The Influence of Corporate Culture on Economic Behavior: Does Religion Matter in Corporate Decision Making in America? *

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Abstract: We examine how corporate culture influences firms' behaviors and, more specifically, how the level of religiosity in a firm's environment affects its investment decisions. We focus on one country (the U.S.) to minimize differences in legal and economic environments. Prior research suggests a positive link between individual religiosity and risk aversion. We find that this relation also influences organizational behavior. Specifically, firms located in counties with higher levels of religiosity display lower degrees of risk exposure as measured by variances in equity returns or in returns on assets. In turn, such firms require a higher internal rate of return before investing and exhibit a lower rate of investment either in tangible capital or in R&D. Their long-term growth is also lower. Finally, we document that CEOs are more likely to join firms with similar religious environment as their last firm when they switch employers. All results are both economically and statistically significant. They are robust to many alternative specifications that minimize the risk of omitted variables or endogenous relations.

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The role of culture in corporate decision making has not been widely studied in the economics literature. Yet, it seems intuitive that firms operating in different social environments would exhibit different behaviors. In actuality, firms do not make decisions, people do and what they do outside work is likely to affect the ways they make these decisions inside work. This study focuses on a specific example of social interactions and examines the influence of community religion on corporate decisions. This setting gives us an opportunity to operationalize the concept of corporate culture empirically. In addition, as noted by Iannaccone [1998], "studies of religion promise to enhance economics at several levels: generating information about a neglected area of "nonmarket" behavior; showing how economic models can be modified to address questions about belief, norms and values; and exploring how religion (and, by extension, morals and culture) affects economic attitudes and activities of individuals, groups and societies".

In fact, religion has long been part of economic thought. For example, Adam Smith [1776] suggests that participation in religion could be viewed as a rational action by which individuals enhanced the value of their human capital (Anderson [1988]). Later, Weber [1905] suggests that the Protestant ethic was at the core of the economic development of capitalism. Modern economic theory has revisited the analysis of religions. At the micro-economic level, religion has been linked to a large range of social

decisions (see Iannaccone [1998] for a review). This literature is now reasonably well developed and typically uses micro-level data to support empirical analysis. However, it says little about corporate decision making. A second, more recent stream of the literature has focused on religion and macro-economic growth. For example, Barro and McCleary [2003] find that macroeconomic development has a negative correlation with religious activity. Although this research provides valuable insights, the heterogeneity of the samples increased the risk of omitted variables. For example, religion, legal environment and economic structure are likely to the correlated in cross-country samples in ways that are difficult to disentangle (e.g., Zucker and Darby [1999]). Our study also considers the link between religion and economic development but focuses on one country. In doing so, we examine a sample that is very consistent in terms of financial development, legal structure, public infrastructure and productivity.

Specifically, we consider the effect of religious participation at the county level in the U.S. on corporate decisions made by firms located in this county. Prior research has suggested a negative correlation between an individual's risk aversion and religiosity. Indeed, Pascal's Wager could be seen as one of earliest examples of hedging strategy. Furthermore, as noted by Miller [2000], many classic studies of religion (e.g., Malinowski [1925], Hormans [1941]) emphasize the link between religion and the fear of uncertainty. These studies suggest that religion is sought by risk-averse individuals trying to reduce the subjective amount of risk and uncertainty in their lives. Later, Rokeach [1968] reports empirical evidence indicating that religious people tend to be more anxious. More recently, Miller and Hoffmann [1995] report a negative correlation at the individual level between religiosity and attitude towards risk and danger. This

result is also broadly consistent with the prior literature that finds a negative correlation between religiosity and various risk taking behaviors (e.g., crime, alcohol consumption, unsafe sex), although, admittedly, this behavior can also be influenced by moral dimensions and religious prohibitions.[1]

Our results suggest that this link between individual risk aversion and religiosity also influences firms' behavior. We find that firms located in U.S. counties with high levels of religiosity tend to exhibit lower risk exposure as measured by the variances in returns on assets (ROA) or in equity returns. When we decompose the total equity risk, we find that both the systematic and idiosyncratic components are lower for these firms. As a result of this risk aversion, the firms in these counties require a high internal rate of return before investing, which translates to higher undiscounted profits and to lower rates of investment (both tangible and intangible). Not surprisingly given this lower investment rate, their long-term growth (both expected and realized) is also lower. Our results are both statistically and economically significant. They hold in univariate tests as well as in multivariate Ordinary Least Squares (OLS) and Two-Stage Least Squares (2SLS) specifications. They hold when we control for a large number of social and economical variables, both specific to firms and counties. They also hold in many different sub-samples based on geography, industry composition and time periods. They are not sensitive to controls for non-linearities of the different variables. Our results are

[1] Our approach is motivated by prior research suggesting a link between risk aversion and religiosity. For example, Halek and Eisenhauer [2001] suggest that "As Geis (1993, p.12) explains, "According to social identity theory (Hogg and Abrams 1988; Tajfel, 1981) much of one's personal identity is derived from social group membership as one's nationality, ethnicity, religion and occupation – as well as from one's sex. We adopt and internalize the norms, values and attributes of our groups". Thus, for example, adherents of religions that proscribe gambling are less likely than others to engage in wagering as they attempt to conform to the group's expectations". However, although this prior work suggests that it is at least plausible that religion fosters this aversion, we are silent on whether this is the case or if risk-averse people are merely drawn to religious activity. It is sufficient for our purpose to show that there is a correlation at the individual level between religiosity and risk aversion.

largely cross-sectional in nature, but they also hold in either panel or pure time series specifications. In particular, we find that the religious environment Granger-causes the different aspects of the firm behavior we discuss above. These different tests minimize the risk that our results are driven by omitted variables or non-linearities. When we consider individual religious groups, we find that the effect is most consistent in counties where there is a large proportion of Protestants but Catholics also usually have a significant effect. The fact that both groups have a significant effect in spite of being strongly negatively correlated with each other suggests that our main results are not caused by an omitted variable correlated with religiosity. Finally, we consider a sample of CEOs who moved from one firm to another. We find that the degree of religiosity in the county where their former employer is located predicts the degree of the county religiosity of their new employer. This suggests that corporate culture affects the distribution of CEOs across firms.

We contribute to the literature by studying the effect of corporate culture on economic behavior and, particularly, on investment. Although the influence of corporate culture is frequently discussed in the popular press, we are aware of little empirical work on this topic in the economics literature, perhaps because of the difficulty of operationalizing this concept. We focus on religion as a significant sociological factor in part because extensive psychological theory provides a directional prediction on the religious effect. Our empirical results are consistent with our theoretical predictions and can be related to prior findings that relate macroeconomic growth with religious activity. Although the effect of religion on individuals and countries has been analyzed, we are aware of little research on its effects on organizations. We also expect that numerous

other non-economic factors also affect corporate behavior and have economic implications. For example, firms operating in an environment with a high level of inter-personal trust may behave in a different way than do firms operating in a highly litigious society.

The rest of this paper proceeds as follows. Section I reviews the previous literature and develops our hypotheses. Section II describes the sample and data sources. Section III presents the empirical setting and the results. We conclude in Section IV.

I Prior Literature and Hypothesis Development.

1) Economics and religion.

The economic analysis of religion can be broadly categorized into the micro and the macro level. At the micro-economic level, previous research has focused on the decisions of individuals and their religious affiliations on marriage (e.g., Lehrer and Chiswick [1993]), divorce (e.g., Heaton and Pratt [1990]), crime participation (e.g., Evans et al. [1995]), suicide (e.g., Bainbridge [1989]), drug and alcohol consumption (e.g., Cochran and Akers [1989]) or extra-marital sex (e.g., Thornton et al. [1992]). At the macro-economic level, a literature has emerged that seeks to understand the link between economic growth and religion. This literature can perhaps be traced back to Adam Smith. Anderson [1988], in his analysis of the *Wealth of Nations*, indicates that Smith attempted to show how the self-interest of the clergy and political leaders interacted with economic growth and development. In 1905, Max Weber related the development of capitalism to Protestantism and was perhaps the first to relate religion with risk taking. More recently, La Porta et al. [1999] use religion as a proxy for culture

in their study of government quality across countries. Stulz and Williamson [2004] find that a country's principal religion helps to predict the cross-sectional variation in creditor rights better than does a country's openness to international trade, its language, its income per capita or the origin of its legal system. They also find that religion is an important predictor of how countries enforce rights. Barro and McCleary [2003] find that macroeconomic development has a negative correlation with religious activity across countries. They report that economic growth responds positively to the extent of religious beliefs, notably beliefs in hell and heaven, but negatively to church attendance. Guiso et al. [2003] find that, across countries, religious beliefs are associated with "good" economic attitudes, where good is defined as conducive to higher per capita income and growth.

Although this research provides valuable insights, it is generally conducted using cross-sectional samples at the country level. This approach increases the risk of omitted variables. In other words, researchers face too many variables and do not have enough degrees of freedom in such samples to conduct powerful tests (e.g., Zucker and Darby [1999]). This also makes it more difficult to understand the exact mechanisms that link religion to economic decisions. Although some institutional settings can be traced back to theological considerations (e.g., usury laws), the complexity of religions and the multiplicity of religious doctrines make it difficult to link specific religious theories with actual behavior. For example, Weber was subsequently accused of "mischaracterizing Protestant theology, misinterpreting Catholicism, ignoring nonreligious sources of intellectual ferment" (Noland [2003]) in his analysis.

2) Religiosity and risk.

