

What do we know about Capital Structure?

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Ongoing debate in corporate finance evolves around the factors driving corporate financing decisions and specifically the extent to which the mix of debt and equity derives from the existing theories of capital structure. Despite considerable amount of research, there are as yet no conclusive answers to these questions.

Extensive literature on capital structure has tried to reconcile the theory of capital structure with the empirical evidence. While a number of theories of capital structure (e.g. tradeoff, pecking order and market timing) have been proposed to explain the variation in debt ratios across firms, in fact there are many lines of enquiry in empirical studies on capital structure that remain unresolved. There is a stream of the empirical literature that focuses on firm-specific factors to investigate the determinants of capital structure. Titman and Wessels (1988), and Guo and Suliman (2010) document a series of factors that are correlated with leverage. Some of these firm-specific factors are profitability, liquidity, non-debt tax shields, uniqueness of the product etc. Rajan and Zingales (1995) offer empirical evidence on capital structure for a sample of G-7 countries, i.e., USA, Canada, Japan, UK, Germany France and Italy over the period 1987-1991. They concentrate on four factors that according to previous empirical studies are correlated with leverage: size, tangibility of assets, profitability and growth opportunities. They find evidence that the same four factors that are correlated in cross-section with firm leverage in the US are similarly correlated in the six other countries.

Our sample includes active and inactive listed US and UK firms to avoid survivorship bias. The US and UK sample period is from 1950–2002 and 1980–2002, respectively. We use panel data employing a double-censored Tobit estimator, a Fixed-Effects estimator and a regression model that is based on clustered standard errors. The latter accounts for cross-sectional and time-series dependence. We also run Fama-Macbeth regressions to take into consideration time-series effects. Finally, we perform two kind of tests for robustness. We adjust book and market debt ratio to consider cash balances. We also explore whether the coefficients of size, tangibility, profitability and growth opportunities remain robust over time.

We find that size, tangibility have a positive effect on debt ratios while profitability and growth opportunities have a negative effect on debt ratios for US firms. The coefficients of size, tangibility and profitability have the expected signs for UK firms. However, the evidence on the association between leverage and growth opportunities is mixed. While we document a negative impact of growth opportunities on market leverage, we show that there is no effect of growth opportunities on book leverage for UK firms. Fama-Macbeth estimates of size, tangibility, profitability and growth opportunities confirm our core findings. With respect to robustness tests, we provide evidence that size, tangibility, profitability and growth opportunities enter with the expected sign. We also find that size is sensitive across time for US firms and especially for the subperiod 1950–1980. For UK firms growth opportunities is vulnerable across the two subperiods 1980–1991 and 1992–2002. We find no evidence on the effect of growth opportunities on book leverage with respect to the two periods 1980–1991 and 1992–2002. We also find a negative association between growth opportunities on market leverage for the period 1992–2002, which is inconsistent with previous studies.

References

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