be discernable in large number collective action (for example, paying tax). The latter are enforced through the communal sanctions of shunning or withdrawal. I know of no evidence of such responses to corporations that are reported to be engaged in aggressive tax strategies. Promoters and users of aggressive tax strategies designed for large businesses are in what Hardin defines as a dyadic relationship. Posner's model thus might help to illuminate why promoters might limit distribution of a strategy, sacrificing short-term gain, to establish their trustworthiness.
36 Not all do. For other views, see Dick J. Hessing, Henk Elffers, Henry S.J. Robben & Paul Webley, Does Deterrence Deter? Measuring the Effect of Deterrence on Tax Compliance in Field Studies and Experimental Studies, in Why People Pay Taxes, note 33, at 291-305 (reporting Dutch studies suggesting that some people never evade and are trivially affected by deterrence while other sometimes evade or habitually evade and are not impressed by deterrence); Steven M. Sheffrin and Robert K. Triest, Can Brute Deterrence Backfire? Perceptions and Attitudes in Taxpayer Compliance, in Why People Pay Taxes, note 33, at 193-218.
37 Defining that factor as \( v \), Equation (1) becomes
\[
rt(1 - svPdP) - c_e = \]
(2)
38 If reputational costs were a constant \( v \), then Equation (1) can be rewritten as
\[
t - c_e = PdP_s(tS + v).
\]
(3)
depends on the culture or policy of the firm. Ed Kleinbard has written that this culture has changed: "[S]enior corporate managers now perceive a corporation's tax liability . . . as a necessary cost that responds to aggressive management, just like other corporate expenses." \(^{39}\) This change would make managers less averse to pursuing risky tax strategies, bringing agent-level effects more in line with firm-level effects if the reputational costs to the firm of an adverse tax decision are fairly slight, as I expect they are. I make the firm the unit of analysis for two reasons. First, I believe that formal and informal mechanisms are likely to exist within the firm to ameliorate internal agency problems. Second, an agent-level analysis requires specifying decision and reward structures within the firm, which are likely to vary.

The assumption that behavior can be usefully modeled on the basis of rational choice or expected utility is questionable. There is a large body of literature on behavioral anomalies calling into question the standard model. \(^{40}\) Whatever the general validity of the rational choice model, it ought to have special purchase in analyzing the corporate tax shelter market because the education, selection, and acculturation of corporate financial officers, accountants, tax lawyers, and financial planners promote rational and strategic thinking.

**B. The Danger in Numbers**

Each additional use of an aggressive tax strategy increases the prospect that the government will detect the strategy and take adverse action potentially affecting all users. Equation (4) is a simple expression of the expected financial return from the next use of a strategy after \(n\) uses. \(P_d^n\) is the probability of detection at \(n\) uses. To simplify the expression assumes equal cost and tax savings for all users, that the only penalty upon detection is loss of this tax savings, and that there is no reputational cost upon adverse action. \(^{41}\)

\[
t(1 - P_d^{n+1}P_a) - c_e - tnP_a(P_d^{n+1} - P_d^n)
\]  

(4)

The left side of the expression is the expected value to the next user of the strategy. The right side of the expression is the expected cost to prior users from the increase in the probability of detection resulting from the next use. The key point is that some of the expected gain to the next user comes at the expense of prior users.


\(^{40}\) For a good review of this literature, see Russell B. Korobkin & Thomas S. Ulen, Law and Behavioral Science: Removing the Rationality Assumption From Law and Economics, 88 Cal. L. Rev. 1051 (2000).

\(^{41}\) This is roughly the situation when an adverse ruling occurs after a plan is implemented but before a tax return is filed claiming the benefits.
The optimal volume of use of a strategy for users as a group is the point where the expected value from the next use equals the reduction in the expected value to all prior users from that use. Figure 1 shows the relationship between aggregate expected value for users as a group and volume using what I think are realistic assumptions regarding tax savings, cost, and the probability of detection and what is probably an optimistic assumption (from the government's perspective) regarding the probability of adverse action.

![Figure 1](image)

The optimal volume for users as a group is at the peak. This is 34 where the probability of detection is slightly better than even. To the left of the peak, each additional use reduces the expected value of the shelter to prior users because of the increased probability of detection but has a greater positive value to the marginal user. To the right of the peak, the strategy has a positive value to the marginal user but the increase in the probability of detection imposes a greater loss on prior users as a group. The crossover volume where use of the strategy ceases to have a positive value is 111. Beyond this point, the expected value for all users is negative. Firms should not invest in the strategy if they expect volume to exceed this level.

Figure 1 assumes execution costs equal to 25% of the value of the tax savings. The only penalty upon adverse action is loss of the tax savings. I assume the first five uses individually have a one-in-fifty chance of being detected and uses above five individually have a one-in-forty chance.\(^4\) I increase the probability of detection on the sixth use to account in a rough way for the phenomenon of rumor. Figure 1 assumes an unrealistically high, 80%,\(^3\) probability of adverse action

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\(^4\) The probability of detection on one use is 2%; on two uses it is 3.96%; on four uses it is 5.8%. The rate of increase is less than 2% because the base of undetected use shrinks.

\(^3\) This 80% probability of adverse action can play out in different ways. One possibility is that it is certain that 80% of users will disgorge the tax savings if the strategy is detected because four in five will be detected and all who are detected will disgorge the tax savings.
against users when a strategy is detected to produce a dramatic curve. Reducing the probability of successful adverse action flattens the curve. This effect is counteracted by adding costs (for example, a penalty, litigation costs, or reputational costs) in the event of adverse action. Because these costs are within the firm’s control—a firm may abandon the transaction entirely or abandon the claim for tax savings—I defer their consideration to Section III when I take up the firm’s response to blacklisting.

When a promoter offers a tax shelter, it faces the risk that an agent of the offeree will tip off the government or otherwise leak word about the shelter in a way that gets back to the government. While every offer carries this cost (plus the financial and other immediate costs of making an offer), only a fraction of offers of aggressive tax strategies result in a sale. This significantly amplifies the negative effects of volume on expected value. Figure 2 makes the point graphically.

