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Overconfidence and optimism: The effect of national culture on capital structure

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ABSTRACT

This study assesses whether variations in capital structure across countries can be explained by cultural traits. We analyze capital structure choices of firms in 42 countries and provide evidence that these decisions are affected by the degree of individualism of the country where the firm is located. We assert that managers in countries with high level of individualism exhibit strong optimism and overconfidence which cause an upward bias in perception of supportable debt ratios. Our results are robust to controlling for other firm- and country specific determinants of capital structure choices and to using alternative model specifications and estimation techniques.

1. Introduction

The empirical literature on corporate finance has shown that financial decisions depend systematically on certain factors. Much of the research since the irrelevance results of Modigliani and Miller (1958) has focused on testing the implications of the three principal views of capital structure: the classic trade-off model, in which firms follow a target capital structure that balances costs and bene-

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fits of debt; the agency framework, where agency costs are added to the lists of costs and benefits of debt; and the pecking order hypotheses, in which firms obey a financing hierarchy designed to minimize adverse selections costs of issuing securities. Newer approaches to rationalize capital structure decisions include the market timing or strategic effects of financing. Empirical work finds abundant support for the three major theories of capital structure (e.g. Marsh, 1982; Bradley et al., 1984; Long and Malitz, 1985; Friend and Lang, 1988; Titman and Wessels, 1988; Frank and Goyal, 2009).

Previous papers examining capital structure across countries further provide evidence that a firm's capital structure choices are not only influenced by firm-specific factors but also by country-specific factors (e.g. Rajan and Zingales, 1995; Demirgüc-Kunt and Maksimovic, 1998; La Porta et al., 1998; Claessens et al., 2001; Booth et al., 2001; Giannetti, 2003; De Jong et al., 2008; Fan et al., 2013). These papers focus on institutional differences between countries, particularly regarding the legal and economic environment. We assert that besides institutional factors the cultural background of a society requires consideration for explaining cross-country differences in capital structures.

This study examines the determinants of capital structure introducing a behavioral perspective based on cultural differences. Specifically, we investigate whether firms in individualist countries have more levered financing structures. Individualism is linked to overconfidence and optimism bias. Both biases are extensively documented in behavioral research and related to capital structure decisions. Managers in highly individualist countries are prone to optimism and overconfidence bias; and are therefore more likely to choose higher debt leverage ratios. Optimist managers overestimate firm profitability and prefer debt to equity as they perceive their firm's equity as severely undervalued (Heaton, 2002; Hackbarth, 2008). Overconfident managers believe that the volatility of the firm's cash flow is lower than it actually is and therefore underestimate the expected cost of bankruptcy and take on more debt (Hackbarth, 2009).

This paper extends prior theoretical research in corporate finance which has begun to recognize that managerial decisions may be affected by behavioral biases in an international context. We contribute to the literature by examining whether observed cross-sectional differences in firms' capital structures can be better explained by considering these managerial traits. To the best of our knowledge, there is no cross-country assessment of whether managerial traits of optimism and overconfidence are helpful in explaining differences in financing decisions across countries. This paper helps to fill this important gap and contributes significantly to our understanding of the nature of differences in capital structure and its international determinants.

Our empirical analysis substantiates the hypotheses predicted in prior theoretical work. Countries that score higher on individualism have firms with significantly higher debt ratios. Our study encompasses 42 countries and our final database comprises more than 23,000 firms with available data. We use the standard determinants at the firm and country levels as control variables in order to isolate their effects on capital structure choices. Specifically, we control for the firm-specific variables size, growth, tangibility, profitability, depreciation, stock performance, and industry classification. We also incorporate a large number of country-specific variables, including civil law, bankruptcy code, investor protection, auditing standards, bank deposits, and state of development. We document that firms' external financing choices are significantly impacted by behavioral biases rooted in cultural differences. Our findings are robust to alternative model specifications and estimation techniques. The principal result of our analysis adds to the increasing evidence that considering cultural characteristics increases the understanding of corporate financial behavior.

The rest of the paper is organized as follows. In Section 2, we discuss prior literature on capital structure theory. In Section 3, we explain the link between national culture and firm leverage. In Section 4, we describe and summarize our data. In Section 5, we study the relation between individualism and collectivism and corporate leverage. Section 6 concludes.

2. Literature review

Theory suggest that firms select capital structures depending on attributes that determine the various costs and benefits associated with debt, equity or some other form of financing. Prior literature mainly emphasizes three focal theories to explain a firm's choice of capital structure: the trade-off model, the pecking order hypothesis and the agency framework.