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The Return to Corporate Tax Evasion in the Presence of an Income Tax on Shareholders

Graeme S. Cooper

THE RETURN TO CORPORATE TAX EVASION IN THE PRESENCE OF AN INCOME TAX ON SHAREHOLDERS

by

GRAEME S. COOPER*

I. INTRODUCTION

This paper is an extension of work in the field of tax compliance examining the problem of income tax evasion.[1] Existing economic work on this topic contains both empirical and theoretical literature analyzing the sources of and incentives for income tax noncompliance and concentrates on compliance issues regarding individuals with the personal income tax.[2] Another study considers the incentives for publicly-held corporations and their managers to avoid compliance with their corporate income tax obligations and analyze the effects on the reporting behavior of the corporation's managers by such variables as the formal penalty structures, the revenue authority's audit strategies, market interest rates, the corporation's debt policy, and other factors.[3] There is also sociological literature analyzing the behavior of corporate managers,[4] but compared to the analysis of personal income tax eva-

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1. Reviews of the literature can be found in FRANK A. COWELL, CHEATING THE GOVERNMENT: THE ECONOMICS OF EVASION 17-27 (1990); Ann D. Witte & Diane F. Woodbury, *The Effect of Tax Laws and Tax Administration on Tax Compliance: The Case of the U.S. Individual Income Tax*, 38 NAT'L TAX J. 1 (1985); AMERICAN BAR ASS'N COMMISSION ON TAXPAYER COMPLIANCE, *Report and Recommendations on Taxpayer Compliance* (1987), *reprinted in* 41 TAX LAW. 329, 338 (1983); 1 TAXPAYER COMPLIANCE 21 (Jeffrey A. Roth & John T. Scholz eds., 1989); STEPHEN SMITH, BRITAIN'S SHADOW ECONOMY ch. 4 (1986); DAVID J. PYLE, TAX EVASION AND THE BLACK ECONOMY ch. 5 (1989); Susan B. Long & Judyth A. Swingen, *Taxpayer Compliance: Setting New Agendas for Research*, 25 LAW & SOC'Y REV. 637 (1991); Frank A. Cowell, *The Economic Analysis of Tax Evasion*, *in* SURVEYS IN THE ECONOMICS OF UNCERTAINTY 173 (John D. Hey & Peter J. Lambert eds., 1987).

2. *See, e.g.*, INTERNAL REVENUE SERVICE, INCOME TAX COMPLIANCE RESEARCH: GROSS TAX GAP ESTIMATES AND PROJECTIONS FOR 1973-1992 (Publication 7285, 1988); COWELL, *supra* note 1, at 19-24; Michael J. Graetz & Louis L. Wilde, *The Economics of Tax Compliance: Fact and Fantasy*, 38 NAT'L TAX J. 355, 356 (1985); DAVID BURNHAM, A LAW UNTO ITSELF: THE I.R.S. AND THE ABUSE OF POWER xvii-xx (Vintage ed. 1989); Michael O'Higgins, *Aggregate Measures of Tax Evasion: An Assessment*, 1981 BRIT. TAX REV. 286; THE ECONOMICS OF THE SHADOW ECONOMY (Wulf Gaertner & Alois Wenig eds., 1985); M. Marelli, *The Economic Analysis of Tax Evasion: Empirical Aspects*, *in* SURVEYS IN THE ECONOMICS OF UNCERTAINTY 204 (John D. Hey & Peter J. Lambert eds., 1987). The empirical literature is reviewed in James S. Henry, *Noncompliance With U.S. Tax Law—Evidence on Size, Growth and Composition*, 37 TAX LAW. 1 (1983); SMITH, *supra* note 1, at chs. 9-12; PYLE, *supra* note 1, at chs. 2-4.

3. Graeme S. Cooper, Analyzing Corporate Tax Evasion, 50 TAX L. REV. 33 (1994).

4. Roman Tomasic & Brendan Pentony, *Tax Compliance and the Rule of Law: From Legalism*

sion, corporate tax evasion has not been widely explored.

This paper elaborates on an existing model of tax evasion by publicly-held corporations by adding another complicating factor—examining the effect of the personal income tax and the variety of interaction mechanisms[5] between the corporate tax and personal income tax systems. In particular, this paper considers whether the presence of the personal income tax, operating as an additional tax on income derived through companies, and the design of its interaction (if any) with the corporate tax, is likely to induce the corporation's managers to increase or decrease the level of evasion of the corporate tax.[6] In other words, under what circumstances will the existence and operation of the personal income tax lead to greater or less evasion by corporations of their liability under the corporate income tax; and to what extent does the result depend upon the design of the interaction mechanism between the two tax regimes?

The possibility that the interaction of the corporate tax and personal income tax may enhance income tax compliance has been doubted on some occasions,[7] and on others, assumed without much analysis.[8] The effects have

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to Administrative Procedure?, 8 AUST. TAX F. 85 (1991); ROMAN TOMASIC & BRENDAN PENTONY, DEFINING ACCEPTABLE TAX CONDUCT: THE ROLE OF PROFESSIONAL ADVISERS IN TAX COMPLIANCE (Centre for National Corporate Law Research Discussion Paper No. 2/ 1990 1990).

5. The discussion in this paper will use the term "interaction mechanism" rather than "integration" system, dividend relief, or some other term to refer to adjustments made at either the corporate or shareholder level to accommodate the operation of the other tax. Unfortunately, the terminology used in this field is not uniform and confusion may arise as "integration" or "full integration" is often used (and will be used in this paper) to refer to a specific system which attributes corporate profits to shareholders, rather than taxing distributions or sales of corporate profits. McLure notes, "'integration' has so many meanings that most groups can find a version they like." CHARLES E. MCLURE JR., MUST CORPORATE INCOME BE TAXED TWICE? 28 n.23 (1979). Hence this paper will use the nebulous term "interaction mechanism" to avoid possible confusion with existing definitions.

6. In this paper, the evasion being studied occurs only in the reporting of the corporation's taxable income. It is of course quite possible that the shareholder is also contemplating evading by not reporting all of the dividends or, more commonly, capital gains received from this investment. *See* James M. Poterba, *Tax Evasion and Capital Gains Taxation,* 77 AM. ECON. REV. 234 (1987). It may be that the shareholder prefers personal evasion because evasion by the corporation is somehow easier for the revenue authority to detect or more likely to be detected because of the deployment of enforcement resources by revenue authorities. But the additional layer of evasion by shareholders will not be pursued further as this paper is concerned principally with evasion of the corporate tax and the behaviour of corporate managers.

7. *See, e.g.,* MARTIN NORR, THE TAXATION OF CORPORATIONS AND SHAREHOLDERS 73-75, 146-147 (1982). Norr was addressing the effects of particular interaction mechanisms on the compliance behaviour of shareholders rather than the behaviour of corporate managers.

8. *See, e.g.,* Andre Buelinckx, *Belgium, in* IMPUTATION SYSTEMS—OBJECTIVES AND CONSEQUENCES 12 (Hugh J. Ault ed., 1983); Sijbren Cnossen, *The Imputation System in the*

been conceived as occurring in both taxes: that the structure and design of the personal income tax regime may increase compliance by shareholders with the personal income tax,[9] and that it may increase compliance by corporate managers with the corporate tax. This paper suggests that there are some circumstances where the personal income tax discourages corporate tax evasion, but that there are others where it may encourage evasion. This produces situations where managers may be expected to undertake more or less tax evasion when the impact of the personal income tax is added, changing the level of evasion that managers and shareholders might consider desirable apart from the personal income tax. From the perspective of the revenue authority, it will be seen that this result can be influenced significantly by the design of the interaction between the corporate tax and personal income tax systems.

One solution to the problem of corporate tax evasion would simply be to abolish the corporate tax and concentrate on collecting tax on income derived through corporations from the shareholders.[10] But revenue authorities clearly desire to retain the corporate tax despite its acknowledged drawbacks, and it

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EEC, in COMPARATIVE TAX STUDIES 85, 92 (Sijbren Cnossen ed., 1983) (most European countries retain their corporate tax primarily as a withholding procedure because it "works as an anti-avoidance device"). *See also* Hugh J. Ault, *Introduction, in* IMPUTATION SYSTEMS—OBJECTIVES AND CONSEQUENCES 9 (Hugh J. Ault ed., 1983).

9. The possibility that the existence of the personal income tax and particular kinds of interaction mechanism may enhance compliance by shareholders with the personal income tax will not be pursued further in this paper. It is discussed in the literature concerning the compliance behaviour of individuals. *See generally supra* note 1 and accompanying text.

10. The suggestion that the corporate tax ought simply to be removed is not made entirely in jest. It is regularly suggested by many commentators. *See e.g.* William Vickrey, *The Corporate Income Tax and How to Get Rid of It, in* RETROSPECTIVES ON PUBLIC FINANCE 118 (Lorraine Eden ed., 1991); Cnossen, supra note 8, at 87 ("in an equitable tax system . . . the case for a separate corporation tax is uneasy. Ideally, corporate profits, whether distributed or retained, should be subject to personal income tax only."). *Cf.* Richard M. Bird, *Corporate-Personal Tax Integration, in* TAX COORDINATION IN THE EUROPEAN COMMUNITY 227, 244 (Sijbren Cnossen ed., 1987) [hereinafter *Corporate-Personal Tax Integration*] ("whether the personal income tax is based on income or consumption, there is a strong case for a continued corporate tax—not just to act as a withholding tax on personal income but to tap economic rents, to reach the income of non-residents, and to provide an appropriate division of revenues between source and residence countries"). Elsewhere, Bird argues that the corporate tax is a necessary element of the tax system and would have to be invented if it did not already exist. RICHARD M. BIRD, TAXING CORPORATIONS 17 (1980). *See also* Peggy B. Musgrave, *Interjurisdictional Coordination of Taxes on Capital Income, in* TAX COORDINATION IN THE EUROPEAN COMMUNITY 197 (Sijbren Cnossen ed., 1987); Robin W. Broadway, Neil Bruce & Jack M. Mintz, *Corporate Taxation in Canada: Toward an Efficient System, in* TAX POLICY OPTIONS IN THE 1980S 171 (Wayne R. Thirsk & John Whalley eds., 1982) (arguing that the corporate tax is necessary to tax at some point the income derived by foreign corporations and their non-resident shareholders from sources in the country).

All commentators go on to observe, however, that abolishing the corporate tax would create other problems. *See infra* note 13.

is this desire that ensures both the problem of evasion and the variety of interaction mechanisms which will be described in Section IV. From an economic perspective, the corporate income tax is a tax imposed upon and collected from the corporation but borne (probably, and in varying degrees) by owners of equity investments in corporations.[11] While a corporate tax without a personal income tax is a tax intended to fall upon the owners of specific forms of capital, collected by withholding from the corporation, the corporate income tax with a further personal income tax on distributions or retentions of previously taxed corporate income is much more ambiguous. The historical justification for the corporate income tax was usually the simple need for revenue. However, with the introduction of a personal income tax (often subsequent to the corporate tax), the corporate tax survives largely to protect the personal income tax[12] and, perhaps, because its elimination would now prove too difficult.[13]

Ideally, the corporate tax would operate as a collection point for the tax liability of the individual shareholders who own the corporation's income, unless the view is taken that the corporation itself has taxable capacity

11. The ultimate incidence of the corporate tax is one of the enduring mysteries of public economics and corporate finance. Depending upon the elasticities of supply and demand in various markets, the corporate tax may be borne by the corporation's equity investors, the consumers of its products or its workforce. The voluminous literature on this topic is summarised in JOSEPH E. STIGLITZ, ECONOMICS OF THE PUBLIC SECTOR 564-71 (2d ed. 1988); ANTHONY B. ATKINSON & JOSEPH E. STIGLITZ, LECTURES ON PUBLIC ECONOMICS 173-78 (1980); JOSEPH A. PECHMAN, FEDERAL TAX POLICY 135-41 (4th ed. 1983); *Corporate-Personal Tax Integration, supra* note 10, at 242 ("the question of precisely whose income is reduced by taxes on corporations is far from simple and perhaps ultimately unanswerable"). Indeed, one of Bird's reasons for retaining the corporate tax is precisely the point that its incidence may well not lie with the shareholders who will receive the benefit of its elimination or reduction through an interaction mechanism. *Id.* at 242-46.

12. *See* NORR, *supra* note 7, at 15-18; Cnossen, *supra* note 8, at 86-87; *Corporate-Personal Tax Integration, supra* note 10, at 244; PECHMAN, *supra* note 11, at 181 ("without a corporation tax, a substantial part of the individual income tax would be permanently lost from the tax base through retention of earnings by corporations").

13. All commentators observe, however, that the effect of abolishing the corporate tax would be a windfall gain to existing shareholders at substantial revenue cost and with no desirable incentive effects. *See* Alan J. Auerbach, *Debt, Equity, and the Taxation of Corporate Cash Flows, in* DEBT, TAXES, AND CORPORATE RESTRUCTURING 91, 114-15, 125-26 (John B. Shoven & Joel Waldfogel eds., 1990) [hereinafter *Corporate Cash Flows*]. Further, Bird notes that if the tax is borne by shareholders, its effect will have been capitalised into the price of shares, and so remitting or abolishing the tax will not benefit the correct shareholders. *Corporate-Personal Tax Integration, supra* note 10, at 244. *See also* TAXING CORPORATIONS, *supra* note 10, at ch. 3; Alan R. Prest, *Corporate Taxation in Latin America, in* READINGS ON TAXATION IN DEVELOPING COUNTRIES 211, at 212 (Richard M. Bird & Oliver Oldman eds., 3d ed. 1975) (who notes "the inequity of allowing some individuals to make windfall gains as a consequence of removing the tax"); Cnossen, *supra* note 8, at 87 ("removal of the tax would result in unwarranted windfall gains to existing shareholders"); Vickrey, *supra* note 10, at 132 ("it is an additional item on the bill of indictment against the tax that getting rid of it is so

(whether or not it is able to shift part or all of its liability to others).[14] But the double taxation of corporate income under the classical system confounds this goal and, as an alleged consequence, causes both inefficiency and inequity.[15]

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difficult"); John G. Head & Richard M. Bird, *Tax Policy Options in the 1980s, in* COMPARATIVE TAX STUDIES 3, 16 (Sijbren Cnossen ed. 1983) ("the abolition of . . . [the corporate] tax would therefore generate windfall gains for owners of equity shares").

14. J. A. Kay & M. A. KING, THE BRITISH TAX SYSTEM 152-554 (4th ed. 1986). This view of the function of the corporate tax is not, it must be admitted, universally acknowledged. Surrey was a notable recent critic of the conduit theory for taxing corporate income claiming that the preference for full integration of the corporate and personal income tax was a matter of "tax theology". *See* Stanley S. Surrey, *Reflections on 'Integration' of Corporation and Individual Income Taxes*, 28 NAT.L TAX J. 335 (1975). *See also* MCLURE, *supra* note 5, at 28-38.

15. These claims are almost universally made in the literature. *See, e.g.*, STIGLITZ, *supra* note 11, at ch. 23; U.S. DEP'T. OF THE TREASURY, REPORT OF THE DEP'T OF THE TREASURY ON INTEGRATION OF THE INDIVIDUAL AND CORPORATE TAX SYSTEMS—TAXING BUSINESS INCOME ONCE 1-14 (1992) [hereinafter INTEGRATION]; MCLURE, *supra* note 5, at 25-27; KAY & KING, *supra* note 14, at ch. 10; *Corporate Cash Flows, supra* note 13, at 91; Cnossen, *supra* note 8, at 88-89; Vickrey, *supra* note 10; PECHMAN, *supra* note 11, at 141-49; RICHARD GOODE, THE CORPORATION INCOME TAX (1951); O.E.C.D., COMPANY TAX SYSTEMS IN O.E.C.D. MEMBER COUNTRIES 13-21 (1973) [hereinafter COMPANY TAX SYSTEMS]; RICHARD J. VANN, ELIMINATING THE DOUBLE TAX ON DIVIDENDS: LEGAL AND PRACTICAL ISSUES ch. 2 (1986).

But both of these two propositions have also been contested. It has been suggested, for example, that the corporate tax is more equitable as a means of taxing owners of capital more heavily than those who derive labour income. *See, e.g.*, Prest, *supra* note 13, at 213 ("corporate taxation is a means of taxing unearned income more heavily than earned"); *Corporate-Personal Tax Integration, supra* note 10, at 242-46; PECHMAN, *supra* note 11, at 174 ("since corporate ownership is heavily concentrated in the high income classes . . . moderation or reduction of the additional tax burden on dividends alone would reduce progressivity, unless the change were accompanied by fundamental revisions in the individual income tax base"). Although it has also been suggested that views of this kind are mistaken. *See* KAY & KING, *supra* note 14, at 154. A more refined objection is that some of the partial solutions to the problem are more inequitable than the problem to be solved. Head & Bird, *supra* note 13, at 16; Cnossen, *supra* note 8, at 97; Prest, *supra* note 13, at 212; Julian Alworth, *Piecemeal Corporation Tax Reform: A Survey, in* THE POLITICAL ECONOMY OF TAXATION 63, 73 (Alan Peacock & Francisco Forte eds., 1981).

Similarly, it has been suggested that the corporate tax may not be quite so inefficient after all. Several new interpretations of the efficiency consequences of the corporate tax have recently developed. For example, Stiglitz suggests that the corporate tax might be a tax on entrepreneurship, having little effect on existing firms. *See* Joseph E. Stiglitz, *Taxation, Corporate Financial Policy, and the Cost of Capital*, 2 J. PUB. ECON. 1, 33 (1973) ("from an efficiency point of view, the whole corporate profits tax structure is just like a lump sum tax on corporations"); KAY & KING, *supra* note 14, at 157-58. On another view, the corporate tax is an excess profits tax imposed principally on economic rents and consequently has no distortionary effects. Joseph E. Stiglitz, *The Corporation Tax*, 5 J. PUB. ECON. 303 (1976); O.E.C.D., TAXING PROFITS IN A GLOBAL ECONOMY—DOMESTIC AND INTERNATIONAL ISSUES 22 (1991) [hereinafter TAXING PROFITS] ("the economic justification for imposing a separate tax on corporate profits is that under ideal conditions it is a non-distorting source of revenue, at least insofar as the practical difficulties in identifying pure profits can be overcome"). According to another view, the corporate tax does not discourage distribution of profits. *See* TAXING PROFITS, *supra*, at 25-30; Alan J. Auerbach, *The Economic Effects of the Corporate*

The inefficiencies caused by the corporate tax arise from several sources: the encouragement of inappropriate and costly non-corporate trading forms;[16] the incentive for the retention rather than distribution of corporate profits;[17] the encouragement of financing corporate investment by debt rather than equity;[18] and the incentive to structure returns to investors in ways that avoid the corporate tax.[19] The inequity of the unintegrated corporate tax arises from the interaction of the corporate tax rate, the distribution practices of the corporation's managers, and personal tax rate on shareholders.[20]

Income Tax: Changing Revenues and Changing Views, in FINANCING CORPORATE CAPITAL FORMATION 107 (Benjamin M. Friedman ed., 1986); Robin W. Broadway & David D. Wildasin, PUBLIC SECTOR ECONOMICS (2d ed. 1984). Others have suggested that the removal of the bias toward retention of profits and encouraging greater distribution will cause an undesirable decline in the total level of savings. PECHMAN, *supra* note 11, at 180 ("the retained earnings of corporations are a large source of savings in the United States; many would regard it as unwise to encourage a reduction in this source of saving"); VANN, *supra,* at 25.

16. The incentive is not to invest in corporate form because of the effects of "double tax" on distributions. But there are other (and contradictory) biases also operating. There is a further bias toward closely-held corporations which permit greater flexibility in making distributions that avoid the corporate tax. DAVID BRADFORD & U.S. DEP'T OF TREASURY, BLUEPRINTS FOR BASIC TAX REFORM 61 (Rev. ed. 1984) [hereinafter BLUEPRINTS]. Auerbach has remarked upon the ability to avoid the corporate tax by using debt and upon other effects of the corporate tax, such as the ability for high bracket taxpayers to defer tax by retention of profits and the problems of disincorporation of enterprises already conducted in corporate form. *See Corporate Cash Flows, supra* note 13, at 93.

17. INTEGRATION, *supra* note 15. *Cf.* KAY & KING, *supra* note 14, at 157-58; *Corporate Cash Flows, supra* note 13, at 95, 98.

18. In fact, investing by way of debt rather than equity is recognised as a method of turning the tax system for corporations into the type of tax system appropriate for partnerships. *See, e.g.,* MYRON S. SCHOLES & MARK A. WOLFSON, TAXES AND BUSINESS STRATEGY ch. 18 (1992); Myron S. Scholes & Mark A. Wolfson, *Converting Corporations to Partnerships Through Leverage, in* DEBT, TAXES, AND CORPORATE RESTRUCTURING 173 (John B. Shoven & Joel Waldfogel eds., 1990); *Corporate Cash Flows, supra* note 13, at 99 ("the use of debt rather than equity by corporations has been viewed as "do-it-yourself integration", since it causes corporate cash flow to be taxed as it would be in an unincorporated business").

19. *See* INTEGRATION, *supra* note 15, at ch. 1.

20. It is interesting to observe that the Treasury did not regard the inequity associated with the separate corporate tax as significant, although the opinion was expressed in the context of a system where corporate rates exceed the top personal marginal rate. Nevertheless, the Treasury report clearly treats neutral taxation of corporate capital as a more important goal than equitable treatment of capital income derived by individual investors. For example, the report says:

> A traditional goal of integration proposals has been to tax corporate income only once at the tax rate of the shareholder to whom the income is attributed or distributed. . . . Assuring that corporate income is taxed once, but only once, does not require that corporate income be taxed at individual rates, however.
>
> Neutral taxation of capital income will reduce the distortions under the current system. Economic efficiency suggests that all capital income should be taxed at the same rate. Accordingly, we place less emphasis than some advocates of integration on

These difficulties of the classical system have usually generated calls for reforms to remove them, often with the implicit consequence of reducing the total tax collected on corporate income. Where those calls have been successful, they have led to a variety of idiosyncratic interaction mechanisms between the corporate and personal income tax with differing effects upon shareholders.[21] Sections III and IV of this paper are taken up with the way in which these mechanisms can influence the decision of the corporation's managers whether, and how much, to evade the corporate income tax.

The paper will proceed in the following stages: Section II will describe a theoretical model of the incentive structure surrounding corporate tax evasion and the implications that the model suggests for the behavior of corporate managers. Section III will analyze how the personal income tax might change the returns to evasion and how this effect could be expected to influence the behaviour of the corporation's managers. Section IV will describe the principal interaction mechanisms between the corporate tax and personal income tax employed in practice. Section V will analyze the effects of each of the interaction mechanisms described. Section VI will consider how the

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either trying to tax corporate income at shareholder tax rates or on simply trying to eliminate one level of tax on distributed corporate income.

INTEGRATION, *supra* note 15, at 12-13.

21. This issue tends to generate idiosyncratic solutions combining differing degrees of theoretical purity, administrative susceptibility and national priorities. For example, the American Law Institute Reporter principally concentrated on the transitional problems of eliminating the double tax on corporate earnings and suggested for the United States a dividend deduction system for new capital; an additional excise tax on non-dividend distributions and the elimination of the dividend-received deduction system for intercorporate portfolio dividends. AMERICAN LAW INSTITUTE, FEDERAL INCOME TAX PROJECT SUBCHAPTER C, PROPOSALS ON CORPORATE ACQUISITIONS AND DISPOSITITIONS 327 (1982). These proposals were elaborated and modified in a Supplemental Study. The additional tax on non-dividend distributions became an alternate tax; it elaborated the dividend deduction for new equity by limiting the deduction to a specific rate; it substituted for the proposal to abolish the dividend-received deduction for inter-corporate portfolio dividends, a complete exemption of inter-corporate dividends. AMERICAN LAW INSTITUTE, FEDERAL INCOME TAX PROJECT, REPORTER'S STUDY DRAFT, SUBCHAPTER C (Supplemental Study) (1989). Another solution proposed by the Institute of Fiscal Studies suggested offering the same benefit to equity investment currently offered to debt by granting a corporate deduction representing a notional interest amount for the value of shareholder equity employed by the corporation. INSTITUTE FOR FISCAL STUDIES, EQUITY FOR COMPANIES: A CORPORATION TAX FOR THE 1990S (1991). Most radical of all are proposals to replace the corporate income tax with a cash-flow corporate tax with the effect of excluding distributions from the corporation's tax base. BLUEPRINTS, *supra* note 16, at 120-21; INSTITUTE FOR FISCAL STUDIES, THE STRUCTURE AND REFORM OF DIRECT TAXATION (1978). Most recently, the U.S. Treasury preferred a dividend exemption system but also expressed interest in a Comprehensive Business Income Tax ("CBIT") system which would equalise the return to debt and equity by denying a deduction for debt, eliminate the investor's tax on debt and equity and impose the same tax burden on corporate and non-corporate enterprises. *See* INTEGRATION, *supra* note 15, at ch. 4.

personal tax and interaction mechanisms might be constructed or improved to deter evasion more effectively.

By the time the analysis is complete, the paper will argue that it is possible in theory at least, to construct the interaction mechanism between the corporate tax and personal income tax so as to eliminate many of the benefits of successful evasion and probably far more effectively and at less cost than the strategies usually suggested. In practice, however, it will be seen that few of the interaction mechanisms currently employed deliver this result. Consequently, in so far as the revenue authority relies on the interaction mechanism to assist in reducing corporate tax evasion, the full benefits of the interaction mechanism have yet to be exploited.

II. MODELLING CORPORATE TAX EVASION

A. Introduction

This section of the paper briefly summarizes a model of corporate tax evasion describing the variables believed to influence corporate managers in regard to corporate tax compliance. At first glance, the incentives for the managers of publicly-held corporations not to comply with the corporate tax appear obscure. Where, as in the case of privately-held corporations, the corporation's managers are also its principal shareholders, they may suffer personally from the criminal penalties imposed upon directors for detected evasion. But also, they may benefit directly from successful evasion where their alter ego, the corporation, is able to reduce the claim of the government on the corporation's cash flow.

Where, however, the corporation is managed by salaried staff, there is a divergence between those who will derive the benefits of the higher after-tax profits (the shareholders alone) and those who may suffer the costs of failure (the corporation's shareholders and managers). Managers (and, on occasions, shareholders) can suffer personal losses (such as being held personally liable for the tax liability of the corporation) which might discourage corporate evasion that seemed profitable where only the costs and benefits for the corporation were considered. Corporate managers might be implicated in such offenses as attempting to evade the corporate tax,[22] aiding or abetting tax evasion by the corporation,[23] conspiring to defraud the government through

22. I.R.C. § 7201 (1994). The provision has been interpreted so that there does not need to be identity between the person attempting to avoid tax and the person who is subject the tax liability. Hence a corporate officer can be convicted of an offence under this section where the officer attempts to evade the corporate income tax.

23. 18 U.S.C. § 2 (1994).

tax evasion,[24] failing to file tax returns,[25] or making false statements to the revenue authority in tax returns.[26]

Possible explanations for the existence of corporate tax evasion in the face of these potential criminal penalties were sought in other incentives confronting managers, both institutionalized within the corporation and generated externally. It was suggested that managers may believe there are sufficient benefits for themselves to persist in corporate tax evasion. Incentives for evasion would follow from devices commonly used by shareholders to align the interest of managers with their own. The most obvious of these devices would include remunerating managers by share allotment or linking their salary to the corporation's profitability. Even in the absence of such arrangements, there exist other incentives which could lead managers to contemplate evasion. For example, successful evasion might assist to establish the manager's reputation in the market for corporate managers as a person capable of producing above-average returns to shareholders.[27] In addition, corporate managers may perceive the expected cost of detected evasion to be minute. This perception might arise from the manager's belief that the imposition of personal liability is so unlikely that he may treat the prospect of punishment as negligible.[28] What may be more damaging for corporate managers is to face the loss of employment, reputation in the market for managers, and the ability to find subsequent employment.[29] Devices and incentives

24. 18 U.S.C. § 371 (1994).

25. I.R.C. § 7203 (1994); AUSTL. ACTS P., Taxation Administration Act 1953 §§ 8B-8H [hereinafter TAA].

26. I.R.C. § 7206 provides a series of offences involving making false statements, all punishable by a fine of up to $500,000 and 3 years imprisonment. A further perjury provision is created by 18 U.S.C. § 1001. TAA §§ 8J-8W.

27. Eugene F. Fama, *Agency Problems and the Theory of the Firm,* 88 J. POL. ECON. 288 (1980).

28. *See, e.g.*, PETER GRABOKSY & JOHN BRAITHWAITE, OF MANNERS GENTLE: ENFORCEMENT STRATEGIES OF AUSTRALIAN BUSINESS REGULATORY AGENCIES 156, 161-65 (1986); Arie Freiberg, *Enforcement Discretion and Taxation Offences*, 3 AUST. TAX F. 55, 89, 90 (1986), stating:

> The adoption of a compliance rather than a deterrence orientation, with the concomitant emphasis upon negotiation and low visibility bargaining, though it conserved resources, perpetuated, if it did not create, a moral ambivalence about tax offending. It has been confined to the ranks of the illegal but not criminal. . . .
>
> [T]he sparing use of criminal and quasi-criminal sanctions against evasion contributed in large measure to the excesses of the 1970s. Because the only perceived risk was a possible civil assessment at some future time, taxpayers and their advisers were 'prepared to "chance their arms."'

Freiberg, *supra*, at 89-90.

29. While the discussion refers to the penalties as imposed upon the corporation's managers, they can also be imposed upon shareholders who may face additional disincentives to evasion

such as these encourage the corporation's managers to pursue the shareholders' goal of maximizing the market value of the shareholders' interests in the corporation.[30] Even pursuing such goals as maximizing cash flow, sales, or corporate size, might be assisted by evasion.[31]

B. The Model

The model begins with a corporation financed entirely by equity, and asks whether corporate tax evasion can be expected to enhance the market value of the corporation's shares—that is, whether the risks and returns to evasion make it a profitable investment, given that it must be financed in a particular way.[32] Expressed in this way, corporate tax evasion is constructed as both an investment decision and as raising issues about the capital structure of the corporation. The investment issue is whether investing in the liability created by corporate tax evasion promises a positive net present value to the corporation. The capital structure question is whether the corporation's value is enhanced or diminished by issuing a new debt with particular attributes in order to make the investment. It is thus implied that corporate tax evasion as a systematic practice is appropriately modelled as a financial decision—that is, that corporate tax evasion has benefits and costs which can be

such as the potential loss of their assets after detection.

30. This proposition is usually attributed to Irving Fisher as elaborated by Hirschleifer. *See* IRVING FISHER, THE THEORY OF INTEREST (1930); J. Hirshleifer, *On the Theory of Optimal Investment Decision*, 66 J. POL. ECON. 329 (1958). *See also* Stewart C. Myers, *Introduction: The Issues, in* MODERN DEVELOPMENTS IN FINANCIAL MANAGEMENT 5-6 (Stewart C. Myers ed., 1976).

31. There are other possible goals that the corporation's managers might pursue. Corporate objectives, alleged to be "non-economic", are sometimes suggested such as maintaining the corporation's reputation for honesty, concern for the community, or patriotism. These latter objectives do not express comprehensive goals for the corporation, although they may operate as constraints upon the ability of the corporation's managers to pursue particular projects. Oliver E. Williamson, *Managerial Discretion and Business Behavior*, 53 AM. ECON. REV. 1032 (1963); John C. Coffee, Jr., *Shareholders versus Managers: The Strain in the Corporate Web, in* KNIGHTS, RAIDERS AND TARGETS: THE IMPACT OF THE HOSTILE TAKEOVER 77, 82-92 (John C. Coffee Jr., et al., eds., 1988); Michael C. Jensen, *The Takeover Controversy: Analysis and Evidence, in* KNIGHTS, RAIDERS, AND TARGETS: THE IMPACT OF THE HOSTILE TAKEOVER 314, 317-323 (John C. Coffee Jr., et al., eds., 1988); GORDON DONALDSON, MANAGING CORPORATE WEALTH: THE OPERATION OF A COMPREHENSIVE FINANCIAL GOALS SYSTEM (1984); O.E.C.D., THEORETICAL AND EMPIRICAL ASPECTS OF CORPORATE TAXATION 36-37 (1973); G. PEIRSON ET AL., BUSINESS FINANCE 23-30 (4th ed. 1989).

32. This goal also implies that, for corporations which are not managed by owners, the corporation's managers are able somehow to signal to the market the higher after-tax profits which evasion will produce without also signalling evasion to the revenue authority. It is suggested that this can occur simply by announcing higher profits since the relation between taxable and financial profit invariably diverge significantly due to innocuous circumstances such as deliberate corporate tax preferences, different tax and financial accounting procedures, differences between the tax concept of income and corporate law notions of profit and so on. This divergence may be sufficient to permit the corporation's managers convincingly to represent profitability and higher retained profits.

meaningfully quantified and that the process of tax evasion by corporate managers is susceptible of cost-benefit analysis.