**Figure 2**

--- Every offer yields a sale

--- One-in-four offers yields a sale

Another possibility is that 100% of users will disgorge the tax savings 80% of the time because all are detected but there is a one-in-five chance of retaining the tax savings upon detection.

44 For reports of rejections of BOSS, see McKinnon, note 17, at A1. For the same on CINS, see Randall Smith, Merrill Lynch Tactic May Reduce Taxes on Asset Sales, but the IRS Is Watching, Wall St. J., Aug. 17, 1990, at A2 [hereinafter Merrill Lynch Tactic]; see also Jeffrey H. Paravano & Melinda L. Reynolds, Corporate Tax Shelters: Evaluating Recent Developments, in Tax Strategies for Corporate Acquisitions, Dispositions, Spin-Offs, Joint Ventures, Financings, Reorganizations, and Restructurings 2000 (2000), available at WESTLAW, 485 PLI/Tax 765, 830 (estimating that one in ten proposals pass muster by the offeree).

45 Let \( P_d \) = the probability of detection upon number of offers \( o \), \( P_o \) = the probability that an offer will result in a sale, and \( c_o \) = the cost of making an offer. The simplified expression of the marginal return (or cost) of an offer is:

\[
P_o [P_d (1 - P_o)^o P_o] - c_o - mP_o (P_d^o - P_d)\]  

(5)

The expression does not disaggregate disclosure risk in an offer from disclosure risk in a use. I disaggregate these risks in the analysis.
Using the same assumptions as Figure 1, the left line shows the aggregate expected value when only one in four offers results in a use and there is a one-in-hundred risk that an offer will result in the strategy being disclosed to the government.\textsuperscript{46} The optimal volume for users as a group drops from 34 uses to 15 uses. The point where the shelter has a negative expected value drops from 111 uses to 51 uses.

Figure 2 assumes that the cost of executing a strategy is 25\% of the value of the strategy's tax benefits and that this expense is lost if the government takes adverse action. In several reported tax shelter cases, fees and expenses paid by the taxpayer to invest in a shelter were in the range of 15\% to 20\% of tax savings.\textsuperscript{47} These do not include the opportunity cost of tying up funds in the strategy. In two cases where opportunity costs were close to zero because funds were tied up only for a moment, fees and expenses were over one-third of the value of the tax savings.\textsuperscript{48} What portion of the promoter's fee is compensation for its costs in executing the transaction is not known.

To illustrate the relationship of execution cost to volume, Figure 3 shows the average expected value of a shelter using the same assumptions as Figures 1 and 2.\textsuperscript{49}

\textsuperscript{46} More precisely, Figure 2 assumes a .005 (one-in-two hundred) chance that an offer will result in the strategy being tipped off to the government and a .005 chance starting with the sixth offer that an offer will ignite a rumor leading to disclosure. There is a .015 chance that a use will result in the strategy being detected upon audit.

\textsuperscript{47} Merrill represented to Colgate that it could reap tax savings with a net present value of $20 million at an after-tax cost of $4.1 million in transaction costs and fees. ACM P'ship v. Commissioner, 157 F.3d 231, 236-38 (3d Cir. 1998). Merrill's proposal to Brunswick put its fee at 5\%-10\% of tax savings, which it said was negotiable, plus legal fees, transaction costs, and fees paid the foreign partner in the ballpark of 4\% to 5\% of tax savings. Saba P'ship v. Commissioner, 78 T.C.M. (CCH) 684, 690 (1999), vacated, 273 F.3d 1135 (D.C. Cir. 2001). These numbers are from the Zelisko memorandum. Id. at 689-91. Allied Signal seems to have gotten a better deal. It was told that for a cost of around $12 million it could shelter a $447 million capital gain. ASA Investerings P'ship v. Commissioner, 76 T.C.M. (CCH) 325, 325-26 (1998), aff'd, 201 F.3d 505 (D.C. Cir. 2000).

\textsuperscript{48} Compaq paid Twenty-First Securities Corp. a fee of almost $1 million plus expenses of approximately $525,000 to reap a tax savings of approximately $3 million. Compaq Computer Corp. v. Commissioner, 113 T.C. 214, 218-19 (1999), rev'd, 277 F.3d 778 (5th Cir. 2001). The district court's decision in \textit{IES} is skimpy on facts. IES Indus., Inc. v. United States, 253 F.3d 350 (8th Cir. 2001). For a fuller story, see DOJ Argues Trades in American Depository Receipts Were Shams, 2000 TNT 151-27, Aug. 4, 2000, available at LEXIS, Tax Analysts File. The brief states that Twenty First's promotional materials promised a 30\% return on the investment in the arbitrage transaction.

\textsuperscript{49} I assume every offer yields a sale.
The curved line is the expected value of the strategy before execution costs are subtracted. It decreases with volume as the probability of detection increases and flattens as detection nears certainty.\(^{50}\) The horizontal lines represent execution costs. At an execution cost of 25% of the tax savings (the lower horizontal line), the breakeven point on the strategy is at a volume of 111. At an execution cost of 35% (the upper line), the breakeven point is at a volume of 66. The optimal volume for users as a group (the dashed vertical lines) changes with cost. At a 25% cost, the optimal volume is 34; at a 35% cost, it is 26; at a 10% cost, it is 63. This is a function of the number of prior users, the marginal increase in the probability of detection from each additional use (the slope of the curve), and the expected value of the marginal use.

Promotion costs are similar to execution costs except they are borne by the promoter. The analysis of the value of investments in researching and developing a new tax-saving strategy would be quite different. If tax innovation is like financial innovation generally, most research projects will be fruitless.\(^{51}\) Thus the expected value of a strategy to the developer would have to be quite high to justify a significant in-

\(^{50}\) The only adverse consequence upon detection is an 80% probability of loss of the tax savings so the strategy has an expected value of 20% of the tax savings if detection is certain.