Therefore, instead of trying to ground our analysis on religious doctrine or institutions, we turn to the psychology and anthropology literatures. Prior research has suggested a negative correlation between risk aversion and individual religiosity. As noted by Miller [2000], many classic studies of religion (e.g., Malinowski [1925]) emphasize religion's ability to assuage fear and uncertainty. Empirically, Rokeach [1968] reports evidence suggesting that "people with formal religious affiliations are more anxious" (p.191), while Lerner and Keltner [2001] suggest that anxiety leads people to more risk-averse behavior. Miller and Hoffmann [1995] provide further support for the claim that religious people are more risk averse. They use data collected by Bachman et al. [1993] at the University of Michigan's Survey Research Center for a nationally representative sample of American high school seniors. They report a negative correlation between religiosity (measured by church attendance and a subjective rating of religion's importance in one's life) and self-reported attitudes towards risk and danger. In subsequent work, Miller [2000] reports cross-country results indicating that this relation is stronger in Western societies (Christian and Muslim) than in Eastern ones (Hindu and Buddhists). Using survey data on insurance purchase, Halek and Eisenhauer [2001] report a positive but weakly significant correlation between religion and risk aversion.[2] Finally, Deheija et al. [2005] report individual data suggesting that religious participants have less volatile income streams.

[2] Note that 95% of the observations in Halek and Eisenhauer [2001] are classified as belonging to religious groups and that a variable for each of the different groups (Protestant, Catholic and Jewish) are included. This specification is therefore more suitable for detecting differences across the different groups rather than investigating whether religion as a whole has an effect. Also, dummy variables are used to measure religious participation and no attempt is made to distinguish between the levels of religious activity. These issues may explain why the coefficients are positive but only weakly significant.

3) Individual characteristics and organizational behavior.

In turn, characteristics of individuals are likely to affect organizational behavior. For example, the link between individual and organizational characteristics has been studied in the personnel psychology literature. Schneider [1987] suggests that "attraction to an organization, selection by it, and attrition from it yield particular kinds of persons in an organization. These people determine organizational behavior". Schneider et al. [1995] review subsequent empirical evidence confirming the basic premises of this theory. This approach is built on earlier work. For example, Vroom [1966] shows that people choose to work in organizations that they believe will be most instrumental in helping them to obtain their valued outcomes. Tom [1971] shows that people prefer environments that have the "same" personality profile as they do. Holland [1976] reports that the career environments people choose tend to be similar to the people who choose them. This line of research suggests that organizations should be fairly socially homogeneous. It would seem natural to expect that the culture of an organization is generally aligned with the local environment of the firm. Managerial style, corporate culture, employees' preferences and investment behavior should all be congruent. To the extent that religious individuals cluster in a county, firms located in this county should employ a larger proportion of religious people at different levels of the organization. In turn, the extent to which religious employees, managers in particular, tend to be more risk averse should be reflected in a firm corporate culture and its behavior.

This hypothesis leads to different predictions about corporate decision making. For example, if employees are more risk adverse, they should avoid projects whose pay-

offs are more uncertain (i.e., these firms should have a lower risk exposure). Therefore, we expect that the standard deviations of ROA or equity returns for "religious firms" should be lower compared with those of other firms. As a consequence of risk aversion, these firms should also avoid projects whose profitability is more uncertain and require a higher internal rate of return before investing (i.e., their subjective discount rate for risky cash-flows should be higher). If this is the case, these firms will invest in projects with higher undiscounted cash-flows compared to those accepted by less risk-averse firms. Thus, the "religious firms" should experience a higher ROA. They should also invest less because this higher hurdle rate implies that fewer positive net present value projects are available to them. This prediction is consistent with the analytical work of Malinvaud [1983] and the empirical findings of Sauner-Leroy [2004] who both suggest that risk-averse firms invest less. Therefore, we expect that the investment rate, both in tangible assets and in research and development activities should be lower for firms located in a religious environment. [3] As a consequence of these behaviors, we also expect that the expected growth of these firms should be lower. In other words, firms in religious areas should have higher internal rates of returns on the projects they undertake (i.e., high ROA) but low growth (i.e., low equity returns) because their risk aversion leads them to invest in fewer projects.[4] To the extent that the risk tolerance of the shareholders and of

[3] An alternative explanation for our ROA prediction is that if firms invest less, they will presumably choose the most productive projects when they invest. Therefore, if risk-averse firms invest less, their returns on investment should be higher on average.

[4] For example, suppose two firms have the option of investing in a project with an equal probability of gaining 2 or losing .5 and a project with an equal probability of gaining .51 and losing .5. A risk-neutral firm will invest in both projects; a sufficiently risk-averse firm will pass on the second project. As a result, the average ROA will be higher for the risk-averse firm.

the firm is not aligned, this may create an agency problem.[5] However, we are agnostic on whether this is the case or whether there is a separation of shareholder clientele, by which the firms in more religious areas attract the more risk averse investors.[6]

II Sample and Data Sources.

1) Sample.

To test our predictions, we focus our study on the United States. This stands in contrast to previous work on economic growth and religion, which typically considered differences across countries at the macro level. The main advantage to focusing on one country is that we obtain a more homogeneous sample in terms of financial and economic development, legal structure, public infrastructure, and so forth. In addition, we can add a time series component to our analysis, whereas prior research has largely focused on cross-sectional approaches. Studying the U.S. is also advantageous because it has a higher level of religious practice than other countries but with a similar level of socio-economic development. For example, Iannaccone [1998] reports that weekly church attendance rates are four times higher in the U.S. than in Scandinavian countries. He also reports that the rates of church membership in the U.S. have increased throughout the past two centuries. The U.S. is overwhelmingly Christian, primarily Protestant, but has a relatively heterogeneous Christian population. This gives us a more favorable setting to

[5] Zhang [1998] offers a model in which the risk aversion of the main shareholder causes the firm to reduce its investment. More generally, investors are unconcerned with idiosyncratic risk only to the extent that they can fully diversify their portfolio. However, empirical research shows that many investors are not fully diversified. For example, Blume et al. [1974] report that the average number of stocks in portfolios was 3.4 in 1967. Several more recent studies (e.g., Goetzman and Kumar [2001], Benartzi [2001]) have reached a comparable conclusion. If investors are not fully diversified, they are concerned with the idiosyncratic risk and it is possible that they select the few firms they invest in according to their risk aversion. In this case, the risk profile of the managers and the shareholders may be aligned.

[6] For example, the home bias literature suggests that people tend to over invest in companies located in their immediate environment.

study religious diversity in comparison to many countries that are dominated by a single denomination (e.g., Catholics in Poland or Italy).

2) Data sources and main variables.

Our data on religiosity and religious composition come from the American Religion Data Archive (ARDA). We use the "Churches and Church Membership" files. This dataset was initially collected by Glenmary Research Center. It contains statistics by county for 133 Judeo-Christian church bodies, providing information on the number of churches and the number of members of each church in every county. Our main variable of interest is the degree of religiosity (*REL*) in the county where the firm is located. We calculate *REL* as the log of the number religious adherents in the county (as reported by ARDA)[7] to the total population in the county (as reported by the U.S. Census Bureau). Information on religiosity at the county level is available for three years (1971, 1980, and 1990). In our main tests, we linearly interpolate the data to obtain the values in the missing years (from 1972 to 1979 and from 1981 to 1989) but, as discussed below, our main results hold when we focus only on these three years. Following the prior literature (e.g., Coval and Moskowitz [1999], Ivkovic and Weisbenner [2004], Loughran and Schultz [2004], Pirinnsky and Wang [2006]), we define a firm's location as the location of its headquarters. As noted by Pirinnsky and Wang [2006], this approach seems "reasonable given that corporate headquarters are close to corporate core business activities". We then examine the effect of these variables on firm-specific characteristics

[7] ARDA indicates that "for purposes of this study, adherents were defined as "all members, including full members, their children and the estimated number of other regular participants who are not considered as communicant, confirmed or full members, for example, the "baptized", "those not confirmed", "those not eligible for communion" and the like."

such as risk exposure, investment behavior and growth. We obtain the data on these characteristics from Compustat and the Center for Research on Security Price (CRSP) database. As it is customary, we delete firms from the financial sectors (SIC code between 60 and 69). We also control for different county-level demographic characteristics using data obtained from the U.S. Census Bureau. We use the Compustat Company Location Code to match our county information with firm location. An issue with this approach is that Compustat only reports the current state and county of a firm's headquarter and therefore this introduces noise in the measurement of our variable. The number of firms that relocate is generally small. For example, Pirinsky and Wang [2006] find only 118 examples of relocation in a sample of more than 5,000 firms over 15 years. In addition, although the magnitude of the measurement error might be correlated with some of our dependent variables, it seems unlikely that this would be the case for the direction of the measurement error. Therefore, we do not expect our estimated coefficients to be systematically biased. Nevertheless, as explained in Section III, we allow for this potential problem in our empirical analysis.

3) Descriptive statistics.

Table 1 provides descriptive statistics on the level of religiosity. In panel A, we present overall statistics for the two main variables (*REL* and the breakdown between the different religious groups. The size of the standard deviations suggests a fair amount of variations in our sample. As expected, the largest religious group is represented by Protestants followed by Catholics. In Panel B, we present some geographical data by reporting the average value of *REL*. Utah, areas located in the Mid-West (e.g., North and

South Dakota, Wisconsin, and Minnesota) and Southern states (e.g., Louisiana, Oklahoma, and Texas) tend to be more religious. To have a sense of the religious diversity at the county level, we classifies the different churches into five main groups (Protestant, Catholic, Orthodox, other Christian such as the Church of Latter Day Saints, and Jewish) using the ARDA classification[8] and then formed an index similar to the Herfindhal one. The average religious Herfindhal index is high (73%). This and the relatively high number of counties with a value of one (6%) suggest that religious composition is relatively homogenous at the county level.

Table 2 presents a correlation table. In Panel A, we consider different demographic characteristics of the counties. We initially consider the six demographic variables analyzed by Iannaccone [1998] as possible determinants of religious participation at the individual level: education, sex, income, minority status, marriage status and age. Specifically, we consider the educational attainment defined as the percentage of people 25 years and over having a bachelor's, graduate, or professional degree (*Edu*), the male to female ratio (*Male*) in the county, the average money income by state (*Money*), the percentage of minorities (*Minority*), as well as the percentage of married people (*Married*) and the median age of the population (*Age*) in the state.[9] We also consider the size of the population in the county (*Totpop*). *REL* is significantly correlated with the different demographic control variables, but the correlations among

[8] http://www.thearda.com/RCMS/2000/Denoms/Denominations.html. Details are provided in Appendix A. This database ignores non Judeo-Christian denominations but these groups are demographically marginal in the USA.