The model begins by tracing expected cash flows.[33] If the corporation derives profit in the current year [P] and pays tax on its profits at the corporate tax rate [T_c], the incremental effect of the year's profits on the value of the corporation is to increase the value by:[34]

$$(1 - T_c)P$$

where:

P = the taxable profits of the corporation, and

T_c = the corporate tax rate.

If, instead, the corporation reports to the revenue authority and pays tax on another amount [D] (which is less than its full taxable profits) the evasion initially reduces the cash outflow by the amount of the unpaid tax:

$$T_c (P - D)$$

where:

T_c = the corporate tax rate,

P = the taxable profits of the corporation, and

D = the amount of taxable profit declared to the revenue authority.

This amount [$T_c(P-D)$] is the gross gain from evasion in the absence of a personal income tax and is available for the corporation's managers to distribute to shareholders, or retain as a source of funds for further investment.

The manager's failure to pay the corporation's full tax liability also affects the market value of the corporation by the addition of a new contingent liability for the unpaid tax and other penalties—the cost of failure.[35] The first

33. While some elements of the corporate tax system do undoubtedly involve accrual taxation without reliance upon cash flow, these are in most instances, unusual aspects of the system. Some of the more common are the rules for valuation of trading stock, depreciation of capital equipment, and the treatment of some financial instruments.

34. It is also assumed that the corporation makes no distributions during the period.

35. The discussion refers to the contingent liability as a liability and cost to the corporation although it is more accurately described as a cost to the shareholders deferring their residual claim to a further claimant, the revenue authority. Where bondholders are included, evasion is also a cost to them, either diluting or deferring their residual claim to the claim of the revenue authority, a claim which is often given priority in the bankruptcy or liquidation of a taxpayer above that of unsecured (and often even some secured) creditors. This priority may exist prior to liquidation through a lien for unpaid tax and in bankruptcy. I.R.C. §§ 6321-6323 (1994). In Australia the revenue authority does not have the benefit of a special security for tax debts and the priority of the revenue authority in corporate liquidation has been abolished except for tax withheld from others and not paid by the bankrupt to the revenue authority. AUSTL. ACTS P., Income Tax Assessment Act 1936-1973 § 221P [hereinafter ITAA].

step in estimating the expected net present value to the corporation of evading tax is to subtract from the potential tax saving [$(T_c(P-D)$] the amount of the penalty which the revenue authority can claim from the corporation if its evasion is detected. The penalty imposed for unsuccessful evasion is typically expressed as a multiple of the amount of tax evaded [$T_c(P-D)$], payable in addition to the evaded tax. The penalty for evasion is thus [$fT_c(P-D)$], not including the obligation to pay the unpaid tax.[36] The penalty cost must also be adjusted to reflect the increase in the amount payable upon detection in each year that the contingent liability for evaded tax survives. In order to eliminate the advantage to the taxpayer from the deferral of its tax payment, the administrative procedures of the revenue authority increase the amount of any unpaid tax by an annual interest rate which is set higher than current market rates to discourage the corporation's managers from using the revenue authority as a source of cheap capital.[37] But because the penalty and interest may not have to be paid until a future period, it is also discounted at another rate to express its present value.

Finally, the amounts payable under each outcome—both detection and success—must be adjusted to reflect potential detection in each of the subsequent years until the revenue authority's search for evasion will be abandoned. When the present value of the penalty is discounted by the probability of detection [p], the expected net present value of tax evasion to the corporation is the sum of the expected tax saving less the present value of the expected penalty:

$$NPV = (1-p)^t T_c (P-D) - p \sum_{n=1}^{n=t} (1-p)^{n-1} T_c (P-D) \frac{f(1+r^*)^{n-1} + r^{*n-1}}{(1+r)^{n-1}}$$

where:

t = the number of years until the search for evasion will be abandoned,
p = the probability of detection of evasion,
T_c = the corporate tax rate,
P = the corporation's taxable profits,
D = the amount of taxable profits reported,
f = the penalty rate imposed on unpaid tax (f > 1),
r = the corporation's discount rate, and
r* = the penal interest rate charged on unpaid tax.

36. I.R.C. § 6663(a) sets the civil penalty rate for evasion at 75% of the underpayment attributable to fraud. In Australia the penalty is 75%. ITAA § 226J.

37. I.R.C. § 6601(a),(e) (1994); ITAA §§ 170AA, 214A.

The discounted cash flow method reaches a net present value for tax evasion by aggregating and discounting expected cash outflows at appropriate interest and discount rates and subtracting them from the expected tax saving. Two further variables are then introduced which bear upon the benefit of evasion. The first is the effect upon the value of the corporation's assets. Where a corporation has few assets available to unsecured creditors, the value of the additional liability for evaded tax might not substantially reduce the market value of the corporation and, if the revenue authority's enforcement costs are large relative to the size of the tax to be collected, the reduction in the corporation's market value may be negligible. Reliance upon discounted cash flows gives a misleading impression of the cost of corporate tax evasion because the identified cash flows are unlikely to occur, and, if they do, they are not likely to be at full value. Given the shield of limited liability, the ability of the shareholders to abandon the assets of the corporation in satisfaction of the tax debt is treated as placing an alternative lower value on the contingent liability for corporate tax which is the value of the net corporate assets available to the revenue authority at the time of audit.

A further complication is introduced to reflect the fact that the corporation has protection against possible, adverse fluctuations to the costs of evasion after the corporation has evaded, but before the evasion is detected. The protection against adverse fluctuations in the cost of evasion is included in the model by introducing the corporation's option to abandon its evasion strategy.

The model also considers other costs to the corporation. Transaction costs incurred in setting up the evasion, recasting transactions in forms that are less open to scrutiny, and preventing detection would all reduce the net return even to successful evasion. Also, detected evasion may cause reputation costs, such as the loss of valuable licenses or rights if the corporation is convicted of a crime.[38] Increased compliance costs would increase the return to evasion.

The model is based upon the assumption that the corporation's managers might evade tax where it showed a positive expected return. Such return is determined by the variables just discussed, some representing policy instruments open to the revenue authority and others representing the operation of market forces. Analysis of the model suggests that changes to the corporate tax rate would be ambiguous except where the value of the outstanding corporate tax liability is determined by the value of the corporation's assets. Higher corporate tax rates provide a greater incentive for evasion for a cor-

38. There may also be the special cost for corporations which are not managed by owners that the shareholders may need to offer higher reward to the corporate managers in some form in order to induce them to accept the risk of the personal liability that would often accompany detection of the corporation's evasion.

poration that does not expect to pay the full amount of the accumulated tax and penalty. But increases in the probability of detection [p], level of penalty [f], and decreases in market interest rates would all increase compliance. The effect of changes to the level of the corporation's income and value of its net assets are also ambiguous.

The effect of corporate debt is also said to be ambiguous. On the one hand, issuing new corporate debt in the form of corporate tax evasion will enhance the market value of the corporation for the existing shareholders if the value of the liability created by evasion is less than the price raised on issue. Further, retiring outstanding corporate tax debt (whether current or accumulated) will enhance market value if the redemption price is less than the value of the debt, and, again, it is the shareholders who are entitled to the difference. On the other, the benefit of adding the further tax liability to the capital structure of the corporation can be offset by the cost of financial distress if the additional liability increases the prospect of the corporation entering bankruptcy. In addition, existing bondholders may object to evasion if the corporation does not have sufficient assets to meet all of its liabilities as they come due, for at this point, the shareholders are gambling with the bondholders' money. But bondholders, aware of risks such as evasion, may take precautions to protect their interests prior to purchasing the bond which may operate as impediments to evasion by the corporation's managers, especially if the corporation will need to re-enter capital markets to repay existing debt.[39] It may be argued that substituting corporate tax evasion for the existing debt might be profitable depending upon the costs involved.

In summary, the model suggests that corporate tax evasion is a curious puzzle that is not easily explicable. Where it exists, it is a complex phenomenon dependent upon many influences. It is ultimately based, however, upon the simple proposition that the corporation's managers can enhance the market value of the corporation by tax evasion if the circumstances are such that the value of the tax evaded is greater than any penalty that the corporation is likely to pay. This proposition presupposes that the corporation's managers can change their minds in the event that circumstances change drastically. It also assumes that corporate managers can be encouraged to undertake the evasion for the shareholders and that bondholders do not present an insuperable impediment to evasion.

But the model does not consider the effects of the personal income tax upon the holders of equity interests in the corporation and whether this additional layer of tax might lead the corporation's managers into further evasion

39. Bondholders might not be concerned, however, if they could insist on further injection of capital from the shareholders, or if the subsequent liability were deferred to theirs. In either case, they will be the first beneficiaries of the gamble made using the money of others.

or might, instead, have the effect of increasing compliance with the corporate tax. That is the task of this paper.

III. THE EFFECTS OF THE PERSONAL INCOME TAX

Before proceeding to describe and analyze the various interaction mechanisms—a task which will form the majority of this paper—it is appropriate to explore why and how the existence of the personal income tax and the structure of its interaction with the corporate tax might change the decision of the corporation's managers whether to comply with or evade the corporate tax.

The observation that the corporate tax compliance decision is one for the corporation's managers accords with formal legal rules and assumptions usually made about the allocation of responsibilities for activities conducted in corporate form.[40] But the interaction mechanism between the corporate tax and personal income tax can only influence the behavior of the corporation's managers if it is accepted that the corporation's managers are influenced in making their decisions by the desires and directions of the shareholders.[41] In particular, it is necessary to assume, as was done in the model described in Section II, that the corporation's managers can be influenced or constrained by the expressed (or more probably implied) wishes of shareholders to engage in evasion[42] and that they are concerned with maximizing the effective after-tax return received by shareholders on their investment in the corporation.

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40. There is also the further possibility that the evasion decision will be significantly influenced, although perhaps not ultimately made, by professional tax advisers. The role of advisers will not be pursued in this model partly because, it is suggested, advisers are unlikely to be involved in evasion decisions. Indeed, the corporation's managers may even try to conceal evasion from professional advisers. Advisers are much more likely to play an active part in corporate tax avoidance where their knowledge and opinions may be indispensable for successful avoidance.

41. In another context, Cnossen notes that the effects of the personal income tax on the behaviour of corporate managers depends upon an assumption that its effects are taken into account in managerial decisions. He observes,

> Most studies assume implicitly that a firm takes the total tax burden on corporate source income into account. This appears realistic in the case of closed companies, in which directors and shareholders sit, so to speak, in the same chair. In the case of open companies, however, it is possible that firms only take the corporate tax into consideration.

Cnossen, *supra* note 8, at 101-02. In this discussion, it is assumed that corporate managers are aware of the implications of the operation of the personal income tax or, that if they are not, they will be made aware of its consequences by shareholders if shareholders are made worse off by its effects consequent upon evasion.

42. The influence of shareholders on corporate managers can come about directly when, for example, the shareholders are able to appoint managers who accept their directions. But more importantly in this context, the influence of shareholders can also be brought to bear on

The model of corporate tax evasion described in Section II concentrated on the effects of evasion as an investment decision and as one affecting the capital structure of the corporation. In contrast, the effect of the personal income tax will not be seen most obviously in the capital structure of the corporation, at least in so far as the analysis of corporate tax evasion is concerned.[43] Rather, the effects of the personal income tax will be seen primarily in the after-tax returns received by shareholders on both retentions and distributions of corporate profits, since this is the sphere of operation of the personal income tax and the interaction mechanisms. Thus, this analysis will concentrate on analyzing how the personal income tax alters the return that the shareholder can expect to receive if the corporation's managers decide to evade corporate tax from the return they would receive if the managers reported honestly.

Corporate managers seeking to enhance the market value of the corporation will be aware that the market will look to at least two aspects of the return promised by the corporation on an investment in the corporation: the rate of the promised return and the risk attaching to the promised return.[44] Assuming that corporate managers engage in corporate tax evasion, at least in part, because it permits higher after-tax profits to be available for shareholders, whether as dividend or capital appreciation, it nevertheless undoubtedly raises the risk attaching to the shareholder's return when compared to honesty. Presumably, where the corporation's managers embark upon evasion, it is because they estimate that the detriment of higher risk is more than offset by the promise of an increased return. But the price at which the market resolves this trade-off between increased risk for promised higher return may be difficult for managers to predict *a priori,* and the implications of some of the outcomes will be discussed below.[45]

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managers indirectly when managers are constrained by institutionalised incentives to pursue the goals shareholders wish them to pursue and it is not necessary to assume that any single group of shareholders can directly control managers.

43. Of course, the operation of the personal income tax will affect the design of the capital structure of the corporation in a global sense, influencing decisions about financing investments by debt rather than equity, by retained earnings rather than new equity, the type of equity that is issued, and so on.

44. *See generally* WILLIAM F. SHARPE, INVESTMENTS chs. 5 & 7 (3d ed. 1985); PEIRSON, BIRD & BROWN, *supra* note 31, at ch. 3; IVAN WOODS, MEASURES OF INVESTMENT YIELD ch. 4 (2d ed. 1989).

45. Attempting to explain how price, risk and return functions are related is the task of such models as the Capital Asset Pricing Model or Arbitrage Pricing Theory which try to relate the price of particular capital assets to levels of risk and expected return in the presence of other assets. It is not necessary here to use these models which involve very general abstractions from reality. In the case of evasion, the source of risk arises from only one cause which, while it may not be easy to predict with accuracy, can be separated from other sources of uncertainty associated with the return for this security. *See* SHARPE, *supra* note 44, at ch.

The remainder of this paper will contrast the return offered where the corporation's managers report honestly with the expected (but more risky) return offered if the managers evade. This section will mention some of the ways in which the personal income tax will bear upon the return. The fundamental inquiry is to determine how corporate tax evasion changes the expected return from the position where the corporation's managers report honestly. Unless the effect of corporate tax evasion is to enhance the potential return, it is suggested that there is no gain to be derived from evasion and managers will not pursue it. This analysis will also be compared to the predictions of the model described in Section II to see if the addition of the personal income tax substantially alters expected behavior. It will be seen in Section V that adding the personal income tax does change the costs and benefits of evasion from the position that would apply if the corporation's managers focused only on the value of corporate tax evasion as an investment undertaken by the corporation.

The personal income tax on income derived through corporations is a cost to shareholders reducing the after-corporate tax return on their investment and, as a result, the value that they would be able to realize for their investment in the corporation in the absence of a shareholder tax. The size of the cost that the personal income tax represents, and the consequent reduction in the market value of the shareholders' interest, is a function of many variables in the institutional framework of the tax system; most obviously, the tax rates for holders of the corporation's shares.[46] But the cost of the personal income tax is also affected by some elements under the control of the corporation's managers, such as the pattern of retention and distribution of corporate profits[47] and the legal form in which the shareholder's return on the investment is offered.[48] On most occasions, the size of the shareholder's

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7; PEIRSON, BIRD & BROWN, *supra* note 31, ch. 3; WOODS, *supra* note 44, at 49-54; RICHARD A. BREALEY & STEWART C. MYERS, PRINCIPLES OF CORPORATE FINANCE 169-73 (4th ed. 1991).

46. *See* SHARPE, *supra* note 44, at ch. 9; PEIRSON, BIRD & BROWN, *supra* note 31, at ch. 18. There will almost always be different personal income tax rates applied to the various shareholder: for example, progressive for individual shareholders; constant (or only slightly progressive) rates for corporations; some institutional shareholders will be tax exempt; non-resident rates will be different and so on.

47. This arises from a trade-off made at the corporate level between the retention of profits to be taxed as capital gain and the distribution of profit to be taxed as dividends, although it is still an unsolved question whether the corporation's managers could actually enhance the market value of the corporation by changing their distribution and retention patterns. The literature on the effect of retention patterns and so-called clientele effects is enormous. *See generally* BREALEY & MYERS, *supra* note 45, at ch. 16; SHARPE, *supra* note 44, at ch. 14; PEIRSON, BIRD & BROWN, *supra* note 31, at ch. 3.

48. The effect of the legal form of the distribution is not a question of whether the investment is treated as debt or equity. There may be different consequences attaching to cash distribution

personal income tax liability is also influenced by the amount of tax paid by the corporation. In some cases, it will be seen that the effect of corporate tax evasion will be a direct increase in the shareholder's personal income tax rate.[49]

The potential for the amount of the shareholder's personal income tax liability to fluctuate with the amount of corporate tax paid has implications for the costs and benefits of corporate tax evasion. Consider, for example, a regime under which the corporate tax on distributions operates purely as an intermediate withholding procedure, collecting from the corporation's profits amounts of tax which are accurately credited against the shareholder's personal income tax liability on those profits. Under a regime of this type, the gain, even from successful corporate tax evasion, may be reduced to nil or a slight deferral — tax unpaid by the corporation may simply be collected from the shareholder on receipt of the distribution.[50] A similar regime for retained corporate profits which collected unpaid corporate tax on the sale of the shareholder's interest in the corporation would again offer only the benefit of deferral, although perhaps for a longer time at the shareholder's discretion. In other words, the apparent benefit of the tax saved by the corporation from successful evasion may be almost completely offset by a corresponding increase in the tax liability of the shareholder where the corporate tax is constructed as a withholding tax.[51]

At the other extreme, if the corporate tax is the final tax on income derived through corporations whether retained or distributed, successful corporate tax evasion will eliminate all tax from income derived through corporations. In this case, corporate tax evasion would have no effect on the personal income tax liability of the shareholder and the analysis of the incentives for

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or asset distribution, the issue of fully paid up shares, payments which are treated as the partial return of the investors capital, the full redemption of the shareholder's interest, and so on.

49. This consequence will be seen to follow whether the shareholder's return is taken in the form of dividends or capital appreciation, provided that the shareholder is not tax exempt.

50. Of course, deferral of tax for a sufficient time is equal to an exemption of the tax, or a reduction in the effective tax rate.

51. In another context, Stiglitz has expressed this same idea thus:

> Many transactions, while they seem to reduce the tax liabilities to some parties to the transaction, increase those of others. Because "prices" (the terms of the transaction) adjust to reflect these changed tax liabilities, it is often difficult to ascertain who really benefits from many tax avoidance schemes. Moreover, the aggregate loss to the Treasury may be much less than the seeming gain to the alleged beneficiaries (when those calculations fail to take account of the general equilibrium effects of tax avoidance schemes).

Joseph E. Stiglitz, *The General Theory of Tax Avoidance*, 38 NAT.L TAX J. 325, 325 (1985). In this context, the "parties" to the transaction are the corporation and its shareholders treated by tax law as separate entities.

corporate tax evasion need not include any reference to the personal income tax. In practice, the net benefit of successful corporate tax evasion, after payment of shareholder taxes, will lie between these two results, as the corporate and personal income tax structures resemble one or other extreme in their treatment of both retained and distributed profits.

Even where there is no formal interaction between the corporate tax and personal income tax, as in the so-called classical system described below, savings of corporate tax will mean that the size of either (or both) the retained and distributed after-tax profits will be greater. Assuming honest reporting by the shareholder, higher profits after corporate tax will mean higher personal tax payments by the shareholder on dividends and on capital gains, again reducing the apparent net benefits from successful evasion. In this case, corporate tax evasion may simply represent "tax arbitrage across income streams facing different tax treatment"[52]—a preference for paying tax on dividends or capital gains tax, rather than corporate tax. To anticipate what is to follow, at the extreme where the corporate tax most closely approximates a pure withholding tax, the reduction in corporate tax may equal almost exactly the increase in the shareholder's personal income tax liability, generating little real gain even from successful evasion.

So, depending on the structure of the interaction between the corporate and personal income tax, corporate tax evasion will cause an increase in the total amount of the shareholder's personal income tax of greater or less size.[53] Holding the other determinants of the personal income tax liability constant, the extent of any increase in the personal income tax liability will depend upon the operation of the interaction mechanism between the two taxes. As the increase in the amount of tax collected from the shareholder approaches the amount of corporate tax saved through evasion, the gain from successful evasion of the corporate tax approaches zero.

If the corporation's managers have correctly assessed that corporate tax evasion has a positive net present value to the corporation (ignoring for the moment the effect of the personal income tax), it has been argued that the market value of the shareholders' interest in the corporation can be expected to rise. The market can be expected to increase the price of the shares to reflect the corporation's higher value (probably represented by retained earnings) after corporate tax is paid on the declared profits. But, when the further complication of the personal income tax is added, the extent of the increase in market value will depend upon how much of the evaded corporate tax is

52. *Id.*

53. It will be observed that corporate tax evasion can also, in some circumstances, cause a decrease in the personal income tax liability of the shareholder, both in the short and long term.

recovered from the shareholder and how quickly. If almost all of the evaded tax will be offset by higher taxes on shareholders, the gain from successful corporate tax evasion may be almost nil, and the return offered by the investment may not substantially change. In this situation, while corporate tax evasion may offer a positive net present value to the corporation, when the effect of higher personal income taxes is added, the return to the shareholder net of all taxes may not have changed. Corporate tax evasion would offer a small but positive gain, and any increase in market value due to evasion may likewise be expected to be small.

In addition to the reduced size of the gain from successful evasion, the corporation's managers also need to consider the potential cost should the corporation's evasion be detected. If evasion is detected, the corporation's liability to pay unpaid tax, fines and interest will leave the shareholder worse off than if the corporation's managers had complied with the corporate tax.[54] This must be so if the penalty for evasion is capable of deterring it. While the shareholders will not (usually) suffer any additional penalty because of the evasion of the corporation's managers, the return to shareholders will decline by the amount collected from the corporation.[55] Detected evasion would reduce the market value of the shareholders' interests in the corporation by reinstating the claim of the revenue authority over the corporation's remaining assets, and at a higher amount than if the managers had reported honestly.[56]

There are two other consequences which can be expected to arise from failed evasion. First, there may be a significant loss to shareholders which will arise if the corporation's evasion is detected, but only after the corporation's managers have distributed some proportion of the corporation's profits as dividends. The corporation's managers may have distributed more profit than the corporation possessed, since dividends were distributed from a pool unreduced by corporate tax which was collected after a subsequent audit. The shareholder would, assuming honesty on his or her part, have reported and paid tax on more than would have been available for distribution (and taxed

54. There may be reasons why the shareholder will not actually be worse off after failed evasion. For example, the corporation may become insolvent in the intervening period, or the original shareholders may sell their shares and reap the benefits of evasion before the corporation's evasion was detected.

55. In the case of failure, the shareholders will not, except perhaps in the case of an integration system or the CFC regime, suffer a further penalty beyond that imposed upon the corporation, unless they have participated in some way in the corporation's managers actions. The reason to suggest an exception for these two systems is discussed *infra* note 144 and accompanying text.

56. It may also be possible, depending upon the practice enacted in each jurisdiction and the facts that have led to the circumstance, for the revenue authority to pursue funds distributed as dividends by the corporation's managers if the corporation is insolvent when its evasion is detected. *See generally* 11 U.S.C. § 548 (1994), I.R.C. § 6901 (1994).

at the shareholder level) had the corporation's managers reported honestly. While there will be a compensating adjustment to the shareholder's capital gains tax liability, it is possible that distributing untaxed corporate profits will create a higher total of tax payments if the evasion is detected than if the corporation's managers had retained the profits.[57] This effect is a penalty for early distribution and plays a part in determining the size of the shareholder's return.

Secondly, the nominal value of the fine and interest which will be assessed upon detection must be adjusted to take into account the capital gains tax on the shareholder. The interest and fine do not reduce the value of retained earnings to the shareholder by their face value. Rather, the interest and fine reduce both the value of the retained earnings and the tax liability on retained earnings. This comes about because costs such as corporate tax are effectively treated as a deduction for capital gains tax purposes in most tax systems, so that, when the shareholder comes to realize the value of retained earnings by sale, their value will be less by the amount of fine and interest, and consequently, the capital gains tax liability on sale will be less. This reduction will compensate to some extent for the extra tax generated by distributing untaxed profits.

The cost of failure, the benefits of success, and the likelihood of each establish the expected returns to evasion. Together, they imply that the increase in shareholder tax need not be sufficiently large to recapture all of the tax successfully evaded at the corporate level in order to reduce the expected return to the shareholder on their investment after payment of all taxes. While it is unlikely, in a case of successful evasion, that the increased shareholder tax will ever be great enough to reduce the *actual* return to shareholders, a reduction in the *expected* after tax return would come about where the gain from corporate tax evasion is small after payment of the personal income tax and the penalty for failure is large, even if unlikely. For example, successful evasion of a pure withholding-style corporate tax offers only the small gain from deferral because much of the evaded corporate tax may be collected from the shareholder, while unsuccessful evasion will generate various penalties collected from the corporation. If both detection and success are equally likely, and the penalties for detected evasion are large, corporate tax evasion may reduce the expected return to shareholders on their investment to a rate lower than would be expected if the corporation's managers acted honestly.

57. It is assumed that the shareholder cannot claim a refund from the revenue authority in the subsequent year when it becomes clear that the corporation distributed some monies which did not represent distribution of after-tax profits. It is also assumed that there is no "reverse" imputation system under which the excess tax paid by the shareholder in the prior year could be credited to the corporation's tax liability.

If corporate tax evasion reduces the expected return on an investment in the corporation below the certain return arising where the corporation's managers report truthfully, then it is to be expected that the corporation's managers will not engage in evasion—a higher expected return could be offered to shareholders without evasion. Sections IV and V will analyze the circumstances under which the operation of the personal income tax, and its interaction with the corporate tax, may reduce the expected return to shareholders.

The possibility that reduced corporate tax payments may (or may not) be offset by higher personal income tax payments is not, however, the entire story. It is possible for the corporation's managers to influence the expected personal income tax rate by both their evasion and distribution decisions. The influence of the distribution decision on the personal income tax rate occurs because of the differing treatment under the personal income tax of dividends and capital gains in the hands of different shareholders. If it is the case that, by adjusting their distribution decisions, the corporation's managers are able to offset the increased personal income tax liability created by a decision to evade, other equilibria may occur. Section V will consider whether the corporation's managers can, by adjusting distribution and retention ratios, offset any decrease in the shareholder's expected return brought about by corporate tax evasion.

Finally, it was mentioned previously that the market will place a value on the corporation's shares according to both the level of expected return and the riskiness of that return. So, even where the expected return to shareholders on their investment remains higher after estimating the contingent penalties and increased personal income tax cost, there is the potential further cost to shareholders in the additional risk arising from evasion which does not arise from honesty. The usual assumption of risk aversion suggests that individual shareholders will require a premium above the certain rate that honesty offered to compensate them for this risk. If that premium is not offered, and the expected return is the same as the expected return to honesty, this may be another reason for the market value of the shares declining.[58] Ultimately, the market value of the shareholders' interests in the corporation will depend upon how the competing effect of increased risk and the promised higher return are resolved.[59]

This paper will not pursue the effect of increased risk further. The rea-

58. It is implicitly assumed that the shareholder's investment is earning a normal return where the corporation's managers behave honestly.

59. The level of premium demanded will depend upon the degree of aversion to risk in the market, a matter which will depend upon the profile of the investors, including intermediaries, bidding for securities.

son for ignoring its effects lies in the fact that it is unlikely that any information about the increased level of risk due to evasion will be communicated to the market. Indeed, information about evasion is antithetical to the corporation's success in the market, and the corporation's managers will likely try to ensure that no such information is made public. Since the ability of the market to accurately assess risk depends upon the market being aware of the source of the risk, it is unlikely that the price of the shares would be discounted in any observable way for the risk that the corporation might be evading tax.

So, the focus of attention will be on how the various interaction mechanisms will change the expected return to shareholders. The expected return is the way that the corporation's managers will seek to signal to the market what they wish to announce, namely that the corporation has achieved a given level of profit after payment of the required corporate tax, without changing the risk profile of the corporation. The market would then be expected to adjust the price of the shares to treat the higher announced return as evidence of greater underlying profitability.[60] So, it is argued, the success of the strategy depends upon evasion being able to generate a higher expected return for shareholders, and the effects of the risk of detection are analyzed only by the corporation's managers in determining this expected return.

IV. MODELLING CORPORATE AND PERSONAL INCOME TAX SYSTEMS

This section describes in detail some of the principal interaction mechanisms between the corporate and personal income tax used in the taxation systems of various countries or, in one case, proposed as a theoretical model although not implemented. It will become obvious that, except for two cases, the interaction mechanisms attempt only to deal with the double tax on distributions, and leave untouched the double tax on retained corporate profits. Section V will examine whether and how the interaction of the systems here described will affect the expected return to the corporation's shareholders and consequently, it is argued, the tax evasion decision of the corporation's managers.[61]

60. Another reason for concentrating on the effect of evasion on returns is that the decisions about compliance and evasion will be made by the corporation's managers who will have (one would expect) good information about the treatment of distributed and retained corporate profits at the shareholder level and would be much more likely to take this information into account than they would in attempting to estimate the effects of increased risk, a risk which they hope will never become apparent.

61. The after-tax return to the shareholder will depend significantly upon the form in which profits are made available to shareholders: cash distribution, distribution of corporate assets in lieu of cash, allotment of new shares paid for from profits, redemption of existing shares paid for from profits, retention of profits, and so on. In the following discussion it is assumed

There is a variety of possible interactions between corporate and individual tax systems to deal with distributed corporate earnings.[62] In a pure classical system of taxation, there is no formal interaction between the corporate and individual income tax and each is levied without explicit regard for the operation of the other. But even in a classical system, there may be implicit recognition of the dual operation of both taxes in the rate formally imposed under either tax or in the definition of its base. For example, a lower marginal rate formally imposed upon capital income derived by an individual, or substantial investment concessions offered to industry may each be a method of recognizing the existence of the two layers of tax. The first reduces total tax by encouraging retention of profits by the corporation and extraction of gain by the individual selling the shares, while the second reduces the total tax collected from the corporation.[63]

The pure classical system has become rare in developed tax systems in Western nations,[64] and it is more common to see in practice a wide variety of

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that the corporation's managers choose only the first and last alternatives, distributing some fraction of the corporation's profits as cash and retaining any balance for reinvestment. It will also be assumed that the cash distribution is not a liquidating distribution upon winding up of the corporation (or that, if it is, the distribution is dealt with in an identical manner to a cash distribution).

It is also assumed that all distributions made are taxable so as to avoid problems of managers being permitted to re-characterise detected evasion as the return of capital to shareholders. This assumption accords with the probable wish of the corporation's managers that shareholders believe that the distribution is from profits, not a return of their investment.

62. There is a voluminous literature on this issue. For descriptions of various methods of interaction and differing taxonomy, see generally 4 REPORT OF THE ROYAL COMMISSION ON TAXATION (Carter Commission) ch. 19 (1967); DEP'T OF THE TREASURY, BLUEPRINTS FOR BASIC TAX REFORM (1977); COMPANY TAX SYSTEMS, *supra* note 15, at 9-11; Alvin Warren, *The Relation and Integration of Individual and Corporate Income Taxes*, 94 HARV. L. REV. 719 (1981); George F. Break, *Integration of the Corporate and Personal Income Taxes,* 22 NAT.L TAX J. 39 (1969); Charles E. McLure, Jr., *Integration of the Personal and Corporate Income Taxes: The Missing Element in Recent Tax Reform Proposals,* 88 HARV. L. REV. 532 (1975); Charles E. McLure, Jr., *Integration of the Income Taxes: Why and How*, 2 J. CORP. TAX. 429 (1976); MCLURE, *supra* note 5; PECHMAN, *supra* note 11, at 179-89; TAXING CORPORATIONS, *supra* note 10; NORR, *supra* note 7; O.E.C.D., THEORETICAL AND EMPIRICAL ASPECTS, *supra* note 33, at chs. 1, 2; MARTIN FELDSTEIN, CAPITAL TAXATION ch. 8 (1983); CONGRESSIONAL BUDGET OFFICE, REVISING THE CORPORATE INCOME TAX ch. 8 (Robert Lucke ed., 1985); Alworth, supra note 15, at 72-73; KAY & KING, *supra* note 14, at 159-62; *Corporate Cash Flows*, *supra* note 13, at 108-26; RICHARD A. MUSGRAVE & PEGGY B. MUSGRAVE, PUBLIC FINANCE IN THEORY AND PRACTICE 395-98 (4th ed. 1984); Vann, *supra* note 15, at chs. 4, 5; Sijbren Cnossen, *Alternative Forms of Corporation Tax,* 1 AUST. TAX F. 253 (1980).