\(^{51}\) Hal Lux, Product Envy, Investment Dealers’ Dig., May 13, 1991, at 22 (reporting that only one in ten of new products on the Chicago Board of Exchange becomes a major hit and two in ten become “moderate successes”).
vestment in research and development.\textsuperscript{52} There is little evidence that significant investments are being made in finding new loopholes in tax law.\textsuperscript{53} Perhaps this is because they are easy to find. Peter Canellos has written that in the tax shelter business "[t]he hard part is not finding the loophole . . . it is cloaking the shelter in the mantle of a real transaction . . . [and selling] the idea to clients . . . ."\textsuperscript{54} Another reason may be that it is difficult for a firm to capture the benefits of a new idea. I turn to this point now.

\section*{C. The Collective Action Problem}

An illicit tax strategy is worth much more to a user if it knows the idea will not be widely marketed. From the user's perspective, the optimal number of users is one. From the promoter's perspective, the optimal volume logically might seem to be that which maximizes the expected value of users as a group. The larger the pie, the bigger the slice the promoter can take. But this assumes that the promoter can make a credible commitment that volume will be limited.

If a promoter has a monopoly over an idea, it is possible to structure the relationship between promoters and users so that the incentives of the promoter are aligned with those of users as a group. A commitment by the promoter to reimburse fees is not sufficient to align incentives unless the promoter incurs execution costs that would

\textsuperscript{52} Research and development proceeds in stages. Much of the ultimate investment in developing an idea into a marketable state is made after initial work suggests a positive payoff is likely. Thus, the model needs to treat an investment in research and development as being in the nature of an investment in an option. The largest factor of production in tax law research and development, the time of tax lawyers and a law library, is more in the nature of a fixed cost if lawyers and the library are on hand.

\textsuperscript{53} The ideas for CINS and BOSS were brought to Merrill Lynch and Price-waterhouseCoopers by outsiders; they were not developed in house. McKinnon, note 17, at A1; Smith, Tactic, note 44, at A2. Judge Schwartz's opinion in In re CM Holdings, Inc., 2000-2 USTC \textsuperscript{\textcopyright} 50,791 (D. Del. 2000), tells the story behind COLI. It seems to have been the brainchild of a "life insurance entrepreneur," Henry F. McCamish, who was not a tax lawyer. Id. at 586. McCamish retained Milliman & Robertson, "a nationally prominent actuarial consulting firm," to develop the policy, which was mostly a financial and actuarial effort. Id. A percentage interest retained by McCamish on each COLI policy sold by MBL paid $40 million in 1992 and had a potential worth estimated by McCamish of $800 million. Brendan Intindola, MBL, COLI Adviser Settle Their Dispute, Nat'l Underwriter, Aug. 24, 1992, at 23. In 1992, MBL was reported to have 55 outstanding COLI policies with a face value of $44 billion. Mutual Benefit Venture, note 6, at 19. The policies underwritten by MBL were marketed by Newport Group, which was reported in 1993 to be the "largest COLI producer in the country." Jim Connolly, Hartford's COLI Business Growing, Nat'l Underwriter, Oct. 25, 1993, at 31.

\textsuperscript{54} Peter C. Canellos, A Tax Practitioner's Perspective on Substance, Form and Business Purpose in Structuring Business Transactions and in Tax Shelters, 54 SMU L. Rev. 47, 56 (2001).
be reimbursed out of the forfeitable fee. In theory, a precisely tailored reputational sanction also could constrain promoter opportunism. But a reputational sanction is exceptionally clumsy because it requires collective action. While people might predict how they will respond to a violation of a collective norm, they cannot know how others will respond, and they cannot be confident that others will hold to whatever response is in the group's long-term interest when deviation has a positive individual short-term payoff. For example, users might do well by refusing to do business with promoters of failed shelters for this would create a very strong incentive for promoters to restrict volume. But this strategy requires that users trust each other to reject enticing offers from "tarred" promoters.

The copycat phenomenon enormously exacerbates the collective action problem. An industry source tells me that everyone tends to know what other firms are doing, attributing this to movement of people across firms. What we know bears this out. Before Morgan Stanley completed the first public issue of step-down preferred, other investment banks offered a similar security. Government sources report several promoters sold BOSS, which originated at PricewaterhouseCoopers.

The presence of copycats tends to push volume beyond the optimal point for the group of users. Dishonorable promoters, meaning promoters who are indifferent to negative reputational effects and willing to dishonor whatever commitments they make regarding reimbursement of fees, will over-promote a shelter, pushing volume to the point where the expected value to users approaches zero, because they have

\[ f(1 - P_d^{n+1}P_d) - c_{ep} - fnP_d (P_d^{n+1} - P_d^n) \]  

This expression assumes all users are charged the same fee. Assuming that each use increases the probability of detection by a slight amount and that \( c_{ep} = 0 \), the expected gain to the promoter on the fee from the next use, the left side of the expression, is likely to exceed the expected loss to the promoter from the increased risk of forfeiting prior fees. I found that by manipulating the promoter's execution cost, \( c_{ep} \), it was possible to align the incentives of the promoter with those of users as a group.

I separate a specific cost that is associated with the volume of use and a general reputational cost. The former may be thought of as the harm to the promoter's relationship with the user when a strategy the promoter sold goes bust. The latter is the industry-wide harm to the promoter's reputation. A simplified expression of the expected value to the promoter on a marginal use is where \( r_u \) = specific reputational cost per user and \( r_g \) = general reputational cost:

\[ f - c_{ep} - P_d[P_d^{n+1}((n + 1)r_u + r_g) - P_d^n(nr_u + r_g)] \]  

By manipulating the severity of these sanctions, one can align the incentives of the promoters with those of users as a group.

Copycats complicate enforcement at the back-end because users cannot all be traced back to a single promoter.
no incentive not to do so. Even if only a small percentage of potential users will do business with dishonorable promoters, they have an incentive to market a shelter widely. The only cost a dishonorable promoter bears on making an offer is the cost of the offer itself.

