TAXES, MARKET VALUATION AND CORPORATE FINANCIAL POLICY

M. J. BRENNAN*

IN A well-known series of papers Franco Modigliani and Merton Miller[1] have outlined a general framework for the analysis of the effects of capital structure and dividend policies on the valuation of the corporation under uncertainty. What disagreement remains about their conclusions stems mainly from different beliefs about the effects of various market imperfections on their analysis.[2] Modigliani and Miller themselves have dealt comprehensively with one such imperfection, namely the tax system as it affects corporations directly.[3] However, while they have directed attention to the effects of the tax system as it relates to the taxation of corporate income, their papers are characterized by an almost total neglect of the complementary aspect of the system, which is the taxation of individuals. It is the purpose of this paper to extend their analysis to incorporate the effects of those features of the personal tax structure which are relevant for the valuation of the corporation.

Two features of the personal tax structure stand out in importance for the theory of valuation. First is the provision of the existing tax code which permits individuals as well as corporations to deduct interest payments from the computation of their taxable income. Second is the asymmetric tax treatment of income received in the form of dividends and of capital gains. The difficulty of introducing these institutional imperfections into the analysis arises from the progressive nature of the personal tax structure, which causes the relevant marginal tax rates to vary between investors in different income classes.

An important step towards recognizing the effects of the personal tax structure on corporate financial policy was made in a 1967 article in this journal by Farrar and Selwyn.[4] However, their analysis is limited by its concentration on the net income received by an investor with given tax rates from a share in a corporation, as that corporation pursues alternative financial policies. Their use of this net income concept as a criterion of optimality suffers by its implicit neglect of the market exchange opportunities open to an investor who does not find a particular set of financial policies congenial. To take into account these market exchange opportunities requires the development of a market valuation principle, so that the impact of alternative financial policies on the value of the corporation may be calculated: the Farrar-Selwyn paper lacks such a valuation principle.

The outline of this paper is as follows: in Section I the Farrar-Selwyn analysis and its results are considered in more detail. In Section II a market equilibrium condition is developed which takes account of the diversity of investor marginal tax rates. From this equilibrium condition a market valuation equation is developed in Section III. This is then used to discuss the effects of alternative dividend policies on the valuation of the corporation. In Section IV the effects of alternative capital structures are discussed within the framework of the same

*University of British Columbia. This paper represents a substantial part of a thesis completed at M.I.T. in June 1970. The author is grateful to the Sloan School for financial support and to his thesis committee, especially Franco Modigliani, for his help and encouragement. Daniel Rie and a referee have also made helpful comments. The author is responsible for remaining errors. An abbreviated version of this paper was presented at the Second World Econometric Congress in Cambridge, September 1970.

1 [4, 5, 6, 7]

2 Major attention has been focused on the effects of bankruptcy costs by P. A. Tinsley [12]. There remains also some dispute about the effects of dividend policy under uncertainty.

3 [7].

4 [1].