63. SCHOLES & WOLFSON, *supra* note 18, at 56-57.

64. The United States is the most obvious example of a country that still retains the classical system for individual shareholders, although even the U.S. has had a fully integrated system for small corporations in Subchapter S of the Internal Revenue Code of 1986. But in respect of larger corporations with more than one class of shares, non-resident shareholders or passive

idiosyncratic mechanisms for integrating the corporate and individual tax.[65] The design of these interaction systems involves many issues: the level at which the relief is to be afforded (corporate or shareholder); the form that the relief is to take (deduction, credit or exemption); whether the relief is to be afforded to non-resident shareholders; whether differences are to exist for different shareholders (corporate, individual, or holders of portfolio interests); the treatment of corporate tax preferences; the treatment of tax exempt investors; and so on. For the moment, the analysis will concentrate on the position of resident individual shareholders, with the position of non-resident shareholders considered later in passing.[66] It will also be assumed that different rules do not apply if the corporation has one major shareholder or many portfolio interests.

While the idiosyncrasies of the particular mechanisms that countries have adopted (not to mention the peculiarities of nomenclature) make it difficult to generalize, once the classical system is abandoned, the mechanisms for recognizing the impact of both corporate and shareholder level income tax can be combined into four illustrative groups.[67]

First, there are split rate, or dividend-paid, deduction systems operating at the corporate level which impose different rates on the corporation's distributed and undistributed profits. Split rate systems simply reduce the corporate tax payable on distributed profits or formally impose tax only on re-

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income, the United States moved clearly against the current trend toward interaction in 1986 by eliminating the $100 dividend-received deduction for individual shareholders. I.R.C. § 116 (repealed). The U.S. also reduced the size of the deduction for corporate shareholders in some cases from 80% to 70% of dividends received depending upon the degree of affiliation between the companies. For corporate shareholders, the U.S. still retains the dividend received deduction system. I.R.C. § 243 (1994).

In Europe, only the Netherlands and Luxembourg retain the classical system and then only for individual shareholders. *See* J-M TIRARD, CORPORATE TAXATION IN EC COUNTRIES 12-13 (1991).

65. *See generally* COMPANY TAX SYSTEMS, *supra* note 15, at 9-41; MCLURE, *supra* note 5, at ch. 3. For a discussion of current European practices see TIRARD, *supra* note 64.

66. The discussion will refer to individual shareholders but many of the mechanisms described are applied to both individual investors and to intermediaries such as other corporations or trusts. Many jurisdictions will employ a combination of systems using one for individuals and another for corporations or other intermediaries and yet another for non-resident shareholders. For example, the U.S. employs a classical system for individual shareholders and a partial dividend-received deduction system for corporations; Canada employs an imputation system for individual shareholders and a full dividend-received deduction system for corporations; Australia employs an imputation system for individual shareholders and a tax credit system for corporate shareholders.

67. The first three are often referred to as systems for dividend relief—adjusting the combined tax on rate on distributions—while the last, integration, is more ambitious—reducing the combined tax rate on all corporate profits. Even the number of interaction mechanisms is a matter for debate. *See* PECHMAN, *supra* note 11, at 175-81 (who says there are five groups but lists six); COMPANY TAX SYSTEMS, *supra* note 15, at 10 (which lists three).

tained earnings.[68] The same effect can also be achieved by a tax surcharge on undistributed corporate profits.[69] Dividend-paid deduction systems are designed to achieve the same result but do so by giving the corporation a tax deduction for distributions and then imposing tax at the shareholder level.[70] A tax deduction for distributed profits means that they incur no tax at the corporate level and are effectively taxed as interest payments by the corporation.

Secondly, there are exemption or dividend-received deduction systems operating at the shareholder level.[71] These systems leave the corporation's tax liability untouched, but adjust the shareholder's position by giving the individual a tax deduction for some or all of the distributions received, or exempting dividends from tax entirely.[72]

Thirdly, there are tax credit or tax imputation systems operating at the shareholder level.[73] An imputation or credit system retains both the separate corporate tax and personal tax, but treats the payments of corporate tax by the corporation on its own income as also satisfying the shareholder's tax liability on distributions from the same profits. This is achieved by giving a tax

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68. For example, Germany and France apply different rates to distributed and undistributed profits, Germany applying a higher rate on retentions and France a higher rate on distributions. TIRARD, *supra* note 64, at 71-72, 87-88. This was also the first of many suggested interaction mechanisms proposed for uniform adoption in Europe. TAX HARMONIZATION IN THE COMMON MARKET (CCU ed. 1963). *See Corporate-Personal Tax Integration, supra* note 10, at 227-28.

69. NORR, *supra* note 7, ch. 5/B. For example, a further tax was imposed on retained profits in Australia. ITAA, Part III, Div. 7. This was not done apparently to formalise the interaction of the corporate tax and personal income tax although it had the effect of reducing one distortion from the lack of coordination—different rates applying to retained and distributed earnings. The surcharge was imposed in order to encourage distribution so that there was no gain from sheltering income within the corporation and the classical system could collect the further tax from the shareholders.

70. NORR, *supra* note 7, at ch. 5/C. Greece, for example has a dividend-paid deduction system. TIRARD, *supra* note 64, at 102-03. A dividend-paid deduction system was used in the U.S. from 1936-37. PECHMAN, *supra* note 11, at 176-77.

71. A version of this system, allowing a deduction for 50 percent of dividends paid, was proposed for the United States in 1984. U.S. DEP'T OF THE TREASURY, TAX REFORM FOR FAIRNESS, SIMPLICITY AND ECONOMIC GROWTH (1984). It was later revised to a deduction for 10 percent of the amount of dividends paid. THE PRESIDENT'S PROPOSALS TO THE CONGRESS FOR FAIRNESS, SIMPLICITY AND ECONOMIC GROWTH (1985). *See Corporate-Personal Tax Integration, supra* note 10, at 235-36; Reuven S. Avi-Yonah, *The Treatment of Corporate Preference Items Under an Integrated Tax System: A Comparative Analysis*, 44 TAX LAW. 195 (1990); INTEGRATION, *supra* note 15, at ch. 12A.

72. NORR, *supra* note 7, at ch. 6/B. The United States and Belgium, for example, have a dividend-received deduction system for inter-corporate dividend distributions; Denmark has an exemption system. TIRARD, *supra* note 64, at 41-42, 57-58.

73. NORR, *supra* note 7, at ch. 6/C. These systems are used in Australia, England, Germany, Canada, for example.

credit of some amount to the shareholder for distributions received, reflecting more or less accurately the amount of tax that the profits have already borne.

Finally, there is the integration system for corporations.[74] An integration system operates at the shareholder level and attributes the corporation's income, whether distributed or not, to the shareholders who are taxable on all of the corporation's profits. Where the partnership version of the integration system is used, no tax is imposed on the corporation with respect to the profits, unlike the other systems discussed. Where the corporation remains taxable, the corporation's tax is also attributed to the shareholder as a credit against their liability on the corporation's profits.

There are virtues and vices to each interaction system, explaining why, in practice, countries do not consistently choose only one of these different regimes.[75] For example, systems which reduce the corporation's primary tax liability such as rate or base reductions will benefit both resident and nonresident shareholders equally, a result which the source country may dislike,[76]

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74. *See generally* PECHMAN, *supra* note 11, at 178-81; MCLURE, *supra* note 5, at 2-9; BLUEPRINTS, *supra* note 16, at 63-69; *Corporate-Personal Tax Integration, supra* note 10, at 235. To add to the complexity, there are also "full" and "partial" integration systems. Under a partial integration system, some (or all) of the corporation's profits are attributed to the shareholders and some (or all) of the corporation's tax is credited to the shareholders. MCLURE, *supra* note 5, at 15-18.

75. For example, the U.S. Treasury report on integration praised the imputation systems and their "flexibility to respond to different policy judgments on the most important issues of integration." INTEGRATION, *supra* note 15, at 93.

The systems may also be seeking objects beyond those described in Section I as the defects of the classical system, and possibly also different from each other. For example, it is claimed that imputation systems in Europe were introduced to encourage more people to hold shares, to increase compliance with the corporate tax, to encourage capital-export and capital-import neutrality within the European Community. *See Corporate-Personal Tax Integration, supra* note 10, at 232-35; Harry G. Gourevitch, *Corporate Tax Integration: The European Experience*, 31 TAX LAW. 65 (1977); Ault, *supra* note 8, at 10 ("it was generally hoped that a more favorable treatment of dividend distributions would increase investment in corporate stock, especially on the part of small investors"); Cnossen, *supra* note 8, at 105 ("it seems desirable that shareholdings should be spread more widely than is the case at present [and] the imputation system might promote that objective"). The different goals that various interaction mechanisms may be pursuing are most apparent in the more unusual systems suggested such as the Institute of Fiscal Studies' A.C.E. system which creates a notional deduction to the corporation for the value of shareholder equity employed by the corporation, with the principal objective of equalising the return to investors on debt and equity. *See* I.F.S., *supra* note 21. The U.S. Treasury set out with explicit goals of retaining the implicit tax collected at the corporate level on tax-exempt investors and coordinating taxing business income only once (rather than in two instalments). INTEGRATION, *supra* note 15, at 13.

76. Cnossen, for example, notes that,

> Under the imputation system the double tax is mitigated at the level of the shareholder. It would also have been possible, of course, to provide relief at the corporate level by

and would reduce the implied tax paid at the corporate level by tax exempt investors.[77] Dividend-received deduction systems, and some kinds of imputation systems do not ensure that the corporation has actually paid any tax on the dividend received by the shareholder, although they do preserve the full nominal value of corporate tax incentives for shareholders.[78] Some imputation systems can result in over-taxation of the corporation where the tax collected on distributions exceeds the corporation's own tax liability, while others require elaborate record keeping.[79] Integration systems, which tax shareholders on the value of retentions, can cause solvency problems for individual shareholders where distributions are small but profits are large. They are generally considered impractical for large corporations in part because of the administrative difficulties in administering them,[80] and because the substantial international treaty network assumes that non-resident shareholders are not taxed on a current basis on retentions.[81]

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allowing a deduction for dividends paid in computing taxable profits. This avenue, which should yield the same result as imputation, has not been followed, however, because governments did not want foreign shareholders to share automatically in the relief.

Cnossen, *supra* note 8, at 92. *See also Corporate-Personal Tax Integration, supra* note 10, at 232-35, 239; COMPANY TAX SYSTEMS, *supra* note 15, at 23-30; INTEGRATION, *supra* note 15, at ch. 7.

77. This latter concern seems to have been a major factor influencing the decision of U.S. Treasury to suggest a dividend exemption system, as it collects at least some tax from otherwise exempt investors. INTEGRATION, *supra* note 15, at ch. 6.

78. Avi-Yonah, *supra* note 71; PECHMAN, *supra* note 11, at 180; INTEGRATION, *supra* note 15, at 93 ("an imputation credit can extend the benefits of integration to tax-exempt and foreign shareholders by allowing refundability of imputation credits or it can deny such benefits by denying refunds").

79. This is particularly true of the imputation systems in Australia, France and Germany. *See* Avi-Yonah, *supra* note 71, at 214 ("as the German example shows, however, tracking of income can lead to very complicated account-keeping requirements").

80. *See* PECHMAN, *supra* note 11, at 179 ("experts agree that it would not be practical to extend the partnership method to large, publicly held corporations with complex capital structures, frequent changes in ownership, and thousands or millions of stockholders"); *Corporate Cash Flows, supra* note 13, at 105 (describing proposals for integration as "pure in concept, ambitious in scope, and unadopted in practice"); 4 REPORT OF THE ROYAL COMMISSION ON TAXATION (Carter Commission) ch. 19 (1967) (recommending an optional profit attribution system because of the solvency and administrative problems); VANN, *supra* note 15, at 30-34. Some others believe that these administrative difficulties have been overstated. Head & Bird, *supra* note 13, at 16 ("although the difficulties are considerable, there appear to be no insuperable problems"); Anthony P. Polito, *A Proposal for an Integrated Income Tax*, 12 HARV. J. L. & PUB. POL. 1009 (1989); Peter L. Swan, *An Australian View on Tax Integration, in* TAXATION ISSUES OF THE 1980S 259 (John G. Head ed. 1983). It is interesting to note that the U.S. Treasury report considered even an imputation system unnecessarily difficult to administer. INTEGRATION, *supra* note 15, at 93.

81. *See* 4 REPORT OF THE ROYAL COMMISSION ON TAXATION (Carter Commission) ch. 19 (1967).

This variety of eccentric interaction mechanisms suggests that the effects of each interaction system on the returns to shareholders will differ under each system and that they will have different effects where the corporation evades corporate tax. This section will analyze the classical system and most systems of company and shareholder interaction. The models described below are stylized to capture the fundamental relationships of the systems discussed, rather than being entirely accurate reflections of the exact rules employed in any particular jurisdiction. It will be seen that the return to individual resident shareholders will depend upon the stipulated treatment of tax payments voluntarily made by the corporation, and the treatment of enforced tax payments, penalties and interest after detected evasion, as well as informal matters such as the distribution or retention patterns of the corporation's managers. Because the actual treatment of these items when employed in the tax systems of representative countries may differ or be unclear, assumptions will be made at various places about the expected treatment.[82]

A. Classical System of Corporate Tax

The first corporate tax system considered is the so-called classical system. Under the classical system, the corporation is expected to pay corporate tax [T_c] on its taxable profits [P] and the individual who is a resident pays income tax at marginal rates [T_i] on the proportion [d] of after-tax profits distributed by the corporation as dividends. Retained profits [1–d], which should be reflected in accretions to the value of the shares, are taxed as capital gain [T_g]. Typically, retained profits enjoy the advantage of being taxed on a deferred basis when the shares are sold by the shareholder and sometimes also with the benefit of a lower nominal rate.[83] The essence of the classical system is that no deduction or tax credit is given to the shareholder for taxes paid by the corporation, whether voluntarily or after enforcement efforts have been undertaken by the revenue authority.

Given a corporate tax system bearing these features, the position of an individual shareholder after payment of corporate tax on all profits and personal tax on distributions and retentions is:[84]

$$I = dP(1-T_c)(1-T_i) + (1-d)\,P(1-T_c)\,(1-T_g) \qquad (1)$$

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82. *See also* notes to Tables A1 to A24. In all the following discussions, it will be assumed that the shareholder does not sell the shares before the corporation's evasion is detected and so will bear the costs of evasion in the value of their own retentions if evasion is detected.

83. The effect of deferral is the same as formally imposing a lower rate, or as the revenue authority making an interest free loan of the unpaid tax to the taxpayer. Hence the discussion will treat [T_g] as being a rate less the [T_i] even though this may not appear formally to be the case.

84. Robert R. Officer, *The Australian Imputation System for Company Tax and Its Likely Effect on Shareholders, Financing and Investment*, 7 AUST. TAX F. 353, 376-77 (1990).

where:

P = the taxable profits of the corporation available for distribution,

d = the proportion of profits distributed as dividends,

T_c = the corporate tax rate,

T_i = the individual tax rate, and

T_g = the individual tax rate on capital gain.

Where the corporation engages in evasion, the wealth of the corporation and the return to the shareholder will differ, the size and direction of the change varying ultimately according to the success of the operation. Assuming there are no transaction costs in implementing evasion, evasion of corporate tax by reporting a lower amount of taxable profit [D], if undetected, will enhance the position of the company by the amount of corporate tax saved [$T_c(P-D)$]. This saving may be either retained by the corporation or distributed to shareholders. But it is clear that, when the position of the shareholder is added, evasion of corporate tax does not entirely exclude the undeclared profits from tax. Assuming there is no further evasion by the shareholder, the undeclared profits and also the amount of corporate tax saved, will bear some tax in the hands of the shareholder. The amount of shareholder tax will depend upon whether the undeclared profits and tax saving are retained by the corporation or are distributed. If distributed, they will be taxed to the shareholder as a dividend, but if retained, will be taxed as capital gain.[85]

The corporation which evades tax by not reporting income has undisclosed profits which it can retain or distribute, and in greater or smaller proportions than the disclosed profits.[86] There are several reasons for suspecting

85. A third possibility, where the untaxed profits are distributed but treated as not coming from corporate profits, is not explored. *See supra* note 61. The reason for this assumption is that the corporation's managers will wish to represent to shareholders that the corporation has derived the higher amount distributed or retained as profits and is not simply returning the shareholder's investment. If this were simply the return of the shareholder's investment, the distribution would reduce the shareholder's basis in the shares and might generate (or advance) a capital gain. All distributions are treated as dividends out of profits and hence taxable as dividends, rather than under the capital gains tax.

86. The issue being discussed raises a question about the ordering of funds which represent the corporation's profits. The corporation's accounts presumably show a pool of funds or assets available for distribution and at another place that some amount of tax has been paid. When the corporation's managers declare a dividend or retain some of those funds the drawing may be treated as reducing the taxed funds, untaxed funds or both pools pro rata, although these separate pools will not appear as such in any accounts. On most occasions, whether for corporate or tax law, it is not necessary to decide which funds have been disbursed or retained—or even whether it is within the power of the corporation's managers to decide which funds will be disbursed or retained. But for the purposes of this discussion, it is assumed either that the corporation's managers can determine the order in which sums are debited and may "earmark" distributions in the manner described, or that the appropriate rules which would determine this issue achieve the same result. *See* Cnossen, *supra* note 8, at 94; INTEGRATION,

that the corporation is likely to retain at least some of the undeclared profits and the corporate tax saving.[87] First, retained earnings are typically taxed at lower rates because of the deferral of tax until sale of the shareholder's interest, and some shareholders will often prefer to reduce personal tax by this method.[88] Second, distribution of an amount of profit disproportionate to the size of the declared profits may signal to the revenue authority that the corporation has engaged in evasion, making detection more likely.[89] Third, the corporation's managers may prefer to retain control over the untaxed profits and unpaid tax in case the evasion is later detected and the corporation needs to find money to pay the additional tax, interest, and penalties. Retained profits are likely to be a cheaper source of finance for these costs than subsequent borrowing or share issue, especially if financial markets discover that the further issue is simply to meet an expired liability. These arguments would suggest that the corporation's managers would retain at least some of the undeclared profits, and it will thus be assumed that the undeclared profits are distributed in the same proportion as the declared profits.

If the corporation's managers successfully engage in evasion, the position of the shareholder changes to:

$$I = dD(1-T_c)(1-T_i) + (1-d)D(1-T_c)(1-T_g) + d(P-D)(1-Ti) + (1-d)(P-D)(1-T_g) \quad (2)$$

The terms in this equation identify the amount remaining for the shareholder after payment of corporate and shareholder tax on declared profits, and after shareholder tax on distributed and retained but undeclared profits.

If the corporation is unsuccessful and its evasion is detected, the corporation must pay to the revenue authority the evaded corporate tax, interest on the tax, and a penalty. The undisclosed income [(P–D)] is now taxed at the corporate level as corporate income [(1–T_c)]. It is assumed that the interest on the unpaid tax and the fine do not affect the corporation's own tax liabil-

supra note 15; Avi-Yonah, *supra* note 71.

87. This assumption is not, however, essential to the model. It would be possible to model other treatment of undeclared profits with only minor adjustments to equations.

88. This is the case in classical systems where the shareholder benefits by deferral, although this common assumption can often be wrong where, for example, capital gains can be taxed on accumulation, the shares are held by non-residents, or the taxpayer is highly levered. It may or may not apply under imputation systems which typically offer lower formal rates on distributions because of the tax credit attached to the distribution which is usually not available for retentions. Even so, under an imputation system, the taxpayer may approach a 0 capital gains tax rate if deferral is for a sufficiently long time.

89. This conclusion is not strongly proffered since the revenue authority could draw the same inference from examining the corporation's own tax return and contrasting the declared profits admitted to be subject to tax with the total disclosed profits reported to shareholders. But the reason that distribution may increase the possibility of detection is that the revenue authority may not audit the corporation's return until prompted to do so by the individual's return—that is, the corporation's managers may be able to present the corporation's tax return to avoid triggering a corporate audit, but cannot similarly influence the presentation of the

ity, but will reduce the value of retained earnings to the shareholder.[90] This procedure causes the two changes to the position of the shareholder discussed above. First, the value of the fine must be adjusted to take into account the capital gains tax on the shareholder which will refund part of the amount of the interest and fine. In addition, the shareholders will have received and paid tax on dividends unreduced by the corporate tax which the revenue authority will now collect from the corporation, increasing the total tax paid.

These two complications mean that undeclared but distributed profits will be taxed to the shareholder in the year of evasion *as if* the evasion were successful and all the fine is borne by retained profits, while the smaller amount of retained earnings also reduces the size of the shareholder's capital gains tax liability. These two complications are significant elements in the return to shareholders, although they tend to effect the return in opposing ways.

The fine imposed for evasion increases the amount of unpaid tax by a percentage [f] of the unpaid tax. In addition, the amount of both the unpaid tax and penalty is increased by interest at a penal rate [r*] which is compounded annually. With the two complications mentioned above, and specifying the fine and interest functions more fully, where corporate tax evasion is unsuccessful the position of the shareholder becomes:

$$I = dD(1-T_c)(1-T_i) + (1-d)D(1-T_c)(1-T_g) + d(P-D)(1-T_i) +$$

$$\frac{(1-d)(P-D)(1-T_c(1+f)(1+r^*)^t-d)(1-T_g)}{(1-d)} \qquad (3)$$

where:

f = the rate of fine levied on unpaid corporate tax,

r* = the interest rate imposed by the revenue authority on unpaid corporate tax,

d = the percentage of profits distributed, and

t = the number of years elapsed.

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shareholder's return to prevent the revenue authority selecting the shareholder for audit and possibly reconsidering an audit of the corporation.

The retention of untaxed profits may also provide another indirect source of information to the revenue authority. An unexpected adjustment to the price of the corporation's shares to reflect the higher retained profits may also signal to revenue authority that the corporation is evading tax but it may be a more difficult signal for the revenue authority to detect and interpret.

90. It is assumed that the interest component imposed on evaded tax is not deductible to

These equations (1), (2) and (3) describe the after-tax return that the shareholder would receive under a classical system in each of the three possible outcomes: no evasion, successful evasion, and unsuccessful evasion. Viewed *ex ante,* the goal of the corporation's managers is to choose between honesty or evasion, choosing the action which promises the higher expected return, given that the result of the decision to evade is uncertain—that is, whether the retained undeclared profits are taxed once at the capital gains tax rate in the hands of the shareholder, or taxed once in the hands of the corporation at a penal rate (calculated on all unreported profits) and again in the hands of the shareholder.

One variation on the classical system is a limited dividend-received deduction system of the type that was in place in the United States for dividends received by individuals.[91] As under the classical system, the corporation still pays tax on its profits during the year, and the shareholder pays income tax at marginal rates on the proportion of after-corporate-tax profits distributed by the corporation as dividends. A tax deduction is, however, given to resident shareholders, the amount of which is limited for individual shareholders to a maximum deductible amount. Retained corporate earnings are taxed to the corporation and to the shareholder under the capital gains tax, with no adjustment for the corporate tax already paid. Where the system offers individuals a tax deduction available for dividends received limited to a constant amount, the effect is the same as that produced under a pure classical system with the after-tax return to the shareholder shifted slightly: the shareholder is better off by the product of the constant amount [K] and the individual shareholder's marginal rate [T_i].[92]

The effect of corporate tax evasion under a classical system (and classical system with a limited dividend-received deduction adjustment) is not obvious *a priori.* The size of the potential gain, even from successful evasion, is clearly reduced by the second layer of shareholder tax and the unnecessary tax payment on excess distributed profits, but there is also reduction of the capital gains tax. How these two opposing tendencies are resolved is explored in Section V.

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the corporation as it is in the nature of a fine. In Australia, specific provisions exist to deny a deduction for the fine component. ITAA § 51(4). In fact in the U.S., it is likely that interest on back tax is deductible to a corporation under I.R.C. § 163(a). *See* MICHAEL I. SALTZMAN, IRS PRACTICE AND PROCEDURE ¶ 6.01 (2d. ed. 1991).

91. Former I.R.C. § 116 permitted taxpayers to exclude $100 received as a dividend from income. The effect of this exclusion can be understood as a deduction at least for taxpaying individuals. *See supra* note 64.

92. This treatment assumes that the amount of the tax deduction is a constant amount unaffected by whether the amount currently distributed is [dD] or [dD + d(P-D)]. So, if, as is

B. Adjustment at Corporate Level: Split Rate and Dividend-Paid Deduction Systems

Split rate and dividend-paid deduction systems attempt to integrate the corporate tax and personal income tax by removing tax at the level of the corporation. Under a split rate system, the corporation pays tax on its profits but generally faces a lower rate of tax on the proportion of pre-tax profits distributed by the corporation as dividends.[93] Under the dividend-paid deduction system, the corporation is able to reduce its taxable profits by the amount of any distribution.[94] The corporation, therefore, pays no corporate tax on distributed profits, but pays tax at the corporate rate on retentions.[95] This system has the same effect as a split rate system under which the rate on distributed profits is set at zero. Under each system, the shareholder pays income tax at marginal rates on the proportion of profits distributed by the corporation as dividends. Retained profits, which have already been taxed to the corporation, are taxed as capital gain on a deferred basis to the shareholder.

Focusing on the dividend-paid deduction system (that is, a split rate system where the rate on distributions is zero), the position of an individual shareholder after payment of corporate tax on all profits and personal tax on distributions and retentions is:

$$I = dP(1-T_i) + (1-d)P(1-T_c)(1-T_g) \quad (4)$$

If the same assumption is made that the corporation will distribute some proportion of unreported profits, successful evasion of corporate tax will change the after-tax return to the shareholder to:

$$I = dD(1-T_i) + (1-d)D(1-T_c)(1-T_g) + d(P-D)(1-T_i) + (1-d)(P-D)(1-T_g) \quad (5)$$

If the corporation is unsuccessful and the evasion is detected, the corporation must pay the evaded tax, interest on the tax, and a penalty. Since, under a dividend-paid deduction system, no tax is payable on distributed profits, it is assumed that no further tax or penalty is payable on distributed profits even where the corporation does not disclose their existence. Assuming that the fine imposed by the revenue authority must take into account that a portion of

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common, the amount of the deduction is expressed to be "[$K] or the amount of the dividend received whichever is the lower" it is assumed that the size of [dD] is greater than [K] and sufficient to exhaust the entire deduction available to the shareholder.

93. This is the system used in Germany and France, although in both cases in combination with an imputation system. There is also a disparity in actual practice with Germany imposing a lower rate on distributed profits while France imposes a lower rate on retained profits. TIRARD, *supra* note 64.

94. This is the system used in Greece. TIRARD, *supra* note 64.

95. The effect of a dividend deduction system is to treat equity as debt, giving the corporation a deduction for its dividend payments as it does for its interest payments. Cnossen, *supra* note 8, at 92.

the taxable profits was distributed, the penalty is only applicable to retained undeclared profits.[96] The undisclosed retained income [(P–D)] is now taxed at the corporate level as corporate income [$(1-T_c)$], and at the shareholder level as retained earnings [$(1-T_g)$]. Again, it is assumed that the interest and fine do not affect the corporation's own tax liability, but reduce the value of retained earnings to the shareholder. The after-tax return to the shareholder is:

$$I = dD(1-T_i) + (1-d)D(1-T_c)(1-T_g) + d(P-D)(1-T_i) + (1-d)(P-D)(1-T_c(1+f)(1+r^*)^t)(1-T_g) \quad (6)$$

The first two terms of equation (6) set out the return after payment of corporate and shareholder tax on declared profits; the third term represents the rate on undeclared but distributed profits; and the final term shows the rate on undeclared and undistributed earnings, imposed only on retained earnings, where evasion is unsuccessful.

Under a dividend-paid system and a split rate system, it might be expected that corporate tax evasion would be less rewarding than under the classical system—the only tax to be evaded is that levied on retained earnings. This would accord with the object of the mechanism, which is to impose one layer of tax only on distributed earnings, and at the shareholder's tax rate. But corporate tax evasion would also be less costly where unsuccessful, since the fine is imposed only on the tax on retained earnings. How these contrary tendencies might be resolved will be amplified later.

C. Adjustment at Shareholder Level: Exemption and Dividend-Received Deduction Systems

The next corporate and personal tax interaction mechanisms, unlike the two just discussed, try to integrate the corporate tax and personal income tax by removing the tax at the shareholder level. The dividend-received deduction system is still retained in many countries as the means for adjusting the total tax paid on dividends flowing through chains of corporations.[97] Exemption systems may operate for distributed earnings, either through explicit exemptions or through imputation systems. The effect of both is to recover only one amount of tax from corporate earnings, but this time at the corporate tax rate. This observation, of course, suggests that this system will be the most profitable for shareholders where corporate tax evasion is successful—successful evasion of the corporate tax is the evasion of all tax on distributed corporate earnings.

96. Again there is an ordering issue about the nature and source of the profits remaining. *See supra* note 86.

97. This is the case in the U.S. and Canada. In Australia, the deduction of the dividend is replaced by an automatic credit of the amount of tax payable on the dividend. The effect of this credit system is the same as an automatic full dividend-received deduction.

As under the classical system, the corporation still pays tax on it's profits derived during the year. The shareholder pays income tax at marginal rates on the portion of after-corporate-tax profits distributed by the corporation as dividends. A tax deduction is, however, given to resident shareholders for corporate distributions received. Retained corporate earnings are taxed to the corporation and to the shareholder under the capital gains tax, with no adjustment for the corporate tax already paid. Assuming that the deduction available to the shareholder is for the entire amount of the dividend received, the position of the shareholder after payment of corporate and personal income tax on all profits is:

$$I = dP(1-T_c) + (1-d)P(1-T_c)(1-T_g) \quad (7)$$

Again, the after-tax position of the shareholder will vary according to the success of the evasion decision made by the corporation's managers. If evasion is successful, and the same proportion of undeclared profits is distributed as declared profits, the after-tax position of the shareholder is:

$$I = dD(1-T_c) + (1-d)D(1-T_c)(1-T_g) + d(P-D) + (1-d)(P-D)(1-T_g) \quad (8)$$

If the corporation's evasion is detected, the after-tax return to the shareholder adjusted for unpaid tax, interest and penalty is:

$$I = dD(1-T_c)+(1-d)D(1-T_c)(1-T_g)+d(P-D) + \frac{(1-d)(P-D)(1-T_c(1+f)(1+r^*)^t-d)(1-T_g)}{(1-d)} \quad (9)$$

Again, as in the discussion of the classical system, this treatment assumes that distributions from undeclared profits will be made to the shareholder currently, and dealt with in the shareholder's return before the corporation is audited. In this case, no further tax is then collected from the shareholder because of the dividend received deduction. The retained profits bear the tax on all undeclared corporate profits.

Equation (9) is explained in the same manner as earlier versions: the first two terms state the combined corporate and shareholder tax rate on declared profits; the third term represents the rate on undeclared but distributed profits; and the fourth term shows the rate on all undeclared earnings if evasion is unsuccessful.

The same result can also occur where there is an imputation system which operates automatically at the shareholder level. In most imputation systems, as under the classical system, the corporate tax survives—the corporation still pays tax according to its profits, and the shareholder pays income tax at marginal rates on the portion of after-tax profits distributed by the

corporation as dividends and on retained earnings under the capital gains tax. The difference from the classical system is that an imputation mechanism gives credit to the shareholder for payments of corporate tax on distributions of taxed income received from the corporation. But under some imputation systems, the amount of tax credited to the individual shareholder may not reflect the total tax paid by the corporation. At one extreme, the Canadian system simply increases the amount of any distribution by a constant amount to represent corporate tax assumed to be paid, and then gives to the shareholder a credit for a portion of the grossed-up amount. This gross-up and credit occurs whether or not tax has actually been paid at the corporate level—it is apparently simply assumed that the corporation has paid tax at the appropriate rate and so the credit should be given.[98] Where the corporate tax attributed to the shareholder has not been paid by the corporation, the effect of the exemption at the shareholder is the same as a dividend received deduction system.[99]

98. *Corporate-Personal Tax Integration, supra* note 10, at 236 ("as in Belgium, Italy and Denmark, the amount of the dividend tax credit is completely independent of the whether any tax was paid at the corporate level at all"); INTEGRATION, *supra* note 15, at 164 ("because the shareholder credit is not dependent on the actual payment of corporate tax, the Canadian system does not require rules allocating credits to dividends"). So also France and Germany give a credit to shareholders (for supposed payments of corporate tax) which is calculated by reference to the corporate tax rate rather than the corporation's actual tax payment. TIRARD, *supra* note 64.

99. Under the Canadian system as currently enacted, the corporation pays tax on its taxable profits, whether distributed or retained, at the corporate tax rate. *See* Income Tax Act, § 123(1)(1971) (Can.) [hereinafter ITA]. The shareholder must include in income the amount of distributed profits increased by a multiple representing the corporate tax assumed to be paid on the distribution. ITA § 12(1)(j). The section requires an individual shareholder resident in Canada to include in income any "dividend paid by a corporation resident in Canada on a share of its capital stock", and § 82(1) requires the shareholder to include:

> (a)(ii) the aggregate of . . . all amounts received by the taxpayer in the year from corporations resident in Canada as, on account of, in lieu of, payment of, or in satisfaction of, taxable dividends . . . plus
>
> (b) where the taxpayer is an individual , . . . one-quarter of the amount determined under subparagraph (a)(ii) in respect of the taxpayer for the year.

