

Three Essays on Capital Structure and Corporate Cash Holdings

by

Brian John Clark

An Abstract of a Thesis Submitted to the Graduate

Faculty of Rensselaer Polytechnic Institute

in Partial Fulfillment of the

Requirements for the degree of

DOCTOR OF PHILOSOPHY

Major Subject: Management

The original of the complete thesis is on file
In the Rensselaer Polytechnic Institute Library

Examining Committee:

Iftekhhar Hasan, Thesis Co-Adviser

Bill B. Francis, Thesis Co-Adviser

Yawen Jiao, Member

Kose John, Member

Rensselaer Polytechnic Institute
Troy, New York

May 2010
(For Graduation August 2010)

ABSTRACT

This dissertation consists of three related empirical studies that examine corporate cash holdings and capital structure decisions. I begin by examining the determinants and implications of corporate cash holdings. I then examine how the need to maintain financial flexibility impacts capital structure decisions, both within the U.S. and in a large international sample.

In the first chapter, I show that geographic location impacts corporate cash holdings within the U.S. I find that rural firms hold significantly less cash than similar urban and small city firms. The findings are robust to controlling for various firm characteristics such as size, growth opportunities, leverage, and payout ratios. They are also robust to the estimation methodology, the definition of cash holdings, the sample period, and the sample of firms. Contrary to the argument that advances in information and communications technologies should mitigate the impact of geography on finance, I show that the difference in cash holdings between rural and urban firms appears to be widening over time.

Overall, the results in this chapter show that the speculative motive for holding cash is a primary determinant of corporate cash holdings. I find no evidence that managers of rural firms, whom are more costly to monitor than managers of urban firms, are excessively hoarding cash or wasting cash reserves. In fact rural firms actually invest less than similar urban firms. Further, the results are consistent with the notion that urban firms have better growth prospects as compared to rural firms and they tend to build up their cash reserves to ensure they have adequate financing when investment opportunity arises.

In the second chapter, I empirically test how the need to maintain financial flexibility impacts capital structure decisions in a large sample of publicly traded U.S. firms from 1971 to 2006. Using the marginal value of cash to proxy for the marginal value of financial flexibility, the results shed light on several important capital structure questions. First, I show that when the marginal value of financial flexibility is high, variables traditionally shown to impact leverage (e.g., profitability, depreciation and amortization expense, fixed assets, etc.) become less important and explain less of the observed variation in leverage. This is consistent with the notion that financial

flexibility is of first-order importance when firms make capital structure decisions. Second, the results show that firms that have a high marginal value of financial flexibility tend to preserve debt capacity in the current period but are significantly more likely to embark on intentional, but temporary, deviations from their target leverage ratios in the near future. Further, firms which have a high marginal value of financial flexibility that do raise large amounts of financing in the current period are significantly more likely to issue equity than transitory debt in order to preserve debt capacity. This result helps to explain why young, high-growth firms tend to have lower debt ratios than the pecking order or traditional tradeoff models predict. Finally, I show that once the marginal value of financial flexibility is included in a dynamic partial adjustment model, it explains the asymmetric adjustment speeds reported in the literature. That is, I show that it is primarily the firms with the highest marginal value of financial flexibility that tend to be reluctant to lever up when they have below their target leverage. Overall, my results highlight the need to account for the marginal value of financial flexibility in empirical tests of capital structure theory.

The third chapter extends the work of the previous chapter to a large international sample of firms from 43 countries. I show that the marginal value of financial flexibility is increasing in country-level shareholder protection rights and growth opportunities while it is decreasing in financial market development. I also show that across countries, the need to maintain financial flexibility has a significant impact on capital structure decisions, and that its impact varies not only with firm specific variables, but also country-level variables. Finally, I show that the role of financial flexibility is stronger in developed countries as compared to developing countries.

In addition to being the first study to empirically examine the impact of financial flexibility on capital structure decisions in an international context, my results help to explain why previous studies have yet to come up with a consensus as to how firms make capital structure decisions. In particular, tests that do not account for the marginal value of financial flexibility essentially suffer from an omitted variable bias. Moreover, the magnitude of the bias depends on the marginal value of financial flexibility, which I show to vary across countries.