[9] We obtain education data by state for the year 1990 and extrapolate the data based on national data in 1970, 1980 and 1990. We obtain data on married households and minorities for the years 1970, 1980 and 1990. We obtain data on income for the years 1965-1989 every five years. We obtain data on the male-to-female ratio in 1990 and 2000. We obtain data on the median age in 1980 and 2003. We linearly interpolate the data between these years. We also obtain data on cross-sectional variations at the county level for *Edu, Money* and *Male* in 2000 as well as *Minority* in 1989. We use this structure to obtain county-specific values for these variables. Results hold (untabulated) if we use the log of the variables instead of the ratio.

the demographic variables are reasonably low. The only exception is between *Married* and *Age* (-0.77). Therefore, we exclude *Age* in our main tests but our main results (untabulated) are unaffected when we include this additional control variable.

In Panel B, we consider six firm-specific variables: *StdRet, ROA, Inv, RD, Growth* and *StdRoa*. *StdRet* is the log of the standard deviation of the daily return calculated on a yearly basis. *StdRet* can be seen as a direct measure of risk supported by the firm. The more risky the firm is, the more its returns vary.[10] *ROA* is the ratio of Compustat item 18 to item 6 lagged by one year. *Inv* is the investment rate in tangible capital (calculated as the ratio of Compustat item 128 to item 8 lagged by one year). *RD* is a measure of research and development activity (the ratio of Compustat item 46 to item 6 lagged by one year). *Growth* is the log of the ratio of market value of equity (as reported in CRSP) to the book value of assets (Compusat item 6 + item 199 times item 25 minus items 60 and 74, scaled by item 6). *StdRoa* is the standard deviation of *ROA* from year t-5 to t+5. Results indicate that religiosity is negatively correlated with all the corporate characteristics considered except profitability (where the correlation is positive): firms located in more religious counties appear to take less risk, to be more profitable, to invest less in tangible and intangible assets and to have lower expected growth. These univariate results are consistent with our expectations. In addition, our numerous dependent variables are not highly correlated. The use of multiple, reasonably uncorrelated, variables mitigates the risk that our results are due an omitted variable in any given regression.

III Empirical Setting and Results.

[10] We obtain very similar results when we use the standard deviation of price instead of returns.

1) Main Specifications.

We extend our univariate correlations from Table 2 by using regressions that control for multiple variables. We start this analysis by considering the influence of county religiosity on the amount of risk taken by a firm and on different related corporate aspects. Our model is the following:

$$FLC_{i,t} = \alpha_1 + \beta_1 REL_{i,t} + \delta^k Demo_{k,i,t} + \gamma^j Controls_{j,i,t-1} + \varphi^y Years_{y,t} + \varepsilon_{i,t} \qquad (1)$$

where *FLC* is a vector of firm-level characteristics defined in Section II (*StdRet, ROA, Inv, RD* and *Growth*). *Demo* is a vector of county-level demographic characteristics also previously defined (*Totpop, Edu, Male, Money, Minority, Married*). We include these control variables because they have been shown to be correlated with religious participation and we want to make sure that *REL* captures the effect of religious participation *per se* as opposed to simply being correlated with other demographic characteristics. We do not have strong predictions concerning the effect of these control variables (after controlling for *REL*), although we would expect that education and, perhaps, wealth should be correlated with corporate behavior more conducive of growth and investment. Similarly, the presence of men (as opposed to women) might be associated with more risk taking behavior (e.g., Levin et al. [1988], Powell and Ansic [1997]). *Control* is a vector of firm-specific control variables. Specifically, we consider *Size* (the log of annual sales as reported in Compustat, item 12),[11] *Liquidity* (the ratio of cash balance, items 14 and 18, to item 8 lagged by one year) and two measures of profitability, *ROA* (the ratio of Compustat item 18 divided by item 6 lagged by one year)

[11] Results are similar when we use the log of total assets or the log of market value.

and *Loss* (a dummy variable that takes the value of one if ROA is negative, zero otherwise). We lagged these control variables by one period to mitigate any endogeneity issue. We expect that firms that are smaller, more leveraged and more prone to losses should be more positively correlated with risk. All our variables are winsorized at the 1% level. We also include (but do not tabulate) dummy variables for each year.

2) Main Results.

We present our main results in Table 3 using Ordinary Least Squares (OLS) estimation. All standard errors are robust and are corrected for clustering of observations by firms (clustering by years or using bootstrapped standard errors gives very similar results). They indicate that the effect of religiosity is negative for all variables; the only exception is ROA, which has a positive coefficient as expected.[12] An F-test also indicates that the five variables are jointly significant (p-value=0.000). When we decompose the total equity risk using the Capital Asset Pricing Model (CAPM), we find (untabulated) that both the systematic and the idiosyncratic components are lower for "religious firms". Results (untabulated) also hold when we substitute a measure of realized growth (the log of the change in market value over ten years) instead of our *ex-ante* measure. These different results corroborate our univariate results reported in Table 2 and support our hypotheses. The economic magnitude is also significant. An increase in one standard deviation of *REL* leads to a decrease of more than 20% in the median expected *Growth*. The corresponding numbers for *StdRet*, *StdRoa, ROA*, *Inv* and *RD* are approximately 1%, 10%, 14%, 7% and 15% respectively.

[12] Given that information concerning R&D is missing for many firms, we estimate a Heckman selection model for this specification. Results (untabulated) still hold.

When we turn our attention to the control variables across the different estimation procedures, only *Edu* is consistently and positively associated with risk taking, investment and growth. The other demographic variables have a much less consistent effect across our estimation procedures, although *Mone*y is positively associated with investment. The lack of robustness and consistency of these demographic variables stands in contrast to the coefficients for *REL*, which is consistent across all the different specifications. On the other hand, the firm-specific control variables have a more stable effect. For example, we find the unsurprising results that bigger firms are more stable than smaller ones or that levered firms tend to be more risky and to invest less. The R-square is reasonably high in the different regressions (generally around 10-40%).

Our results also hold (untabulated) when we include lagged values of *Growth, Inv* and *ROA* as additional control variables in our *StdRet* regression, when we include *StdRoa, Inv* and *Growth* in the *ROA* regression, *Growth*, *StdRet* and *ROA* in our investment regression or *StdRet*, and *ROA* and *Inv* in the *Growth* regression.

3) Robustness checks for the main results.

Having established a link between religiosity and firm behavior, we then perform different tests to evaluate the robustness of our results.

a) Sample Size.

First, we address the concern that our results may be driven by large sample size. We run our regressions using the three years for which we have direct data on religiosity (1971, 1980 and 1990). Although our sample size is smaller by approximately seven fold, our results (untabulated) still hold. In addition, we redo our regressions at the

county level. We perform this additional test to address the concern that our observations may be clustered in a limited number of counties. To do so, we calculate the average values of the different variables over the entire sample period (1971-1990) and we re-run our regressions treating each county as one observation (standard errors are robust and are corrected for clustering of observations by states). Although this purely cross sectional specification remove any temporal variations and drastically reduces the power of our tests, all variables remain significant at the conventional levels (as reported in Table 4). In other words, our results are not a statistical artifact created by the large sample size.

b) Omitted Variable.

Another related concern is the possibility that our results are driven by an unspecified omitted variable. For this to be true, however, the omitted variable would have to be correlated with religion but uncorrelated with the factors known to explain religiosity at the individual level. It would also have to be correlated with our many different dependent variables in a way consistent with our findings. Nevertheless, we perform several tests to further mitigate this concern.

First, we add an array of additional variables to our basic specifications. We find that our results (untabulated) hold when we include dummies for each 2-digit industry, when we include state dummies (to control, for example, for differences in the legal and cultural environment or in labor costs) or when we calculate the religiosity at the state rather than the county level. They also hold when we include a long list of cultural variables including different measures of education level,[13] the suicide rate,[14] the alcohol

[13] We use the current expenditure per pupil, average pupil/teacher ratio in public elementary and secondary schools during Fall 1994, the estimated average annual salary of teachers in public elementary and

consumption rate, the abortion rate,[15] the percentage of Republican voters during presidential elections,[16] the log of the number of years that a given state has belonged to the Union, the existence of a death penalty law in the state, the number of prisoner executions in the state between 1976 and 1990 (both the raw number and the number deflated by the state population), the percentage of the state population incarcerated.[17] Results also hold when we include different measures of state attractiveness for businesses: business costs, labor quality, regulatory environment, economic climate, growth prospect and quality of life.[18] They also hold when we control for economic variables such as the number of banks or banking branches in the state in 1992 (both unscaled or scaled by the population of the state) and the average weekly wage in the county (as reported by the Bureau of Labor Statistics). Our results also hold (untabulated) when we control for the age of the firm, its effective tax rate, and a measure of liquidity constraint (as defined in Lamont et al. [2001]). Finally, the results are robust to substituting county density for county population and to adding the average county density in the state (to control for the density of the surrounding counties).

Further, we re-estimate our models in more homogenous sub-samples. In particular, we restrict our data to the six states in the South west (Arizona, California, Colorado, Nevada, New Mexico and Utah). This sub-sample has both a high degree of geographical homogeneity and religious heterogeneity (Utah is the most religious state, New Mexico is the 10th most religious state, Arizona the 12th least religious, California

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secondary schools, the percentage of all eligible students taking the SAT and the average SAT score in 1994-95. We obtained the data at http://www.stat.ucla.edu/datasets/view_data.php?data=30.

[14] We use the state values for the 1981 to 1990. We use the 1981 value for years prior to 1981. We obtained the data from www.cdc.gov.

[15] We obtained the data for both alcohol consumption and abortion at http://pubs.niaaa.nih.gov.

[16] We linearly interpolate between years.