The identified corporate tax shelters were sold by established firms in the financial services industry, such as PricewaterhouseCoopers,58 Merrill Lynch,59 Morgan Stanley,60 and National Union Fire Insurance.61 Presumably these firms incur reputational costs if a shelter they promote collapses. Their willingness to unwind transactions and repay fees when a shelter is blacklisted attests to this. Such “honorable” promoters will tend to push volume beyond the optimal point for users as a group, but to a lesser extent than would dishonorable promoters. It is in the interests of multiple promoters to maximize the size of the pie but they confront a classic collective action problem. Each promoter individually bears only a fraction of the cost to promoters as a group on making an additional offer or sale while reaping the entire benefit from that offer or sale.

Equation 8 is the expected value to a promoter of the next sale \((n + 1)\) defining its fee as \(f\), its execution costs as \(c_{ep}\), and its market share as \(sh\). It assumes that if the government takes adverse action against a user who did business with the promoter, the promoter will reimburse its fee and suffer no other harmful effects.

\[ f(1 - P_d n+1P_a) - c_{ep} - fnshP_d(P_d n+1 - P_d^n) \]

From the perspective of promoters as a group, each promoter has an incentive to over-promote a shelter because it reaps the entire fee from the next use while bearing only a fraction of the cost to all promoters in increased risk of loss of fees on prior uses. The predictable effect is over-promotion. Picture Spindletop.62 Precisely how this plays out in the real world depends on variables on which I could only speculate. The key variables are the number of promoters sharing the market, the ratio of the fee to their promotion and execution costs, and the extent of other costs (reputational costs or fines) incurred by a

58 McKinnon, note 17, at A1 (BOSS).
62 On January 10, 1901, near Beaumont, Texas, oil was struck after drilling 1,000 feet into the Spindletop salt dome. This first Spindletop well produced 80,000 barrels of oil in its first nine days. An oil rush followed with a large number of wells drilled on the same hill. Productions returns fell very rapidly. By 1904, only 100 of the 1,000 wells that had been drilled around Spindletop were producing much oil. Richard O’Connor, The Oil Barons: Men of Greed and Grandeur 81 (1971); Walter Rundell, Jr., Early Texas Oil: a Photographic History 1866-1936, at 36-37 (1977).
promoter in the event of adverse action by the government. If promoters and users are rational and informed, one would expect volume to be at some point between the point that maximizes joint expected value and the point where an investment in the shelter has a negative expected return.

III. The Response to Blacklisting

A firm that has invested in a shelter has several options when the shelter is blacklisted. It may not claim the tax benefits and reduce its losses by deducting the expense of the shelter. It may claim the tax benefits and disclose the position on its return. Or it may claim the tax benefits and not disclose the position. In the event its position is challenged, the firm may opt to fold or fight. Fighting entails litigation expense. If the firm loses, it will pay a penalty. The Service in December 2001 offered to waive the negligence penalty for taxpayers who disclosed a blacklisted transaction within 120 days. The strong implication is that a taxpayer who does not disclose will be subject to the penalty and perhaps not be allowed to deduct expenses. What precise penalties face a taxpayer who discloses, fights, and loses can only be guessed.

The following decision tree depicts these options and a likely set of payoffs under existing law.

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64 The Service also published guidelines issued to examiners on assessing the penalty. See Memorandum From Larry R. Langdon to Large and Mid-Size Business Division Executives, Managers, & Examiners (Dec. 20, 2001), 2001 TNT 247-8, Dec. 24, 2001, available at LEXIS, Tax Analysts File. The guidelines state that the penalty should not be assessed if a corporation “acted with reasonable cause and in good faith regarding its treatment of a tax shelter.” At a minimum this requires a showing of substantial authority for a position. Even substantial authority will not save a taxpayer “if the taxpayer’s participation in the tax shelter lacked significant business purpose, if the taxpayer claimed tax benefits that are unreasonable in comparison to the taxpayer’s investment in the tax shelter, or if the taxpayer agreed with the organizer or promoter of the tax shelter that the taxpayer would protect [its] confidentiality . . . ”
The factor of audit aversion is a rough measure of the negative consequences attendant to being audited by the government. These include use of managerial time, legal and accounting fees, and the increased risk of detection of other understatements on tax returns. The factor of loss aversion isolates the negative consequences of losing in litigation. From the agent's perspective, this might be a reputational cost. From the firm's perspective, this is a rough way to account for risk aversion.

Volume of use of a strategy affects the probability of blacklisting. Volume also affects the probability that an unreported use will be detected. One way the government finds users is by forcing a promoter to disclose its customers. The larger the group of customers, the greater the risk that a customer in the group will be detected, leading to the detection of others in the group. The division of the market between multiple promoters isolates this risk into different customer groups. There is an independent risk that use of a strategy will be detected in audit. This risk probably increases somewhat with volume because agents are trained to recognize widely-used strategies. In the event a strategy goes undetected or unblacklisted, there is a residual risk of a position being challenged on audit. A taxpayer should be able to get a favorable settlement in this situation.

Once values are assigned to these variables, it is possible to calculate the expected value of an investment in a shelter by assuming that a firm will choose the path with the highest expected value at each decision point. As with the simpler model, increasing volume depresses average and joint expected value. Figure 4 depicts the effect of volume on the average expected value of a highly aggressive strategy.\(^6\) The probability that a transaction will be blacklisted if detected

\(^6\) Figure 4 is based on the following assumptions: Execution cost is 30% of tax savings with one-third of this being the fee paid the promoter; tip-off risk and rumor risk are .5%
is assumed to be 95% and the probability that a taxpayer will lose on litigation is assumed to be 80%. If an undisclosed shelter is detected and beaten, there is a 20 percent negligence penalty and no deduction of expenses.

The volume that maximizes the joint expected value of users as a group is 56. The crossover volume where use of the strategy ceases to be profitable is 180. Even at the lower volume, there is a high probability that the strategy will be blacklisted (almost 90%) but users are likely to escape detection if they do not disclose the position. Nondisclosure upon blacklisting remains the dominant strategy as volume increases but the probability of detection gradually increases with volume.