This effectively requires the shareholder to include 125% of the amount of any dividend in income. The factor by which the dividend is increased is set at a constant rate, currently 25 per cent. The shareholder then pays personal tax on the amount of increased distribution but is given a tax credit against this liability which is a proportion (currently 66%) of the grossup amount. Section 121 provides a credit against tax on the increased dividend of "two-thirds of any amount that is required by paragraph 82(1)(b) to be included in computing his income for the year." Retained earnings are taxed to the corporation and the balance after corporate tax is taxable to the shareholder as capital gain (although there is a real possibility that the capital gain may also escape tax under Canada's rather unusual lifetime $100,000 capital gain exemption. ITA § 110.6.

Given a current corporate tax rate in Canada of 38% with a multitude of further tax adjustments, and personal marginal rates approaching 50%, it is clear that something less

D. Adjustment at Shareholder Level: Imputation Systems

The next interaction systems to be modelled are two versions of the wide variety of imputation systems. In an imputation system, the corporation still pays tax according to its own circumstances, and the shareholder pays income tax at marginal rates on the portion of after-tax profits distributed by the corporation as dividends and on retained earnings under the capital gains tax. The difference from the classical system is that an imputation mechanism gives credit to the shareholder for payments of corporate tax on distributions of taxed income received from the corporation. Unlike the shareholder exemption or dividend-received deduction systems, which also reduce the shareholder tax on distributions, these systems are apparently intended to have the effect of taxing corporate earnings at the higher of the corporate or personal rate.

These systems should not be confused with simple withholding systems where the corporation is obliged to withhold tax on distributions, and the tax withheld is credited to the shareholder. The difference between imputation and withholding systems is that the payment of the withholding tax by the corporation is in addition to the corporation's own corporate tax liability, and does not discharge the corporation's own tax obligation (except for England's Advanced Corporation Tax system). In other words, a pure withholding system is simply a collection mechanism on behalf of the shareholder, not an attempt to overcome the defects of the classical system. For example, most European jurisdictions see the need to impose both a withholding tax at a constant rate on corporate distributions and to have some other interaction mechanism, such as an imputation system that attributes payments of the corporation's own tax liability to the shareholders[100] or a dividend deduction system[101] that operates in conjunction with the withholding tax. Even The Netherlands, which retains the classical system, has a withholding system collecting tax from the corporation on distributions which is creditable to the shareholder, but which creates no further reduction in total tax payable by either the corporation or shareholder.[102]

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than full integration of the corporate and personal income tax is achieved by this system. Instead, the generally accepted view is that the system is intended to achieve close to full integration for the corporate tax on distributions from small corporations engaged in active business and controlled by Canadian citizens, referred to in the legislation as "Canadian controlled private corporations" (CCPCs). ITA § 125(1). *Corporate-Personal Tax Integration, supra* note 10, at 236 ("What Canada ended up with is a system which provides full dividend relief .. for small companies and partial dividend relief for others.").

100. Variations on this system are employed in France, Germany and Italy. *See* TIRARD, *supra* note 64.

101. This system is used in Greece. *See* TIRARD, *supra* note 64.

102. *See* TIRARD, *supra* note 64.

Although there are common elements to all imputation systems, there are also many differences within this broad framework. Common to all systems is the survival of the separate corporate tax, the attribution to shareholders of some corporate tax paid on distributed profits, and the denial of a credit for corporate tax paid on retained profits. Differences arise, for example, where imputation systems operate with more or less accuracy in the attribution of corporate tax payments.[103] In some systems, the amount of the tax collected at the corporate level may not be entirely reflective of the tax actually payable by the corporation. Under others, the amount of tax credited to the individual shareholder may not reflect the total tax paid by the corporation. As mentioned above, the Canadian system simply increases the amount of any distribution by a constant amount to represent corporate tax paid, and then gives the shareholder a credit for a portion of the grossed-up amount.[104] This gross-up and credit occurs whether or not tax has actually been paid at the corporate level. The United Kingdom's Advanced Corporation Tax (hereinafter "ACT") system is more careful to ensure that the tax has been paid, but occasionally is also at the expense of collecting payments of ACT which exceed the company's own corporate tax liability.[105] Of the two systems modelled, the system which attempts to be the most accurate is that used in Australia and New Zealand. It attempts to trace (and verify) the tax actually paid by the corporation on its profits, and attribute only those verified payments of corporate tax to the shareholders.

Which system is in place will depend upon many factors, but probably the most important choices involve issues about the size and distribution of tax preferences; the treatment of exempt shareholders; the importance of equity concerns; the treatment of foreign income; administrative convenience; and so on. Corporate tax preferences (and credits for tax paid on foreign income) are an issue under an imputation system which traces actual payments of corporate tax because the value of the preference (or credits for payments of foreign tax) will be recaptured if (untaxed) profits are distributed and even, to a lesser extent, for taxed profits if they are retained. The value of the pref-

103. Avi-Yonah, *supra* note 71.

104. The Canadian version of the imputation system appears to be the least accurate of the imputation systems examined, although as will be seen, except in some unusual circumstances, the advantages of some of the imputation systems in their alleged accuracy may be more apparent than real. *See* INTEGRATION, *supra* note 15, at Appendix B.2.

105. The ACT is payable at a flat rate on a distribution regardless of whether the profits out of which the distribution is made have already borne tax, and of the actual rate of tax which will be imposed upon the company. The payment of ACT discharges the corporation's primary tax liability to the extent of the ACT payment and the individual shareholder is credited with the ACT payment against the shareholder's tax liability on the dividend received. *See generally* RICHARD BRAMWELL ET AL., TAXATION OF COMPANIES AND COMPANY RECONSTRUCTIONS ch. 9 (3d ed. 1985).

erence under such a system is reduced from a tax exemption to a tax deferral, which may not be consistent with the level of subsidy intended by the government.[106] The problem could possibly be solved by specific adjustments to the tax credits offered to shareholders, either to gross-up the tax actually paid by the corporation by an amount to represent tax not paid but attributable to preference items or foreign income, or to perform a similar gross-up to the shareholder's tax credits.

The purpose in raising these problems in the context of this paper is to observe that the effects of a corporate tax preference resemble those of corporate tax evasion—either may account for the existence of untaxed corporate profits. Indeed, corporate managers keen to conceal the existence of evasion would probably try to explain the difference between the size of the profits reported variously to the revenue authority on the one hand, and shareholders on the other, in part by pointing to the value of tax preferences. If the imputation system tries to recapture corporate tax preferences, it may also have the desirable but unintended consequence of recapturing the benefits of successful corporate tax evasion.

(1) Advanced Corporation Tax System

The United Kingdom's ACT system uses a withholding tax on distributions as both the collection mechanism and the interaction mechanism between the corporate tax system and the personal income tax.[107] The essence of the ACT is that a withholding tax is imposed on corporate distributions and credited against the corporation's liability for corporate tax payable on its taxable income. Because an imputation system also operates, the ACT is effectively also collected on behalf of the shareholder's liability for tax on the distribution. The ACT is perhaps better described as an imputed withholding tax for both the corporate tax and personal income tax rather than simply an imputation system. But because the ACT is collected on the gross amount of any corporate distributions, it changes both the returns and costs of evasion.

Under the ACT, each qualifying distribution by a corporation is subject to ACT at a nominal rate, set at a level equal to the basic personal income tax

106. Avi-Yonah, *supra* note 71. See, for example, the adjustment made in Australia to the tax liability on trust distributions where part of the distribution represents untaxed profits, reduced because of the building depreciation deduction. ITAA § 160ZM. This same adjustment is not made to distributions from companies with similar deductions.

Even for retained profits, the value of the tax preference is reduced but in this case by less. The value of the preference will possibly be recaptured when profits on the sale of the shares are taxed as capital gain. The size of the recapture depends upon the length of time until redemption, the interest discount factor and the tax rate applicable to capital gains. In the right circumstances, it is possible for the amount of recapture to approach 0.

107. *See generally* SIMON JAMES & CHRISTOPHER NOBES, THE ECONOMICS OF TAXATION 287 (3d ed. 1988); INTEGRATION, *supra* note 15, at Appendix B.6.

rate.[108] This rate is also approximately the same as the rate charged on taxable corporate profits under the corporation tax.[109] Because the tax is imposed upon a distribution, it is collected whether or not the source of corporate profits from which the distribution has been paid has borne tax, or even is taxable. The corporation is able to credit the ACT payment against its own liability for corporate tax on its profits.[110] The balance payable after the credit is usually referred to as the "mainstream corporation tax" (hereinafter "MCT") liability. Where the corporation retains profits, there is no ACT payment, and thus no change to the classical system's consequences for the corporation and shareholder.

The reduction in the corporation's tax liability for payments of ACT cannot generate a refund of corporate tax if the corporation distributes more than its current-year taxable profits, or if it is taxable at less than the ACT rate on its profits.[111] Effectively, tax is collected from the corporation at the higher of the ACT rate or the corporate tax rate on distributed profits and at the corporate tax rate on retentions. An ACT system can thus result in the consequence that all distributions are reduced by an amount of ACT, while some will be reduced by the corporate tax rate if that is higher. The after-tax corporate profit is, therefore:

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108. Income and Corporation Taxes Act 1988 (Eng.) § 14(1) [hereinafter ICTA] provides that "where a company . . . makes a qualifying distribution it shall be liable to pay an amount of corporation tax in accordance with subsection (3)." *Id.* Section 14(3) formally expresses the ACT rate in the form:

$$\frac{I}{100-I}$$

"I" being "the percentage at which income tax at the basic rate is charged. . . ." Since, at present, the UK has only two rates of personal income tax (25% and 40%), this ACT rate is currently becomes 25/75 or 33%.

The reference to a "qualifying distribution" is the way that returns of capital and certain other distributions are excluded from tax. Distributions from corporations are not subject to further tax as ACT is only collected on the excess of distributions made over distributions received. ICTA § 241.

109. The UK currently imposes tax at 25% on corporations with profits less than £150,000 and 35% for other corporations.

110. ICTA § 239(1) provides:

> Advance corporation tax paid by a company . . . in respect of any distribution made by it in an accounting period shall be set against its liability to corporation tax on any profits charged to corporation tax for that accounting period and shall accordingly discharge a corresponding amount of that liability.

111. This consequence is dealt with in the variety of provisions dealing with "surplus advance corporation tax." If the corporation has insufficient tax liability, it can carry the credit back and recover tax paid in prior years or forward to use against the tax liability of future years, the liability of other companies in the group or controlled foreign corporations. ICTA §§ 239, 240. This complication will be ignored.

$$dP[1-T_a-(T_c-T_a)] + (1-d)P(1-T_c)$$

where:

T_a = the rate of ACT (where $T_c > T_a$).

With respect to distributed profits, the shareholder is treated in the same way as under other imputation systems. The shareholder is taxed on the net distribution increased by the amount of ACT presumed withheld, and then receives a credit for that amount as in any other withholding system.[112] The ACT credit is refundable to the shareholder if the credit exceeds the shareholder's tax liability.[113] But if the corporation has paid more in ACT than its own MCT liability, the excess is not refundable to the corporation and, unless they can be utilized in some other way,[114] its profits are effectively taxable at [T_a] rather than [T_c].

If the corporation's managers report its full profits, the shareholder includes in income:

$$dP[(1-T_a-(T_c-T_a)] + dP[(1-T_a-(T_c-T_a)] \times \frac{T_a}{1-T_a} + (1-d)P(1-Tc)$$

Where [T_a] is set at a lower rate than [T_c], the position for distributions is equal to:

$$dP(1-T_c) \times \left[1 + \frac{T_a}{1-T_a} \right]$$

and the shareholder receives a credit equal to the amount of ACT [dPT_a]. Since [T_a] is set at the same rate as [T_i],[115] the after-tax position of the shareholder becomes:

$$I = dP(1-T_c) + (1-d)P(1-T_c)(1-T_c) \qquad (10)$$

Where [T_c] is set at the same rate as [T_i], distributed declared earnings are effectively taxed at [T_i]. But where the corporate tax rate is higher than [T_i], the distributed earnings are taxed at the higher rate [T_c].

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112. ICTA § 20(1), Schedule F. The amount taxed is "the aggregate of the amount or value of [any] distribution and the amount of [any] credit". The credit is provided in ICTA § 231 which states that,

> where a company resident in the United Kingdom makes a qualifying distribution and the person receiving the distribution is . . . a person resident in the United Kingdom. . . , the recipient of the distribution shall be entitled to a tax credit equal to such proportion of the amount or value of the distribution as corresponds to the rate of advance corporation tax. . . .

113. ICTA § 231(3).

114. *See supra* note 111.

115. It will be the same rate if T_i is a marginal rate rather than an average rate since income is subject to reliefs, progressive rates, losses etc while T_a is set at a gross rate.

If the corporation successfully engages in evasion of its primary corporation tax liability, the after-tax position of the shareholder remains the same for distributions of declared earnings. But successful evasion means that the corporation's managers can attribute the ACT payment on distributions of undeclared earnings toward the mainstream corporate tax liability on declared earnings. So, although ACT will be collected on distributions of undeclared income, it is assumed that the same overall corporate tax is collected. Distributions are taxed at $[T_a]$, and a corresponding credit will be given to the shareholder.

The gross-up and credit procedures occur automatically, as in the Canadian system, but they do so on the basis that ACT has actually been collected on distributions. No corporate tax will be collected on retained earnings where evasion has been successful, and no ACT will be collected because profits have been retained. Consequently, only capital gains tax will be collected on the sale of the shares. The position of the shareholder becomes:

$$I = dD(1-T_c) + (1-d)D(1-T_c)(1-T_g) + d(P-D) + (1-d)(P-D)(1-T_g) \quad (11)$$

It is important to observe that, in this formula, the ACT does not actually ensure that the correct corporate tax is actually paid, even where the corporation evades but distributes. Rather, the ACT simply permits the corporation's managers to reduce the amount of any final MCT to be paid on declared profits, assuming that the MCT obligation on declared profits exceeds the ACT payments. In other words, there is the potential for the "leakage" of tax credits from the corporation's ACT liability on undeclared but distributed profits to reduce its liability on declared but retained profits. The only circumstance where the ACT mechanism will ensure that more corporate tax is paid than would otherwise occur is where the corporation proposes to report less taxable profits than the amount of profits (both taxed and untaxed) that it proposes to distribute. It is assumed that the corporation's managers are able to manage the amounts distributed and declared to ensure that no additional ACT liability is created to eliminate the benefits of evading the MCT liability.

Where the evasion is unsuccessful, the shareholder faces an after-tax return under an ACT system of:

$$I = dD(1-T_c) + (1-d)D(1-T_c)(1-T_g) + d(P-D) +$$

$$\frac{(1-d)(P-D)[(1-T_c(1+f)(1+r^*)^t-d]\,(1-T_g)}{(1-d)} \quad (12)$$

(2) Australian Imputation System

The other imputation system to be modelled is the type in place in Australia and New Zealand.[116] Of the other systems discussed, it is perhaps the system which tries most accurately to measure the interaction of the corporate and personal income tax on at least distributed income. Unlike the Canadian system mentioned above, which assumes that corporate tax has been paid on all distributions, or the ACT system that enforces payments of tax in excess of the corporate tax liability, this system traces the tax actually paid by the corporation on its profits, and attributes only tax actually paid to the profits distributed. The consequence of this is that corporate tax preferences or foreign tax credits are recaptured at the shareholder level and also, if properly constructed, that the benefits of corporate tax evasion might also be recovered from the shareholder.

The corporation still pays tax on its taxable income whether distributed or retained. A shareholder who is a resident pays income tax at marginal rates on the portion of after-tax profits distributed by the corporation as dividends. The same gross-up procedure is used as in the other systems, so that an additional amount is included in the shareholder's income representing tax paid by the corporation,[117] and this shareholder receives a tax credit for this amount.[118] Retained profits are still taxed as capital gain to the shareholder when the shares are sold, with no explicit credit against capital gains tax given for the corporate tax already paid on retained profits. That is, the tax paid on reported profits which are retained is not available to the shareholder.[119] In this respect, the Australian imputation system, like the other imputation systems discussed, operates in a similar way to the classical system for retained profits.

The means for delivering the tax credit and the amount of tax credit differ from the system employed in the United Kingdom. The Australian system tries to trace tax payments actually made by the corporation and to attribute tax credits for those payments to individual shareholders to the extent only that verified tax payments have been made by the corporation. In other words, the Canadian system disregards the possibility that profits being

116. RICHARD J. VANN, COMPANY TAX REFORM (1988); Richard Krever, *Companies, Shareholders and Capital Gains Taxation*, 3 AUST. TAX F. 267 (1986); R. RICHARDS & R. DOHERTY, THE IMPUTATION SYSTEM (1987); Officer, *supra* note 84; INTEGRATION, *supra* note 15, at Appendix B.1.

117. ITAA § 160AQT.

118. ITAA § 160AQU.

119. It was assumed above that tax involuntarily paid would not be credited. These assumptions would not be in doubt if the unreported income were retained, as was assumed above, since no tax credits are attached to retentions. Some minor exceptions to the proposition

distributed might not have been taxed; the system used in the United Kingdom forces the payment of tax on all distributions; and the Australian system permits untaxed profits to be distributed but identifies them as such in the hands of the shareholder.

Where the corporation reports all of its profits, the corporation will pay corporate tax of [PTc], and the balance available for distribution is [$P(1-T_c)$]. The net amount distributed to the shareholder [$dP(1-T_c)$] is increased by the gross-up representing corporate tax, effected by multiplying a fraction of the net dividend[120] by a factor, [$T_c/1-T_c$] and adding this amount to the net dividend. The gross-up and credit procedure are effected through a process referred to as "franking". Under this process, taxed profits are identified, with the gross-up and credit procedure operating in respect of declared and taxed profits only.

The franking procedure operates in several steps. Each step is verified by entries in a notional account, the corporation's "franking account", that traces corporate tax payments. First, when the corporation discloses to the revenue authority the amount of its taxable profits and pays tax on these profits, the corporation enters a credit in its franking account.[121] The amount of the credit is calculated by adjusting the amount of tax paid to express the amount of dividend which can be distributed tax free upon a tax payment of this size.[122] In other words, if the corporation discloses its full taxable profits [P], and pays tax of [PT_c], the entry is:

$$P T_c \times \frac{1-T_c}{T_c} = P(1-T_c)$$

The corporation can then "frank" a dividend of up to [$P(1-T_c)$] to one hundred percent, meaning that it can attach a full tax credit [PTc] to a dividend of this amount. When the corporation declares a dividend of some portion of the after-tax profits [$dP(1-T_c)$], it also reduces its franking account in the same amount, so as to leave a balance of [$(1-d)p(1-T_c)$].[123] In contrast to the ACT

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that tax on retained corporate profits is not credited to shareholders, arise in the case of share buy-back arrangements and the attributed income of controlled foreign corporations. *See respectively* ITAA Division 16J of Part III, § 461. These exceptions will not be discussed further here.

120. ITAA § 160AQT requires the shareholder to include in income the "franked amount" of the dividend increased by this factor.

121. ITAA §§ 160APMA - 160APMD.

122. ITAA §§ 160APMA - 160APMD refer to the amount of the credit being the "adjusted amount" in relation to the payment. Section 160APA defines the adjusted amount to be the amount multiplied in the manner indicated in the text.

123. ITAA § 160AQB prescribes a reduction to the franking account of "the franked amount of the dividend" paid by the corporation.

system, none of these steps affect the corporation's own tax liability. They merely serve as a record for the purpose of subsequent calculations.[124]

The shareholder goes through similar procedures to calculate the tax liability on the net dividend distributed. Where all profits are reported and taxed, the shareholder reports the portion distributed increased by the gross-up for corporate tax.[125] This gross-up does not occur as a simple increase of the net dividend by a constant rate. Rather, the gross-up is calculated on the amount that has been debited to the corporation's franking account, which, as will be later shown, may or may not correspond to the net amount of dividend distributed. Where the full taxable profits have been declared, this step becomes:

$$dP(1-T_c) + \left[dP(1-T_c) \times \frac{T_c}{(1-T_c)} \right] = dP$$

This amount is then subject to personal income tax [dPT_i], and the shareholder is entitled to a credit against the personal income tax liability of the same amount that was included by the gross-up procedure [dPT_c].[126] Thus, the net tax at the shareholder level on distributed dividends is [$dPT_i - dPT_c$]. The after-tax return to the shareholder is:

$$I = dP(1-T_i) + (1-d)P(1-T_c)(1-T_g) \qquad (13)$$

with [dPT_c] collected from the corporation and any deficiency collected from the shareholder.[127] This achieves the desired result that the shareholder pays tax on distributions at the higher of the corporate or personal income tax rates.

Where the corporation's managers engage in evasion (or for some other reason such as the existence of foreign tax credits or corporate preferences), and all of the profits distributed have not borne tax at the full corporate rate, the franking system will operate rather differently both at the corporate and shareholder level. If the corporation pays tax of [DT_c], the entry in the corporation's franking account will be:[128]

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124. Although if it is found that the corporation has over-franked the dividend, it must pay "franking additional tax to balance the franking account. This payment is treated as a pre-payment of the corporation's tax for the ensuing year.

125. ITAA § 160AQT.

126. ITAA § 160AQU.

127. Any excess, where dPTc is greater than dPTi can be used as a credit against the shareholder's other tax liabilities but is not refundable.

128. ITAA § 160APMA.

$$DT_c \times \frac{1-T_c}{T_c} = D(1-T_c),$$

which will permit the corporation's managers to distribute profits up to $[D(1-T_c)]$ tax-free through the process just described.

The assumption has been previously made that the corporation distributes a portion of the undeclared profits. The treatment of the portion of undeclared profits distributed as dividends [d(P–D)] will depend crucially on the way that the franking account is debited and tax credits attached to dividends. This is an issue similar to that raised in the ACT system. It is clear that the franking account balance would be insufficient to permit the corporation's managers to fully frank a dividend greater than $[D(1-T_c)]$. But if the corporation's managers retain a portion of the declared and taxed profits $[(1-d)D(1-T_c)]$, can the unused credits in the franking account (representing tax on these declared but retained profits) be applied against the undeclared but distributed profits? If so, the distributed portion of the undeclared profits might also be distributed tax-free to shareholders.

The answer depends in part upon the dividend policy of the corporation's managers, and in part upon their compliance or disregard of other rules. Sections 160AQF and 160AQG try to ensure that all dividends are franked to the same proportion where there are insufficient credits to cover all dividends to be declared in a year.[129] But if the corporation's managers plan to distribute from undeclared profits up to the amount of retained declared profits, this rule would not apply—that is, if the total distribution is less than $[D(1-T_c)]$. This would mean that all dividends, whether out of declared or undeclared profits, could effectively be distributed tax free to shareholders. If, however, the corporation's managers were planning to distribute all of the declared profits $[D(1-T_c)]$, and some portion of the undeclared profits, the rule would apply, and all dividends would carry only fractional credits.[130] Thus, the

129. Section 160AQF provides that all dividends paid under a resolution of the company are taken be franked to the percentage specified in a declaration made in relation to the dividend. The declaration cannot be varied or revoked. Section 160AQG treats all dividends paid during the year on the same class of shares as being franked to the same percentage declared for the first dividend.

The purpose of these sections is to prevent "streaming" of distributions so that distributions carrying tax credits are paid to taxpaying entities while taxable distributions (if any) are directed to tax exempt bodies. Streaming of this kind would permit the corporation to increase the after-tax return to both groups of shareholder. The section tries to prevent this practice by insisting on a pro rata attaching of credits rather than a "first-in-first-out" rule. INTEGRATION, *supra* note 15 (which recommends a first-in-first-out rule).

130. The Act also offers to the corporation's managers the choice of franking the distribution of untaxed profits to 100% but the corporation will be obliged at the end of the year to pay additional tax to restore a credit balance in the franking account. That is, the corporation

corporation's managers can effectively attach tax credits to a distribution up to the amount of $[D(1-T_c)]$ whether or not some portion of the amount distributed has actually been declared and borne tax.

If there are insufficient credits to frank a distribution to one hundred percent (that is, the corporation's managers distribute more than $[D(1-T_c)]$) the gross-up and credit procedure will still operate in respect of the declared profits, but not for undeclared profits. If the profits are not declared, they carry no tax credit, and the shareholder simply includes the distributed portion of untaxed profits in income $[d(P-D)]$ with no gross-up or credit and is taxed in the same way as under a classical system.

An issue arises under this system similar to that implicitly raised under the ACT—why it is not assumed that the corporation's managers simply falsely represent to the shareholders that the distributed undeclared profits have been declared and carry a tax credit? Why, in other words, is it assumed that the corporation's managers are dishonest about the amount of corporate income earned and corporate tax payable, but honest about the amount of ACT or corporate tax actually paid? The reason that this assumption is made is because the revenue authority is the other party to the corporation's tax payment. Hence, it is assumed that the revenue authority can cheaply and quickly verify the amount of tax paid by the corporation from its own records and does need to accept the representations of the corporation's managers nor engage in costly audits of the corporation's records in order to ascertain the amount of corporate tax paid. Expressed another way, it is assumed that detection for misrepresenting the amount of ACT or corporate tax paid is certain.[131]

If the corporation's managers are to make the most use of their evasion, they will need to retain sufficient declared profits to ensure that the undeclared but distributed profits can be franked fully. If they do this, the after tax position of the shareholder becomes:

$$I = dD(1-T_i) + (1-d)D(1-T_c)(1-T_g) + d(P-D) + (1-d)(P-D)(1-T_g) \quad (14)$$

If the corporation's evasion is detected, the position of the shareholder changes again. The corporation must pay back tax on the undisclosed profits, interest on the tax, and a penalty to the revenue authority. It has previously been assumed that the payment of interest on detection does not affect the corporation's own tax liability, but the payment of back tax raises the additional issue under an imputation system whether payment of evaded tax will

effectively pre-pays the next year's corporate tax. *See supra* note 124.

131. This might not happen if the corporation is claiming credit for foreign corporate tax paid, but the revenue authority will usually require documentary evidence of payment before a credit is given. But the issue does not arise in dealing with the Canadian-style imputation system discussed above since no attempt it made to verify payments of corporate tax before giving credit to the corporation's shareholders for the corporate tax.

give rise to a tax credit to the shareholder. It will be assumed that the credit for corporate tax is limited to the tax paid on profits voluntarily disclosed, but it is not entirely obvious that a credit is (or should be) denied for enforced tax payments.[132] But it will be assumed that the enforced tax payment gives rise to no tax credit for the shareholder.[133]

Where evasion is detected, the after-tax return to the shareholder becomes:

$$I = dD(1-T_i)+(1-d)D(1-T_c)(1-T_g) + d(P-D)+(1-d)(P-D)\frac{[(1-T_c(1+f)(1+r^*)^t-d)]}{(1-d)}(1-T_g) \quad (15)$$

The first two terms describes the combined corporate and shareholder tax rate on declared profits; the third term shows the rate on undeclared but distributed profits; the fourth term represents the rate calculated on all undeclared earnings (but collected from retained earnings) if evasion is unsuccessful.

E. Integration System

Integration systems, of which there are two varieties, are intended to offset the effect of the corporate income tax entirely, so that all corporate profits are ultimately taxed at individual marginal rates in the current year, regardless of whether the profits are distributed. This system promises the model treatment to which the other systems aspire, because all profits are taxed at exactly the shareholder's personal income tax rate (although portions of the total tax might be collected from each of the corporation and share-

132. The position in Australia is that credit is available for the amount of unpaid tax in the year that it is paid (ITAA § 160APMD) but probably that no credit is available for the amount of the penalty (nor interest) imposed under Part VII. The doubt arises from the reference to the penalty as "Penalty tax" and in Section 227 to "additional tax" which might be sufficient for the franking provisions which require simply a payment of "company tax" (§ 160APMD) defined to be "tax assessed on the taxable income of the company" (§ 160APA). The specific provisions imposing the penalty, however, impose "a penalty" for making false statements. It is suggested that the probable treatment is that a credit will arise for the payment of unpaid tax but not for the penalty.

133. The benefit of such a rule is that it would serve as a cheap (from the revenue authority's point of view) supplement to the penalty system, denying to shareholders a valuable benefit at no cost to the revenue authority. But if the shares have been sold by the time the evasion is detected, the tax and fine will be a cost to the current owner which might suggest attributing the credit to the current owner as well, since the purchaser has paid to the vendor a higher price for the corporate profits (unreduced by corporate tax) presumably unaware of the potential liability for the evasion. To deny the tax credit penalises the purchaser beyond the apparent size of the fine with no obvious cost to a hasty vendor. Perhaps in the long run, once this position becomes known the price of securities may be adjusted downward to reflect the potential diminution in value of the purchaser's interest or cautious purchasers may try to bargain for collateral guarantees.

holder), and there is no gain to the taxpayer from deferring the recognition of income by retaining profits within the corporation.[134]

One form of integration system—the so-called "partnership-style" system—achieves this result by eliminating the corporate tax altogether, and taxing the shareholders in the corporation as if they were numbers of a partnership. Under this system, no tax is imposed upon the corporation and all corporate profits are included in the individual's taxable income. The United States permits shareholders to elect this treatment under Subchapter S of the Internal Revenue Code for domestically controlled corporations with few shareholders and little foreign source or passive income.[135] The consequence of the election is that the corporation is not taxed on its income; shareholders are taxable on all income whether or not distributed; and the benefit of corporate losses and tax preference items are passed through to the shareholders.[136] This style of integration will not be considered further in this paper because it achieves integration by eliminating the corporate tax and makes the study of corporate tax evasion irrelevant.

With this exception and for the reasons stated earlier, integration systems have not been adopted by any country for the taxation of domestic companies and their resident shareholders, despite the support of many commentators and several government reports.[137] But somewhat surprisingly, a second style of integration system is more common in the taxation of non-resident companies controlled by resident shareholders, where the system is usually referred to as a controlled foreign corporation (hereinafter "CFC") tax system. In this context, the system is used not because it approximates the economist's ideal of eliminating the double taxation of corporate profits, but rather as an anti-avoidance mechanism to prevent the accumulation of untaxed profits offshore.[138]

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134. Cnossen, *supra* note 8, at 98; *Corporate-Personal Tax Integration, supra* note 10, at 235.

135. *See generally* BORIS I. BITTKER & JAMES S. EUSTICE, FEDERAL INCOME TAXATION OF CORPORATIONS AND SHAREHOLDERS ch. 6 (5th ed. 1987).

136. I.R.C. § 1372(b)(1) (1994) (corporation not taxable); I.R.C. § 1373(b) (1994) (shareholders taxable on all income); I.R.C. § 1374 (1994) (corporate losses deductible to shareholders). In this model the corporation effectively ceases to exist as either a separate taxable entity or withholding point and it is, for that reason, not relevant to the present analysis of the behaviour of the corporation's managers and will not be discussed further.

137. *See supra* note 80.

138. I.R.C. Subpart F; ITAA Part X. In the international context, these systems are referred to as controlled foreign corporation (CFC) regimes and are evident in the tax systems of the United States, United Kingdom, Canada, Australia, New Zealand, France, Germany and Japan. *See* BRIAN J. ARNOLD, THE TAXATION OF CONTROLLED FOREIGN CORPORATIONS: AN INTERNATIONAL COMPARISON (1986). Even more curiously, while CFC systems were originally developed as a means of eliminating the gain from accumulating lightly-taxed

This section considers a theoretical CFC-type system for domestic corporations.[139] It should be noted that such a system is not in use in any domestic tax system, but the system suggested here would achieve the central element of an integration system, taxing shareholders currently on all declared corporate profits, but with the innovation of retaining the corporate tax as a quasi-withholding mechanism. Because of this continued legal obligation of the corporation to pay tax, it is assumed that penalties remain on the corporation where any failure to disclose full taxable profits is detected.

In modelling this fictitious integration system, it is assumed that the corporation would still pay tax on its disclosed profits, and the individual shareholder would pay income tax at marginal rates on all the disclosed taxable profits of the corporation whether or not they are distributed, with a tax credit then given to the shareholder for the entire amount of corporate tax voluntarily paid. Again, it is assumed that the crediting mechanism traces actual payments of corporate tax, is limited to payments of tax rather than interest or fine, and is limited to corporate tax paid voluntarily. Any retained profits have been taxed to the individual at the appropriate personal rate when they were earned (and appropriate credits were also attributed), so that retained earnings are not taxed if the shares are sold (generating a capital gain) up to the amount of the attributed retained earnings. This is achieved by stepping up the shareholder's cost in the shares by a factor to reflect the amount already taxed.[140] Any further capital gain beyond the value of attributed earnings is taxed in the usual way.