[17] We obtained the data at www.deathpenaltyinfo.org

[18] We obtained the data from http://www.forbes.com.

the third least and Nevada the least). The different demographic control variables are also reasonably homogenous (e.g., except for *Money*, the different state averages are usually within 10% of the average for the sub-sample). Our results hold in these six states (in fact, they also hold if we restrict our sample to the four Western states and exclude New Mexico and Colorado or if we add two-digit SIC code dummies). Similarly, they hold when we split our sample between Northern and Southern states, between Western and Eastern states,[19] between states starting with a letter before and after L (a random geographical partition), between rural and urban counties (using the median county density as a cut-off point), between manufacturing and service industries (using SIC code 4000 as a cut-off). The results hold when we further limit our sample to coastal states, or when we split our sample in two time periods (from 1971 to 1980 and from 1981 to 1990). To further ensure that our results are not driven by the industry composition of our sample, we calculate the mean of *REL* for each 2-digit industry. We then delete observations from industries where the distance between the industry mean and the sample mean is greater than two standard deviations of the industry means. We then run our baseline regressions in this truncated sample. Results (untabulated) hold. In fact, the results hold when we delete industries up to a quarter of a standard deviation. All the variation of *REL* due to industry composition is essentially removed at that point. These results confirm the ones we obtain when we include industry dummies or when we split the sample based on industry composition.

Next, we statistically assess the degree of omitted variables bias by using the approach described in Altonji et al. [2005]. To do so, we perform two additional tests.

[19] The one exception is that *REL* is insignificant in the sub-sample of Eastern states sub-sample, when *Growth* is the dependent variable. Following the US Census, we use the Illinois-Alabama line has a separation between east and west.

First, we redefine our continuous *REL* as a binary one (called *BinRel*) that takes the value of one if *REL* is greater than the median value (zero otherwise). We re-estimate our baseline models, substituting *BinREL* for *REL*. We find that our conclusions are unchanged when we use this binary specification. We then estimate the ratio of selection on observables to selection on observables that would be required if one is to attribute the entire effect of religiosity to selection bias. We find that that selection on observables would need to be extremely high (more than 4.6) to explain our results. With a value of 3.55, Altonji et al. [2005] conclude in their study that it would "seem extremely unlikely" that an omitted variable would explain the result in this situation. Second, we replicate our results omitting all the demographic control variables. Our results are not drastically changed, suggesting that the omission of demographic control variables is not driving our results.[20]

Finally, although our results are largely cross-sectional in nature, we estimate a county-level panel specification.[21] The statistical significance becomes stronger, even though this specification is quite taxing because religiosity is reasonably stable over time.

c) Non-linearities.

We also perform different tests to ensure that our results are not caused by non-linearities in the data, particularly in *size* (our most significant control variable). First, we replace each control variable by nine dummy variables representing whether the value of a given variable belongs to its corresponding deciles. Second, we form a matched sample on firm size. Third, we split our sample between small and big firms (using the median

[20] The median change is 14% excluding the R&D regression where the coefficient changes by 50%. If we replicate the tests using state dummies, tour results go through and the median change in the coefficients is 1.4%

[21] We use a firm-specific random-effect model with a correction for serial correlation but omitting the year dummies. A Hausman test is inconclusive on if this specification is appropriate.

size as a cut-off point). Fourth, we re-estimate our models using Median Least Squares procedures, a technique less sensitive to the presence of outliers. Results (untabulated) hold in all cases. Lastly, we obtain a predicted value for the dependent variables using the baseline model describe in equation (1) but excluding *REL* from the regressions. We then divided the overall sample in three groups based on the religiosity. We form a matched sample based on the predicted value of the dependent variable using an equal number of observations from the highest and the lowest religiosity group. We then study if there is a systematic difference between the mean and the median of the dependent variables between the matched sample (we do this both pair-wise and overall). Results are consistent with our hypotheses. The mean and median of *StdRet*, *StdRoa*, *Inv*, *RD* and *Growth* are lower for the firms located in a more religious environment and the opposite is true for *ROA* (p-values=0.000 in all cases). Binomial tests also confirm these results (p-values=0.000 in all cases). We conclude that non-linearities in the data are unlikely to drive our results.

Overall, all these different procedures suggest that our results are statistically robust and that they are unlikely to be driven by the sample size, an omitted variable or non-linearities in the data.

4) Causality.

We then investigate whether the correlations found in the previous specifications can be understood to be causally linked. In other words, does the religious make-up of the population cause firms to behave in a certain way or does the behavior of firms attract

certain people of certain faiths or no faith to live in the county?[22] To answer this question, we perform three additional tests.

First, we reproduce our Ordinary Least Squares (OLS) results using a Two-Stage Least Square (2SLS) approach. Aside from investigating causality, using a 2SLS approach has two additional advantages. First, it mitigates the effect of any potential measurement errors in the level of religiosity (although it is not immediately obvious why this measurement error should be correlated with dependent variables such as the variance in a firm's returns, or investment rate). Second, an instrumented variable approach removes the estimation bias caused by an omitted correlated variable if the instruments are uncorrelated with this omitted variable and are sufficiently correlated with the endogenous elements of the variable of interest (Wooldrige [2002]). Although we cannot test if these two conditions are met in our specifications, the 2SLS approach provides an additional assurance against the risk that our results are driven by an omitted variable. We use *REL* lagged by three years as a first instrument in all specifications. In addition, we use the county population lagged by three years, except in the *RD* specification where we use the median age of the population lagged by three periods. The first-stage F-statistics in the first-stage regression are very high (p-value=0.000) and the Hansen J test fails to reject the orthogonality condition (p-values are between 0.63 and 0.80), suggesting that the instruments are both valid and adequate. Again, standard errors are robust and are corrected for clustering of observations by firms. We tabulate

[22] As noted in footnote 1, we do not investigate the issue of whether religiosity at the individual level causes a higher risk aversion. Since our purpose is to study the effect of demographic make-up of the population on firm behavior, this interesting question is irrelevant for our study.

our results in Table 5.[23] They are similar to the results reported in Tables 3 and 4. *REL* is significantly negative in all specifications, although the magnitude of the coefficients is slightly smaller. Results are also similar when we use the 2SLS specification with county random effects.

Second, we repeat our OLS specifications but lag *REL* by three and five years. Our results (untabulated) are unaffected. We then lag our six variables of interest (*StdRet*, *StdRoa*, *ROA, Inv*, *RD* and *Growth*) by three or five years. We regress *REL* on these lagged values, controlling for our demographic control variables. None of the six variables of interest is significant (untabulated). These results suggest that the religious composition of a county affects its firms' behaviors, although it remains plausible that the differences in firms' behavior also affect differences in county demographics.

Third, we calculate the mean (and the median) of each variable on a yearly basis. Thus, we obtain a pure time series of our different variables. We use a balanced panel to calculate these time series (to make sure that our results are not caused by firms entering or leaving our sample or changing location) but results are similar when we use an unbalanced one. Chi-square statistics indicate that *REL* Granger-cause the effect on our dependent variable. This result holds when we use the time series of either the means or the medians (the p-value=0.000 for all cases).[24] In other words, our results not only hold both in panel and in pure cross-section specifications but they also hold in pure time series tests. A standard criticism of the Granger causality test is that the time series could be capturing expectations about future behavior. This alternative explanation would imply in our setting that the religious composition of a county would change because

[23] Tabulated results exclude state dummies but our results are similar when we include these additional variables.
[24] We use a three-year lag specification in the Granger-causality test.

people would expect that the standard deviation of return, for example, should decrease in the future. This strikes us as implausible.

We conclude from these different tests that a change in the religious environment of the firm is likely to cause a change in the behavior of the firm.

5) Religious affiliation and firm behavior.

To interpret our results, we then consider potential differences across religious groups. To this end, we form two variables similar to *REL* but we separate the two main religious groups (Protestant and Catholic).[25] We then estimate a model similar to (1) but with a proxy for religiosity for each denomination. Results reported in Table 6 indicate that Protestants are most consistently associated with corporate risk aversion. *Protestant* is significant in all six regressions and the F-test indicates that the variable is jointly significant in the five regressions. This result is perhaps surprising given the Weberian perception that the Protestant work ethic has a positive effect on growth. However, more recent studies suggest that the analysis done by Weber was incorrect (see Iannaccone [1998] for a review). Our result reveals the complexity of religious phenomena. *Catholic* has also the predicted sign and is significant (except for *Growth*) but the magnitude and the statistical significance are lower than for *Protestant* in all regressions. This result is interesting because counties are mostly religiously homogenous, which leads to a negative correlation between *Protestant* and *Catholic* (-0.62, p-value=0.000). The fact that both *Protestant* and *Catholic* are significant in spite of being strongly negatively correlated suggests that *REL* does not proxy for a correlated omitted variable in our main tests. The variance inflation factors (VIF) for *Protestant* and *Catholics* are

[25] We do not analyze the other denominations given their small demographic importance.

around 3, well below the commonly accepted threshold of 10, suggesting that multicollinerity is not driving this additional finding.

We then investigate if our results are exacerbated by the most conservative Protestant denominations. On the one hand, conservative Protestants appear to be more involved in religious life. For example, they are more likely to go to church or to make financial contributions to religious institutions. On the other hand, it is not clear that their theological conservatism translates into different attitudes toward business activity (see Iannaccone [1998] for a review of these different arguments). Therefore, we treat this issue as an empirical question. Again, we follow the ARDA typology to record a denomination as conservative or not to obtain an external validation on the classification but we acknowledge that this classification contains an element of subjectivity. According to this typology, "charismatic" or "pentecostal" churches are classified as conservative. A list of conservative denominations is provided in Appendix A.[26] Specifically, we define *ConsProt* as the analog of *Protestant* for conservative denominations. Our results (untabulated) indicate that more conservative denominations are associated with lower growth and RD efforts. The coefficient in the *StdRet, StdROA, ROA* and *Inv* is also negative but is not significant at conventional levels. A joint test indicates that *ConsProt* is jointly significant in the six regressions (p=0.000). *REL* remains significant in all regressions. We conclude that conservative denominations tend to exacerbate our findings but that the effect is not very robust, perhaps because our classification is too crude.

[26] The correlation between *REL* and *ConsProt* is only 11.6%, suggesting that multi-collinearity between the two variables is not an issue.

6) Religiosity and CEO.

