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Religiosity and risk-taking in international banking

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ABSTRACT

We examine the relationship between religiosity and risk-taking in the international banking sector. Previous research indicates that individuals who are more religious have greater risk aversion. Additionally, prior literature documents a positive relation between religiosity and both financial accounting transparency and timely recognition of bad news. Given timely recognition of future loan losses, religiosity could constrain excessive risk-taking through enhanced internal and external monitoring. We hypothesize and find that banks located in more religious countries exhibit lower levels of risk in their decision-making. We also demonstrate that banks in more religious countries were less likely to encounter financial difficulty or fail during the 2007–2009 financial crisis.

1. Introduction

The culture of a nation is an important determinant of economic growth and outcomes (Huntington, 1996; Inglehart and Baker, 2000) because it affects individual characteristics such as work ethic and honesty (Barro and McCleary, 2003). Culture encompasses many dimensions, including language, education, ethnic background and religion. Guiso et al. (2004, 2008) assert that religion is more primitive than other cultural values and can be considered a primary driver of personal traits. Previous research demonstrates that religion affects a wide array of behaviors (e.g., crime, drug and alcohol abuse, health, marriage, etc.) that impact an economy (Iannaccone, 1998). Weber (1930) argues that religious practices and beliefs have important consequences for economic development. More recently, researchers in the disciplines of accounting and finance are focusing on the link between religion and corporate decision-making. Roundy (2009, p. 311) aptly observes "…there is growing evidence that the once distinct line between religious (and spiritual) belief and the workplace may be blurring". For instance, Morgan (2005) finds that the "traditional wall separating faith from work" seems to be crumbling at an accelerated rate and that religion no longer seems to be "a hat that can be removed and forgotten as soon as an employee enters the doorway of an office or factory".

Accounting/finance researchers emphasize two aspects of religion: (1) its role as an external monitoring mechanism, and (2) its relationship to risk aversion. Examples of

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the former line of inquiry include McGuire et al. (2012), who demonstrate that companies located in more religious areas have fewer incidences of financial reporting irregularities; they attribute this finding to religious social norms curbing unethical managerial behavior. Dyreng et al. (2012) show that companies are more likely to report bad news and less likely to restate financial statements when they are located in more religious areas. The latter line of this research is exemplified by Hilary and Hui (2009), who demonstrate that firms located in counties with stronger religiosity have lower asset and equity return variability due to more conservative investment policies. Ghoul et al. (2012) focus on the relationship between religion and a firm's cost of equity; they find that companies located in more religious counties have less costly equity financing and attribute this to religiosity diminishing corporate risk-taking. Our study adds to this second line of inquiry by documenting the relationship between several measures of religiosity and risk-taking in the international banking sector. It also relates to the first line of inquiry because financial reporting quality and timely recognition of losses will most likely constrain banks' ability to take risk (e.g. Bushman and Williams, 2012).

We use the *Bankscope* database to extract an international bank sample representing 30 countries, from the 2000–2006 pre-financial crisis period, in order to examine our main prediction that religiosity is negatively related to bank risk-taking. We employ three variables, *z*-score, asset return volatility, and net interest margin volatility, to characterize bank risk-taking during this period, and utilize data from the World Values Surveys (WVS) to capture the three dimensions of religiosity (i.e., cognitive (knowing), affective (feeling), and behavioral (doing)) that have been referenced by social psychologists (Cornwall et al., 1986; Parboteeah et al., 2008). The three religiosity variables are based on responses to WVS questions about religious membership, religious importance, and religious service attendance. We also extract the first principal component of these three variables to develop a summative religiosity variable.

The results of our analysis demonstrate that, as hypothesized, there is a significant negative relationship between the religiosity variables and bank risk-taking. During the 2000–2006 period, banks in countries with stronger religiosity took less risk, as proxied by *z*-score, asset return volatility, and net interest margin volatility. We find a significant positive relationship between capital adequacy (i.e., Total Equity/Total Assets) and the religiosity variables and a significant negative relationship between loan quality (i.e., Non-Performing Loans/Total Loans) and the religiosity variables; these two bank-specific risk measures are commonly employed by regulators to assess the health of banks. We also document a significant negative relationship between religiosity and bank trouble/failure during the 2007–2009 financial crisis. Banks in more religious countries were less likely to encounter financial difficulty or fail during this period; this may be attributed to their more conservative investment policies and lower risk taking in the preceding years.

We conduct several sensitivity tests to ascertain the robustness of our results. First, we verify that our main findings hold when we restrict the sample to include only large banks (i.e., banks with total assets greater than $100 million), when we exclude banks from the United States and Germany, and when we control for the cultural variables, individualism and uncertainty avoidance (Hofstede, 2001). We also obtain consistent results when we employ weighted regressions. In addition, we obtain robust results when we include loan types or bank types, or when we control for large shareholders or for number of local and foreign subsidiaries.

Our study makes several contributions to the extant literature. First, we add to the growing body of literature that examines the impact of cultural variables on economic outcomes (e.g. Stulz and Williamson, 2003; Chui et al., 2010). By focusing on religiosity, we are better able to address one of the criticisms often made of empirical work in this area (i.e., the issue of causality). Guiso et al. (2006, p. 24) observe "All work on culture and economics faces the problem that causality is likely to work both ways — from culture to economics and from economics to culture. The above definition of culture suggests an answer: to focus only on those dimensions of culture that are inherited by an individual from previous generations rather than voluntarily accumulated". As Becker (1996, p. 16) writes: "Individuals have less control over their culture than over other social capital. They cannot alter their ethnicity, race or family history, and only with difficulty can they change their country or religion. Because of the difficulty of changing culture and its low depreciation rate, culture is largely 'given' to individuals throughout their lifetimes". Moreover, religious practices, even when they respond to economic conditions, are modified over time only over centuries or even millennia (for example, (Botticini and Eckstein, 2005))".

Second, our results add to previous research (e.g. Hilary and Hui, 2009; McGuire et al., 2012) documenting that religion does have an impact on corporate decision-making. Indeed, while most of these efforts focus on religiosity within a single country (e.g., Dyreng et al., 2012; Ghoul et al., 2012), ours is one of only a few studies (e.g. Callen et al., 2011; Kanagaretnam et al., forthcoming) that take an international perspective. Third, we add to the well-established body of research that delineates the variables that characterize risk-taking in the banking sector (e.g. Laeven and Levine, 2009). Our results are particularly noteworthy from this perspective because religiosity, unlike the traditional bank risk factors, is a cultural variable. Fourth, we also contribute to research that seeks to identify factors that are associated with excessive risk-taking in the international banking sector and thereby contributed to the 2007–2009 global financial crisis (e.g. Fahlenbrach and Stulz, 2011). Banks in countries with higher religiosity had relatively stronger capital ratios and loan quality in the pre-crisis period and, therefore, were less likely to fail or encounter trouble during this period. This is compelling evidence that a cultural variable, religiosity, is able to minimize the negative impact of an exogenous shock to the economy.

The rest of this paper is organized as follows. We discuss the relevant literature and develop our hypothesis in Section 2 and outline the research design in Section 3. We discuss the data in Section 4, the empirical results in Section 5, and make concluding remarks in Section 6.