If the corporation's managers report the corporation's full taxable income, the after-tax position of the shareholder is:

$$I = P(1-T_i) \qquad (16)$$

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income offshore, the substantial income tax rate reductions of the 1980s have now meant that there may even be gains to be made from deliberately creating a CFC. *See* PAUL R. MCDANIEL & HUGH J. AULT, INTRODUCTION TO UNITED STATES INTERNATIONAL TAXATION 118-20 (3d ed. 1989).

139. PECHMAN, *supra* note 11, at 178-81. It is one of the prototypes suggested by the U.S. Treasury. INTEGRATION, *supra* note 15.

140. In fact, the result might be prevented in several ways, including, for example, a further grossup and credit procedure which increased the basis in the shares by [Tg/1-Tg] and gave to the shareholder a credit against capital gains tax for the same amount which could be carried forward and used when the shares were sold. Instead, the procedure described here is the one used in the U.S. to reconcile the capital gains tax and personal income tax on shareholders in Subchapter S corporations, with appropriate modifications to reflect the fact that the corporate tax has been retained in this discussion. *See also* BLUEPRINTS, *supra* note 16, at 64. An alternative procedure is used in Australia for the attributed profits of CFCs which writes down the proceeds of sale by amounts already attributed, permitting shareholders to sell retentions of previously taxed income without further tax. ITAA § 461.

This result would be achieved in several steps. First, corporate tax [PT_c] is collected from the corporation. The amount of any distribution is included in the shareholder's income together with the usual gross-up for corporate tax:

$$dP(1-T_c) + dP(1-T_c) \times \frac{T_c}{(1-T_c)} = dP$$

This generates a tax liability of [dPT_i], and the shareholder receives a credit of [dPT_c] against this tax liability. The retained earnings and a further gross-up are also included in the taxpayer's current assessable income:

$$(1-d)P(1-T_c) + (1-d)P \times \frac{T_c}{(1-T_c)} = (1-d)P$$

This creates a tax liability of [$(1-d)P T_i$], and a credit of [$(1-d)PT_c$] is set off against this tax liability.

It would be possible under such as regime simply to exempt sales of shares from the capital gains tax, but the capital gains tax is retained to capture other items not taxed on a current basis such as unrealized corporate profits, tax preferences, or evasion.[141] This necessitates a further adjustment to reflect the fact that some of the retained profits reflected in the price of the shares will already have been taxed. This is achieved by annually increasing the shareholder's basis in the retained earnings by the amount of retained earnings taxed in that year.[142] If the taxpayer realizes only the accumulated value of retained taxed profits, the shareholder's basis equals this amount and no capital gain arises.

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141. INTEGRATION, *supra* note 15, at 82 ("not all capital gains from increases in the value of corporate equity arise from accumulated retained earnings. Gains from other sources may imply different tax consequences than those applicable solely to gains from fully-taxed retained earnings"); Head & Bird, *supra* note 13, at 15 n.22 ("a capital gains tax at the personal level would still be needed to tax "goodwill gains"—those arising from such factors as improved market position, technological developments, and natural resource discoveries"). This is necessary because the attribution process is a tax procedure only—no corporate funds need actually be distributed to shareholders.

142. In the U.S. this process occurs in two steps. I.R.C. § 1367(a)(1)(A) increases the shareholder's basis in the shareholding by the "items of income described in subparagraph (A) of section 1366(a)(1)." This is the provision which includes in the shareholder's taxable income "the shareholder's pro rata share of the corporation's items of income (including tax exempt income)." I.R.C. § 1366(a)(1)(A). A subsequent provision states that this increase in basis occurs "only to the extent such amount is included in the shareholder's gross income on his return". I.R.C. § 1367(b)(1). The shareholder's basis is then reduced by "distributions by the corporation which were not includible in the income of the shareholder by reason of section 1368". I.R.C. § 1367(a)(2). Section 1368 exempts distributions by a Subchapter S corporation up to the lower of the shareholder's basis in the shares or the balance in the "accumulated adjustments account." The result of these provisions is that the shareholder

If the corporation's managers decide to evade tax, the corporation will initially pay tax only on declared profits, and the shareholders will be attributed with only the reported income and tax credits on that income. If the evasion is successful, the exact position of the shareholder will again depend upon the method of effecting the adjustments between the corporate tax and the personal income tax. If a tracing procedure is used to follow actual payments of corporate tax, the shareholder will include in income all after-tax profits $[D(1-T_c)]$ together with a gross-up for the corporate tax paid $[DT_c]$, and will receive a credit for the amount of the corporate tax against the personal tax liability $[DT_i]$.

The treatment of the undeclared corporate profits comes about in a series of steps.[143] Since the corporation's managers have distributed some declared profits $[dD(1-T_c)]$ and undeclared profits $[d(P-D)]$, the corporation still retains a portion of the after-tax declared profits $[(1-d)D(1-T_c)]$ and undeclared profits $[(1-d)(P-D)]$, with corporate tax having already been paid on $[(1-d)D]$. The shareholder's basis in the total retained earnings is increased by the amount of declared profits remaining after corporate tax $[D(1-T_c)]$ and reduced by the amount of profits which have been distributed and reported by the shareholder without further personal income tax $[dD(1-T_c) + d(P-D)]$ up to the amount of the declared profits. Thus the taxpayer's basis in the earnings is increased by only the declared and distributed profits and the undeclared distributed profits $[(1-d)D(1-T_c)-d(P-D)]$ —that is, undeclared but distributed profits effectively reduce the increase in basis by the amount distributed. This means that the capital gains tax calculation becomes:

$$\{(1-d)D(1-T_c)+(1-d)(P-D)-[(1-d)D(1-T_c)-d(P-D)]\}\ (1-T_g)$$

which becomes $[(P-D)(1-T_g)]$. The eventual after-tax position of the shareholder becomes:

$$I = D(1-T_i) + (P-D)(1-T_g) \qquad (17)$$

If, however, the corporation's tax evasion is detected, the corporation will again pay interest, penalties, and tax on the unreported income. But, unlike the imputation system, it is assumed that the unreported income will then have to be attributed to the shareholder for further tax at personal rates.[144]

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will increase his or her basis in the shares by the net of the income actually disclosed by the corporation and distributions up to the amount actually disclosed.

143. These steps have been modified from those described above because the corporate tax still remains in operation unlike the position in the U.S. for Subchapter S corporations.

144. It is assumed that the detected evasion by the corporation of its tax will not generate further penalties at the shareholder level. This position is not entirely clear since the shareholder has failed to report some income by virtue of the managers' evasion but for the purposes of this paper it will be assumed that detection creates penalties only at the corporate level.

Since the discovered income will be attributed and taxed to the shareholder, it is again necessary to resolve the question of whether the additional tax on the unreported income paid after detection is also credited to the shareholder. Even though the essence of the system is to impute both retained earnings and tax to the shareholder, it is assumed that the shareholder does not receive a tax credit for the further tax paid where corporate evasion is detected, nor for interest and penalties. This treatment is like that assumed for the imputation system and operates as an additional penalty for failed evasion.

In addition, with respect to the operation of the capital gains tax, it is assumed that the increase in the shareholder's basis is only for retained declared earnings, occurring in the manner described above. The corporation has retained profits of $[(1-d)D(1-T_c)]$ and $[(P-D)(1-T_c(1+f)-d)]$. The shareholder's basis in the retained earnings will be increased by $[D(1-T_c)]$ and reduced by $[dD(1-T_c)]$, leaving a net increase of $[(1-d)D(1-T_c)]$. If the balance of the retained profits $[(P-D)(1-T_c(1+f)-d)]$ is a negative figure, it is assumed that the shareholder's basis is reduced only to zero and cannot be a negative figure.

Under these assumptions, the position of the shareholder after payment of tax is:

$$I = D(1-T_i) + (P-D)\,(1-T_c(1+f)-T_i). \qquad (18)$$

The first term describes the combined corporate and shareholder tax rate on declared profits; the second term shows the rate calculated on undeclared earnings if evasion is unsuccessful. The logic of the equation is simple, if draconian. Declared profits are always taxed at the personal income tax rate but undeclared profits are subject to tax at the corporate tax rate and a fine. And since neither the tax nor fine is creditable against the shareholder's tax, the shareholder pays personal income tax again on the full amount of the undeclared profits.

F. Interaction Systems for Non-Resident Shareholders

The prior discussion has set out to describe the expected returns to resident shareholders from investment in domestic corporations. But there are also international dimensions to the interaction between the corporate and personal income tax systems which will bear upon corporate tax evasion. It is not proposed to elaborate the effects of the possible combinations of interaction mechanisms in an international context, but rather to describe the regimes briefly and then to identify the comparable domestic system, so far as corporate tax evasion is concerned, from those described above.

A shareholder who is not a resident in the same country as the corporation paying the dividend (hereinafter "the country of source") will face issues in the interaction of the corporate and personal tax systems similar to those

facing a resident shareholder, but with additional complications. The country of source will usually vary the personal income tax rules for taxing income from corporate profits where the shares are held by non-residents. For example, it is common for a different personal income tax rate to be imposed on distributions to a non-resident shareholder, and for the tax imposed upon distributions to non-resident shareholders to be a withholding tax calculated on gross amounts with no deduction for interest or other costs. Capital gains made on the disposal of interests in domestic companies may, on some occasions, be taxed in the country of source but, on others, are also often exempted from tax.

Secondly, the treatment by the tax system in the shareholder's country of residence of income earned abroad will also have to be considered at least by the shareholder and also perhaps by the corporation's managers. This second point is somewhat more conjectural than the first, in so far as the behavior of the corporation's managers is concerned. While it is likely that the corporation's managers will consider the effects of the domestic tax regime on their non-resident shareholders, it might be thought that the corporation's managers are unlikely to be influenced in their evasion decisions by the effects of the tax system of some foreign jurisdiction—or more probably, several foreign jurisdictions.[145] But the same arguments which suggest that corporate managers will consider the effects of the domestic personal income tax regime (in its application to both resident and non-resident shareholders) apply also to the tax system of the foreign country, although perhaps with less vigor.[146] Further, there may be special circumstances which encourage attention by the corporation's managers to the interaction of the tax rules of the country of source and those of a particular foreign jurisdiction. For example, a predominance of shareholders residing in one foreign jurisdiction (a situation which may occur where the corporations are part of a larger group) or where the corporation is resident in a substantially capital importing country proximate to a large developed economy, or there is otherwise a shortage of capital in the country of residence, may direct the attention of the corporation's managers to the tax system of another country. Indeed, these two ideas may coalesce so that, for example, the managers of a corporation resident in Canada (or New Zealand) may find the majority shareholder in the corporation is another corporation whose shareholders are primarily resident in the U.S. (or Australia).

This section will examine these two issues: first, the interaction mecha-

145. *See* Cnossen, *supra* note 8, at 101-02.

146. That is, that it is the express or implied desires of the shareholders that principally create the incentives for corporate managers to evade corporate tax. Even where the incentives for evasion arise, for example, in the market for corporate managers, the meritorious manager is likely to be the one who can claim the highest return for shareholders.

nisms between the corporate tax system of the country of source and its personal income tax system in the treatment of distributions to non-resident shareholders, and next, the treatment that these shareholders can expect in their country of residence for dividends and capital gains received from abroad. Again, these descriptions are stylized although reference to current national practice will be made.

1. Tax System of Country of Source

While classical, deduction, imputation, or integration systems may be employed by the country of source for resident shareholders, the interaction of corporate and personal tax systems in an international context tends to be less sophisticated and follow fewer models. Almost without exception, the country of source subjects shareholders to the treatment of the classical system, perhaps slightly complicated by the overlay of international treaty provisions negotiated between the respective countries. Under a classical system in an international context, the country of source collects further tax on dividends paid to non-resident shareholders and capital gains tax on the sale by the non-resident shareholders of retained earnings.[147] Where the government of the country of source decides to use an interaction mechanism between the corporate tax and personal income tax, the only procedure commonly used is to grant an exemption from further tax at the shareholder level for the benefit of non-resident shareholders.

The reason for not employing more sophisticated interaction mechanisms for non-resident shareholders stems usually from policy judgments about the extent to which credits afforded to resident shareholders to offset corporate tax should also be available for non-residents.[148] Occasionally, international treaties provide specifically for the benefit of tax credits to be extended to the residents of the other country on the basis of reciprocity.[149] But, apart from these treaty provisions, shareholders who are not residents are usually not included within the domestic imputation system.[150]

147. Some countries choose not to impose capital gains tax on portfolio investments by foreign nationals. *See, e.g.*, ITAA § 160T(d) (imposing capital gains tax only on shareholdings which exceed 10 percent of the issued capital of publicly traded companies).

148. *See* Cnossen, *supra* note 8, at 95 ("no country permits foreign shareholders to share automatically in the [dividend] relief"); *Corporate-Personal Tax Integration, supra* note 10, at 236 n.9; INTEGRATION, *supra* note 15; MUSGRAVE & MUSGRAVE, *supra* note 62.

149. Some of the French and English treaties permit access to credits for non-resident shareholders but always on a specific and reciprocal basis. *See* Cnossen, *supra* note 8, at 95; INTEGRATION, *supra* note 15.

150. One reason is that the credits offered for corporate tax would probably exceed any personal income tax liability since the corporate tax rate will often be greater than the personal income tax rate for non-resident shareholders dictated either by the domestic law of the source country or by bilateral tax treaties. If the tax credits were refundable or could be accumulated and applied against the capital gains tax on disposal, there would effectively be no tax for non-resident shareholders either on the receipt of distributions or the disposal of shares. The

Further, the country of source is often under little pressure to change its tax treatment to permit non-resident shareholders to have access to credits where the country of residence of the shareholder operates a foreign tax credit system. Where such a system operates, any effective reduction in the amount of corporate tax collected by the country of source either on distributions from the company or on the underlying profits of the corporation paying the dividend, would simply mean a higher rate of tax collected by the residence country.[151] In other words, where the effective tax rates and tax base of both countries are similar, the issue becomes one of distribution to be negotiated between the two countries.[152]

In an international context, an integration system is even more difficult to operate for domestic corporations because it attempts to currently tax non-resident shareholders on retained and distributed earnings. This is entirely at odds with the prevailing model of corporate taxation adopted in the bilateral tax treaties of most developed and developing nations which are based on either the O.E.C.D. or U.N. models.[153] Both of these models assume that non-resident shareholders are taxed only on distributions, and not attributions, of corporate profits, and operate to impose a maximum rate of tax that the country of source can collect from non-resident shareholders. Integration systems may, however, be applied to the treatment of resident shareholders who control non-resident corporations in ways discussed below.

Where a classical system operates for non-resident shareholders, the corporation continues to pay corporate tax, but the rate nominally charged by the country of source on distributions of after-tax corporate profits to non-resident shareholders will often be limited in many cases by a bilateral tax treaty to a maximum constant rate on the gross amount of any distribution, usually fifteen percent.[154] The tax on distributed profits is usually collected

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total tax collected on income paid to non-resident investors would be at a low level which may accord with the desire of the government but need not. Many governments apparently wish to collect some capital gains tax from non-resident shareholders or to recoup the value of tax preferences given to the corporation in order not to prefer non-resident shareholders to their own citizens.

151. Indeed, the pressure from shareholders usually operates in other direction with non-resident shareholders seeking to have their country of residence give credit for tax incentives offered in the source country—tax sparing.

152. MUSGRAVE & MUSGRAVE, *supra* note 62.

153. O.E.C.D. COMMITTEE ON FISCAL AFFAIRS, MODEL TAX CONVENTION ON INCOME AND ON CAPITAL ART. 10 ¶¶ 40-58 (1992); DEPARTMENT OF INTERNATIONAL ECONOMIC AND SOCIAL AFFAIRS, UNITED NATIONS MODEL DOUBLE TAXATION CONVENTION BETWEEN DEVELOPED AND DEVELOPING COUNTRIES ART. 10 (1980).

154. Since it is not assumed in any of these models that the shareholder is leveraged, this last qualification is not important. The constant 15% rate may, however, be higher or lower than the marginal or average rate payable by resident individuals.

by requiring the corporation to withhold tax at a constant rate on the gross amount of the dividend.[155] One important feature of this treatment is that the size of the rates imposed upon retained and distributed earnings for non-resident shareholders are usually inverted from those assumed to apply to resident shareholders.[156] Retained earnings are taxed as capital gain on the disposition of the shares, again at marginal rates applicable to non-residents, but without the benefit of the treaty-imposed rate ceiling on distributions.[157]

In the context of corporate tax evasion, the consequences of a classical system for non-resident shareholders are the same as the result for resident shareholders—some of the tax unpaid at the corporate level can be recaptured from the shareholder in higher (withholding) tax payments on dividends and from increased capital gains tax payments.

Many governments have accepted that, even in an international context, the same objections to the classical system which led to the variety of domestic interaction mechanisms remain.[158] Consequently, some form of interaction mechanism for non-resident shareholders is often provided, but rarely is it the same mechanism adopted for resident shareholders. If the classical system is to be abandoned, one solution to the interaction of corporate tax and personal income tax in the international context is to exempt distributions of taxed profits to non-resident shareholders from any further personal income tax. This system is the international analogue to the domestic dividend-received deduction and exemption systems since it operates at the shareholder level. One layer of tax is collected at the corporate level.

An exemption system simply relieves distributions from any tax collected by assessment or by withholding tax but, while distributions may be exempt from further tax, retentions might still be taxed at capital gain rates applicable to non-resident owners without credit for prior corporate tax. For corporate tax evasion, such an outcome would be similar to the domestic dividend-received exemption system.

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155. It may be asked why the corporation's managers do not evade the withholding tax on distributed corporate profits paid to non-resident shareholders. The reason, like the reason for not trying to mislead shareholders about the amount of corporate tax actually paid, is because it is assumed detection would be too easy for the revenue authority.

156. This often means that the presumption that the classical system encourages the retention of earnings—one of the common criticisms of the system—does not apply to non-resident shareholders who often face higher rates on retained rather than distributed earnings. Although these preferences, even for resident shareholders, may be harder to discern than is often alleged since all shareholders suffer differing marginal rates. *See* James M. Poterba, *Comment, in* DEBT, TAXES AND CORPORATE RESTRUCTURING 127 (John B. Shoven & Joel Waldfogel eds., 1990).

157. This discussion assumes that capital gains tax is imposed upon the shareholder and either that there is no exemption for portfolio interests or it is not triggered.

158. This view has, however been queried. For example, the van den Tempel report to the

However, many countries are unwilling to permit distributions to non-resident shareholders to be entirely free of further tax at the shareholder level as a matter of course. Australia, for example, uses an exemption system for non-resident shareholders in lieu of the imputation system used for residents, but one that is subject to several qualifications. Rather than impose personal tax on distributions to non-resident shareholders and then attribute verified payments of corporate tax, or simply exempt distributions from further tax in the hands of the shareholder, the Australian solution has been to exempt distributions of dividends only to the extent that they arise from taxed corporate profits.[159] In a way similar to the tracing of tax payments undertaken in the imputation, the exemption system also traces payments out of taxed corporate profits and provides an exemption only for these distributions. As under a classical system, distributions which are not from taxed profits are subject to further tax.

If the non-resident shareholder had other tax liabilities in the country of source, this treatment accords a less favorable result to the non-resident shareholder than giving credit for payments of corporate tax where the corporate tax is levied at a higher rate than that applicable to distributions to non-resident shareholders. Where the profits out of which the distribution is made have not been subject to corporate tax, a withholding tax is imposed, again limited by treaty to a constant rate on the gross amount of distributions. Hence, each distribution must now be divided into two parts—an exempt portion and a remainder which is taxable at the treaty rate. Retentions are still taxed at capital gain rates applicable to non-resident owners without credit for prior corporate tax.[160] The outcome of such a qualification would be that some of the benefits of even successful evasion could be recaptured using the withholding tax. In other words, successful corporate tax evasion reintroduces the classical system for distributions. The result of this treatment is analogous to that offered under the Australian imputation system: distributions from taxed profits are exempt, but distributions from untaxed profits are taxed as they would be under the classical system.

It has already been mentioned that integration systems are generally regarded as impractical, except, somewhat paradoxically, in an international context, and then only for non-resident companies controlled by resident

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European Community concluded that the classical system provided the best reconciliation of claims to tax in an international context. A. VAN DEN TEMPEL, CORPORATION TAX AND THE INDIVIDUAL INCOME TAX IN THE EUROPEAN COMMUNITIES (1970). *See Corporate-Personal Tax Integration, supra* note 10, at 93-94; Cnossen, *supra* note 8, at 232-33; MUSGRAVE & MUSGRAVE, *supra* note 62.

159. *See, e.g.*, ITAA § 128B.

160. *See* Cnossen, *supra* note 8, at 94; INTEGRATION, *supra* note 15.

shareholders.[161] Where an individual or small group of resident shareholders control a non-resident corporation, many countries have now instituted systems which effectively attribute all of the corporation's income to its shareholders, whether or not it is distributed, giving them credit for certain taxes paid by the corporation or the shareholders.

Many countries such as the United States, United Kingdom, Canada, Germany, Japan and Australia now operate Controlled Foreign Corporation (hereinafter "CFC") systems,[162] but because a CFC system is exceedingly complex to administer, the application of these systems is usually limited by a collection of cumulative criteria common to most of these countries: control of the foreign corporation must be contained within a small group of domestic shareholders and shares in publicly-traded companies are often excluded;[163] the foreign corporation must be resident in or derive a substantial amount of its income from various tax haven countries or for some other reason suffer a low effective rate of corporate tax;[164] the non-resident corporation must derive income from investment activities rather than from active conduct of a business in the foreign country;[165] the nonresident corporation must retain a substantial proportion of its profits;[166] the amount of corporate profit derived by the corporation must exceed some *de minimis* figure;[167] and so on.

Where the relevant conditions are met, the CFC system operates as an overlay imposed by the country of residence on the tax system of the foreign country. So far as corporate tax evasion is concerned, a CFC system approximates an integration system employed by the country of residence for its resident shareholders who hold controlling interests in non-resident corporations. That is, all profits of the foreign company, regardless of whether the profits are distributed, are attributed to the shareholders in the country of residence and the attributed profits are taxed to the shareholders in the current year at individual marginal rates.[168] Successful evasion allows undeclared

161. ARNOLD, *supra* note 138; Richard L. Kaplan, *Perspectives on International Tax Compliance and Enforcement: Transfer Pricing in the United States*, 6 AUST. TAX F. 423 (1989). The rules governing CFCs are found in I.R.C. Subpart F; ITAA Part X.

162. *See* ARNOLD, *supra* note 138.

163. I.R.C. § 957 (1994); ITAA § 340; ARNOLD, *supra* note 138, at 414-24, 489.

164. I.R.C. § 954 (1994); ITAA § 320 and Schedule 10, Reg. 152J, Income Tax Regulations (Aust.); ARNOLD, *supra* note 138, at 427-44.

165. I.R.C. § 951 (1994) (which adopts a tainted income approach but contains no automatic exemption if the foreign subsidiary is engaged in active business); ITAA §§ 317, 432; ARNOLD, *supra* note 138, at 444-69.

166. I.R.C. § 951 (1994); ARNOLD, *supra* note 138, at 484-91.

167. I.R.C. § 954 (1994); ARNOLD, *supra* note 138, at 489-91.

168. Other aspects of the CFC system are, however, usually dependent upon the structures of the taxation system of the country of residence. For example, if the country of residence

retained profits to be taxed as capital gains, but success in this case generally requires that the evasion escapes detection by the revenue authority of both the country of source and the country of residence. The domestic integration system provides an analogue.

2. Tax System of Country of Residence

The return to the shareholder will ultimately be determined by both the country of source's rules for taxing non-residents and by any final layer of tax collected in the country of residence of the shareholder on his or her foreign source income. This section describes the ways in which the tax system of the shareholder's country of residence may be expected to operate on the income from the shareholder's investment abroad.

Specifically, the operation of any exemption or credit system for shareholders to recognize tax already paid to the country of source either by the shareholder directly, or by the corporation on its income, will be important.[169] It is not universally the case in taxing international transactions that a country will give credit to its citizens for taxes paid to the revenue authority of another country.[170] But where some form of recognition is given, it is necessary to see whether the credit or exemption treatment depends upon proof of actual payment of tax or assumes payment of the tax.

The tax system in the shareholder's country of residence may grant an exemption from further tax on distributions of income already taxed in the country of source. An exemption might be granted where the resident shareholder satisfies the revenue authority in the country of residence that the shareholder has paid tax on the amount of the distribution, paid capital gains tax on profits made from the sale of the investment (in this case representing retained earnings), or that tax on the corporation's underlying profit has been paid by the corporation to the country of source. An exemption system may be employed without procedures for estimating and tracing the amount of tax paid to the foreign jurisdiction—once it is established that the shareholder

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otherwise operates a classical system domestically, it is unlikely to have an indirect foreign tax credit system for resident individual shareholders and only corporate shareholders will be given a credit for underlying corporate tax paid by the CFC. But if the domestic regime employs an imputation system, some credit for underlying corporate tax on distributed profits may be offered. In many jurisdictions, while the purpose of a CFC system is to require the shareholder to include all of the corporation's profits in the current income of the shareholder, this can be achieved by attributing only the retained profits of the CFC. ARNOLD, *supra* note 138, at 470-71. Currently distributed profits need not be attributed because they are included in the shareholder's assessable income without the need for the attribution process.

169. ELISABETH A. OWENS, THE FOREIGN TAX CREDIT (1961); ELISABETH A. OWENS & GERALD T. BALL, THE INDIRECT CREDIT (1975).

170. Treaties will usually require credit to be given for tax paid by a taxpayer to the revenue authority of the other country where the power to tax is allocated to that country.

paid tax (of some amount) on the dividend or sale of the shares, that may be sufficient to render the entire distribution or capital gain exempt in the country of residence. Without this type of verification system, an exemption system for shareholders becomes the same as an exemption, full dividend-received deduction, or automatic imputation system where corporate tax evasion is not detected.

More common than exemption systems, however, are foreign tax credit systems (hereinafter "FTCS") operated by the country of residence for its citizens who derive income abroad. Credit systems usually operate for distributed corporate profits and occasionally for retained profits. The direct FTCS is necessary where the country of residence retains the further tax on distributions or retentions of already taxed corporate profit to give to resident taxpayers a credit against this tax liability for tax paid to the country of source. A direct credit permits the shareholder to claim, for example, credit for withholding tax on dividends paid by the corporation to the country in which the corporation is resident. The indirect FTCS is also relevant. This system gives to the resident shareholder a further credit against the tax liability on dividends in the country of residence for some of the corporate tax paid by the company making the distribution to the country of source. Where the indirect FTCS system operates, it permits the shareholder to reduce the tax payable on dividends to the country of residence by both the tax paid by the shareholder on the distribution and by a portion of the tax paid by the corporation to the country of source. This additional credit is usually available only against the tax payable in the country of residence on distributions. No credit is available for the underlying corporate tax paid on retained earnings. Access to the indirect FTCS is also usually subject to substantial qualification.[171]

Either FTCS usually operates against verified payments of tax by the taxpayer on dividends and the corporation on its income, although in the case of withholding tax, verification is probably not a matter of concern since withholding taxes are usually imposed at flat rates on gross amounts and are not easily subject to dissemblance.

The direct credit system operates in the same way as the imputation systems described above: the shareholder includes in income the net dividend received increased by the amount of tax withheld in the country of source; the domestic tax on this gross amount is calculated; and the shareholder is obliged

171. It is common, for example, for the country of residence to offer credit, especially for indirect taxes, only to shareholders with a substantial interest in the foreign corporation, excluding shareholders with portfolio interests. Most countries also limit the indirect credit only to corporate shareholders. ITAA § 160AFC; I.R.C. § 902 (1994). Such a restriction is understandable in a jurisdiction which retains a classical system, where interaction mechanisms are usually limited to inter-corporate distributions. It makes much less sense in the system of a country like Australia which operates an imputation system domestically.

to pay the balance, if any, of the domestic tax after subtracting the amount of tax already withheld and paid to the foreign revenue authority.[172] This process ensures that distributed corporate profits are subject to tax at the higher of the foreign corporate rate or the domestic shareholder rate. But unlike domestic imputation systems, a direct FTCS can also provide credit to the shareholder for capital gains tax paid to the foreign revenue authority. Again, the same process operates, by increasing the capital gain by the amount of verified capital gains tax paid to the foreign country and by giving credit for this amount. This has the effect of taxing retained earnings at the higher of the two rates.[173] But unless an indirect FTCS also operates in the country of residence, the direct credit operates as an overlay on a classical system imposed by the country of source on the corporation and its non-resident shareholders.

The combination of the interaction mechanism for non-resident shareholders used by the country of source with the tax system of the country of residence of the income derived by its residents offshore admits a wide variety of possibilities. For example, the country of source may use a classical system (albeit with a low formal rate on distributions) and the country of residence might employ a foreign tax credit system; or the country of source may employ an exemption system and the country of residence might also use an exemption system of its own. Further, different systems may be employed for different kinds of income from corporations. For example, distributions may be exempt from tax in one country and taxed in the other, while retentions of taxed corporate income may be subject to capital gains tax in one country which gives rise to a credit in the other. As was mentioned at various points, most of these combinations can be viewed as replicated by various domestic solutions, albeit in combination and in more circuitous stages. One major difference needs to be mentioned before leaving this brief description of the international implications. Because two countries are involved, it makes little sense for the revenue authority of the country of source to rely upon the personal income tax and interaction mechanism to recapture the benefits of corporate tax evasion if these shareholder taxes are imposed by the government of another country.

172. If the foreign tax rate exceeds the domestic rate (or, in some systems, if the foreign tax rate on this income type exceeds the domestic tax) the excess is usually lost. In general, a FTCS will often provide that credit for foreign tax will only be available to reduce the domestic tax on this income from this country. In other words, if the foreign tax rate exceeds the domestic rate, the excess may not be used to reduce the domestic tax on other income from domestic sources, although some systems permit the taxpayer to use the credit against the tax on income of this kind if derived from a third country (so-called "baskets" approach).

173. Another common alternative is a foreign tax deduction system for foreign capital gains tax—that is, the foreign tax is treated as a subtraction in calculating the proceeds of sale of the investment for the purposes of the domestic capital gains tax. I.R.C. § 164(a) (1994).

V. IMPLICATIONS OF THE PERSONAL INCOME TAX SYSTEM

This section analyzes how the various interaction mechanisms between the corporate tax and the personal income tax developed in Section IV might be expected to affect the decision of the corporation's managers whether to evade corporate tax. The emphasis here is on the effect of evasion on the expected return to the corporation's shareholders either as dividends or capital gains, since this is where the impact of the personal income tax is felt. It was argued that if the effect of the interaction mechanism raised the expected tax rate and reduced the expected return on the shareholder's investment, the shareholder would prefer that the corporation's managers comply with the corporate tax. Hence this analysis will focus on the actual and expected returns to shareholders. This section seeks answers to two questions. First, will the interaction mechanism change the benefits and costs of evasion so that it is more or less desirable? Second, what consequences will follow if the corporation's managers change other aspects of their behaviour as a result of the evasion decision? The discussion will proceed in three stages. It will first analyze the expected returns to shareholders under each system for honesty and evasion. Next, it will consider the further effects of the managers' decision to distribute some profits, the remaining elements of the interaction mechanisms, and the effects of time. Finally, it will evaluate the potential effects of consequential changes to the managers' behaviour.

A. Corporate Tax Evasion Under the Interaction Systems

1. After-tax Returns Under Each Interaction System

The average tax rates and average after-tax returns that would accrue to a shareholder under each interaction system are set out in Table 1.[174] Table 1 assumes a constant corporate rate and personal income tax rate of 35% (which is also the ACT rate), and a capital gains tax rate of 25%[175] which is also the rate on distributed profits in a split rate system. A fine of 75% of the unpaid tax is imposed where evasion is detected, but no interest is charged on unpaid tax, describing the result where the evasion and detection occur in the same year. The after-tax return is shown for the distributed and retained profits under each of three results: honest reporting by the corporation's managers of the corporation's tax liability (column (b)); successful evasion (column (c)); and unsuccessful evasion detected in the same year as the corporation makes its tax report (column (d)).