Finally, we finish our empirical analysis by considering the effect of corporate culture on CEO selection. We mentioned in our hypothesis development section that we expect that managerial style, corporate culture and investment behavior should be congruent. However, it is difficult to obtain a direct measure of the religiosity of the CEO. Therefore, we use an indirect approach to explore this idea and we examine a sample of 59 CEOs who changed employers from 1991 to 2003.[27] We regress the religiosity of the county where the new employer is located on the religiosity of the county where the former employer is located.[28] Results tabulated in Table 7 indicate that the later is a predictor of the former. This is consistent with the observation that CEOs consistently choose to work for organizations that are likely to exhibit the same culture.

IV. Conclusion.

Our primary objective is to examine if the level of religiosity in a firm's environment affects its corporate behavior and investment decisions in particular. Our results complement findings at the country level relating growth to religion but we focus on a single country (the U.S.) with a high level of religious activity. Therefore, all the firms in our sample are located in very similar legal and economic environments. Prior research in psychology and anthropology has suggested a negative link between individual religiosity and risk aversion. We find that this relation also influences organizational behavior. Specifically, firms that are located in a U.S. county with high levels of religiosity exhibit lower risk exposure as measured by the variance in equity

[27] We thank Yuk Ying Chang and Sudipto Dasgupta for providing this dataset to us.
[28] We use religiosity as reported by ARDA for the year 1991. The standard errors are corrected for heteroskedasticity.

returns and in ROA. They have a higher ROA, consistent with a higher required internal rate of return. They tend to invest less in capital and engage less in R&D activity. Not surprisingly, their long-term growth is also lower. Finally, we find that CEOs tend to join firms with a similar culture after they leave their current employer. The effects are both economically and statistically significant. They are robust to different specifications (including a 2SLS approach and a Granger-causality test, suggesting that there is a causal relation between the demographic environment of the firm and its behavior). In particular, we perform different checks to ensure that these results are not driven by omitted variables. For example, we use a multiplicity of dependent variables to ensure that our results are not attributable to any particular construct. We also control for numerous variables (including the demographic control variables that have been showed to be correlated with religiosity at individual level). Our results are also robust to different panel specifications. They hold in pure time series and in pure cross-sectional specifications, indicating that any correlated omitted variable would have to be associated with both the geographical and temporal variations of religiosity. The results of a test described by Altonji et al. [2005] also suggest the magnitude of an omitted variable would have to be implausibly high to explain our results. In addition, the results hold in many different sub-samples based on geography, industry composition and time periods. They also hold after including numerous variables controlling for potential differences in the cultural, social and economic environment of the firm. Finally, we also find that both Protestants and Catholics have a significant effect, even though the presence of these two groups is very negatively correlated at the county level.

References.

Altonji, Joseph G., Todd E. Elder, Christopher R. Taber, 2005, "Selection on Observed and Unobserved Variables: Assessing the Effectiveness of Catholic Schools", *Journal of Political Economy*, Vol. 113, Iss. 1, pp. 151-184.

Anderson, Gary M., 1988, "Married. Smith and the Preachers: The Economics of Religion in the Wealth of Nations", *Journal of Political Economy*, Vol. 96, Iss. 5, pp.1066-1088

Bachman, Jerald G., Llyod D. Johnston and Patrick O'Malley, 1993, *Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth*, the University of Michigan's Survey Research Center, Ann Arbor.

Bainbridge, William S., 1989, "The Religious Ecology of Deviance", *American Sociology Review*, Vol 54, Iss. 2, pp.288-95.

Barro, Robert J. and Rachel M. McCleary, 2003, "Religion and Economic Growth", *Harvard working paper*.

Benartzi, Shlomo, 2001, "Excessive Extrapolation and the Allocation of 401(k) Account to Company Stock", *Journal of Finance*, Vol. 56, Iss. 5, pp. 1747-64.

Blume, Marshall, Jean Crockett and Irwind Friend, 1974, "Sock Ownership in the United States: Characteristics and Trends.", *Survey of Current Business*, Vol. 5, pp. 210-218.

Cochran, Robert K. and Leonard Beeghley, 1991, "The Influence of Religion on Attitudes toward Nonmarital Sexuality", *Journal of Scientific Studies of Religion*, Vol. 30. Iss. 1, pp.45-62.

Coval, Joshua D. and Tobias J. Moskowoitz, 1999, "Home bias at home: Local equity preference in domestic portfolios", *Journal of Finance*, Vol 54, pp.2045-2073.

Dehejia, Rajeev, Thomas DeLeire and Erzo F.P. Luttmer, 2005, "Insuring Consumption and Hapiness Through Religious Organizations", *National Bureau of Economic Research Working Paper, No.11576*.

Goetzmann, William and Alok Kumar, 2001, "Equity Portfolio Diversification.", *NBER Working paper 8686*.

Guisi, Luigi, Paola Sapienza and Luigi Zingales, 2003, "People's Opium? Religion and Economic Attitude", *Journal of Monetary Economics,* Vol. 50, pp.225-282.

Heaton, Timothy B. and Edith L. Pratt, 1990, "The Effect of Religious Homogamy on Marital Satisfaction and Stability", *Journal of Family Issues*, Vol. 11, Iss. 2, pp.191-207.

Halek, Martin and Joseph G. Eisenhauer, 2001, "Demography of Risk Aversion", *The Journal of Risk and Insurance*, Vol. 68, Iss. 1, pp.1-24.

Holland, JL, 1976, Vocational Preferences, in Dunnette MD(Ed), *Handbook of Industrial and Organizational Psychology*, pp.571-570, Chicago, Rand McNally.

Homans, George C, 1941, "Anxiety and Ritual: The Theories of Malinowski and Radcliffe-Brown", *American Anthropologist*, Vol. 43, pp.164-172.

Iannnaccone, Laurence R., 1998, "Introduction to the Economics of Religion", *Journal of Economic Literature*, Vol. 36, pp.1465-1496.

Ivkovic, Zoran and Scottt Weibenner, 2004, "Local does as local is: Information content of the geography of individual investors' common stock investments", *Journal of Finance,* Vol. 60, pp.267-306.

Lamont, Owen , Christopher Polk, Jesus Saa-Requejo, 2001, "Financial Constraints and Stock Returns", *The Review of Financial Studies*, Vol 14, Iss. 2, pp. 529-554.

La Porta, R., F. Lopez-de-Silanes, Shleifer and R. Vishny, 1999, "The Quality of Government", *Journal of Law, Economics and Organization*, Vol. 15, pp.222-279.

Lerner, Jennifer S. and Dacher Keltner, 2001, "Fear, Anger and Risk", *Journal of Personality and Social Psychology*, Vol. 81, Iss. 1, pp.146-159.

Levin, Irwin P., Mary A. Snyder and Daniel P. Chapmen, 1988, "The Interaction of Experiential and Situational Factors and Gender in a Simulated Risky Decision-Making Task", *Journal of Psychology*, Vol. 122, Iss. 2, pp.173-181.

Loughran, Timothy and Paul Schultz, 2004, "Dissemination of Information: Urban versus rural stock returns patterns", *Working Paper*.

Malinvaud, Edmond, 1987, "Capital Productif, Incertitudes et Profitabilité », *Annales d'Economie et de Statistique*, Vol 5, pp. 1-36.

Mallinowski, Bronislaw, 1925, "Magic, Science and Religion, pp.18-94 in Joseph Needham (ed.), *Science, Religion and Reality*, New York MacMillan.

Miller, Alan S. and John P. Hoffman, 1995, "Risk and Religion: An Explanation of Gender Differences in Religiosity", *Journal for the Scientific Study of Religion*, Vol. 34, Iss. 1, pp.63-75.

Miller, Alan S., 1996, "The Influence of Religious Affiliation on the Clustering of Social Attitudes", *Review of Religious Studies*, Vol. 37, Iss. 3, pp.219-232.

Miller, Alan S., 2000, “Going to Hell in Asia: The Relationship between Risk and Religion in a Cross-Cultural Setting”, *Review of Religious Research*, Vol. 40, Iss. 1, pp.5-18.

Noland, Marcus, 2003, “Religion, Culture and Economic Performance”, *KDI School working paper series.*

Pirinsky, Christo and Qinghai Wang, 2006, “Does Corporate Headquarters Location Matter for Stock Returns?”, *Journal of Finance*, forthcoming.

Powell, Melanie and David Ansic, 1997, “Gender Differences in Risk Behaviour in Financial Decision-Making: An Experimental Analysis”, *Journal of Economic Psychology*, Vol. 18, Iss. 6, pp. 605-628.

Rokeach, M. , 1968, *Beliefs, Attitudes and Values*, Joossey-Bass Inc, San Francisco.

Sauner-Leroy, Jacques-Bernard, 2004, “Managers and Productive Investment Decisions: The Impact of Uncertainty and Risk-Aversion”, *Journal of Small Business Management*, Vol. 42., Iss.1, pp.1-18.

Schneider, Benjamin, 1987, “The People Make the Place”, *Personnel Psychology*, Vol. 40, pp.437-453.

Schneider, Benjamin, Harold W. Goldstein and D. Brent Smith, 1995, “The ASA Framework: An Update”, *Personnel Psychology*, Vol. 48, pp.747-773.

Stulz, René and Rohan Williamson, 2003, "Culture, Openness, and Finance", *Journal of Financial Economics*, Vol. 70, Iss. 3, pp.313-349.

Thornton, Arland, William G. Axinn and Daniel H. Hill, 1992, "Reciprocal Effects of Religiosity, Cohabitation, and Marriage", *American Journal of Sociology*, Vol. 98, Iss. 3, pp.628-51.

Tom, V.R., 1971, "The Role of Personality and Organizational images in the Recruiting Process", *Organizational Behavior and Human Performance*, Vol. 6, pp.573-592.

Vroom, Victor H., 1966, "Organizational Choice: A Study of pre- and post-decision processes", *Organizational Behavior and Human Performance*, Vol. 1, pp.212-226.

Weber, Max, 1956, "*The Protestant Ethic and The Spirit of Capitalism*", London, Unwin.

Wooldridge, Jeffrey M., "Econometric Analysis of Cross Section and panel Data", MIT Press, Cambridge, USA.