Ronald Pearlman suggests executives are reluctant to sign a return attesting to its accuracy when they know the return is inaccurate because of the risk of personal embarrassment and sanction.\(^6\) This agent-level effect can be taken into account by adding a negative factor on the outcome where an undisclosed blacklisted position is detected and beaten in litigation. Think of it as personal aversion to being caught lying. Figure 5 uses the same assumptions as Figure 4 but adds a negative cost equal to one-third of the value of the tax savings on detection and defeat. The effect, not surprisingly, is to reduce significantly the optimal volume and cross-over volume.

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This increase in the cost of nondisclosure changes the dominant strategy in the event a shelter is blacklisted to abandonment in the case of a highly aggressive transaction. Figure 5 assumes a transaction that taxpayers estimated would have only a one-in-five chance of holding up in court. This is quite aggressive indeed.

The degree of aversion to audit, loss, and being caught lying no doubt varies across firms and individuals. Firms respond differently to the blacklisting of a strategy. Presumably, promoters learn which firms are least averse to risky tax gambits. By concentrating offers on such firms they can limit the risk of rejection of offers and the risk of an agent of the offeree tipping off the government. But there is a countervailing factor. If a firm invests in multiple shelters, there is a risk that the detection of one will lead to the detection of others. The government could increase this risk by requiring a user of a shelter to disclose other offerings made by the same promoter. It then could compel the promoter to divulge the identity of other firms to which it made these same offerings.

IV. THE RETURN ON DETERRENCE

The most easily measured social cost of corporate tax shelters is the cost to promoters and taxpayers of developing, marketing, and executing the strategies. Such expenditures yield little social benefit and so may be counted as a deadweight loss. Revenues lost to tax shelters also impose a social cost but the magnitude of this loss is difficult to assess. The allocative effects depend upon how firms respond to what

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67 The battle between SunTrust Banks and First Union over Wachovia offers a glimpse of differences in firm behavior. SunTrust Banks reported that First Union had a major stake in LILO while it had only a minor stake in a deal that it inherited in an acquisition. See Seccombe, note 19, at 1. Government sources report that a handful of firms continued with step-down preferred.
is in effect a reduction in the tax rate\textsuperscript{68} and the nature of the fiscal response to the revenue loss.\textsuperscript{69} The distributive effects depend upon who reaps the benefit of the reduction in taxes and who bears the burden of the fiscal response.

Figure 6 shows the average expected value to the user of an aggressive tax strategy (it assumes the taxpayer has only a 20\% chance on the merits if it takes the position to court) under regimes of lax, medium, and strong enforcement.\textsuperscript{70} I assume execution costs are 30\% of the value of the tax benefits from the transaction.

\textsuperscript{68} Professor Shaviro’s criticism of this statement is correct but incomplete. See Daniel Shaviro, Commentary, Evaluating the Social Costs of Corporate Tax Shelters, 55 Tax L. Rev. 445 (2002) Sometimes it is a mistake to analyze the reduction as a general reduction in the corporate tax rate because a tax-saving strategy is available only to firms with particular tax attributes such as foreign source income. His criticism is incomplete because the effect is ex post. The strategy is offered to firms that already have foreign source income. It is not at all clear that heretofore obscure sheltering possibilities influence economic decisions ex ante.

\textsuperscript{69} In theory, tax avoidance could yield a social benefit by reducing the deadweight loss from a tax. For example, the ability to shelter capital gains may induce firms to sell assets that others can use more profitably. In none of the litigated shelter cases was the shelter necessary to implementing a real business plan. Allied Signal’s use of CINS comes closest for the firm sought out Merrill Lynch to find a way to shelter capital gains at the same time the decision was made to sell the asset. ASA Investerings P’ship v. Commissioner, 76 T.C.M. (CCH) 325, 325-26 (1998), aff’d, 201 F.3d 505 (D.C. Cir. 2000). The absence of such effects means that the tax savings from shelters can be analyzed at best as a general reduction in the tax rate facing the firm. I have analyzed this elsewhere using the case of commodity straddles. Mark P. Gergen & Paula Schmitz, The Influence of Tax Law on Securities Innovation in the United States: 1981-1997, 52 Tax. L. Rev. 119, 186-89 (1997). Because the tax reduction comes at significant transaction costs, the effect is to purchase a small welfare gain for an inordinately large revenue loss. The transaction costs have a further distortionary effect by attracting labor and capital into industries and financial markets that support the shelters.

\textsuperscript{70} The other assumptions are that tax rate is 35\%, litigation costs are 10\% of tax savings, aversion to audit is 5\% of tax savings, aversion to loss in litigation is 20\% of tax savings, aversion to being found out in a lie is 20\% of tax savings, tip-off risk is .5\%, rumor risk is .5\% beginning on the 11th offer, 25\% of offers are accepted, should the transaction not be blacklisted there is an independent audit risk of 5\% with a projected settlement disgorging 50\% of the tax savings, and four promoters share the market equally.
Under a regime of lax enforcement, the shelter has a positive expected value at any volume. The prospect of adverse government action has no deterrent effect. Volume is limited only by the number of firms in a position to reap a tax benefit from the shelter. Moving to a regime of medium enforcement makes the zero value volume 103. If investors act intelligently, they will not invest in the shelter unless they expect that volume will not exceed this level. Moving to a regime of strong enforcement reduces the zero value volume to 41. The broken lines to the left of the zero value point identify the volume that maximizes the joint expected value to users under regimes of medium and strong enforcement.

The most visible social benefit from reducing volume is reduced execution costs. If volume is at the zero value point, this would equal box $abcd$ in a move from medium to strong enforcement. Box $abcd$ also defines the lower limit on the amount of the expected value of the revenue gain to the government in a move from medium to strong enforcement.\footnote{The actual value of the expected revenue gain will be greater because users of a shelter will rely on tax savings to offset costs that do not reflect payments to the government (for example, litigation costs, audit aversion, and loss aversion). To the left of the zero value point the expected value of the revenue gain is even greater because the shelter has a positive expected value.}
The table below summarizes the differences between the three regimes depicted in Figure 6.