The Table shows the average after-tax return that would actually occur

174. Table 1 consolidates Tables A1 - A6 in the Appendix to this paper.

175. An effective rate of 25% for taxing capital gains is equivalent to a nominal rate of 35% but with payment deferred for just over 3 years, where interest is 10% per annum compounded annually.

under each interaction mechanism for the same amount of taxable profit, whether distributed or retained. The comparison of the position of the shareholder where the corporation evades is expressed as a percentage increase (column (e)), or decrease in the case of failure (column (f)), compared to the position where the corporation reports honestly.[176] Table 1 also shows the expected return to a shareholder where the probability of detection by the revenue authority is 50% (column (g)), as well as the probability of detection that would be necessary to make the expected nominal return to the shareholder the same as the return to honesty (column (h)).[177] It is important to note that the comparisons in Table 1 proceed from a constant amount of pre-tax corporate profit, and not constant revenue or after-tax returns in the case of management honesty. This has the effect that the after-tax returns are not uniform, but the object of comparison is the deviation from the return to honesty, whatever that may be for each system. Note that Table 1 does not consider some of the assumptions that were made in deriving the equations in Section IV. For example, it does not show the differences that will arise where the corporation's managers report some fraction of the corporation's profits rather than report or evade tax on all profits; it does not show the complication where profit may be either retained or distributed at the direction of the corporation's managers in different proportions;[178] it does not show in the case of unsuccessful evasion, the effect of a distribution of some profits by the corporation prior to audit and detection by the revenue authority; and no attempt is made to incorporate the effects of transferring tax credits within some of the imputation systems from taxed to untaxed corporate profits. The effect of these complexities will be incorporated later.

Not surprisingly, the Table shows that in all systems the shareholder will

176. This procedure is used to eliminate the effect of the interaction mechanism on the shareholder's tax rate, since each mechanism will change the return to honesty as well as the returns after evasion. Comparing the percentage increase or decrease will isolate the way that each interaction mechanism changes the shareholder's return in cases of evasion from the way that the mechanism changes all shareholders' after-tax returns. The same goal might have been achieved by varying the nominal corporate tax rate to ensure equal after tax returns to the shareholder under each mechanism in cases of honesty and then comparing the return under evasion.

177. No attempt is made in this discussion to explore the consequence of the higher risk attaching to the expected return where the corporation's managers evade at this stage. The Table merely sets out the required rate of detection in order for the expected (but more risky) return from evasion to be the same as the certain return from honesty. The following discussion will use the term "nominal return" to refer to the return to shareholders unadjusted for the increased risk. But it is clear that the effect of corporate tax evasion to enhance the risk attaching to the expected return may be the cause of a further diminution in the return to the shareholders by a decline in the market value of the shares.

178. The combined tax rates (expressed as a percentage) are the average of the after-tax returns on both distributed and retained earnings in each system for each hypothesis—honesty, success, and failure.

be better off if the corporation successfully evades its tax liability than if its evasion is detected, which simply means in each system there is some threat of a penalty for failure. Further, in each case successful evasion is more profitable than compliance. That is, there is a potential gain to be made from successful evasion, the smallest of which arises in the case of the integration system which most closely approximates the pure withholding tax described in Section III.

What does the Table suggest about the incentives for corporate managers to evade corporate tax? It has been argued that the incentive for the corporation's managers to deviate from honesty is a function of the effect of dishonesty on the expected return to shareholders: the potential cost of unsuccessful evasion and the gain to be made from successful evasion, as well as the likelihood of the occurrence of each. It is clear from inspection that, holding the other elements constant, the size of the gains and losses to successful and unsuccessful evasion will differ under each interaction mechanism. Hence, assuming a uniform probability of detection for all systems, the expected returns will not be uniformly distributed around the return to honesty in all systems. If they were, there might be little further to be said about the complication represented by the personal income tax. This is because the incentive for corporate tax evasion would be a function determined primarily by other factors, and would not be seriously influenced by the personal income tax nor the interaction mechanism with the corporate tax. If the returns and costs to evasion were uniformly distributed around the return to honesty, the principal effect of corporate tax evasion would be to increase the risk attached to the expected return, while leaving the size of the expected return untouched. Nevertheless, despite the deviation in costs and benefits after the effect of the personal income tax is introduced, it is striking that only two of the systems show any marked diminution in the return to honesty.

Classical System. The managers of a corporation in the classical system know that if they report the corporation's full income and distribute 50% of after-tax profits, the return to shareholders will be 45.5%. Successful evasion will increase the expected after-tax return to the individual shareholder on retained and distributed earnings by about 54% when compared to honest reporting, while unsuccessful evasion will reduce the expected return to the shareholder by only 40% of the certain return to honesty. If the managers thought that evasion and detection were equally likely, the expected return to evasion would be about 48.5%, which is only 3 points higher than the certain return to honesty. The implication for the revenue authority is that unless the corporation's managers perceive the probability of detection to be more than 57%, evasion will not reduce the nominal expected return to shareholders.

Dividend-paid Deduction. The dividend-paid deduction system offers an expected gain from evasion of only 23% and a loss of about 17% of the after-tax return to honesty. This is with a variance of about the same degree as that of the classical system, so that a probability of detection of about 57% is necessary before the evasion offers the same expected return as honesty. Again, the rates on evaded income combine to an average rate (58%) only slightly lower than the certain rate paid on declared income (56.8%).

Dividend-received Deduction. The full dividend-received deduction system maintains the same degree of variance, which again necessitates a detection rate of about 57% before the revenue authority will replicate the same return as honesty. Evasion offers a potential increase of about 4 points (60.7%) over the return to honesty (56.8%). The return to evasion under a partial dividend-received deduction system is obviously determined by the amount of deduction offered. Thus, the principal insight observed from Table 6 is that the effect of a constant deduction (such as the $20 modelled) is to effect a constant shift of the returns to honesty, success and failure by an amount which is the product of the tax rate and the amount of the deduction. It can be seen from Table 6 that the returns are simply shifted by 3.5, which is the product of the amount of the deduction (20) and the personal income tax rate (0.35). The same degree of variance of the returns is displayed.

Imputation Systems. The effect of the imputation systems differ noticeably. As a general observation, the Australian imputation system changes the incentive to evade, while the ACT changes the opportunity to evade. The ACT and Australian imputation systems offer a much smaller reward to evasion even if successful than does the classical system because in both cases the loss of the tax credit increases the cost of successful evasion. In the ACT system, evasion offers a reward to the corporation only for the tax liability on retained profits; while in the Australian tax system, the tax unpaid will be collected from the shareholder. In other words, in each case, the tax credit is a valuable asset (either to the corporation or the shareholder) which arises only when the corporation reports a tax liability. But the cost structures of the ACT and Australian systems are different. If it is assumed that the corporation cannot evade the ACT liability, the ACT system admits of evasion only on retentions. Thus, failed evasion represents a cost which decreases the return by only 15% when compared to honesty, while successful evasion offers a gain of 23%. Assuming a 50% chance of detection, the ACT system offers only an increase of 2 points over the return to honesty. The ACT system does not reduce the rate of detection required of the revenue authority from the 57% established under the other systems.

The Australian system offers a much greater cost to failed evasion (a loss of 52%), while maintaining the same return to successful evasion (about 23%)

as ACT. Thus, at a 50% probability of detection, evasion no longer offers a positive return. The first major variance in the detection rate required of the revenue authority also appears here—a probability of detection of only about 31% is necessary before the evasion offers the same return as honesty. In other words, this system gives the revenue authority the ability to reduce the probability of detection without substantial diminution in the deterrent effect of penalties for evasion when compared to the ACT and other systems.

Integration. Not surprisingly, the integration system offers the most assistance to the revenue authority, given the assumption that the shareholders will report truthfully. Because the integration system operates as an accurate withholding where shareholders are honest, and all (and only verified) payments of corporate tax can be credited, corporate tax evasion offers an increase in the return that the corporation's managers can offer, limited to the difference between the personal income tax and capital gains tax rates. Since successful evasion offers only this gain even where the shareholder is honest, and the cost to evasion is substantial, reducing the return by 61%, corporate tax evasion offers only the prospect of a small gain. The revenue authority would need only to threaten a 12% chance of detection.

All of these results are summarized in Table 1 below:

TABLE 1
AFTER-TAX RETURNS UNDER INTERACTION MECHANISMS
WITH CONSTANT PRE-TAX PROFITS

(a) System	(b) Honesty	(c) Evasion	(d) Failure	(e) Increase from Success (%)	(f) Decrease from Failure (%)	(g) Increase in Expected Return (points)	(h) Probability of detection for Indifference (%)
Classical	45.5	70	27.1	54	(40)	3.8	57
Dividend -Paid	56.8	70	47	23	(17)	1.7	57
Dividend -Received	56.8	87.5	33.9	54	(41)	3.8	57
ACT System	56.8	70	47	23	(17)	1.7	57
Australian Imputation	56.8	70	27	23	(52)	(8.3)	31
Integration	65	75	25	7	(61)	(20)	12

2. Expected Returns to Shareholders and Expected Gains From Evasion

The previous section expresses the differing returns to a uniform investment by the corporation's managers allocated totally to honesty, evasion, or failure, with detection occurring in the same year if at all. But the equations derived in Section IV also include other relevant effects: the behavior of the corporation's managers distributing a portion of both declared and undeclared profits; distributing some portion of profit before audit; the prospect that the audit of the corporation's affairs may occur after a period of time has passed subjecting the corporation to interest charges and changing the probability of success; and the potential "leakage" in imputation systems of tax credits from taxed to untaxed profits.

The purpose of this section is to explore the effects of these complications and to see how they alter the after-tax return to the shareholder under each interaction mechanism. The directions in which these complicating effects could be anticipated moving the expected return will often conflict and cannot easily be predicted *ex ante*. For example, distributing untaxed profits will increase the total amount of tax collected if the corporation's evasion is later detected, but may reduce total tax (by reducing shareholder tax in systems which favor distribution of profits) if evasion is successful. Similarly, shifting the balance from full retention or distribution of profits may either increase or reduce the total amount of tax collected according to the size of the relative tax burden borne by distributed or retained profits. Also, the effective reduction in the cost of failed evasion offered by the capital gains tax will offset the increased tax cost initially caused by the personal income tax. Where these effects contradict, the direction in which they move the expected return will depend upon the strength of the competing influences, which will differ at various times and for the different interaction mechanisms. It will be seen that at some points the personal income tax is a clear penalty, while at others it operates as a subsidy to evasion.

The analysis will consider a hypothetical example using the same corporate and personal tax rates, interest, and fine rates previously assumed. It is assumed that the corporation has earned $100,000 in taxable profits, the corporation's managers are considering not reporting $20,000 of that sum, and that they will distribute 50% of the profits remaining after payment of corporate tax in the current year—that is, before any unpaid tax, fine or interest is collected from the company. The distribution is assumed to occur prior to the audit of the corporation. Interest and fines accumulate commencing in the first year at a rate of 15% per annum compounded annually. The corporation's discount rate, which is assumed to be 10%, is used because the fine and back tax may not have to be paid by the corporation until a future period. It is

assumed that the strategy of the revenue authority leads the corporation's managers to believe that there is a 10% probability in each year that their evasion will be detected. For those interaction mechanisms where it is relevant, the leakage of tax credits from taxed to untaxed profits occurs in the ways described in Section IV.

Figures 1 to 6[179] show the size of the expected return to the shareholder from a profit of $100,000 (of which $20,000 is not disclosed) and compare the size of the expected return to the certain return from honest reporting for each of the six interaction mechanisms described above.[180] The comparison shows that in all cases honesty has a lower actual return in the short term than the expected return to evasion which persists in the long term for most mechanisms, but honesty promises a higher return if the corporation's evasion might still be detected after several years. The effect of the passage of time is eventually to reduce the expected return to evasion to a level below the certain return from honesty (the point at which the expected gain from evasion for shareholders becomes negative) but the length of time before the expected return falls below the return to honest reporting depends upon the interaction mechanism.

The Figures show a further element—a comparison of the size of the expected gain from evasion when the corporate tax alone is considered and when the effect of the personal income tax is added. This comparison, which appears in the Tables under the headings "Expected Gain/Loss to Shareholder" and "Expected Gain/Loss to Corporation", attempts to draw out implications about how the personal income tax will influence the behavior of the corporation's managers by focussing on changes to marginal gains and losses.[181] The "Expected Return" to the shareholder is the amount which the shareholder can expect to receive should the corporation's managers decide

179. These Figures consolidate the positions described in Tables A7 to A12 in the Appendix.

180. The expected return is based on a probability function which is the same as that discussed in Section II for the corporation considered alone. That is, the corporation only succeeds if its evasion is detected in none of the ensuing [t] years. The probability of success is, therefore, $(1-p)^t$ and the likelihood of failure is:

$$p\sum_{n=1}^{n=t} (1-p)^{n-1}$$

The expected return to evasion under a classical system, therefore, is calculated using this probability function and equation (2) (successful evasion in a classical system) and equation (3) (unsuccessful evasion in a classical system) from Section IV.

181. In most cases, since the adjustment caused by the interaction mechanism occurs at the shareholder level, the expected gain or loss from evasion will be the same when calculated at the corporate level, if managers ignore the personal income tax. The two exceptions are the split rate and dividend-paid deduction systems where the adjustment procedure occurs at the corporate level.

to evade the corporate tax discounted according to the probability of each outcome. The "Expected Gain/Loss" is the marginal increase or decrease in the expected return when compared to the certain return to honesty calculated for the shareholder using the equations in Section IV and, for the corporation, using the equation in Section II.

Comparing the expected gain to the corporation in isolation from its shareholders, with the expected gain to the shareholder when the effect of the personal income tax is added, shows several interesting features and suggests that the effect of the personal income tax on the expected return and the behavior of corporate managers may be quite complex. The differences appear in the size of the expected gains from evasion and the time period over which evasion is profitable. First, as discussed above, it is apparent that the expected gain to the shareholder is initially reduced when the personal income tax is added, suggesting that the personal income tax will discourage corporate tax evasion. In other words, a decision about the investment in corporate tax evasion based solely on the elements in the model in Section II would, in the short term at least, overstate the expected gains from evasion. However, in some of the cases modelled, the personal income tax also has a subsidy effect. While the capital gains tax reduces the size of the loss caused by failed evasion, both it, and the penalties for failure are not uniform, suggesting that the personal income tax is not a consistent disincentive to evasion. In other words, depending on the interaction mechanism, the operation of the personal income tax can both increase and diminish the size of the expected gain to shareholders, and it can have different results at different points in time.

The personal income tax may also produce a timing effect which, in general, diminishes the duration of the period during which corporate tax evasion promises a positive expected gain to the shareholder. Thus, if the corporation's managers had performed an assessment of the return to corporate tax evasion (using the values for the variables), but without considering the effect of the personal income tax, they would have observed that corporate tax evasion only offered negative returns after more than seven years. But, if the effect of many of the modelled interaction mechanisms is added, the corporation's managers would face a positive expected gain from corporate tax evasion only after five, or perhaps six years have expired. In some of these simulations, however, the subsidy effect of the personal income tax overtakes the decrease in expected return caused by the tax, so that, paradoxically, the effect of the personal income tax is actually to enhance the expected return (or reduce the size of the expected loss) from corporate tax evasion in the medium and long term.

The full dividend-received deduction system most clearly displays the subsidy effects of the personal income tax. This comes about because of the

complete elimination of tax on distributed undeclared profits in this system. Under this system, the shareholder will commence with a higher expected return than under a classical system because there is no shareholder tax. Thus, the personal income tax causes no initial reduction of the expected gain. When combined with the slower decrease in the expected gain caused by the personal income tax, the expected gain from evasion becomes higher with the personal income tax than without it, and the corporation's managers would under-estimate the size of the increased expected return to shareholders if they failed to include the effect of the personal income tax. The differences between the expected gains are not large at these rates and on these amounts, but the system would show greater returns to evasion, and greater longevity for success, if there were more disparity between the corporate tax and personal income tax rates.

Neither of the two imputation systems—the ACT and Australian imputation systems—seriously enhances the effect of the personal income tax to deter evasion that was already observed for the classical system. They both display lower returns from the outset when the operation of the personal income tax is added and a reduced period during which the expected gain is positive. Interestingly, however, they do display at these values a slight subsidy effect from the personal income tax after an extended period. That is, corporate tax evasion offers a larger return with the personal income tax than without it, provided that evasion may extend for a sufficiently long period. This effect is presumably due to the "leakage" of tax credits from retained declared earnings. These reduce the tax on shareholder's distributed undeclared profits so that they are effectively untaxed at the shareholder level.

The effects of the personal income tax are different in at least three different time periods. In the short term, the operation of the personal income tax will diminish the return to shareholders, suggesting that the personal income tax will discourage corporate tax evasion. In the medium term, the effect of the personal income tax is to enhance the expected return that the corporation's managers can offer to shareholders. The personal income tax also prolongs the period during which corporate tax evasion shows a positive return, suggesting that it may encourage rather than discourage corporate tax evasion, especially if the period during which the revenue authority may be expected to pursue the corporation is relatively short. But in the long term, the personal income tax cannot prevent evasion from turning negative.

While, using these values, the outcome of the ACT and Australian imputation systems are identical, there would be differences in the outcome if the tax rates differed. The difference in outcome would come about from the allocation of the tax credit to different participants. In the ACT system, the tax collected on distributions is set off against the corporation's tax liability

to the effect that distributed declared profits will be taxed at the higher of the corporate tax rate [T_c] or the ACT rate [T_a]. However, in the Australian imputation system, the tax credit is allocated to the shareholder so that declared distributed corporate profits are taxed at the higher of the corporate tax rate and the personal income tax rate [T_i].

The effect of the dividend-paid deduction system resembles those of the ACT and Australian imputation systems, with the personal income tax reducing the potential cost of corporate tax evasion. However, under this system, the effects are smaller and not as obvious as with systems just discussed. The effect of the personal income tax is preceded by the reduced benefit available to the corporation for evading corporate tax on distributed profits. Thus, the corporate tax on distributed profits is lower (zero in the case of the dividend-paid deduction system) than on retained profits. The size of the expected gain from evasion is initially lower under this system than under the classical system, and this is so for both the corporation and the shareholder. With regard to timing, the subsidy effect takes longer to appear in dividend-paid deduction systems than under the imputation systems, and more closely resembles the profile of the classical system.

The only major deviation from the pattern is the integration system. The reason for this departure is that under an integration system, all reported income, whether distributed or not, is taxed to the corporation and then to the shareholders as ordinary income with credit for all corporate tax voluntarily paid. When corporate evasion is successful, the unreported income is not subject to corporate tax and, in the hands of the shareholder, is subjected only to capital gains tax which is levied at a lesser rate than the personal income tax on distributions. In other words, the benefit derived from corporate tax evasion under an integration system is simply that of being taxed on undeclared income under the capital gains tax, and not the income tax. The penalties, however, are the same as under the classical system for the corporation, and this effectively translates into an enhanced penalty for the shareholder.

Over the period shown, the expected gain from corporate tax evasion commences substantially lower when the effect of the personal income tax is added. When the position of the corporation is considered in isolation, corporate tax evasion offers the same expected returns as under the classical system. But when the effect of the personal income tax is added, because the gain from successful evasion is small compared to the cost, the expected gain also becomes small and the corporation's managers would substantially *over*-estimate the benefits of corporate tax evasion if they ignored the personal income tax. The expected gain remains lower than if the corporate tax were considered alone, although it is interesting to observe that the difference between the two expected gains is diminishing, and the pattern established by

the other systems would eventually re-appear. The timing effect is also unlike the usual pattern that has been seen where a reduction in cost gradually emerges. In the integration system, the effect of the personal income tax is to confirm and then extend the immediate negative expected gain from the position that would be estimated if the personal income tax were ignored.

In summary, the pattern of these results does not vary substantially except in the case of the integration system. In the short term, the operation of the personal income tax will diminish the return to shareholders under all of the interaction mechanisms, suggesting that the personal income tax will discourage corporate tax evasion. This result, that the expected gain is initially less when the personal income tax is considered, occurs in all the interaction mechanisms except those that reduce the gross benefits of evasion by reducing the amount of tax available to be avoided, and the imputation systems which reduce the total cost of distribution. In these cases, the shareholder's potential losses are reduced as time proceeds from the operation of the personal income tax in the context of evasion. This effect may, therefore, lead the corporation's managers not to be so discouraged by the additional complication of the personal income tax, but only if they can afford to take on a long-enduring gamble.

These results occur in all the systems except for the integration system. In that system, the almost pure withholding operation of the corporate tax means that there is little gain to the shareholder even from successful evasion, while the large cost from failure survives.

Figure 1 – Expected Return Under Classical System

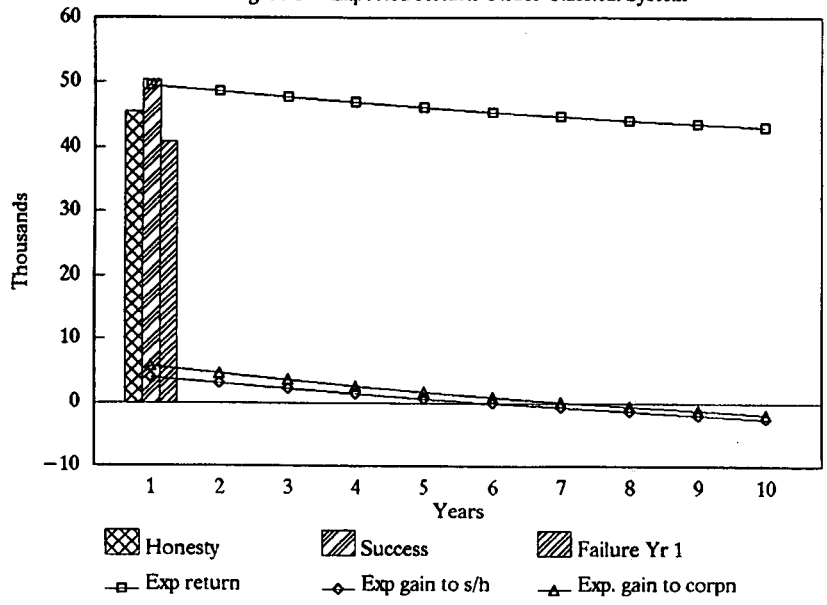


Figure 2 – Expected Return Under Dividend–Paid Deduction System

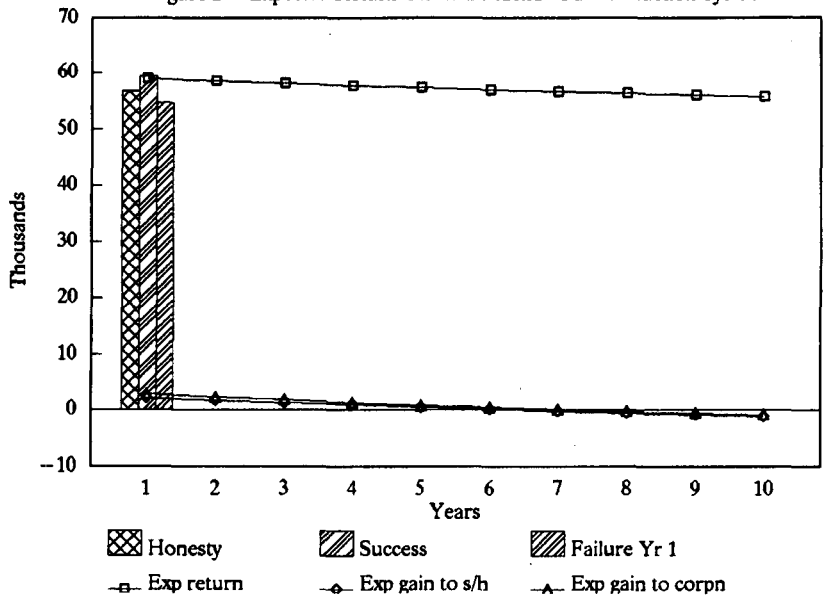


Figure 3 – Expected Return Under Dividend–Received Deduction System

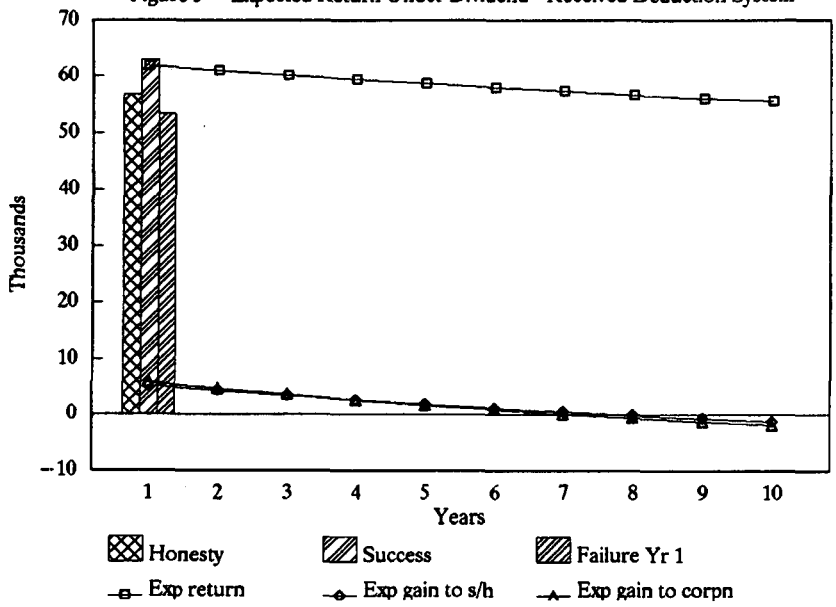


Figure 4 – Expected Return Under ACT System

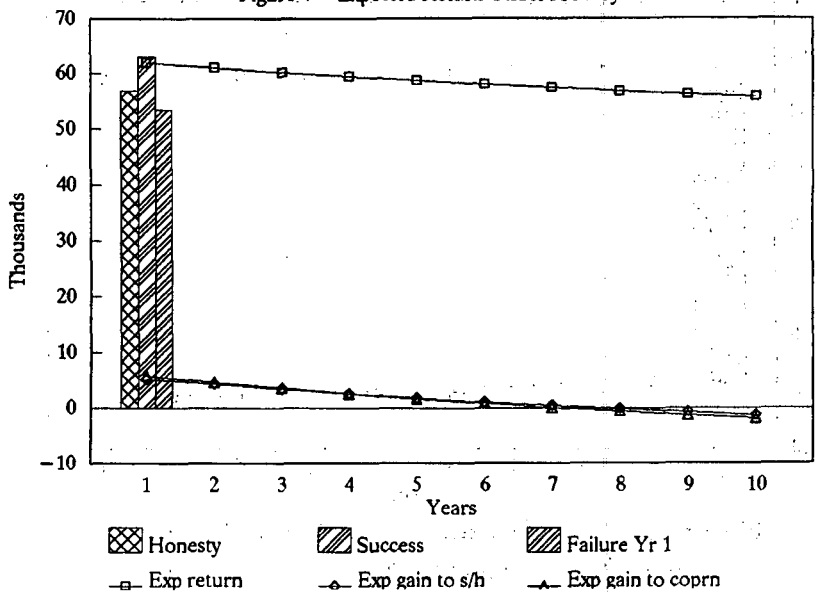


Figure 5 – Expected Return Under Australian Imputation System

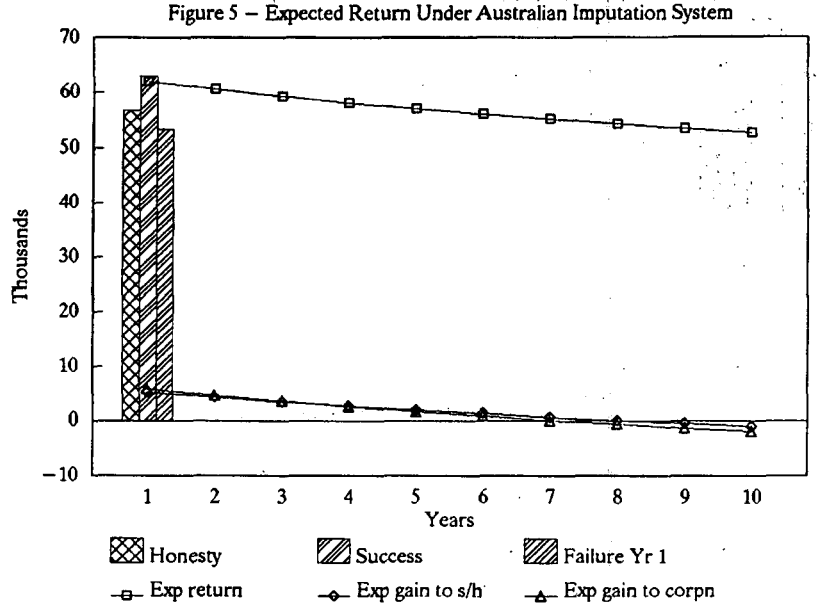
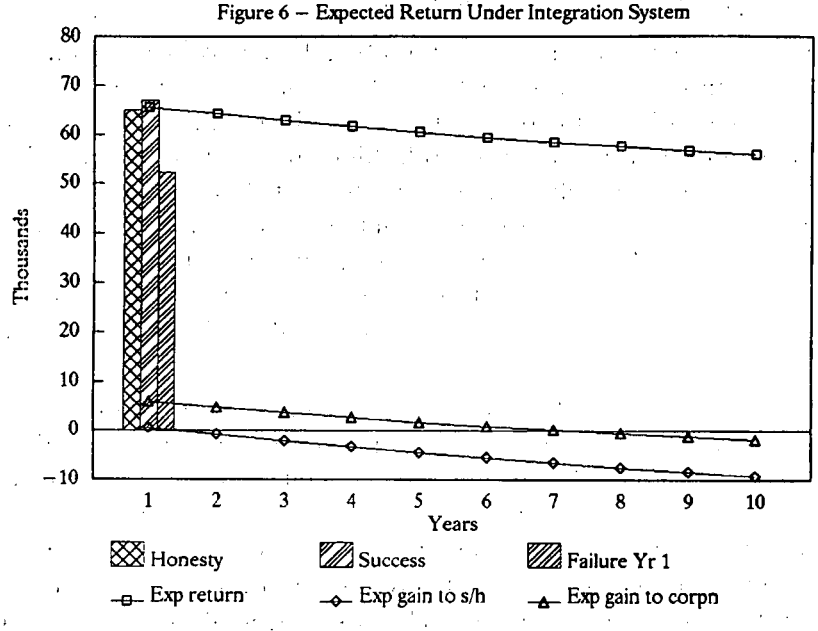


Figure 6 – Expected Return Under Integration System



B. Effects of Changes to Management Behavior

The previous discussion considered the expected return to the shareholder from corporate tax evasion assuming certain behavior by the corporation's managers. However, this discussion did not address how the corporation's managers might then adjust other behavior to change the initial consequences of their evasion decision. For example, the corporation's managers decide not only whether to evade tax but also how much to evade, and whether to retain or distribute declared and undeclared income and in what proportions. This section asks whether, if the corporation's managers do decide to evade, they can alleviate some of the problems that evasion might cause (or enhance the potential benefits) by changing other behavior. If so, the corporation's managers may be able to enhance (or restore) the desired higher after-tax return by a combination of steps of which corporate tax evasion is one.

Before doing so, however, it is important to observe that there may be significant constraints upon the ability of the corporation's managers to adjust other behavior to compensate for their evasion decision. For example, the market may not permit the percentage of profits distributed to vary too markedly before the variance is seen as evidence of some underlying reduction in the viability of the corporation. If it were viewed in this way, the price of the

shares may fall, removing or reducing the desired benefits flowing from higher expected returns to shareholders.

Even if some adjustments are possible, there may be other internal conflicts between shareholders created by their making. For example, taxable domestic shareholders are assumed to prefer the retention of corporate profits to distribution, tax exempt shareholders are assumed to be indifferent, while non-resident shareholders may prefer distribution to retention. These preferences are assumed to follow from the rates at which distributions and retentions are taxed.[182] A decision by managers to shift the balance between the distribution and retention of profits will benefit some shareholders and cause losses to others at least in respect of the value of the income stream that the shares generate.

There may also be effective constraints upon the decision of how much income to report. It is assumed for the purposes of this paper that the probability of detection is independent of the amount of income reported. Clearly, however, that assumption simplifies reality. Revenue authorities develop sophisticated profiles of individual taxpayers and industries so that marked deviation from industry norms or the reports of prior years may increase the probability of detection seriously. The description offered here might, nevertheless, be considered as a more accurate description of the probability of detection within income bands where the probability of detection is more likely to be uniform and random.

1. Distribution and Retention Rates

Figures 7 to 12 show the effect of distributing more or less of the corporation's profit, which includes both declared and undeclared profits.[183] The effect of this decision is felt mostly at the shareholder level, changing the balance between the personal income and capital gain taxes. But other effects occur at the corporate level under the dividend deduction and ACT systems reducing (or increasing) the amount of corporate tax to be evaded. Also, again at the shareholder level, the level of tax credits will increase (or decrease) where credits or exemptions are attached to distributions only.

It will be seen that no pattern clearly emerges describing the effects of changes to the level of distributions. Under the classical and ACT systems,

182. In some cases, the nominal tax rates for non-resident shareholders will be higher for retained than distributed earnings (although some countries choose to exempt portfolio dividends and capital gains from tax entirely).