Zhang, Guochang, 1998, "Ownership concentration, risk aversion and the effect of financial structure on investment decisions", *European Economic Review*, Vol. 42, pp. 1751-1778.

Zucker, Lynne G. and Michael R. Darby, 1999, "Comment on "The Quality of Government": Why Do Some Governments Have Better Institutions Than Others?", *Journal of Law, Economics and Organization*, Vol. 15, Iss. 1, pp. 280-282.

Table 1. Descriptive statistics.

Panel 1 Demographic Characteristics by County.

	Mean	Median	Std dev
REL	53.978%	52.88%	17.668%
Protestant	39.658%	39.822%	18.253%
Catholic	12.696%	7.744%	14.412%
Orthodox	0.002%	0.000%	0.014%
Other Christian	1.775%	0.072%	8.118%
Jewish	0.048%	0.000%	0.155%

Panel 2. Statistics by State.

States	Average % of adherents/ total population	Number of adherents
Utah	78.80%	997,032
Rhode Island	75.30%	712,967
North Dakota	75.00%	476,755
South Dakota	67.70%	458,789
Wisconsin	65.80%	3,003,846
Minnesota	65.60%	2,587,611
Massachusetts	63.90%	3,651,576
Nebraska	61.70%	943,735
Iowa	61.60%	1,769,397
New Mexico	60.70%	697,608
Connecticut	60.40%	1,856,257
Pennsylvania	60.10%	7,105,574
Louisiana	58.40%	2,297,215
Oklahoma	56.10%	1,573,831
Texas	55.20%	7,050,817
Illinois	55.00%	6,204,858
Kentucky	53.70%	1,853,682
Mississippi	53.00%	1,259,747
Kansas	52.90%	1,220,809
Alabama	52.60%	1,938,841
New Jersey	52.60%	3,826,068
North Carolina	52.00%	2,862,966
Missouri	51.90%	2,483,799
Tennessee	51.90%	2,223,564
South Carolina	51.40%	1,474,503

Arkansas	49.60%	1,076,884
Vermont	49.60%	237,549
New York	48.30%	8,637,326
Ohio	48.30%	5,185,626
New Hampshire	46.80%	389,170
Georgia	46.30%	2,340,616
Indiana	44.30%	2,372,017
Michigan	44.00%	3,992,146
Montana	43.80%	325,725
Maine	42.50%	451,024
Virginia	42.10%	2,093,021
Delaware	41.50%	237,368
Maryland	41.20%	1,680,803
Arizona	40.40%	910,550
District of Columbia	40.40%	278,080
Idaho	39.70%	336,969
Florida	39.50%	3,283,517
West Virginia	39.50%	731,885
Colorado	38.00%	971,865
Hawaii	33.80%	294,402
Oregon	33.50%	798,053
Alaska	33.20%	99,425
California	33.20%	7,274,641
Washington	30.80%	1,166,854
Nevada	28.80%	187,834

Table 2. Correlation Tables.

Panel A: Demographic Characteristics (by county)

	REL	*Totpop*	*Edu*	*Male*	*Married*	*Mon*	*Min*
Totpop	-0.13	1.00					
Edu	-0.04	0.22	1.00				
Male	0.00	-0.13	0.17	1.00			
Married	0.08	-0.14	-0.47	-0.15	1.00		
Mon	-0.10	0.15	0.17	0.11	-0.15	1.00	
Min	-0.09	0.38	0.10	-0.03	0.03	-0.01	1.00
Age	-0.07	0.17	0.37	0.02	-0.77	0.15	0.00

All the correlations are significant at less than 1%.

Panel B: Firm Characteristics (by firm years)

	REL	*StdRet*	*StdRoa*	*ROA*	*Investment*	*RD*
StdRet	-0.14					
StdRoa	-0.09	0.40				
ROA	0.08	-0.33	-0.27			
Investment	-0.08	0.11	0.22	-0.05		
RD	-0.10	0.23	0.48	-0.46	0.28	
Growth	-0.13	0.13	0.40	-0.15	0.33	0.39

All the correlations are significant at less than 1%.

Table 3: Influence of Religiosity – OLS Specifications[1]

Variables	Dependent variables					
	StdRet	*StdRoa*	*ROA*	*Inv*	*RD*	*Growth*
REL	-0.217	-0.049	0.069	-0.181	-0.033	-0.218
	(-3.00)	(-4.92)	(6.62)	(-5.29)	(-2.58)	(-3.27)
Totpop	0.026	0.003	-0.003	0.015	0.000	0.004
	(5.09)	(4.51)	(-4.24)	(6.07)	(-0.29)	(0.80)
Edu	0.282	0.011	-0.010	0.237	0.087	0.417
	(4.03)	(1.09)	(-0.84)	(6.50)	(5.64)	(5.82)
Male	0.004	0.000	0.001	0.003	0.001	0.003
	(2.74)	(1.68)	(3.09)	(3.36)	(4.45)	(1.79)
Money	-0.004	0.001	-0.004	0.004	0.007	0.003
	(-0.41)	(0.81)	(-2.39)	(0.75)	(3.51)	(0.29)
Minority	-0.012	-0.001	0.000	-0.002	0.000	-0.003
	(-5.44)	(-3.71)	(-0.28)	(-1.97)	(-0.24)	(-1.24)
Married	-0.758	-0.007	0.098	-0.433	-0.270	-0.084
	(-3.53)	(-0.22)	(3.13)	(-3.75)	(-7.32)	(-0.39)
Size	-0.101	-0.016	0.014	-0.054	-0.008	-0.050
	(-40.67)	(-39.81)	(33.72)	(-36.89)	(-16.97)	(-17.86)
Liquidity	0.013	-0.007	0.032	0.020	-0.010	-0.036
	(5.74)	(-10.12)	(28.86)	(5.75)	(-11.53)	(-9.95)
Loss	0.335	0.038	-0.090	-0.114	0.000	-0.008
	(32.50)	(25.19)	(-40.81)	(-18.74)	(0.26)	(-0.92)
Leverage	0.204	0.003	-0.063	-0.027	-0.030	-0.102
	(14.32)	(1.39)	(-18.99)	(-4.03)	(-12.33)	(-7.07)
Number of observations	44,818	67,685	83,125	77,632	38,442	65,168
R-square	35.11%	33.81%	38.32%	6.57%	19.57%	15.10%

[1] The dependent variables are: *StdRet* is the log of the standard deviation of the daily return calculated on a yearly basis. *StdRoa* is the standard deviation of *ROA* from year t-5 to t+5. *ROA* is the ratio of Compustat item 18 to item 6 lagged by one year. *Inv* is the investment rate in tangible capital (calculated as the ratio of Compustat item 128 to item 8 lagged by one year). *RD* is a measure of research and development activity (the ratio of Compustat item 46 to item 6 lagged by one year). *Growth* is the log of the ratio of market value of equity (as reported in CRSP) to book value of assets (Compusat item 6 + item 199 times item 25 minus items 60 and 74, scaled by item 6). The independent variables are: *REL* as the log of the number religious adherents in the county (as reported by ARDA) to the total population in the county (as reported by the U.S. Census Bureau). The demographic control variables are: the size of the population in the county (*Totpop*),

the educational attainment defined as the percentage of people 25 years and over having a bachelor's, graduate, or professional degree (*Edu*), the male to female ratio (*Male*), the average state money income (*Mon*), the percentage of minority (*Min*), in the county. The firm-level control variables are: *Size* (the log of annual sales as reported by Compustat, item 12), *Liquidity* (the ratio of cash balance, items 14 and 18, divided by item 8 lagged by one year) and *Loss* (a dummy variable that takes the value of one if ROA is negative, zero otherwise). Dummy variables for the year dummies are included but not tabulated. Standard errors are robust and are corrected for clustering of observations by firms.

Table 4: Influence of Religiosity – County Level OLS Specifications[1]

Variables	Dependent variables					
	StdRet	*StdRoa*	*ROA*	*Inv*	*RD*	*Growth*
REL	-0.219	-0.041	0.138	-0.107	-0.056	-0.264
	(-1.91)	(-2.30)	(3.81)	(-2.06)	(-2.07)	(-1.81)
Totpop	-0.009	-0.001	0.002	-0.003	0.006	-0.014
	(-0.74)	(-0.42)	(0.55)	(-0.69)	(4.41)	(-1.08)
Edu	1.337	-0.015	-0.090	0.829	0.111	1.701
	(2.10)	(-0.25)	(-0.38)	(3.45)	(2.07)	(2.34)
Male	0.003	0.001	0.000	-0.001	0.001	0.003
	(0.70)	(1.25)	(0.46)	(-0.41)	(0.81)	(0.67)
Money	-0.020	0.001	-0.006	-0.005	0.004	0.020
	(-0.75)	(0.51)	(-1.11)	(-0.43)	(0.72)	(0.61)
Minority	-0.018	-0.001	-0.003	-0.001	0.000	-0.002
	(-2.55)	(-0.79)	(-2.19)	(-0.49)	(-0.42)	(-0.22)
Married	-1.609	-0.106	0.368	0.166	-0.120	-0.085
	(-3.57)	(-1.14)	(1.73)	(0.80)	(-1.11)	(-0.14)
Size	-0.102	-0.011	0.018	-0.016	-0.008	-0.062
	(-6.71)	(-6.35)	(6.35)	(-3.81)	(-6.39)	(-4.26)
Liquidity	-0.014	-0.020	0.060	0.004	-0.008	-0.049
	(-0.63)	(-5.42)	(7.30)	(0.50)	(-2.36)	(-1.86)
Loss	1.005	0.178	-0.204	-0.325	-0.055	-0.269
	(5.10)	(5.29)	(-3.72)	(-4.99)	(-2.21)	(-1.10)
Leverage	0.203	-0.009	-0.089	-0.002	0.003	0.062
	(2.65)	(-0.65)	(-4.66)	(-0.06)	(0.25)	(0.68)
Number of observations	640	706	790	776	556	721
R-square	35.27%	47.27%	23.57%	9.27%	22.54%	13.96%

[1] The dependent variables are: *StdRet* is the county mean of the log of the standard deviation of the daily return calculated on a yearly basis. *StdRoa* is the county mean of the standard deviation of *ROA* from year t-5 to t+5. *ROA* is the county mean of the ratio of Compustat item 18 to item 6 lagged by one year. *Inv* is the investment rate in tangible capital (calculated as the ratio of Compustat item 128 to item 8 lagged by one year). *RD* is the county mean of a measure of research and development activity (the ratio of Compustat item 46 to item 6 lagged by one year). *Growth* is the county mean of the log of the ratio of market value of equity (as reported in CRSP) to book value of assets (Compusat item 6 + item 199 times item 25 minus items 60 and 74, scaled by item 6). The independent variables are: *REL* as the county mean of the log of the number religious adherents in the county (as reported by ARDA) to the total population in the county (as

reported by the U.S. Census Bureau). The demographic control variables are: the size of the population in the county (*Totpop*), the educational attainment defined as the percentage of people 25 years and over having a bachelor's, graduate, or professional degree (*Edu*), the male to female ratio (*Male*), the average state money income (*Mon*), the percentage of minority (*Min*), in the county. The firm-level control variables are: *Size* (the log of annual sales as reported by Compustat, item 12), *Liquidity* (the ratio of cash balance, items 14 and 18, divided by item 8 lagged by one year) and *Loss* (a dummy variable that takes the value of one if ROA is negative, zero otherwise). Standard errors are robust and are corrected for clustering of observations by states.