<table>
<thead>
<tr>
<th></th>
<th>Lax</th>
<th>Medium</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability of blacklisting upon detection</td>
<td>50%</td>
<td>85%</td>
<td>95%</td>
</tr>
<tr>
<td>Probability of challenge of reported blacklisted transaction</td>
<td>50%</td>
<td>85%</td>
<td>95%</td>
</tr>
<tr>
<td>Negligence penalty</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Non-reporting penalty</td>
<td>5%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Probability of detection in audit</td>
<td>5%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Risk of being rolled up if user in group is caught</td>
<td>70%</td>
<td>85%</td>
<td>85%</td>
</tr>
</tbody>
</table>

Figure 7 speaks to the welfare effects of penalizing promoters. If a promoter penalty reduces volume away from the zero-value point and towards the point that maximizes aggregate expected value. This effect might be quite strong if the promoter pays a penalty for each shelter it sold. The consequence is to reduce execution costs, perhaps significantly. But on the revenue side, the effect of the reduction in volume is a wash and may even be negative.

![Figure 7](image-url)

Figure 7 assumes a promoter penalty reduces volume from point $f$ to point $b$. The reduction in execution costs is box $hidg$. The lower limit of the expected value of the loss in tax revenue changes box $efcg$ to...
box $abcd$. The net gain or loss depends upon the relative sizes of boxes $abej$ (the revenue lost at volume $b$ from the reduced probability of detection) and $jfdg$ (the revenue gained by reducing volume from $f$ to $b$). That depends on the slope of the curve, which is a function of the effect of volume on the probability of detection.

Strengthening enforcement is costly. Adding penalties is close to cost-free but ineffective by itself in the politically feasible range of penalties. Doubling the penalty under the lax enforcement regime without other measures to improve detection has a minimal impact on the volume of use of a shelter. A draconian penalty unwaveringly imposed (that is, the government holds out for payment of the penalty when it detects use of a shelter and never settles for less) would have a significant deterrent impact. But few support imposing severe sanctions for violations of indeterminate legal standards.

Improving deterrence depends on increasing the odds of detection. I cannot speak to the marginal effect on the probability of detection from expenditures in monitoring tax shelter activity, auditing returns, and pursuing identified users and promoters. The model does provide some insights on the marginal effect on tax revenue and shelter volume from improvements in detection. Generally, a slight increase in a very low probability of detection yields a revenue gain but does not reduce volume. The reason is that the shelter remains a good investment even with a slight increase in the probability of detection. The effect of the increase is to catch a few more users, which yields a revenue gain. The effect of the improvement in detection is to reduce supranormal profits on a shelter.

Figure 8 shows the effect of gradually increasing the probability of detection of use of an identified shelter in audit from 5% to 10%.$^{72}$

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$^{72}$ It assumes a high probability that an abusive strategy will be blacklisted (85%), a high probability of challenge of a disclosed blacklisted transaction (85%), a medium probability of users being rolled up if one in a group is detected (50%), and a 20% penalty for not reporting a blacklisted transaction. The other assumptions are as in Figure 6. See note 70.
Increasing the odds of detection to 6% (the second line) reduces the average return on the shelter but it remains positive throughout the range. On my assumptions, the increase in the odds of detection in audit from 6% to 7% has an enormous effect because the shelter has a negative value unless users expect volume will be restricted. An increase in the odds of detection beyond 7% lowers the volume at which the shelter has zero value in gradually decreasing increments.

At some point there is little additional payoff in increased tax revenue and reduced volume to improving the odds of detection of individual use of a blacklisted shelter. The reason for this is that when there is high scrutiny for use of blacklisted shelters, the value of the shelter comes to depend on the prospect that it will not be detected by the government and blacklisted. In this situation, gains must come from improving the odds that the government will detect and blacklist an aggressive transaction.

V. WILL ANTI-ABUSE STANDARDS BOOMERANG?

I turn to the costs of deterrence. The direct costs to the government of hiring and training agents and of prosecuting cases are not the only costs of pursuing shelters. Daniel Shaviro and David Weisbach observe that anti-abuse measures can have a socially harmful boomerang effect if taxpayers respond not by forgoing tax-saving transactions but
instead by making greater efforts to avoid the anti-abuse rule.  

Bright line anti-abuse rules invite such a response. Section 901(k) invites corporations that want to do dividend arbitrage with the foreign tax credit to avoid the anti-abuse rule by holding the position for more than 15 days. Assuming the taxpayer has better use for its funds, the longer holding period increases the cost of the transaction. A fuzzy anti-abuse standard can invoke a similar response if taxpayers believe that greater effort in cloaking a transaction with business purpose will increase the probability of success. In the arena of corporate tax shelters, the prospect of a strategy being blacklisted may induce a taxpayer to tailor a transaction to differentiate it from the archetype.

My intuition, which is shared by others and is consistent with experience, is that taxpayers often do not respond to fuzzy anti-abuse standards by making a greater effort at the margin to cloak transactions with apparent economic substance. The model illuminates the logic behind this intuition. Whether tailoring is rational depends, of course, on the bang for the buck. When an anti-abuse measure takes the form of a bright-line rule, such as the 15-day holding requirement in § 901(k), a taxpayer might well believe that a small expense will make a legally risky transaction legally bulletproof. It would be irrational not to incur the additional expense if the transaction delivered large tax benefits.

