Investment Analysts Journal ›

Volume 31, 2002 - Issue 56

199 Views | 7 CrossRef citations to date | 0 Altmetric

Original Articles

Corporate tax and capital structure: some evidence and implications

M Negash

Pages 17-27 | Published online: 18 Feb 2015

Cite this article https://doi.org/10.1080/10293523.2002.11082439

Sample our Economics, Finance, Business & Industry Journals

>> Sign in here to start your access to the latest two volumes for 14 days

References Citations Metrics Reprints & Permissions

Read this article Share

Click to increase image size

M Negash*

Corporate tax and capital structure: some evidence and implications

1. INTRODUCTION

Four decades of research on capital structure has not conclusively answered the basic question of whether there is an optimal mix of debt and equity at the level of the firm. Textbooks present the issue as a problem of balancing the gains from leverage with the expected costs of bankruptcy (Gitman 2000, Ross, Westerfield and Jaffe 1999, Damodaran 1997, Altman 1993). Following the trade-off theory and using data from the Johannesburg Stock Exchange (JSE) Negash (2001) reported the insignificance of the net gain that may be stemming from increased use of interest bearing debt. When bankruptcy related costs were not invoked, the size of the present value of the tax shield over a perpetual period was comparable to the results obtained in NYSE based studies. The gain from leverage was estimated at between 13 and 18 percent of the market values of the firms in the sample. This paper extends the previous work on JSE and addresses the vexing issue of whether Miller's (1977) equilibrium theory is holding under existing tax code and capital structure irrelevancy is a feasible firm level policy.

In the presence of only corporate taxes capital structure irrelevance theory no longer holds unless the firm's marginal tax rate is zero. The corollary is that if corporate tax rate is different from zero, then taxes do not only affect financing decisions. The tax code may provide preferential treatment for (certain types of) investments. Further, investment and financing decisions may not be independent of one another. That is, the well-known Fisher's separation theorem no longer holds as investment and financing decisions cannot be realistically decoupled. Therefore, the need for the simultaneous consideration of investment and financing decisions and the interactions thereof becomes important.

DeAngelo and Masulis (1980) extend Miller's (1977) work and examine the effects of non-debt related tax shields on capital structure. They show that Miller's irrelevance (indeterminacy) theory is sensitive to realistic situations, such as the modification(s) of tax codes. More specifically, they show that the existence of non-debt related corporate tax shields, such as depreciation, is sufficient to overturn the leverage irrelevancy theorem. They state that optimal capital structure is feasible at the individual firm level. Hence, corporate tax is central to the theory of capital structure.

Dammon and Senbet (1988) criticize DeAngelo and Masulis (1980) in that the model (only) partially recognizes the interaction between real and financial decision variables of the firm. Dammon and Senbet (1988) state that DeAngelo and Masulis did not fully incorporate the productive side of the economy and non-debt tax shields are exogenous in the model. The critique provides what it claims to be a more realistic look of the problem and shows that investment and optimal level of non-debt tax shields are endogenous. Thus, the endogenous- exogenous dichotomy adds another dimension to the debate on capital structure.

In a related work, Hodder and Senbet (1990) extend Miller's (1977) equilibrium theorem to the international setting. The stylized analysis was done in the context of perfect markets, differential international taxation and inflation. They state that if corporations engage in international tax arbitrage, no optimal capital structure exists for an individual firm. Thus, Hodder and Senbet (1990) show that Miller's equilibrium analysis can be extended to the international setting. They concluded that differences in international tax rate alone are incapable of dictating a particular capital structure for an individual firm. On the empirical side, gearing ratios cannot be expected to be the same in different tax jurisdictions. Textbooks, for example Gitman (2000:505) and Brealey and Myers (1991), contain figures that show relatively higher level of debt for firms that are based in Europe and Asia. Rajan and Zingales (1995) reported that aggregate level permanent debt capital ratio in the G7 countries had been fairly similar over the 1984-1991 period. Ceteris paribus the Rajan and Zingales (1995) report, economists attribute the difference to extent of financial intermediation, differences in institutional structures governing bankruptcy policy, debt renegotiation and differences in the market for corporate control. The literature on international accounting adds accounting method differences as an additional explanation.

Studies that estimate the tax benefit of leverage followed the spirit of Modigiliani and Miller (1963). Kane, Marcus and McDonald (1984), Titman and Wessels (1988) and Fama and French (1998) estimate the value of the firm and the size of the tax shield from leverage assuming that the value function is linear; $V_L = V_U + T_c B^*$, where V_L and V_u respectively are the value of levered and unlevered firms. T_c is marginal corporate tax rate and B^* is the market value of corporate debt. Thus, over a perpetual period $T_c B^*$ is

*The University of the Witwatersrand, Johannesburg, Private Bag 3, Wits 2050, Republic of South Africa.
Email: Negashm@soa.wits.ac.za

Log in via your institution

Access through your institution

Log in to Taylor & Francis Online

Log in

Restore content access

Restore content access for purchases made as guest

Purchase options *

Save for later

PDF download + Online access

- 48 hours access to article PDF & online version
- Article PDF can be downloaded
- Article PDF can be printed

EUR 48.00

Add to cart

Issue Purchase

- 30 days online access to complete issue
- Article PDFs can be downloaded
- Article PDFs can be printed

EUR 159.00

Add to cart

* Local tax will be added as applicable

Related Research

People also read | Recommended articles | Cited by 7

Constrained leverage in a benchmark-relative framework

H Raubenheimer
Investment Analysts Journal
Published online: 18 Feb 2015

Information for

Authors

R&D professionals

Editors

Librarians

Societies

Open access

Overview

Open journals

Open Select

Dove Medical Press

F1000Research

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Help and information

Help and contact

Newsroom

All journals

Books

Keep up to date

Register to receive personalised research and resources by email

Sign me up

Copyright © 2026 Informa UK Limited Privacy policy

Cookies Terms & conditions Accessibility

Registered in England & Wales No. 01072954
5 Howick Place | London | SW1P 1WG

Taylor & Francis by informa