Table 5: Influence of Religiosity – 2SLS Specifications [1]

Variables	Dependent Variable					
	StdRet	*StdRoa*	*ROA*	*Inv*	*RD*	*Growth*
REL	-0.214 (-2.80)	-0.054 (-4.71)	0.070 (6.35)	-0.188 (-5.18)	-0.035 (-2.64)	-0.259 (-3.70)
Totpop	0.024 (4.53)	0.003 (4.43)	-0.003 (-4.08)	0.016 (6.08)	-0.000 (-0.21)	0.003 (0.70)
Edu	0.291 (4.21)	0.013 (1.36)	-0.010 (-0.84)	0.235 (6.32)	0.087 (5.54)	0.400 (5.63)
Male	0.004 (2.41)	0.000 (1.73)	0.001 (2.85)	0.003 (3.07)	0.001 (4.32)	0.003 (1.81)
Money	-0.000 (-0.88)	0.001 (0.68)	-0.000 (-2.38)	0.000 (0.84)	0.000 (3.51)	0.002 (-1.39)
Minority	-0.012 (-5.58)	-0.001 (-3.75)	-0.000 (-0.46)	-0.002 (-2.04)	-0.000 (-0.45)	-0.003 (0.19)
Married	-0.636 (-2.89)	-0.006 (-0.18)	0.095 (2.91)	-0.452 (-3.76)	-0.272 (-7.15)	-0.056 (-20.27)
Size	-0.103 (-40.04)	-0.017 (-38.78)	0.015 (34.05)	-0.055 (-35.17)	-0.008 (-16.97)	-0.106 (-0.48)
Liquidity	0.012 (4.68)	-0.007 (-9.45)	0.032 (28.64)	0.019 (5.37)	-0.010 (-11.50)	-0.040 (-10.91)
Loss	0.327 (30.33)	0.038 (23.61)	-0.091 (-40.30)	-0.116 (-18.50)	0.000 (0.14)	0.004 (0.39)
Leverage	0.199 (13.93)	0.005 (2.15)	-0.061 (-18.31)	-0.028 (-4.16)	-0.030 (-12.03)	-0.100 (-7.07)
First Stage F-statistics	0.00	0.00	0.00	0.00	0.00	0.00
2nd Stage Hansen J	0.793	0.744	0.664	0.700	0.796	0.632
Nbr of Obs.	37,644	56,834	77,917	72,800	35,835	60,327
Centered R^2	35.82%	32.90%	38.26%	7.00%	19.48%	16.95%

[1] The dependent variables are: *StdRet* is the log of the standard deviation of the daily return calculated on a yearly basis. *StdRoa* is the standard deviation of *ROA* from year t-5 to t+5. *ROA* is the ratio of Compustat item 18 to item 6 lagged by one year. *Inv* is the investment rate in tangible capital (calculated as the ratio of Compustat item 128 to item 8 lagged by one year). *RD* is a measure of research and development activity (the ratio of Compustat item 46 divided by item 6 lagged by one year). *Growth* is the log of the ratio of market value of equity (as reported in CRSP) divided by book value of assets (Compusat item 6 + item 199 times item 25 minus items 60 and 74, scaled by item 6). The independent variables are: *REL* as the log of the number religious adherents in the county (as reported by ARDA) divided by the total population in the county (as reported by the U.S. Census Bureau). The demographic control variables are: the size of the population in the county (*Totpop*), the educational attainment defined as the percentage of people 25 years and over having a bachelor's, graduate, or professional degree (*Edu*), the male to female ratio (*Male*), the average state money income (*Mon*), the percentage of minority (*Min*), in the county. The firm-level control variables are: *Size* (the log of annual sales as reported by Compustat, item 12), *Liquidity* (the ratio of cash balance, items 14 and 18, divided by item 8 lagged by one year) and *Loss* (a dummy variable that takes the value of one if ROA is negative, zero otherwise). Dummy variables for the year are included but not tabulated. Standard errors are robust and are corrected for clustering of observations by firms.

Table 6: Differences across Religious Groups – OLS specifications

Variables	Dependent variables					
	StdRet	*StdRoa*	*ROA*	*Inv*	*RD*	*Growth*
Protestant	-0.316	-0.062	0.052	-0.206	-0.088	-0.515
	(-3.62)	(-4.64)	(4.15)	(-4.45)	(-6.05)	(-6.21)
Catholic	-0.215	-0.041	0.038	-0.189	-0.011	-0.202
	(-3.58)	(-4.90)	(4.22)	(-6.34)	(-1.05)	(-3.60)
Totpop	0.023	0.002	-0.003	0.014	-0.002	-0.006
	(4.00)	(3.05)	(-3.31)	(5.17)	(-2.58)	(-1.10)
Edu	0.317	0.017	-0.015	0.251	0.106	0.498
	(4.43)	(1.80)	(-1.28)	(6.89)	(6.91)	(6.95)
Male	0.004	0.000	0.001	0.002	0.001	0.003
	(2.54)	(1.63)	(2.62)	(2.89)	(4.91)	(1.79)
Money	0.000	0.000	0.000	0.000	0.000	0.000
	(-0.81)	(-0.06)	(-1.57)	(0.63)	(1.19)	(-1.58)
Minority	-0.012	-0.001	0.000	-0.002	0.000	-0.003
	(-5.27)	(-3.53)	(-0.45)	(-1.58)	(-0.26)	(-1.35)
Married	-0.703	0.001	0.110	-0.478	-0.203	0.267
	(-3.11)	(0.04)	(3.09)	(-3.53)	(-5.09)	(1.11)
Size	-0.101	-0.016	0.014	-0.054	-0.007	-0.049
	(-40.38)	(-39.57)	(33.69)	(-36.96)	(-16.68)	(-17.65)
Liquidity	0.013	-0.007	0.032	0.020	-0.010	-0.036
	(5.73)	(-10.11)	(28.86)	(5.76)	(-11.54)	(-9.97)
Loss	0.335	0.038	-0.090	-0.115	0.000	-0.009
	(32.45)	(25.15)	(-40.87)	(-18.80)	(0.17)	(-1.03)
Leverage	0.21	0.00	-0.06	-0.03	-0.03	-0.10
	(14.36)	(1.47)	(-19.07)	(-4.01)	(-12.23)	(-6.99)
Number of observations	44,818	67,685	83,125	77,632	38,442	65,168
R-square	35.18%	33.86%	38.28%	6.62%	19.91%	15.35%

The dependent variables are: *Protestant* and *Catholic* are the log of the number religious adherents for the different religious groups in the county (as reported by ARDA) divided by the total population in the county (as reported by the U.S. Census Bureau). The dependent variables are: *StdRet* is the log of the standard deviation of the daily return calculated on a yearly basis. *StdRoa* is the standard deviation of *ROA* from year t-5 to t+5. *Growth* is calculated as the log of the ratio of market value of equity (as reported in CRSP) divided by book value of assets (Compusat item 6 + item 199 times item 25 minus items 60 and 74, scaled by item 6). *Inv* is the investment rate in tangible capital (calculated as the ratio of Compustat item 128 to item 8 lagged by one year). *RD*

is a measure of research and development activity (the ratio of Compustat item 46 to item 6 lagged by one year). *REL* as the log of the number religious adherents in the county (as reported by ARDA) to the total population in the county (as reported by the U.S. Census Bureau). The demographic control variables are: the size of the population in the county (*Totpop*), the educational attainment defined as the percentage of people 25 years and over having a bachelor's, graduate, or professional degree (*Edu*), the male to female ratio (*Male*), the average state money income (*Mon*), the percentage of minority (*Min*) in the county. The firm-level control variables are: *Size* (the log of annual sales as reported in Compustat, item 12), *Liquidity* (the ratio of cash balance, items 14 and 18, divided by item 8 lagged by one year) and two measures of profitability, *ROA* (the ratio of Compustat item 18 divided by item 6 lagged by one year) and *Loss* (a dummy variable that takes the value of one if ROA is negative, zero otherwise). Dummy variables for the year are included but not tabulated. Standard errors are robust and are corrected for clustering of observations by firms.