Expenditures in cloaking a transaction with economic substance to withstand a potential challenge under the anti-abuse standards may

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A striking fact in *Compaq* and *IES* is that the taxpayers and the promoter expended minimal effort to cloak the transactions with business purpose. The purchase and sale transactions were nearly simultaneous and the counterparty was a client of the promoter. The transactions were not shams—there were real purchases and sales at the market price of the ADRs—but there was no effort beyond doing real transactions to cloak the deals with business purpose. *Compaq Computer Corp. v. Commissioner*, 277 F.3d 778, 782-83 (5th Cir. 2001) (citing *IES Indus., Inc. v. United States*, 253 F.3d 350, 353-54 (8th Cir. 2001)). COLI was carefully tailored in the 1980's and 1990's to comply precisely with the law's restrictions regarding internally-funded premiums. No effort was expended to cloak them with additional substance to ward off a potential challenge on anti-abuse grounds. American Elec. Power, Inc. v. United States, 136 F. Supp. 2d 762 (S.D. Ohio 2001); In re *CM Holdings, Inc.*, 2002-2 USTC (CCH) ¶ 50,791, at 85,864 (D. Del. 2000); *Winn-Dixie Stores, Inc. v. Commissioner*, 113 T.C. 254 (1999), aff'd, 254 F.3d 1313 (11th Cir. 2001). Some users of COLI were warned of the risk of such a challenge. Ernst & Young approved an internal analysis, which concluded that the policy qualified as an insurance contract under the technical rules, but warned that the Service might challenge the deductions because the policy "is designed to take advantage of a tax arbitrage opportunity under existing law." *CM Holdings*, 2000-2 USTC (CCH) ¶ 50,791, at 85,918.
well have a negative expected value. Figure 9 shows the effect of increased cost on expected value when one unit of cost yields a 1%, 2%, or 3% increase in the probability of success in litigation.75

Figure 9

To simplify matters, I assume that the only effect of the cloaking expense is to improve the odds of success in litigation. A large cloaking expense presumably also affects the odds of detection and challenge because an extravagant good disguise may fool the Service. The cloaking expense initially has a negative payoff because even with an increase in the probability of success in litigation, the firm is better off folding rather than fighting should the government detect and challenge its position. The expense has a positive payoff only once fighting becomes the dominant option on detection, but as the bottom line with a one-to-one ratio illustrates, not always then. Fighting becomes the dominant option at a probability of success on the merits of 32% but the expected value continues to decline with a one-to-one ratio, albeit at a slower rate. This result occurs because the gain from the improvement in the taxpayer's position in the worst-case outcome (the transaction is blacklisted and its use is detected) is discounted by the probability that this outcome will be avoided.

A more realistic assumption regarding the relationship between cloaking expense and the odds of success in litigation amplifies this phenomenon. Cloaking probably has a small effect initially that increases geometrically at some point. This is inherent in fuzzy concepts.76 One or two hairs do not make a bald man hairy, but add more

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75 I assume volume is expected to be in the mid-range between the optimal volume and the crossover volume. The probability that the transaction would be blacklisted is very high (95.8%) and the probability that the taxpayer will be detected is a little less than even (44.29%). The base expense is 30% of the tax savings. The base probability of success on the merits is 20%.

76 My sense is that the concepts of "tax shelter" or "abusive tax transaction" are not fuzzy in the same way that the concept of baldness is fuzzy. Baldness is a fuzzy concept...
hairs and at some point he is no longer bald. Figure 10 shows the effect of cost on expected value when cloaking effort has such an effect.\footnote{77}

![Figure 10](image)

The firm must almost double the cost of the transaction—from 30\% to 51\% of the tax savings—before it improves upon its original position. Even then the improvement is slight. Not cloaking the transaction still is irrational from the perspective of the firm since the much larger additional expense marginally increases the expected value. But this is a minor irrationality that is easy to explain by human psychology or agency problems.

VI. Should We Be Concerned About Over-Aggressive Enforcement of Anti-Abuse Measures?

It is in the nature of anti-abuse measures in general and the standards of tax motive and business purpose in particular that they ought not to impinge on business planning when tax considerations are not somewhere near the forefront of a planner's mind. When tax lawyers complain about anti-abuse measures impinging on ordinary affairs, because the phenomenon of baldness/hairiness is continuous but is expressed through a single metric. Temperature is a continuous phenomenon that is expressed through a continuous metric and so is not fuzzy. The concepts of "tax shelter" or "abusive tax transaction" are fuzzy because these are given meaning by a cluster of descriptive elements. Changing one or two elements may change the conceptual characterization with only a slight change in position. This is a vague predicate. If the concept of marriage is understood as expressing anything other than formal wedlock (for example, we might define a marriage as a long-term sharing relationship with a strong emotional and sexual component), then it has the character of a vague predicate. See Stanford Encyclopedia of Philosophy: Sorites Paradox, available at \url{http://plato.stanford.edu/entries/sorites-paradox}.

\footnote{77} The underlying assumptions are the same as in Figure 6 with a regime of medium enforcement and at an expected volume of 70. See note 70.
the complaint really is that the measures impinge on ordinary tax planning. Some such effect seems inevitable given the caution of transactional lawyers and the difficulty of defining when tax planning is abusive. Respectable tax lawyers have tried to distinguish what they do from what tax shelter promoters do. One argument contrasts tweaking real business deals to minimize taxes, which is what ordinary tax planners do, with creating deals that have no purpose other than tax. This is a hard line to draw. In some tax shelters, the aggressive feature is an add-on to a real deal, albeit a novel add-on. Is this "tweaking" a deal or creating a deal? A related argument contrasts the tax lawyer who helps a client by offering an idea out of his "bag of tricks" with the promoter who pitches an idea to the world. Drawing the line here would tend to drive the marketing of tax shelters to firms with established relations with customers. This would lessen the collective action problem that faces users and promoters of tax shelters, which might be either a good or bad thing from a social perspective.

What may seem an insoluble problem lurks behind the difficulty of distinguishing ordinary tax planning from abuse. If we cannot draw this line, then how can we evaluate the costs and benefits of crossing it? A significant cost of measures to reduce the incidence of false negatives in the war against corporate tax shelters—meaning abusive positions that go uncaught—is the predictable increase in the incidence of false positives—meaning nonabusive positions that are caught in the web of blacklisting, audit, and litigation. Should we be worried about false positives? David Weisbach argues in his contribution to this Symposium that we should not be concerned if the effect is to deter tax planning. His position is that tax planning "is almost always bad for society—it is worse than worthless." The major drawback he sees with anti-abuse measures is the potential boomerang effect.

