IMPACT OF RELIGIOSITY ON AUDITORS' BEHAVIOR AND AUDIT FEES

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Abstract

Extending the existing literature on the impact of religiosity on human behavior, we argue that religiosity also has a significant impact on auditors' risk and trust behavior, which is reflected in lower audit fees. Higher religiosity values are expected to motivate auditors to provide higher reliability to information and they would achieve this by reducing audit risk and audit effort. Auditors operating in high religiosity areas are expected to readjust their client portfolio in a way that their overall risk exposure is lower. Additionally, high religiosity would enhance mutual trust among auditors and managers which will encourage auditors to recognize higher reliability of information prepared by managers operating in high religiosity areas. The higher reliability of information generated by managers will in turn result in lower audit risk and lower audit effort. The joint effect of lower risk and lower audit effort will

translate into lower audit fees for auditors operating in high religiosity areas, especially when the client firms are also located in high religiosity areas. The results confirm that overall firm risk as well as audit fees are lower for the client firms of auditors operating in high religiosity areas compared to the client firms of auditors operating in lower religiosity areas. The findings also show that the negative association is stronger when auditors are located in rural high religiosity areas and also when the client firms have comparatively lower complexity, reflected by a lower number of firm segments, because lower complexity reduces audit risk and audit effort.

INTRODUCTION

It is well documented in the social sciences literature that high moral and ethical norms fostered by high religiosity values have a significant impact on individual behavior (Sunstein 1996; Kennedy and Lawton 1998).[1] This line of research has been extended to business environment and it has been found that religiosity values also have a significant impact on managers' behavior. For example, Hilary and Hui (2009) report that managers operating in high religiosity environments prefer lower risk exposure, whereas McGuire, Omer, and Sharp (2012) document that managers of firms from high religiosity counties engage in lower earnings manipulations and irregularities compared to the firms from low religiosity counties. Dryeng, Mayew, and Williams (2012) find that managers operating in the high religiosity counties do not engage in higher accounting restatements. We present that high religiosity environments also have an impact on auditors' risk

[1] See Lehrer, McKinney, and Moore (2004) for review of literature on the impact of religiosity on human behavior.

exposure and their trust behavior, which in turn have an impact on audit fees.

So far as risk behavior is concerned, it is argued that auditors operating in high religiosity areas would prefer to reduce their risk as much as possible so that they can provide higher reliability to information audited by them (e.g. Omer, Sharp, and Wang 2013). It is reported in the literature that auditors tried to reduce their risk by readjusting their client portfolio after introduction of the Sarbanes Oxley Act in 2002 (e.g. Hogan and Martin 2009). Consistent with this evidence, we argue that the high religiosity environment in which auditors operate will encourage them to realign their client portfolio that has an overall lower risk and this will be done with an objective of providing higher reliability to information audited by them. This argument suggests that overall audit risk is expected to be lower for firms whose auditors operate from high religiosity areas, i.e. high religiosity counties.

With regard to the trust behavior of auditors, we argue that auditors will have higher trust in managers if they are also operating in high religiosity counties. It is presented in the literature that individuals from high religiosity areas develop better relations and trust among themselves (Guiso, Sapienza, and Zingales 2006). It is further documented that managers operating in high religiosity counties are expected to provide more reliable information for audit purposes (e.g. McGuire et al. 2012 and Dyreng et al. 2012). Given auditors' higher trust in managerial behavior when managers are also operating in high religiosity areas, auditors will perceive and recognize higher reliability of information provided by managers. It, however, needs to be emphasized that auditors recognize higher reliability of information generated by managers only when both auditors and managers are operating from high religiosity counties because that creates mutual trust in each other. Recognition of high reliability of information generated by managers will thus enable auditors to readjust the scope of their audit work. The combined effect of

lower firm risk and recognition of higher reliability of information generated by managers in high religiosity counties will result in lower audit risk and effort, which will translate into lower audit fees.

Additionally, we examine whether urban or rural location will make any difference in the association between high religiosity environment of auditors' office and audit fees. Consistent with the existing evidence (Chalfant and Heller 1991), we present that auditors and managers operating in rural areas, are expected to be more religious compared to auditors and managers operating in urban areas. Based on this evidence, we argue that auditors operating in the rural areas are expected to be more concerned about audit risk and reliability of information. Thus, we expect the association between religiosity values and audit fees to be stronger in the rural areas compared to urban areas. Furthermore, we examine the impact of firm complexity on the association between auditors' office location and audit fees. It is argued that audit firms with higher diversity in religiosity are generally scattered over different areas, whereas there is a greater uniformity in the religious environment if firms are concentrated in a single location. Thus, we expect the association of religiosity with audit fees to be stronger for firms with location concentration rather than dispersion over different locations.