Table 7: Influence of Religiosity on CEO movements – OLS Specifications[1]

Variables	Dependent variables		
	REL	*REL*	*REL*
OldREL	0.33 (2.46)	0.35 (2.11)	0.34 (1.82)
OldTotpop		0.06 (1.48)	0.06 (1.29)
OldEdu		0.42 (0.86)	0.34 (0.55)
OldMale		-0.00 (-0.16)	-0.00 (-0.03)
OldMoney		0.00 (2.68)	0.00 (3.35)
OldMinority		-0.30 (-1.98)	-0.31 (-2.24)
OldMarried		2.54 (0.90)	2.75 (0.96)
Totpop			-0.00 (-0.07)
Edu			-0.36 (-1.09)
Male			-0.00 (-0.08)
Money			-0.00 (-0.85)
Minority			0.05 (0.40)
Married			-2.59 (-0.94)
Nbr. Of Obs.	58	58	58
R-square	14.53%	21.68%	25.65%

[1] The dependent variables are: *REL* as the log of the number religious adherents in the county (as reported by ARDA) to the total population in the county (as reported by the U.S. Census Bureau). The demographic control variables are: the size of the population in the county (*Totpop*), the educational attainment defined as the percentage of people 25 years and over having a bachelor's, graduate, or professional degree (*Edu*), the male to female ratio (*Male*), the average state money income (*Mon*), the percentage of minority (*Min*), in the county. The prefix Old indicates that the value for the county where the former firm of the CEO is located. Without the prefix, the value refers to the county of the firm that CEO is joining.

Appendix A. Conservative Protestant Denominations.

Mainstream Protestants	Members
HOLY APOSTOLIC CATHOLIC ASSYRIAN CHURCH OF THE EAST	34,646
ARMENIAN APOSTOLIC CHURCH OF AMER EASTERN PRELACY	1,408
INDEPENDENT NON CHARISMATIC CHURCHES	9,209
MORAVIAN CHURCH IN AMER (UNITAS FRATRUM) NO PROV	31,250
MORAVIAN CHURCH IN AMER (UNITAS FRATRUM) SO PROV	46,549
MORAVIAN CHURCH IN AMERICA ALASKA PROVINCE	3,031
AMERICAN BAPTIST CHURCHES IN THE U.S.A.	1,873,731
EPISCOPAL CHURCH, THE	2,445,286
LATVIAN EVANGELICAL LUTHERAN CHURCH IN AMERICA, THE	14,299
NETHERLANDS REFORMED CONGREGATIONS	5,169
NORTH AMERICAN BAPTIST CONFERENCE	54,010
PRESBYTERIAN CHURCH (U.S.A.)	3,553,335
REFORMED CHURCH IN AMERICA	362,932
UNITED METHODIST CHURCH, THE	11,091,032
ITED METHODIST CHURCH, THE	23,794
CONGREGATIONAL CHRISTIAN CHURCHES ADDITIONAL	35,600
CONGREGATIONAL CHRISTIAN CHURCHES, NATIONAL ASSOC OF	889

Conservative Protestants	
CHRIST CATHOLIC CHURCH	235
APOSTOLIC CHRISTIAN CHURCH OF AMERICA	37,988
ADVENT CHRISTIAN CHURCH	19,809
BARREN RIVER MISSIONARY BAPTISTS	8,156
BIBLE CHURCH OF CHRIST, INC., THE	1,037,757
CHRISTIAN CHURCHES AND CHURCHES OF CHRIST	5,370
CHURCH OF CHRIST SCIENTIST	888,123
CHURCH OF GOD GENERAL CONFERENCE (ABRAHAMIC FAITH) OREGON, ILL.	41,499
CHURCHES OF GOD GENERAL CONFERENCE	99,110
FIRE BAPTIZED HOLINESS CHURCH (WESLEYAN), THE	794,254
INDEPENDENT CHARISMATIC CHURCHES	1,207,173
MISSIONARY CHURCH, THE	21,269
OPEN BIBLE STANDARD CHURCHES, INC.	259,740
SCHWENKFELDER CHURCH, THE	190,193
THE WESLEYAN CHURCH	770
BRETHREN CHURCH (ASHLAND, OHIO)	16,331
BRETHREN IN CHRIST CHURCH	19,769

CHRISTIAN (PLYMOUTH) BRETHREN	85,600
CHURCH OF THE BRETHREN	186,588
HUTTERIAN BRETHREN	11,037
OLD ORDER RIVER BRETHREN	514
UNITED BRETHREN IN CHRIST	25,749
OLD MISSIONARY BAPTISTS ASSOCIATION	16,289
AFRICAN METHODIST EPISCOPAL ZION CHURCH	1,142,016
ALLEGHENY WESLEYAN METHODIST CONNECTION	2,526
APOSTOLIC LUTHERAN CHURCH OF AMERICA	7,812
ASSEMBLIES OF GOD	2,161,610
BAPTIST GENERAL CONFERENCE	167,874
BAPTIST MISSIONARY ASSOCIATION OF AMERICA	289,969
BLACK BAPTISTS ESTIMATE	8,737,667
CHRISTIAN REFORMED CHURCH	226,163
CHURCH OF GOD (ANDERSON, INDIANA)	232,876
CHURCH OF GOD (CLEVELAND, TENNESSEE)	695,074
CHURCH OF GOD (SEVENTH DAY) DENVER, COLORADO, THE	7,511
CHURCH OF GOD IN CHRIST (MENNONITE)	12,535
CHURCH OF GOD OF PROPHECY	91,861
CHURCH OF GOD OF THE MOUNTAIN ASSEMBLY, INC.	6,231
CHURCH OF THE LUTHERAN BRETHREN OF AMERICA	17,793
CHURCH OF THE LUTHERAN CONFESSION	8,753
CHURCHES OF CHRIST	1,681,013
CONSERVATIVE BAPTIST ASSOCIATION OF AMERICA	226,382
CUMBERLAND PRESBYTERIAN CHURCH	91,040
DUCK RIVER AND KINDRED BAPTISTS ASSOCIATIONS	13,215
EASTERN PENNSYLVANIA MENNONITE CHURCH	3,881
ENTERPRISE BAPTIST	6,001
ESTONIAN EVANGELICAL LUTHERAN CHURCH	4,942
EVANGELICAL CONGREGATIONAL CHURCH	33,166
EVANGELICAL FREE CHURCH OF AMERICA, THE	181,692
EVANGELICAL LUTHERAN SYNOD	21,523
EVANGELICAL MENNONITE BRETHREN CONFERENCE	2,089
EVANGELICAL MENNONITE CHURCH, INC.	5,122
EVANGELICAL METHODIST CHURCH	11,105
EVANGELICAL PRESBYTERIAN CHURCH	45,464
FREE LUTHERAN CONGREGATIONS, THE ASSOCIATION OF	27,316
FREE METHODIST CHURCH OF NORTH AMERICA	82,766
FREE WILL BAPTIST, NATIONAL ASSOCIATION OF, INC.	293,448
FUNDAMENTAL METHODIST CHURCH, INC.	1,037
GENERAL CONFERENCE OF MENNONITE BRETHREN CHURCHES	22,097

GENERAL SIX PRINCIPLE BAPTISTS	172
INTERNATIONAL PENTECOSTAL CHURCH OF CHRIST	4,102
INTERSTATE FOREIGN LANDMARK MISSIONARY BAPTISTS	18,293
LUTHERAN CHURCH MISSOURI SYNOD, THE	2,603,725
LUTHERAN CHURCHES, THE AMERICAN ASSOCIATION OF	14,545
MENNONITE CHURCH THE GENERAL CONFERENCE	40,951
MENNONITE CHURCH	154,259
NEW HOPE BAPTIST ASSOCIATION	3,150
PENTECOSTAL CHURCH OF GOD	91,072
PENTECOSTAL HOLINESS CHURCH, INC.	157,728
PRESBYTERIAN CHURCH IN AMERICA	221,392
PRIMITIVE ADVENT CHRISTIAN CHURCH	427
PRIMITIVE BAPTISTS ASSOCIATIONS	49,294
PRIMITIVE METHODIST CHURCH U.S.A.	7,937
REFORMED CHURCH IN THE UNITED STATES	3,722
REFORMED EPISCOPAL CHURCH	6,559
REGULAR BAPTISTS	4,722
SEVENTH DAY BAPTIST GENERAL CONFERENCE	6,439
SOUTHERN BAPTIST CONVENTION	18,940,682
THE PROTESTANT CONFERENCE (LUTHERAN)	1,095
TRUEVINE BAPTISTS ASSOCIATION	561
TW0 SEED IN THE SPIRIT PREDESTINARIAN BAPTISTS	87
UNITED BAPTISTS	68,187
WISCONSIN EVANGELICAL LUTHERAN SYNOD	419,928
SCONSIN EVANGELICAL LUTHERAN SYNOD	3,516
BEREAN FUNDAMENTAL CHURCH	271,865
CHRISTIAN AND MISSIONARY ALLIANCE, THE	1,213,188
CHURCH OF THE NAZARENE	36,679
INDEPENDENT FUNDAMENTAL CHURCHES OF AMERICA	255,092
APOSTOLIC CHRISTIAN CHURCH (NAZAREAN)	73,300
ASSOCIATE REFORMED PRESBYTERIAN CHURCH (GEN SYNOD)	5,457
CONSERVATIVE CONGREGATIONAL CHRISTIAN CONFERENCE	130,484
INTERNATIONAL CHURCH OF THE FOURSQUARE GOSPEL	1,880
JASPER AND PLEASANT VALLEY BAPTISTS	39,948
MIDWEST CONGREGATIONAL CHRISTIAN FELLOWSHIP	31,250

Catholics

CATHOLIC CHURCH	53,385,998

Orthodox	
AMERICAN CARPATHO RUSSIAN ORTHODOX GREEK CATHOLIC DIOCESE OF THE U.S.A.	14,610
ROMANIAN ORTHODOX EPISCOPATE OF AMERICA	15,365
SYRIAN ORTHODOX CHURCH OF ANTIOCH (ARCHDIOCESE OF THE U.S.A. AND CANADA)	30,000
UKRAINIAN ORTHODOX CHURCH OF AMER (ECUM PATR)	5,310
Other Christians	
BEACHY AMISH MENNONITE CHURCHES	8,243
CHURCH OF JESUS CHRIST OF LATTER DAY SAINTS, THE	3,540,820
OLD ORDER AMISH CHURCH	121,750
SALVATION ARMY, THE	127,577
SEVENTH DAY ADVENTISTS	903,062
Jew	
JEWISH ESTIMATE	5,982,529