183. The distinction between declared and undeclared profits made for the purposes of discussion may be somewhat misleading in this context. The behaviour being modelled is the decision to distribute more of the corporation's profits after payment of corporate tax on declared income. The level of return for honesty, successful and failed evasion are for the 50% distribution of after-tax profit described in the previous section, and are retained for comparison.

the effect of retaining more profits is to increase the expected return to shareholders. Conversely, under the dividend-paid, full dividend received, and Australian imputation systems, a higher expected return will be generated by increased distribution of profits. Under an integration system, there is no change to the size of the expected return caused by distribution. It appears to be possible, therefore, for the corporation's managers to manage the distribution pattern to alter the costs and benefits of evasion. However, whether this mandates increased or reduced distribution depends upon the interaction mechanism.

While most of these results would be expected from the different way that each interaction mechanism treats distributed or retained profits, a comparison of the results in these Figures with the position described in Tables A1 to A6 in the Appendix suggests that some of these results differ from the expected effect of the interaction mechanism. For example, Table A1 shows that under a classical system, the shareholder always receives a higher return from the retention of profits and a lower return from the distribution of profits, while the dividend-received deduction system always promises shareholders a higher return for distributed profits and a lower return from retention. Those positions are maintained when the effect of evasion is considered. Figures 7 and 9 show that the preference for retention or distribution is unaffected by the evasion decision. The incentive to distribute or retain as determined by the interaction mechanism, is not challenged in the presence of evasion.[184]

In contrast, there are a number of interaction mechanisms which show no clear result in Tables A1 to A6, but nevertheless display trends in the following Figures. The results occur for the dividend-paid deduction, ACT, and Australian imputation systems. For this group, an ambiguous preference for distribution created by the interaction mechanism is enhanced in the presence of evasion to the effect that higher distribution increases the expected return to shareholders. The ambiguous preference comes from the potential benefit from retaining undeclared profits—the profits will be taxed once only and at the capital gains tax rate, the lowest of the three postulated rates.

Table A2 shows that the dividend-paid deduction system offers a higher return to distributed profits except for the case of successful evasion. When the expected return to evasion is assessed, Figure 8 shows that greater distri-

184. One slight qualification in this regard arises for the partial dividend received deduction system. If too little of the corporation's profits are distributed, the honest shareholder (with a small shareholding) will not have full benefit of the interaction mechanism if the distribution received does not reach the maximum amount of the permitted deduction [$K]. This issue does not arise, however, for the inter-corporate partial dividend received deduction actually used in the U.S. since it is expressed as a percentage of the amount any dividend received. I.R.C. § 243 (1994).

bution will always offer a higher expected return than greater retention. The explanation for this result is that the effect of the exclusion of dividends from the corporate tax base means that distribution is an effective substitute for evasion. The reason for the preference for retention of profits where the corporate tax is evaded is that it permits the shareholder to pay the lower rate of capital gains tax rather than income tax where evasion is successful. But, using these values, if the corporation's managers increase their distribution, this potential benefit is relatively small and is soon more than outweighed by the corresponding decrease in the potential penalty. In short, increasing distribution increases the expected return to shareholders because it has the same return as evasion but none of the cost.

The Australian imputation system (Table A5) shows higher returns for distributed rather than retained profits because shareholders receive tax credits for corporate tax paid. But this result occurs only where the corporation reports truthfully, so that lower returns otherwise apply to distributions taxed in the shareholders' hands at the higher personal income tax rate. If the corporation's managers evade and increase their distribution rate, the expected return also increases. This result occurs because of defects in "franking", the tax tracing procedure discussed in Section IV. This process limits the benefit of credits on corporate distributions to the gross amount of corporate tax paid, so that if the corporation's managers proposed to distribute an amount greater than the amount on which tax had been paid, dividends beyond that amount would be taxed as if the classical system applied, restoring the bias toward retention of profits. In Figure 11, the issue does not arise because the corporation has declared and paid tax on 80% of its profits, and is not proposing to distribute more than 75% of after-tax profits. Unless the tax tracing procedure can identify untaxed profits and quarantine tax credits from undeclared distributed profits, higher distributions will enhance the benefits of evasion. The ACT system in Figure 10 also shows a higher expected return arising from higher distribution. The effect of distributing untaxed corporate profits is simply the leakage of the ACT payments incurred here to reduce the MCT liability on declared but retained profits.

This discussion suggests that there is no single answer to the question of whether changing the amount of corporate profit distributed will enhance the expected return of the shareholder. In all of the systems (except the integration system), the corporation's managers can change the benefits of evasion by greater or less distribution, and on some occasions, the decision for or against increased distribution conforms with the preferences apparently established by the interaction mechanism.

In all of the cases, the apparent preferences are undoubtedly significantly influenced by the particular values attached to the variables in these simula-

tions. Different values may well lead to other results. No clear conclusion can confidently be given beyond the proposition that careful management of the level of distribution will permit the corporation's managers some flexibility to enhance the benefits of evasion.

Figure 7 – Effect of Changed Distribution Rates in Classical System

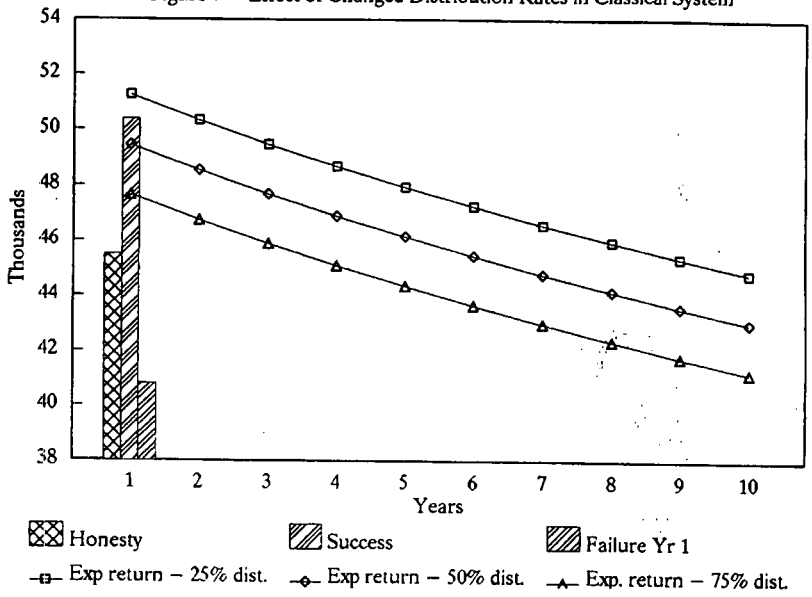


Figure 8 – Effect of Changed Distribution Rates in Dividend–Paid Deduction System

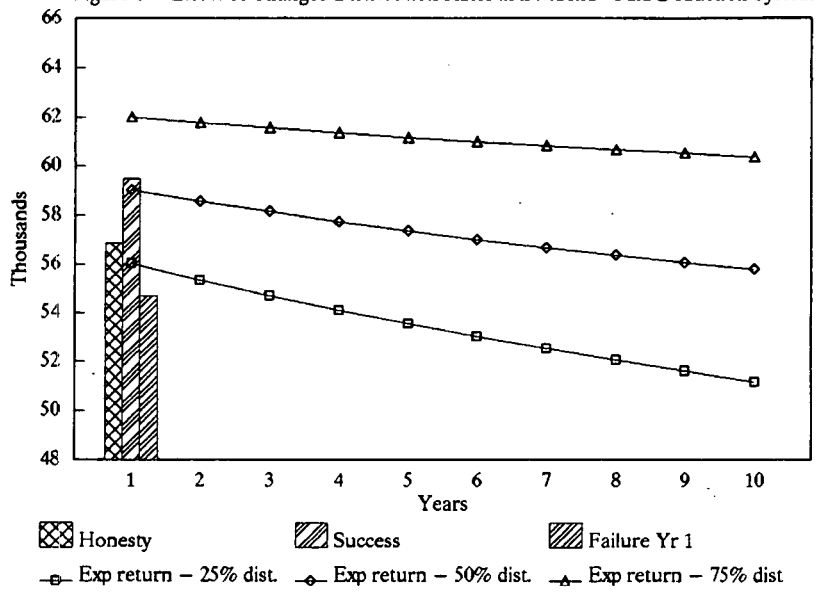


Figure 9 – Effect of Changed Distribution Rates in Dividend–Received Deduction System

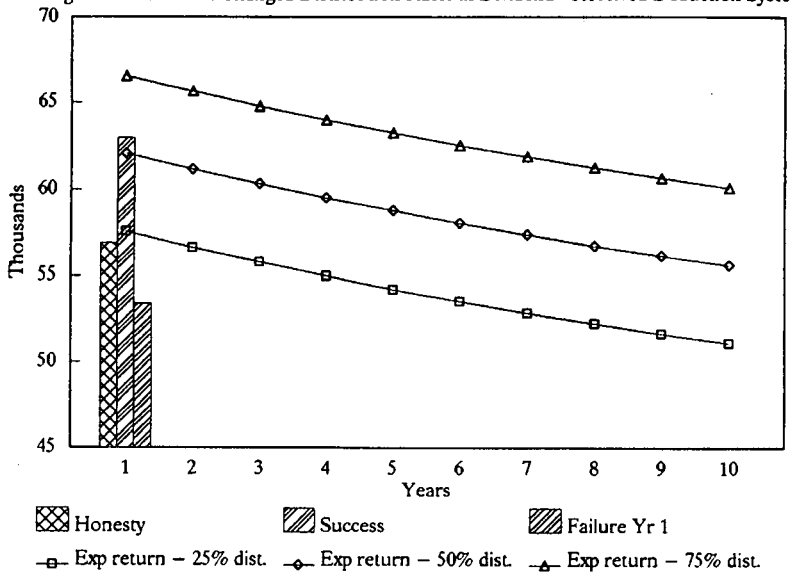


Figure 10 – Effect of Changed Distribution Rates in ACT System

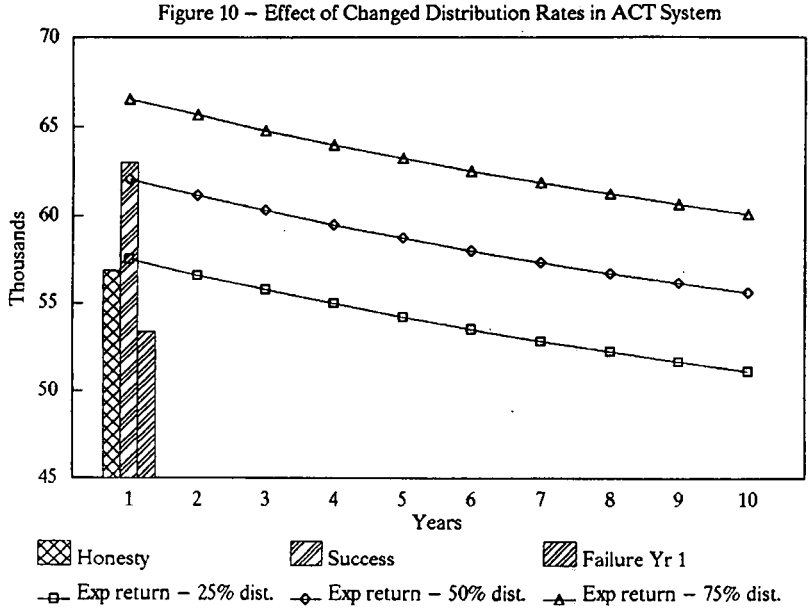


Figure 11 – Effect of Changed Distribution Rates in Australian Imputation System

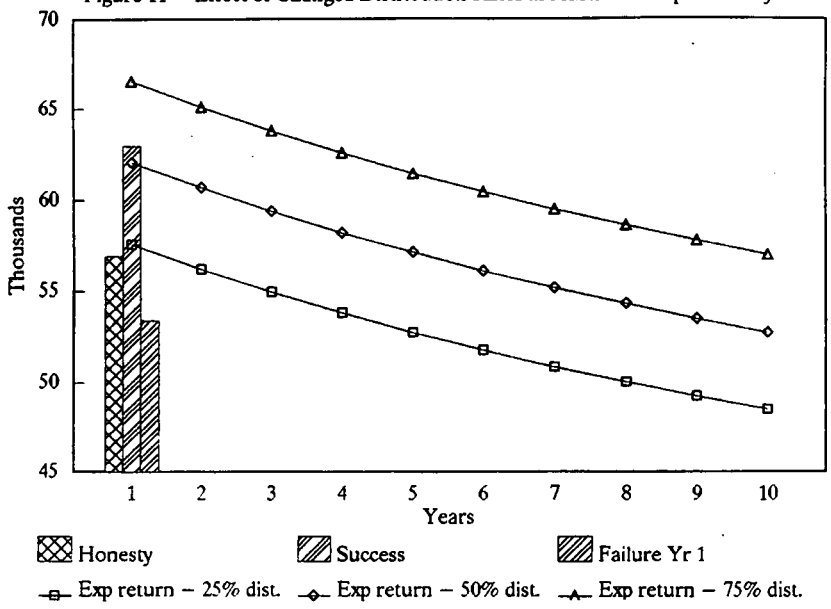
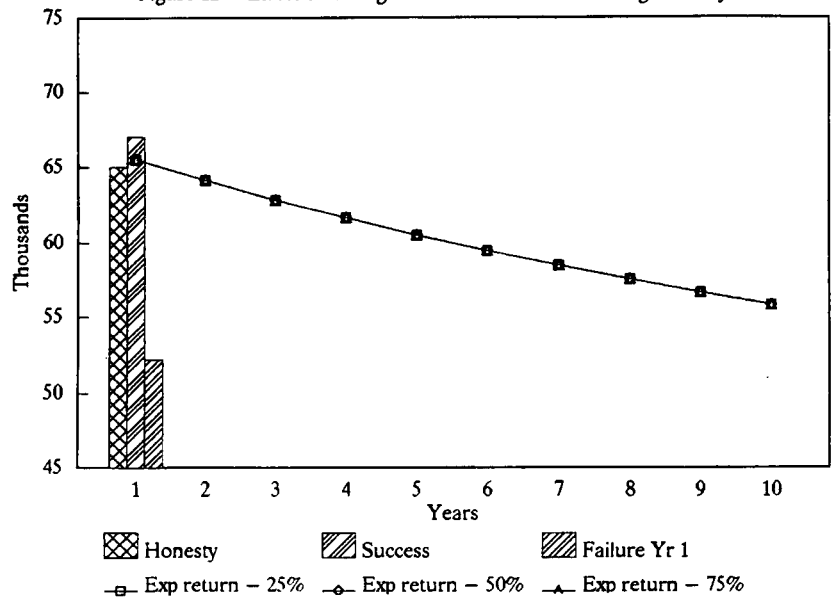


Figure 12 – Effect of Changed Distribution Rates in Integration System



2. Percentage Reported and Unreported

In contrast to the effect of increased retention of profits, a clear pattern of the effect of greater evasion emerges from the description in Figures 13-18. In all cases except the integration system, assuming a constant probability of detection over the income range, lowering the amount of income reported initially increases the expected return to shareholders. And even in the integration system, there is some benefit from reporting less income, but it is a function of the difference between the income and capital gains tax rates at the shareholder level. The result under the Australian imputation system and the integration system requires some explanation because they contain a special penalty for reporting lower levels of income. Not only is there an increase in the formal penalty, but the available tax credits also decline as a result of lower reporting, so that the "excess" tax credits from declared undistributed profits may be insufficient to cover the shareholder's tax liability on undeclared but distributed profits.

But reporting lower levels of income also increases the cost of failure in all the interaction mechanisms. This is apparent in all of the systems where the expected return more rapidly declines the lower the amount of income reported, and the more time passes.

Given that reporting lower levels of income changes both the benefits and costs of corporate tax evasion, it is not inevitable that corporate managers would reduce the levels of reporting to increase the expected return to shareholders. Such a strategy would also increase risk over the long term.

Figure 13 – Effect of Changed Declared Income in Classical System

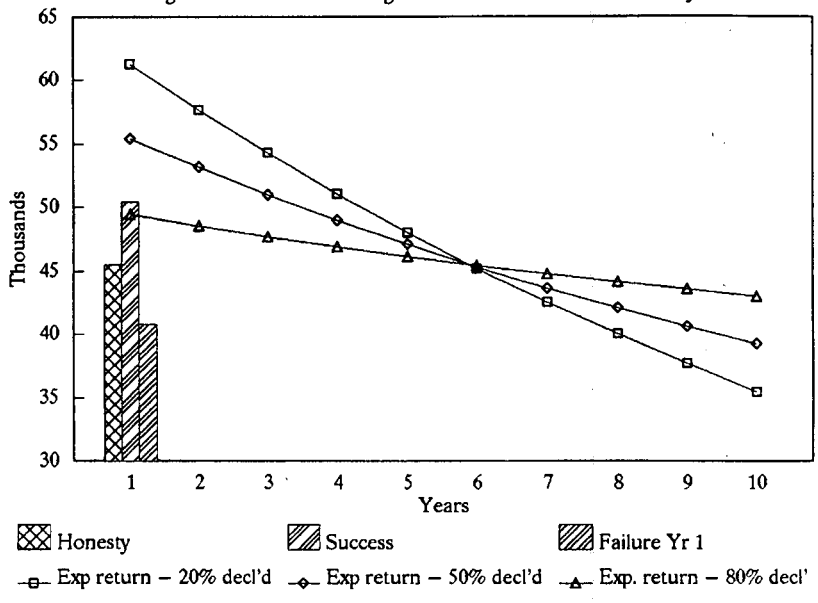


Figure 14 – Effect of Changed Declared Income in Dividend–Paid Deduction System

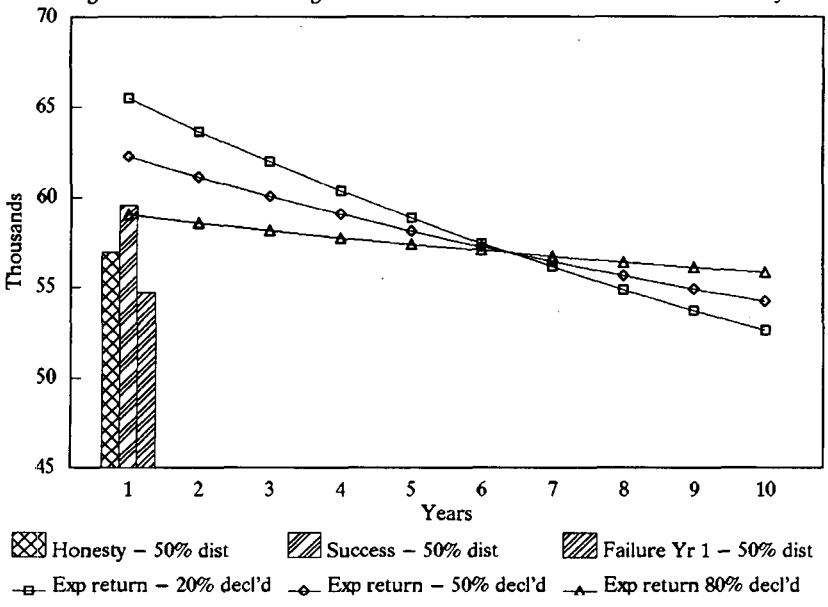


Figure 15 – Effect of Changed Declared Income in Dividend–Received Deduction System

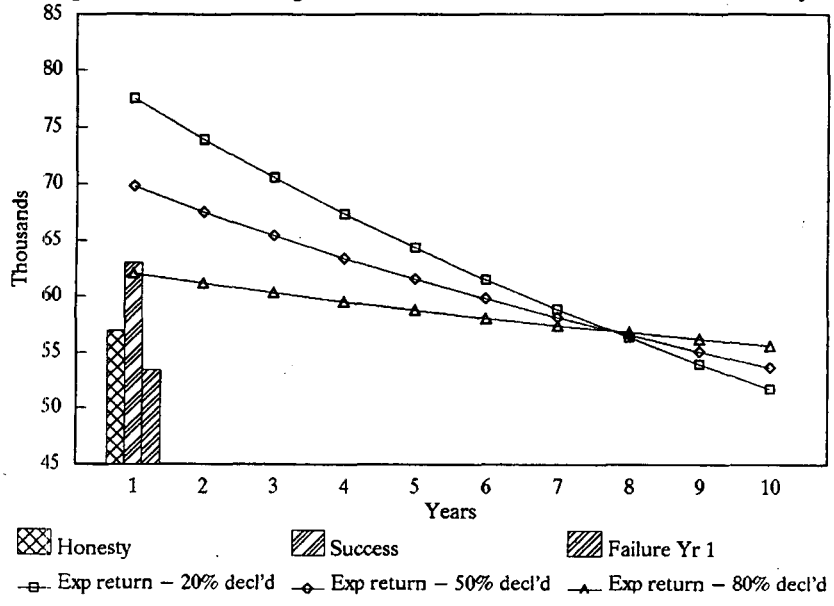


Figure 16 – Effect of Changed Declared Income in ACT System

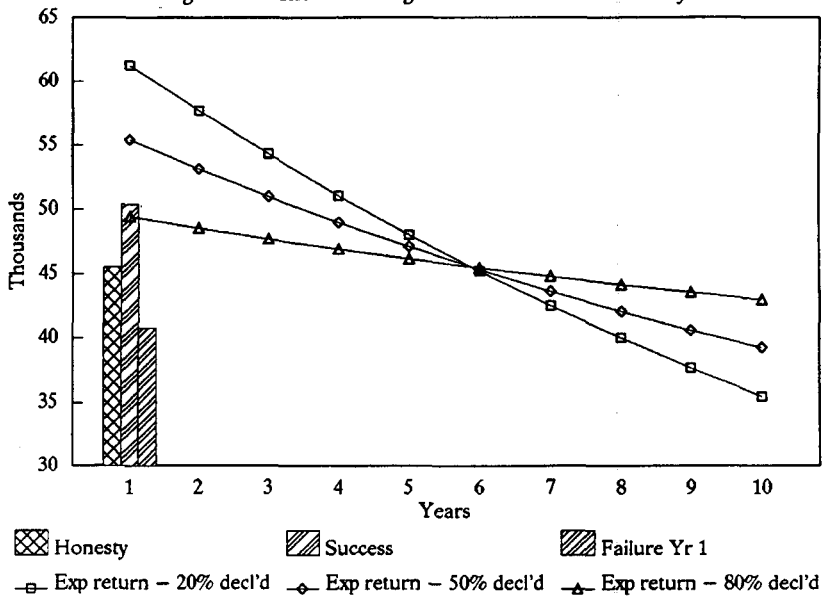


Figure 17 – Effect of Changed Income in Australian Imputation System

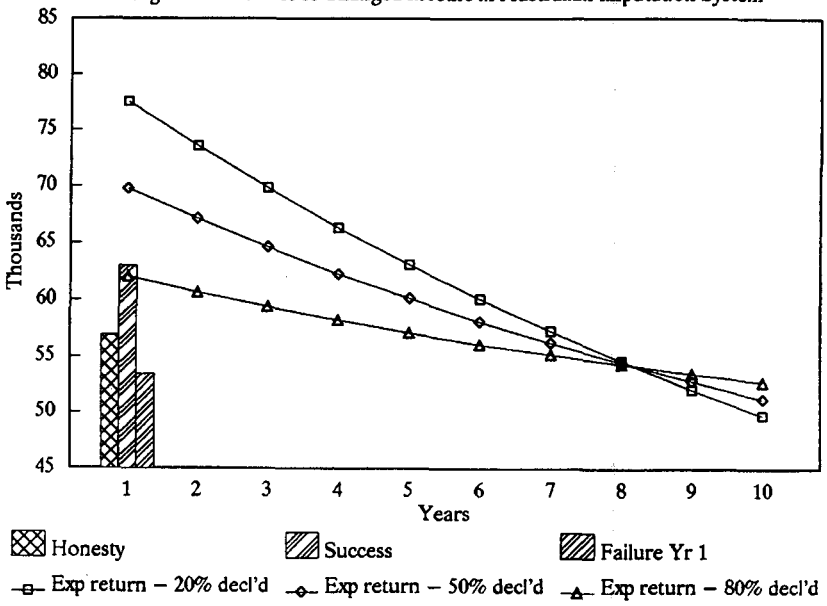
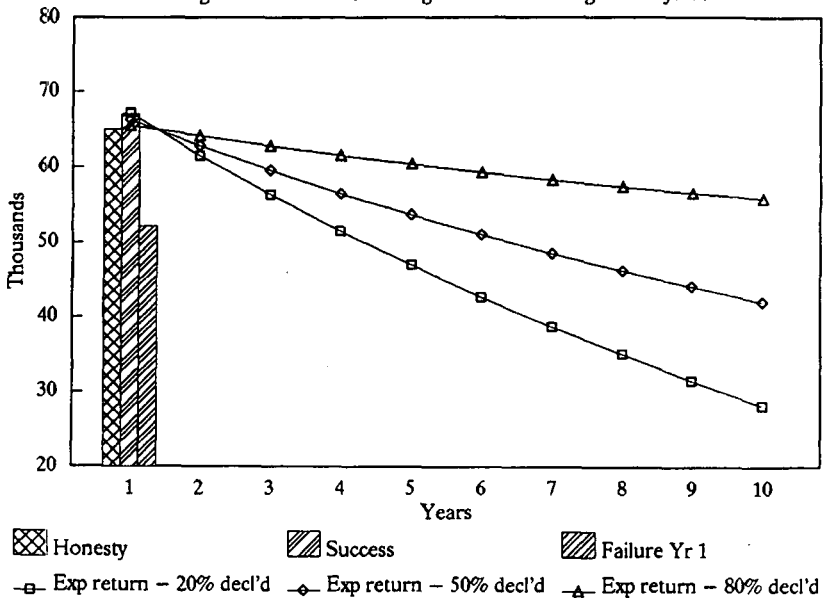


Figure 18 – Effect of Changed Income in Integration System



VI. CONCLUSIONS: CORPORATE TAX EVASION AND EFFECTIVE INTERACTION MECHANISMS

The descriptions of the interaction mechanisms in Section IV and the analysis of their effects in Section V have shown how the actual and expected returns to shareholders are affected by evasion of the corporate tax and the operation of the personal income tax. In most cases, the interaction mechanism changed the classical system only for the treatment of distributions. In the case of the integration system, however, it also changed the treatment of retained corporate earnings. In many cases, the personal income tax reduces both the expected costs and benefits of evasion, although this result is not uniform and can be varied by other action within the control of the corporation's managers. In some senses, it should be easier for the revenue authority to detect evasion of the corporate income tax than evasion of the personal income tax. There are several reasons for this supposition. First, corporate income is subject to additional reporting and scrutiny not applied to individual income. For example, corporations are usually required to report annually to corporate regulators, stock exchanges, and shareholders. Further, the central dilemma of corporate tax evasion, the obscure incentives for managers to risk personal liability, suggest that corporate tax evasion may be less apparent in the conduct of large corporations. In such corporations, the separation of the benefits and costs of evasion are most pronounced, un-

less particular mechanisms are evident, such as remuneration of managers by share option, which have the effect of aligning the interests of managers with those of shareholders. Finally, there are structural reasons—while it may be difficult to follow the corporation's trading activities closely, it is much easier to observe returns to shareholders leaving the corporation especially as dividends but even as retained earnings. And, even prior to observing returns to shareholders, the revenue authority can rely upon the incentive for corporate managers to report the highest profits to shareholders in ways to which the revenue authority has some access.

The present strategies of revenue authorities to control evasion are three. First, they have lessened the opportunity for evasion by intercepting income—a strategy which is not really feasible for many kinds of corporate trading income. Second, they have acquired more information by requiring independent reports from both parties to the transaction. Third, they have attempted to eliminate the benefits of evasion by changing returns to evasion.

The third strategy of eliminating potential gains will involve various combinations of sub-strategies, most usually changing the expectation of detection and increasing the size of interest and fines. A further possibility, which this paper has focused on, is to institutionalize the lack of a real benefit to evasion, even successful evasion, through the corporate and personal income tax interaction mechanism.

The attractiveness of the third option stems in part from the difficulties with implementing the others. Information production, collection, reporting, and analysis are obviously costly. Further, there are practical limitations to the severity of the punishment that can be imposed for evasion. Even if there were not solvency limitations to the severity of the penalties that could be imposed for evasion, the prospect of severe punishment will generate costs even for honest taxpayers trying to avoid an erroneous accusation of evasion. In theory at least, reliance on the effects of the interaction mechanism also has the potential of operating as a self-implementing procedure where it is not actually necessary to be able to identify the untaxed profits in order to be able to tax them. But the lesson drawn from the previous sections is that it is possible to use the personal income tax to influence managers' incentives away from corporate tax evasion by changing its potential costs and benefits. However, this method is not straightforward, and its success will depend significantly on the means adopted.

A. Effective Interaction Mechanisms for Corporate Distributions

By carefully designing the interaction between the corporate and personal income tax, the mechanism may be able to eliminate any gain from evasion without necessarily identifying it. Ideally, under a well constructed interaction mechanism, evasion of the corporate tax would not be a significant

problem where the shareholder is honest because the unpaid corporate tax would be collected from the shareholder. Corporate tax evasion would simply represent a failure to withhold, and carry with it only the benefit of deferral. Of course, the difficulties of implementing this ideal are legion, and this explains why none of the systems described in Section IV are able to achieve this goal.

From the perspective of both equity and efficiency, if the corporate tax is retained, the ideal interaction mechanism would approach a pure withholding tax system, collecting tax on income derived through corporations ultimately at the shareholder's marginal rate in the current year with no distortion to the rates of tax and return caused through retention or distribution decisions.[185] The corporate tax and the personal income tax would simply afford two occasions to collect the same total amount of tax from shareholders, either at the corporate or shareholder level. While the interaction mechanisms described in Section IV approach this ideal with varying degrees of success, it is clear that, in so far as one goal of the interaction mechanism is eliminating the benefits of corporate noncompliance, there are reasons for preferring some mechanisms to others and for remedying some of the defects highlighted in the previous discussion.

One consequence of interaction mechanisms, such as the dividend-paid deduction system, is the effective abandonment of any serious attempt to collect the desired amount of tax at the corporation level on distributed profits. Where the likelihood of shareholder evasion of tax on distributions is small, interaction mechanisms operating at the corporate level might in practice prove just as effective as those operating at the shareholder level. But if shareholder evasion is a serious problem, they may be inappropriate solutions.

If the interaction mechanism is to operate at the shareholder level as a dividend relief mechanism, such as the dividend-received deduction systems, it is preferable that the mechanism not be automatic.[186]

The analysis in Section V showed that the dividend-received deduction system promises the highest reward to corporate tax evasion, since successful evasion completely eliminates any tax being collected on corporate income, even assuming honest reporting by the shareholders.

If an automatic adjustment mechanism is not to be used, some type of

185. There is, however, an emerging opinion that unless interaction mechanisms can create the ideal of the integration system, they are not be desirable. In other words, any of the second best solutions are really detractions rather than improvements. *See Corporate-Personal Tax Integration, supra* note 10, at 242; Prest, *supra* note 13, at 212; Alworth, *supra* note 15. Cnossen refers to these systems as "third best" solutions. Cnossen, *supra* note 8, at 97.

186. As some commentators have put it, " there is little to be said . . . for giving credits even for taxes not paid as Canada does." Head & Bird, *supra* note 13, at 15 n.21.

imputation system which either forces payment of corporate tax (such as the ACT system) or tracks actual payment of corporate tax (such as the Australian imputation system) seems to be preferable. Each of these systems has its own drawbacks, however. For the ACT system, one problem is the manner in which it can force payments of excess corporate tax where the corporation is in tax loss. There is also the "leakage" of ACT payments incurred on distributing untaxed profits to reduce the mainstream corporate tax liability on declared retained profits. For the Australian imputation system, the tax tracing procedures do not effectively prevent a similar "leakage" of tax credits, this time from declared retained profits to distributed undeclared profits.

Partial solutions to these problems are possible. The ACT system permits transfers of excess ACT credits within corporate groups and carrying credits forward to future periods, albeit with a consequent reduction in their value. The problem for the tax tracing procedure of the ACT and Australian imputation systems is more difficult to resolve although it is also a smaller problem than it may appear. Each mechanism does ensure that the corporation can make tax-free distributions only up to the amount on which the corporation has paid tax. In other words, under the Australian system, the corporation has paid tax on the declared but undistributed profits used to provide credits for undeclared profits. If corporate managers wish to have sufficient credits to permit distributions of undeclared profits to have credits attached to them, it is still necessary to declare, pay tax on, and retain at least that amount of profits. Under the ACT system, the corporation has paid ACT on the undeclared distributed profits which is used to provide credits against the tax on declared retained profits, and if the corporation's managers wish to use these credits, it is still necessary to declare and retain an amount of profit. A more complete solution, one that quarantined tax credits to declared profits only, would require several additional ordering rules to track not only corporate tax payments, but also taxed corporate income.[187]

B. Dealing With Retained Corporate Earnings

One major deficiency in the use of interaction mechanisms on distributions to solve the problem of corporate tax evasion is that none can solve the problem of deferral. If the corporation's managers successfully evade the corporate tax, none of these systems will automatically collect tax on undeclared retained earnings, even assuming shareholder honesty. Instead, collection is deferred until sale of the shareholder's interest in the corporation, and even then only at capital gains tax rates.