Our study differs from the existing studies with regards to its focus. It focuses on the impact of religiosity on the auditor behavior whereas the existing studies have focused on the manager behavior (Jha and Chen 2015; Leventis, Dedoulis, and Abdelsalam 2015). Since determination of audit fee is influenced both by the demand and supply side, we focus on the supply side, whereas the existing studies have focused on the demand side. From the supply perspective, we examine what audit resources (which will be translated into audit fees) will be required to achieve the desired level of reliability under given risk conditions. We test the association between audit fees and religiosity values of counties in which auditors' offices are located using the religiosity dataset over

the period of 11 years from 2000 through 2010. We use both ARDA and Gallup data sets in our analyses. Consistent with earlier studies (Hilary and Hui 2009; McGuire et al. 2012), we conduct our main tests on the county-based religiosity values of the ARDA database, and conduct sensitivity tests on the Metropolitan Statistical Area (MSA) religiosity values from the ARDA database. Additional sensitivity test is conducted on the county-based religiosity values of the Gallup dataset. We use the audit fee model that has been extensively used in the literature. In addition to control variables that have been used in several audit fee studies (Ashbaugh, LaFond, and Mayhew 2003; Choi, Kim, and Zang 2010a; Choi, Kim, Kim, and Zang 2010b; Blankley, Hurtt, and MacGregor 2012), we also include the religiosity-related control variables that have been used by McGuire et al. (2012), Dyreng et al. (2012), and Hilary and Hui (2009). Additionally, we include control variables for the cost of living, proxied by CPI, and cost of doing business to control for their impact on audit fees across different counties.

First, we test whether overall business risk of clients of auditors located in high religiosity counties differs compared that of the clients of auditors located in low religiosity counties. We use standard deviations of the reported earnings and returns of assets to evaluate differences in the client risk for firms from high and low religiosity areas. The result show that business risk is higher for the client firms of auditors with offices in low religiosity counties compared to auditors with offices in high religiosity counties. These findings thus indicate that the client portfolios of auditors with offices in high religiosity areas are associated with lower risk compared to the client portfolios of auditors with offices in low religiosity areas. Moreover, based on the existing literature that documents lower earnings manipulation (McGuire et al. 2012) and lower restatement risk (Dyreng et al. 2012) for firms located in high religiosity areas, we present the reliability of information on which audit is performed is higher for the firms operating in high religiosity areas, suggesting lower risk for these firms.

Next, we conduct regression analyses with audit fees as an independent variable. The regression results on the association between audit fees and county-based religiosity values show that the association is negative indicating that audit fees are lower when auditors' offices are located in high religiosity areas. The coefficient of the association is even stronger when firms are also headquartered in high religiosity areas. These results thus support our expectation that lower audit risk and lower audit effort when auditors operate in high religiosity environments result in lower audit fees, and especially when the client firm is also located in high religiosity areas. Additional tests based on MSA using the ADA religiosity scores and also county-based religiosity scores of the Gallup dataset provide the results that are consistent with the negative association between auditors' religiosity values and audit fees.

We also examine whether movements in auditors' offices from high to low religiosity counties and vice versa affect audit fees. We evaluate this by regressing the change in audit fees on the change in the religiosity values when auditors' offices moved from high religiosity counties to low religiosity counties and vice versa. The results show that the coefficient of change in auditors' religiosity is significantly negative when the change is from low to high religiosity counties. On the other hand, the coefficient is significantly positive when the change is from high to low religiosity counties. These results provide support to our main findings that high religiosity values are associated with lower audit fees.

We test the robustness of our finding by conducting the following tests. First, we use audit premium as the dependent variable instead of audit fees, and find that the results are similar to the main results. Second, we find that there is no significant association between non-audit fees and religiosity, suggesting that religiosity has a significant impact only on audit fees because audit activities are especially affected by audit risk. Third, we include accrual quality in the analysis to isolate its effect on our results,

and also include other firm-specific risk factors to evaluate whether the association between religiosity values and audit fees is influenced by these factors. Fourth, we control for social capital to isolate the impact of social capital from our analyses on the assumption that religiosity's impact on audit fees might be influenced by the social capital, which is associated with religiosity. The results of all tests show that our main findings remain unchanged. The result on the analysis with social capital as a control variable shows that the religiosity coefficient is stronger compared to the social capital coefficient, confirming that our findings are not influenced by social capital.