The independence of courts gives rise to another reason for the Service to restrain itself in pursuing less aggressive tax shelters using anti-abuse standards. Up to this point I have assumed that if a user takes

78 I discuss the indeterminacy of the anti-abuse standards and defend the standards from the standard legal objections in Mark P. Gergen, The Common Knowledge of Tax Abuse, 54 SMU L. Rev. 131 (2001) [hereinafter Common Knowledge].
79 Canellos, note 54, at 55-57.
80 See, e.g., Salina P'ship v. Commissioner, 80 T.C.M. (CCH) 686 (2000); ACM P'ship v. Commissioner, 73 T.C.M. (CCH) 2189 (1997), aff'd in part and rev'd in part, 157 F.3d 231 (3d Cir. 1998). David Hariton tries to deal with this aspect of ACM by arguing that the aggressive tax feature was "not essential" to the real deal. David P. Hariton, Sorting Out the Tangle of Economic Substance, 52 Tax Law. 235, 236 (1999).
81 A source from an accounting firm used these words.
its position to court, it has a 20% chance of success on the merits. As the taxpayer’s odds get better, the prospect of blacklisting and challenge has less of a deterrent impact. Eventually it has no deterrent impact. To illustrate, Figure 11 shows the relation of expected value and volume at different odds of taxpayer success in court. I assume the Service attacks a strategy with the same vigor in every case.\(^8\)

If users of a strategy believe they have even odds of success in litigation or better, the prospect of adverse action by the Service does not suppress the volume of use of a strategy. I assume that litigation costs are fairly high\(^4\) and that nonfinancial factors such as aversion to audit and loss are fairly low.\(^5\)

The pursuit of shelters might be justified even when it yields no reduction in volume and so no reduction in execution costs. The revenue gain remains. From this must be subtracted the government’s and the taxpayer’s litigation costs. The taxpayer’s nonfinancial costs also might be counted. Thorough-going utilitarians would even count as a negative the nonfinancial costs to the firm (or its agents) of defeat and penalty when the firm loses.\(^6\) Tactical considerations of a psychological nature loom large when asking the very practical question of how much risk the Service should take in anti-shelter litigation. Judicial behavior is not an independent variable. The Service might pursue only strong cases because victory and defeat have cascading effects in the courts. Victory and defeat also will affect taxpayer psychology. My point is fairly modest. We do not want the Service to pursue every tax-saving strategy it thinks it has a chance of beating in court, but neither should we fault the Service if it loses even as much as one-half of the cases that end up in court. Nor should we conclude that a policy relying on anti-abuse standards cannot work if the government

\(^8\) The probability of blacklisting upon detection is 85%, the probability of challenge of a reported transaction is 85%, the probability of detection in audit is 7%, the probability of all users in a group being detected if at least one is detected is 70%, and a 20% penalty is imposed for failure to report on top of the 20% negligence penalty. The other assumptions are as in Figure 6. See note 70.

\(^4\) I assume 10% of the amount of the tax savings.

\(^5\) The negative premium on audit is 5% of the tax savings, the negative premium on loss in litigation is 20% of the tax savings, and the negative premium on being caught lying (detected nondisclosure of a blacklisted transaction) is 20% of the tax savings. There is in addition a 20% negligence penalty, nondeduction of expenses, and a 20% penalty on nondisclosure of a blacklisted transaction.

\(^6\) I would not. The explanation takes me afield into what I understand to be a part of Jules Coleman’s response to Louis Kaplow and Steven Shavell at the 2001 AALS meeting. Briefly, Kaplow and Shavell advocated evaluating social policies using an expected utility standard. Louis Kaplow & Steven Shavell, Fairness Versus Welfare, 114 Harv. L. Rev. 961, 967-68 (2001). Under such a standard, one would reject a policy that improved the welfare of A at greater cost to B even if we thought that B was a wrong-doer whose loss did not count (or counted less). It seems to me that for some norms we think it sufficient that enforcement of the norm yields a net benefit to all except those who violate the norm.
sometimes loses. My analysis suggests that if the government vigorously wages war against shelters, it will win the war although it loses a fair number of battles in court.

Figure 11 will seem counter-intuitive to many tax lawyers. It predicts that taxpayers will proceed with a transaction and take a tax position in the face of an appreciable risk of challenge and defeat. Anyone who has worked on a corporate acquisition that is contingent upon nonrecognition knows that even a small tax law risk can stop a deal. One explanation is that taxpayers are much more averse to audit and loss than I suppose. A better explanation is that in corporate acquisitions the gain to at least some key players is small enough that their assent depends upon certainty of nonrecognition. Figure 11 assumes an investment that if there were no risk of challenge and defeat would have a rate of return of over 200%. This is not out of line with the returns promised taxpayers in the litigated tax shelter cases.

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88 The costs are 30% of the amount of the tax savings.
VII. Closing Thoughts

If I am right that the corporate tax shelter market has a potentially strong self-limiting dynamic, then radical change in the tax law is not warranted, at least not for this reason alone. The government is on a potentially fruitful path in its current policy of monitoring the marketplace, blacklisting new aggressive strategies when it learns of them, and vigorously pursuing users of blacklisted strategies through promoters. We probably have not yet reached the point where these measures significantly suppress volume. If so, then increased effort by the Service can have a dramatic payoff. There is no reason to think that we have reached the point of diminishing returns.

I did not address the details of a deterrence strategy. The model calls into question the value of promoter sanctions except insofar as they are used to compel promoters to divulge customer lists. Promoter sanctions may actually benefit the corporate tax shelter market by aligning the incentives of promoters and users. Additional sanctions on users have a payoff but in the politically feasible range of sanctions they will not substitute for measures to improve detection. Whether the anti-abuse standards should be codified is a difficult question. I would have said no because of the impossibility of rationalizing anti-abuse law, but recent Court of Appeals decisions that make a hash of the law suggest that some measures are necessary to educate nonspecialist judges about the anti-abuse standards. A better approach might be to make the full Tax Court the final arbiter on such matters.

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89 I explain why it cannot be rationalized in Gergen, Common Knowledge, note 78, at 144-46.

90 I am referring to Compaq Computer Corp. v. Commissioner, 277 F.3d 778 (5th Cir. 2001); UPS, Inc. v. Commissioner, 254 F.3d 1014 (11th Cir. 2001); IES Indus., Inc. v. United States, 253 F.3d 350 (8th Cir. 2001).