While the problem of deferral (whether or not accompanied by evasion) would ideally be solved by attributing and taxing profits in the current period,

187. Cnossen, *supra* note 8, at 94.

the perceived problems with the attribution process have prevented serious attempts to implement it.[188] Moreover, it is doubtful whether the systems which attempt to achieve this result—the integration system in a domestic context and the CFC systems internationally—could ever provide an automatic solution to the particular problem of evasion. These systems attribute to shareholders only reported retained income and lack the added check on managers' behavior, as well as a taxing point of a visible flow of funds from the corporation to the shareholder. Undeclared retained earnings are explained as non-taxable earnings and, unless the corporation's evasion is actually detected, corporate managers can represent to both the revenue authority and shareholders that the higher profits reported to shareholders are not taxable to them and thus need not be reported as the taxable income of either the corporation or the shareholders. If these systems are to be able to effect current taxation of all corporate income, governments would be required not only to insist on the attribution of corporate profits, but also to meet the challenge of removing corporate tax preferences and the other sources of non-taxable earnings.

Solutions such as increased tax rates on retained earnings would not address the central issue if the base for the increased tax were, as inevitably it would be, retained but reported profits. The tax surcharge on retentions would simply create a split rate system and not solve the problem of the increased return to evasion of the tax on retentions.[189]

Neither would the problem of deferral of tax on undeclared retained earnings be solved through a second best device such as an interest charge on retentions collected on disposal of the shares.[190] The interest solution does have some realism to it in this context since deferral is effectively equal to an interest free loan of the corporate tax. But exactly the same difficulty arises imposing an interest surcharge to represent unpaid personal tax on retained corporate earnings that arises with increased tax rates on retained earnings. That problem is to define the principal on which interest is to be paid, and the period for which interest is payable. It is possible to identify the amount of declared retained earnings to bear interest and the period over which the earnings have been retained, but unless the corporation's undeclared earnings were actually detected, these calculations would not identify the undeclared retained corporate profits to be assessed. The interest charge would simply be a substitute impost for corporate manager's evasion.

Probably the only interaction mechanism capable of dealing with unde-

188. *See generally supra* note 80 and accompanying text.

189. For a discussion of the problems of undistributed profits taxes, *see* Vickrey, *supra* note 10, at 126-28.

190. *Cf.* Vickrey, *supra* note 10, at 128-29.

clared retained corporate earnings would be a shareholder tax on the market value (not the amount) of corporate retentions.[191] This would approach the heart of the problem, which is the inability of any interaction mechanism to tax undeclared profits on a current basis without necessarily being able to identify them.[192] The system would depend upon the assumption that the value of retained earnings, both declared and undeclared, was reflected in the share price. But the difficulties with such a system are legion. It could only be realistically applied to interests in publicly traded corporations where a market value for corporate shares could be readily established. This is obviously a major limitation. It would create great difficulty for corporate groups or where chains of interlocking share ownership operate with potential cascading of unremitted tax. Not only would it fundamentally change the ability to defer shareholder tax on retained earnings (declared or undeclared), but it would also render the corporate tax base subject on a current basis to all the other causes of market fluctuation which, at present, are reflected only once when the market value is fixed by sale of the shareholding.[193]

One final caveat to these observations is appropriate. It is not clear that governments always want to collect the tax not paid at the corporate level. The reason for differences between reported income and distributed profit may be due to many causes: corporate tax incentives; credits for taxes paid to foreign governments; differences in accounting procedures for tax and corporation law purposes (such as different depreciation rates); capitalized retained earnings; and corporate tax avoidance and evasion. If governments wish to

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191. Vickrey, *supra* note 10, at 126. This system has been introduced in Australia, where it is referred to as the Foreign Investment Fund system, as one system for taxing the income of portfolio investments in nonresident corporations. ITAA Part XI. Again, like the CFC system, its primary purpose was to prevent deferral of domestic tax by retaining income offshore. The solution reached was to attribute increases in value to the Australian resident shareholder and tax these changes as income.

192. Under such a system, the corporation would be taxed on declared earnings and the shareholder would be assessed on the amount of the current year's distributions with credit for the corporate tax. The shareholder would also be taxed on the increase in the value of the share over the current period with credit for the remaining corporate tax not attributed to distributions. If the personal income tax on distributed and retained earnings exceeded the amount of corporate tax paid (and credited to the shareholder), the difference would be taxable to the shareholder.

193. Additional accuracy could be introduced if the system operated as an accumulating "life-time" holding tax. This would require all payments of personal income tax on both distributions and retentions being treated as prepayments (carrying interest from the time of payment at appropriate rates) against an accumulating total tax liability on both distributions and capital gains assessed from the time of acquisition until the shareholder disposed of the shares. As Vickrey noted, "in this way any deferment of the reporting of income results merely in borrowing the amount of the deferred tax at a suitable rate of interest." Vickrey, *supra* note 10, at 126. That result would be even more true if the source of deferral were evasion.

address differences caused by evasion only, it will be necessary to do so in ways that do not conflict with these other goals.

The result of this analysis, so far as the revenue authority is concerned, gives cause for some caution. While every interaction mechanism will reduce to some extent the potential benefits of corporate tax evasion, none that is presently employed will remove them entirely, and reliance on the interaction mechanism to do so will be misguided. Yet there is scope for the interaction mechanism to be a valuable tool to assist in reducing the benefits of evasion, if the design problems such as the leakage and non-denial of credits can be eliminated.

APPENDIX

TABLE A1
CLASSICAL SYSTEM

	Honesty		Successful Evasion		Failed Evasion	
	d	1–d	d	1–d	d	1–d
Corporation						
Profit	100.00	100.00	100.00	100.00	100.00	100.00
Deductions	0.00	0.00	0.00	0.00	0.00	0.00
Tax	35.00	35.00	0.00	0.00	35.00	35.00
ACT	0.00	0.00	0.00	0.00	0.00	0.00
Fine	0.00	0.00	0.00	0.00	26.25	26.25
Net	65.00	65.00	100.00	100.00	38.75	38.75
Shareholder						
Received	65.00	65.00	100.00	100.00	38.75	38.75
Gross-up	0.00	0.00	0.00	0.00	0.00	0.00
Deductions	0.00	0.00	0.00	0.00	0.00	0.00
Total	65.00	65.00	100.00	100.00	38.75	38.75
Tax	22.75	16.25	35.00	25.00	13.56	9.69
Credit	0.00	0.00	0.00	0.00	0.00	0.00
Net tax	22.75	16.25	35.00	25.00	13.56	9.69
Return	42.75	48.75	65.00	75.00	25.19	29.06
Rates (%)						
Tax + Fine	57.75	51.25	35.00	25.00	74.81	70.94
After-tax	42.25	48.75	65.00	75.00	25.19	29.06
Totals (%)						
Tax Rate	54.50		30.00		72.88	
Return	45.50		70.00		27.13	

TABLE A2
DIVIDEND-PAID DEDUCTION SYSTEM

	Honesty		Successful Evasion		Failed Evasion	
	d	1–d	d	1–d	d	1–d
Corporation						
Profit	100.00	100.00	100.00	100.00	100.00	100.00
Deductions	100.00	0.00	100.00	0.00	100.00	0.00
Tax	0.00	35.00	0.00	0.00	0.00	35.00
ACT	0.00	0.00	0.00	0.00	0.00	0.00
Fine	0.00	0.00	0.00	0.00	0.00	26.25
Net	100.00	65.00	100.00	100.00	100.00	38.75
Shareholder						
Received	100.00	65.00	100.00	100.00	100.00	38.75
Gross-up	0.00	0.00	0.00	0.00	0.00	0.00
Deductions	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	65.00	100.00	100.00	100.00	38.75
Tax	35.00	16.25	35.00	25.00	35.00	9.69
Credit	0.00	0.00	0.00	0.00	0.00	0.00
Net tax	35.00	16.25	35.00	25.00	35.00	9.69
Return	65.00	48.75	65.00	75.00	65.00	29.06
Rates (%)						
Tax + Fine	35.00	51.25	35.00	25.00	35.00	70.94
After-tax	65.00	48.75	65.00	75.00	65.00	29.06
Totals (%)						
Tax Rate	43.13		30.00		52.97	
Return	56.88		70.00		47.03	

TABLE A3
DIVIDEND-RECEIVED DECUCTION SYSTEM

	Honesty		Successful Evasion		Failed Evasion	
	d	1–d	d	1–d	d	1–d
Corporation						
Profit	100.00	100.00	100.00	100.00	100.00	100.00
Deductions	0.00	0.00	0.00	0.00	0.00	0.00
Tax	35.00	35.00	0.00	0.00	35.00	35.00
ACT	0.00	0.00	0.00	0.00	0.00	0.00
Fine	0.00	0.00	0.00	0.00	26.25	26.25
Net	65.00	65.00	100.00	100.00	38.75	38.75
Shareholder						
Received	65.00	65.00	100.00	100.00	38.75	38.75
Gross-up	0.00	0.00	0.00	0.00	0.00	0.00
Deductions	65.00	0.00	100.00	0.00	38.75	0.00
Total	0.00	65.00	0.00	100.00	0.00	38.75
Tax	0.00	16.25	0.00	25.00	0.00	9.69
Credit	0.00	0.00	0.00	0.00	0.00	0.00
Net tax	0.00	16.25	0.00	25.00	0.00	9.69
Return	65.00	48.75	100.00	75.00	38.75	29.06
Rates (%)						
Tax + Fine	35.00	51.25	0.00	25.00	61.25	70.94
After-tax	65.00	48.75	100.00	75.00	38.75	29.06
Totals (%)						
Tax Rate	43.13		12.50		66.09	
Return	56.88		87.50		33.91	

TABLE A4
ADVANCED CORPORATION TAX SYSTEM

	Honesty		Successful Evasion		Failed Evasion		Notes
	d	1–d	d	1–d	d	1–d	
Corporation							
Profit	100.00	100.00	100.00	100.00	100.00	100.00	
Deductions	0.00	0.00	0.00	0.00	0.00	0.00	
Tax	0.00	35.00	0.00	0.00	0.00	35.00	
ACT	35.00	0.00	35.00	0.00	35.00	0.00	(1)
Fine	0.00	0.00	0.00	0.00	0.00	26.25	
Net	65.00	65.00	65.00	100.00	65.00	38.75	
Shareholder							
Received	65.00	65.00	65.00	100.00	65.00	38.75	
Gross-up	35.00	0.00	35.00	0.00	35.00	0.00	
Deductions	0.00	0.00	0.00	0.00	0.00	0.00	
Total	100.00	65.00	100.00	100.00	100.00	38.75	
Tax	35.00	16.25	35.00	25.00	35.00	9.69	
Credit	35.00	0.00	35.00	0.00	35.00	0.00	
Net tax	0.00	16.25	0.00	25.00	0.00	9.69	
Return	65.00	48.75	65.00	75.00	65.00	29.06	
Rates (%)							
Tax + Fine	35.00	51.25	35.00	25.00	35.00	70.94	
After-tax	65.00	48.75	65.00	75.00	65.00	29.06	
Totals (%)							
Tax Rate	43.13		30.00		52.97		
Return	56.88		70.00		47.03		

NOTE

(1) It is assumed that the corporation does not avoid ACT but avoids the mainstream corporate tax.

TABLE A5
AUSTRALIAN IMPUTATION SYSTEM

	Honesty		Successful Evasion		Failed Evasion		Notes
	d	1–d	d	1–d	d	1–d	
Corporation							
Profit	100.00	100.00	100.00	100.00	100.00	100.00	
Deductions	0.00	0.00	0.00	0.00	0.00	0.00	
Tax	35.00	35.00	0.00	0.00	35.00	35.00	
ACT	0.00	0.00	0.00	0.00	0.00	0.00	
Fine	0.00	0.00	0.00	0.00	26.25	26.25	
Net	65.00	65.00	100.00	100.00	38.75	38.75	
Shareholder							
Received	65.00	65.00	100.00	100.00	38.75	38.75	
Gross-up	35.00	0.00	0.00	0.00	0.00	0.00	(1)
Deductions	0.00	0.00	0.00	0.00	0.00	0.00	
Total	100.00	65.00	100.00	100.00	38.75	38.75	
Tax	35.00	16.25	35.00	25.00	13.56	9.69	
Credit	35.00	0.00	0.00	0.00	0.00	0.00	(1)
Net tax	0.00	16.25	35.00	25.00	13.56	9.69	
Return	65.00	48.75	65.00	75.00	25.19	29.06	
Rates (%)							
Tax + Fine	35.00	51.25	35.00	25.00	74.81	70.94	
After-tax	65.00	48.75	65.00	75.00	25.19	29.06	
Totals (%)							
Tax Rate	43.13		30.00		72.88		
Return	56.88		70.00		27.13		

NOTE

(1) It is assumed that the shareholder does not gross-up (and cannot credit) corporate tax unless payment of tax was made voluntarily and can be verified.

TABLE A6
INTEGRATION SYSTEM

	Honesty		Successful Evasion		Failed Evasion		Notes
	d	1–d	d	1–d	d	1–d	
Corporation							
Profit	100.00	100.00	100.00	100.00	100.00	100.00	
Deductions	0.00	0.00	0.00	0.00	0.00	0.00	
Tax	35.00	35.00	0.00	0.00	35.00	35.00	
ACT	0.00	0.00	0.00	0.00	0.00	0.00	
Fine	0.00	0.00	0.00	0.00	26.25	26.25	
Net	65.00	65.00	100.00	100.00	38.75	38.75	
Shareholder							
Received	65.00	65.00	100.00	100.00	38.75	38.75	
Gross-up	35.00	35.00	0.00	0.00	0.00	0.00	(1)
Deductions	0.00	0.00	0.00	0.00	0.00	0.00	
Total	100.00	100.00	100.00	100.00	38.75	38.75	
Tax	35.00	35.00	25.00	25.00	13.56	13.56	(2,3)
Credit	35.00	35.00	0.00	0.00	0.00	0.00	(1)
Net tax	0.00	0.00	25.00	25.00	13.56	13.56	
Return	65.00	65.00	75.00	75.00	25.19	25.19	
Rates (%)							
Tax + Fine	35.00	35.00	25.00	25.00	74.81	74.81	
After-tax	65.00	65.00	75.00	75.00	25.19	25.19	
Totals (%)							
Tax Rate	35.00		25.00		74.81		
Return	65.00		75.00		25.19		

NOTES

(1) It is assumed that the shareholder does not gross-up (and cannot credit) payments of corporate tax unless paid voluntarily and they can be verified.

(2) It is assumed that all declared earnings are attributed to the shareholder and taxed at dividend rates rather than capital gains tax rates.

(3) Undeclared earnings are taxed as capital gain even if distributed where evasion is successful.

TABLE A7

EXPECTED RETURNS UNDER CLASSICAL SYSTEM

d	50%	T_g	25%
P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%

ACTUAL RETURN TO SHAREHOLDERS

		dD	(1-d)D	d(P-D)	(1-d)P-D	Post Tax Return	Gain (loss) v. Honesty
Honesty		21125	24375	0	0	45500	
Success		16900	19500	6500	7500	50400	4900
Failure	1	16900	19500	6500	-2105	40795	-4705
Year	2				-2542	40358	-5142
	3				-2998	39902	-5598
	4				-3475	39425	-6075
	5				-3974	38926	-6574
	6				-4496	38404	-7096
	7				-5041	37859	-7641
	8				-5611	37289	-8211
	9				-6207	36693	-8807
	10				-6830	36070	-9430

EXPECTED RETURN TO SHAREHOLDERS

Years	(1–p)	p	Total
1	45360	4079	49439
2	40824	7712	48536
3	36742	10944	47685
4	33067	13818	46885
5	29761	16372	46132
6	26785	18639	45424
7	24106	20651	44758
8	21696	22435	44131
9	19526	24015	43540
10	17573	25412	42985

EXPECTED GAIN/LOSS TO SHAREHOLDERS

Years	(1–p)	p	Total
1	4410	-471	3939
2	3969	-933	3036
3	3572	-1387	2185
4	3215	-1830	1385
5	2893	-2261	632
6	2604	-2680	-76
7	2344	-3086	-742
8	2109	-3479	-1369
9	1898	-3858	-1960
10	1709	-4223	-2515

EXPECTED GAIN/LOSS TO CORPORATION

Years	(1–p)	p	Total
1	6300	-549	5751
2	5670	-1065	4605
3	5103	-1551	3552
4	4593	-2008	2584
5	4133	-2439	1695
6	3720	-2843	877
7	3348	-3224	124
8	3013	-3583	-569
9	2712	-3920	-1208
10	2441	-4237	-1796

TABLE A8

EXPECTED RETURN UNDER DIVIDEND-PAID DEDUCTION SYSTEM

d	50%	T_g	25%
P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%

ACTUAL RETURN TO SHAREHOLDERS

		dD	(1-d)D	d(P-D)	(1-d)P-D	Post Tax Return	Gain (loss) v. Honesty
Honesty		32500	24375	0	0	56875	
Success		26000	19500	6500	7500	59500	2625
Failure	1	26000	19500	6500	2697	54697	-2178
Year	2				2479	54479	-2396
	3				2251	54251	-2624
	4				2012	54012	-2863
	5				1763	53763	-3112
	6				1502	53502	-3373
	7				1229	53229	-3646
	8				944	52944	-3931
	9				646	52646	-4229
	10				335	52335	-4540

EXPECTED RETURN TO SHAREHOLDERS

Years	(1–p)	p	Total
1	53550	5470	59020
2	48195	10373	58568
3	43375	14767	58143
4	39038	18705	57743
5	35134	22232	57366
6	31621	25391	57012
7	28459	28220	56679
8	25613	30752	56365
9	23052	33019	56070
10	20746	35046	55793

EXPECTED GAIN/LOSS TO SHAREHOLDERS

Years	(1–p)	p	Total
1	2363	-218	2145
2	2126	-433	1693
3	1914	-646	1268
4	1722	-855	868
5	1550	-1059	491
6	1395	-1258	137
7	1256	-1452	-196
8	1130	-1640	-510
9	1017	-1822	-805
10	915	-1998	-1082

EXPECTED GAIN/LOSS TO CORPORATION

Years	(1–p)	p	Total
1	3150	-274	2876
2	2835	-533	2302
3	2551	-776	1776
4	2296	-1004	1292
5	2067	-1219	847
6	1860	-1422	438
7	1674	-1612	62
8	1507	-1791	-285
9	1356	-1960	-604
10	1220	-2118	-898

TABLE A9
EXPECTED RETURN UNDER FULL DIVIDEND-RECEIVED DEDUCTION SYSTEM

d	50%	T_g	25%
P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%

ACTUAL RETURN TO SHAREHOLDERS

		dD	(1-d)D	d(P-D)	(1-d)P-D	Post Tax Return	Gain (loss) v. Honesty
Honesty		32500	24375	0	0	56875	
Success		26000	19500	10000	7500	63000	6125
Failure	1	26000	19500	10000	-2105	53395	-3480
Year	2				-2542	52958	-3917
	3				-2998	52502	-4373
	4				-3475	52025	-4850
	5				-3974	51526	-5349
	6				-4496	51004	-5871
	7				-5041	50459	-6416
	8				-5611	49889	-6986
	9				-6207	49293	-7582
	10				-6830	48670	-8205

EXPECTED RETURN TO SHAREHOLDERS

Years	(1–p)	p	Total
1	56700	5339	62039
2	51030	10106	61136
3	45927	14358	60285
4	41334	18151	59485
5	37201	21532	58732
6	33481	24543	58024
7	30133	27225	57358
8	27119	29611	56731
9	24407	31733	56140
10	21967	33619	55585

EXPECTED GAIN/LOSS TO SHAREHOLDERS

Years	(1–p)	p	Total
1	5513	-348	5164
2	4961	-701	4261
3	4465	-1055	3410
4	4019	-1408	2610
5	3617	-1759	1857
6	3255	-2106	1149
7	2930	-2447	483
8	2637	-2781	-144
9	2373	-3107	-735
10	2136	-3425	-1290

EXPECTED GAIN/LOSS TO CORPORATION

Years	(1–p)	p	Total
1	6300	-549	5751
2	5670	-1065	4605
3	5103	-1551	3552
4	4593	-2008	2584
5	4133	-2439	1695
6	3720	-2843	877
7	3348	-3224	124
8	3013	-3583	-569
9	2712	-3920	-1208
10	2441	-4237	-1796

TABLE A10
EXPECTED RETURN UNDER ACT SYSTEM

d	50%	T_g	25%
P	100000	f	75%
D	80000	r*	15%
T_a	35%	r	10%
T_c	35%	p	10%
T_i	35%		

ACTUAL RETURN TO SHAREHOLDERS

		dD	(1-d)D	d(P-D)	(1-d)P-D	Post Tax Return	Gain (loss) v. Honesty
Honesty		32500	24375	0	0	56875	
Success		26000	19500	10000	7500	63000	6125
Failure	1	26000	19500	10000	-2105	53395	-3480
Year	2				-2542	52958	-3917
	3				-2998	52502	-4373
	4				-3475	52025	-4850
	5				-3974	51526	-5349
	6				-4496	51004	-5871
	7				-5041	50459	-6416
	8				-5611	49889	-6986
	9				-6207	49293	-7582
	10				-6830	48670	-8205

EXPECTED RETURN TO SHAREHOLDERS

Years	(1–p)	p	Total
1	56700	5339	62039
2	51030	10106	61136
3	45927	14358	60285
4	41334	18151	59485
5	37201	21532	58732
6	33481	24543	58024
7	30133	27225	57358
8	27119	29611	56731
9	24407	31733	56140
10	21967	33619	55585

EXPECTED GAIN/LOSS TO SHAREHOLDERS

Years	(1–p)	p	Total
1	5513	-348	5164
2	4961	-701	4261
3	4465	-1055	3410
4	4019	-1408	2610
5	3617	-1759	1857
6	3255	-2106	1149
7	2930	-2447	483
8	2637	-2781	-144
9	2373	-3107	-735
10	2136	-3425	-1290

EXPECTED GAIN/LOSS TO CORPORATION

Years	(1–p)	p	Total
1	6300	-549	5751
2	5670	-1065	4605
3	5103	-1551	3552
4	4593	-2008	2584
5	4133	-2439	1695
6	3720	-2843	877
7	3348	-3224	124
8	3013	-3583	-569
9	2712	-3920	-1208
10	2441	-4237	-1796

TABLE A11

EXPECTED RETURN UNDER AUSTRALIAN IMPUTATION SYSTEM

d	50%	T_g	25%
P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%

ACTUAL RETURN TO SHAREHOLDERS

		dD	(1-d)D	d(P-D)	(1-d)P-D	Post Tax Return	Gain (loss) v. Honesty
Honesty		32500	24375	0	0	56875	
Success		26000	19500	10000	7500	63000	6125
Failure	1	26000	19500	10000	-2105	53395	-3480
Year	2				-2542	52958	-3917
	3				-2998	52502	-4373
	4				-3475	52025	-4850
	5				-3974	51526	-5349
	6				-4496	51004	-5871
	7				-5041	50459	-6416
	8				-5611	49889	-6986
	9				-6207	49293	-7582
	10				-6830	48670	-8205

EXPECTED RETURN TO SHAREHOLDERS

Years	(1–p)	p	Total
1	56700	5339	62039
2	51030	9629	60659
3	45927	13456	59383
4	41334	16870	58204
5	37201	19912	57113
6	33481	22623	56104
7	30133	25036	55169
8	27119	27184	54303
9	24407	29094	53501
10	21967	30791	52757

EXPECTED GAIN/LOSS TO SHAREHOLDERS

Years	(1–p	p	Total
1	5513	-348	5164
2	4961	-665	4296
3	4465	-984	3481
4	4019	-1302	2716
5	3617	-1618	1999
6	3255	-1930	1325
7	2930	-2237	693
8	2637	-2538	99
9	2373	-2832	-459
10	2136	-3118	-982

EXPECTED GAIN/LOSS TO CORPORATION

Years	(1–p)	p	Total
1	6300	-549	5751
2	5670	-1065	4605
3	5103	-1551	3552
4	4593	-2008	2584
5	4133	-2439	1695
6	3720	-2843	877
7	3348	-3224	124
8	3103	-3583	-569
9	2712	-3920	-1208
10	2441	-4237	-1796

TABLE A12
EXPECTED RETURN UNDER INTEGRATION SYSTEM

d	50%	T_g	25%
P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%

ACTUAL RETURN TO SHAREHOLDERS

		D	P–D	Post Tax Return	Gain (loss) v. Honesty
Honesty		65000	0	65000	
Success		52000	15000	67000	2000
Failure	1	52000	193	52193	-12807
Year	2		-389	51611	-13389
	3		-998	51002	-13998
	4		-1634	50366	-14634
	5		-2299	49701	-15299
	6		-2994	49006	-15994
	7		-3721	48279	-16721
	8		-4481	47519	-17481
	9		-5276	46724	-18276
	10		-6107	45893	-19107

EXPECTED RETURN TO SHAREHOLDERS

Years	(1–p)	p	Total
1	60300	5219	65519
2	54270	9864	64134
3	48843	13996	62839
4	43959	17667	61626
5	39563	20928	60491
6	35607	23822	58428
7	32046	26388	58433
8	28841	28660	57502
9	25957	30672	56629
10	23361	32450	55811

EXPECTED GAIN/LOSS TO SHAREHOLDERS

Years	(1–p)	p	Total
1	1800	-1281	519
2	1620	-2486	-866
3	1458	-3619	-2161
4	1312	-4686	-3374
5	1181	-5690	-4509
6	1063	-6635	-5572
7	957	-7523	-6567
8	861	-8359	-7498
9	775	-9146	-8371
10	697	-9886	-9189

EXPECTED GAIN/LOSS TO CORPORATION

Years	(1–p)	p	Total
1	6300	-549	5751
2	5670	-1065	4605
3	5103	-1551	3552
4	4593	-2008	2584
5	4133	-2439	1695
6	3720	-2843	877
7	3348	-3224	124
8	3013	-3583	-569
9	2712	-3920	-1208
10	2441	-4237	-1796

TABLE A13
EFFECT OF CHANGED DISTRIBUTION RATES
IN CLASSICAL SYSTEM

P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DISTRIBUTION

Distribute		25%	50%	75%
Year	1	51239	49439	47639
	2	50336	48536	46736
	3	49485	47685	45885
	4	48685	46885	45085
	5	47932	46132	44332
	6	47224	45424	43624
	7	46558	44758	42958
	8	45931	44131	42331
	9	45340	43540	41740
	10	44785	42985	41185

TABLE A14
EFFECT OF CHANGED DISTRIBUTION RATES IN DIVIDEND-PAID DEDUCTION SYSTEM

P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DISTRIBUTION

Distribute		25%	50%	75%
Year	1	56030	59020	62010
	2	55352	58568	61784
	3	54714	58143	61571
	4	54114	57743	61371
	5	53549	57366	61183
	6	53018	57012	61006
	7	52518	56679	60839
	8	52048	56365	60683
	9	51605	56070	60535
	10	51189	55793	60396

TABLE A15
EFFECT OF CHANGED DISTRIBUTION RATES IN DIVIDEND-RECEIVED DEDUCTION SYSTEM

P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DISTRIBUTION

Distribute		25%	50%	75%
Year	1	57539	62039	66539
	2	56636	61136	65636
	3	55785	60285	64785
	4	54985	59485	63985
	5	54232	58732	63232
	6	53524	58024	62524
	7	52858	57358	61858
	8	52231	56731	61231
	9	51640	56140	60640
	10	51085	55585	60085

TABLE A16
EFFECT OF CHANGED DISTRIBUTION RATES IN ADVANCED CORPORATE TAX SYSTEM

P	100000	f	75%
D	80000	r*	15%
T_a	35%	r	10%
T_c	35%	p	10%
T_i	35%		
T_g	25%		

EXPECTED RETURN WITH DISTRIBUTION

Distribute		25%	50%	75%
Year	1	57539	62039	66539
	2	56636	61136	65636
	3	55785	60285	64785
	4	54985	59485	63985
	5	54232	58732	63232
	6	53524	58024	62524
	7	52858	57358	61858
	8	52231	56731	61231
	9	51640	56140	60640
	10	51085	55585	60085

TABLE A17
EFFECT OF CHANGED DISTRIBUTION RATES
IN AUSTRALIAN IMPUTATION SYSTEM

P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DISTRIBUTION

Distribute		25%	50%	75%
Year	1	57539	62039	66539
	2	56200	60659	65119
	3	54960	59383	63807
	4	53814	58204	62594
	5	52753	57113	61474
	6	51770	56104	60438
	7	50859	55169	59479
	8	50015	54303	58592
	9	49232	53501	57770
	10	48506	52757	57009

TABLE A18
EFFECT OF CHANGED DISTRIBUTION RATES
IN INTEGRATION SYSTEM

P	100000	f	75%
D	80000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN AT ALL DISTRIBUTION LEVELS

Year	1	65519
	2	64134
	3	62839
	4	61626
	5	60491
	6	59428
	7	58433
	8	57502
	9	56629
	10	55811

TABLE A19
EFFECT OF CHANGED DECLARED INCOME
IN CLASSICAL SYSTEM

d	50%	f	75%
P	100000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DISTRIBUTION

Declared		20000	50000	80000
Year	1	61258	55349	49439
	2	57643	53089	48536
	3	54242	50963	47685
	4	51041	48963	46885
	5	48030	47081	46132
	6	45196	45310	45424
	7	42531	43644	44758
	8	40022	42076	44131
	9	37662	40601	43540
	10	35441	39213	42985

TABLE A20
EFFECT OF CHANGED DECLARED INCOME IN DIVIDEND-PAID DEDUCTION SYSTEM

d	50%	f	75%
P	100000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DECLARED INCOME

Declared		20000	50000	80000
Year	1	65454	62237	59020
	2	63646	61107	58568
	3	61946	60044	58143
	4	60346	59044	57743
	5	58840	58103	57366
	6	57423	57218	57012
	7	56090	56385	56679
	8	54836	55601	56365
	9	53656	54863	56070
	10	52546	54169	55793

TABLE A21
EFFECT OF CHANGE IN DECLARED INCOME
IN DIVIDEND-RECEIVED DEDUCTION SYSTEM

d	50%	f	75%
P	100000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DECLARED INCOME

Declared		20000	50000	80000
Year	1	77533	69786	62039
	2	73918	67527	61136
	3	70517	65401	60285
	4	67316	63401	59485
	5	64305	61519	58732
	6	61471	59748	58024
	7	58806	58082	57358
	8	56297	56514	56731
	9	53937	55039	56140
	10	51716	53651	55585

TABLE A22
EFFECT OF CHANGE IN DECLARED INCOME IN ADVANCE CORPORATE TAX SYSTEM

d	50%	f	75%
P	100000	r*	15%
T_a	35%	r	10%
T_c	35%	p	10%
T_i	35%		
T_g	25%		

EXPECTED RETURN WITH DECLARED INCOME

Declared		20000	50000	80000
Year	1	61258	55349	49439
	2	57643	53089	48536
	3	54242	50963	47685
	4	51041	48963	46885
	5	48030	47081	46132
	6	45196	45310	45424
	7	42531	43644	44758
	8	40022	42076	44131
	9	37662	40601	43540
	10	35441	39213	42985

TABLE A23
EFFECT OF CHANGE IN DECLARED INCOME IN AUSTRALIAN IMPUTATION SYSTEM

d	50%	f	75%
P	100000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DECLARED INCOME

Declared		20000	50000	80000
Year	1	77533	69786	62039
	2	73547	67103	60659
	3	69827	64605	59383
	4	66353	62279	58204
	5	63109	60111	57113
	6	60078	58091	56104
	7	57247	56208	55169
	8	54600	55452	54303
	9	52125	52813	53501
	10	49812	51284	52757

TABLE A24
EFFECT OF CHANGED DECLARED INCOME IN INTEGRATION SYSTEM

d	50%	f	75%
P	100000	r*	15%
T_c	35%	r	10%
T_i	35%	p	10%
T_g	25%		

EXPECTED RETURN WITH DECLARED INCOME

Declared		20000	50000	80000
Year	1	67077	66298	65519
	2	61537	62836	64134
	3	56354	59596	62839
	4	51504	56565	61626
	5	46964	53727	60491
	6	42714	51071	59428
	7	38734	48584	58433
	8	35007	46254	57502
	9	31515	44072	56629
	10	28244	42028	55811