The test results on the association of audit fees with religiosity in the rural versus urban areas show that the negative association is stronger for the subsample of firms when auditors' offices are located in rural areas. The results of tests on the role of firm complexity, proxied by geographic segments, show that the negative association between religiosity and audit fees is stronger when firms are concentrated in a single location. These results suggest that the effect of religiosity on audit fees is significantly diluted when firms are dispersed over different locations, because auditors at different locations are influenced by different religiosity values.

Additional analyses are conducted to evaluate the impact of corporate governance, reflected by independent corporate boards, on the association between audit fees and religiosity. The results show a negative association between audit fees and religiosity, especially when board independence is weak, reflected by a lower percentage of independent directors on the corporate boards. This finding suggests that lower audit fees are not the result of strong corporate boards. In another test we find that religiosity has no significant impact on audit fees when firms belong to the industry groups with high legal risk potential.

Our findings make the following contributions to the literature. First, the findings show that high ethical and moral standards of auditors, fostered by high religiosity values in which

auditors operate, have a significant impact on auditor risk behavior. This means that audit test plans and procedures are influenced by auditors' behavior molded by the religiosity environments. This finding is consistent with the literature that individuals' behavior in the business environment is significantly influenced by moral and social norms that are fostered by high religiosity values. Second, our findings show that the religiosity values have a stronger impact on audit effort and hence on audit fees compared to the impact of social values. Third, the religiosity impact is stronger on audit fees when auditors' offices are located in rural counties. Fourth, religiosity's impact on auditors' behavior may vary with firm complexity, corporate governance, and riskiness of industry to which the firm belongs.

The remainder of the paper is designed as follows. Part II presents background and hypotheses development for the study. Research design is explained in part III. This part also provides details on data used in the study and discusses different aspects of the audit fee model. Findings are presented in part IV, and part V contains conclusion.

BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background of the Study

Religiosity and Human Behavior. It is well documented in the social sciences literature that high religiosity environments foster high social norms and sound moral judgments that have an impact on individuals' behavior, and thus it is argued that high religiosity values in which individuals operate encourage them to maintain high moral values and ethical standards (Sunstein 1996; Kennedy and Lawton 1998).[2] Several other studies have confirmed that strong religious beliefs have encouraged individuals to maintain high moral values and ethical standards (Cornwall 1989; Layman 1997a; Layman and Carmines 1997b).

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[2] See Lehrer et al. (2004) for review of literature on the impact of religiosity on human behavior.

Weaver and Agle (2002) have explained how the religiosity values mold individual behavior. They argue that individuals with strong religious beliefs generally behave more ethically because they find it morally rewarding and satisfying. They especially point out that religion's influence on business ethics is determined by the religion's importance in an individual's life, where the impact of religion on human behavior depends on how important is religion in an individual's self-identity. As religion assumes greater importance in individual's self-identity, his/her behavior is more and more guided by the religious and social norms (Zahn 1970). Parboteeah et al. (2008), however, explain the impact of religiosity on individuals' behavior from a slightly different perspective. They argue that individuals' participation in the religious institutions and religious services enhances their interaction with other individuals who have similar beliefs and moral values and this interaction strengthens their beliefs and solidifies their moral and ethical behavior.

The above explanation on religiosity's effects on individuals' behavior suggests that the religiosity values of environments in which individuals operate become an important element of their self-identity and then they mold their outlook and interaction with other individuals. Individuals do not feel comfortable when their behavior and actions are outside the religious and social norms because this will result in emotional distress and guilt feeling (Sustein 1996; Weaver and Agle 2002). Several empirical studies support this line of reasoning and provide evidence confirming the significant role of religiosity in molding individual behavior (Batson, Schoenrade, and Ventis 1993; Singelis and Brown 1995; Karahanna, Evaristo, and Srite 2006). In a recent study, Longenecker et al. (2004) have presented that individuals with religious commitments are also associated with higher business ethics.

Overall, the existing research in the social sciences provides strong arguments and evidence that religiosity values influence human behavior and that individuals operating in high

religiosity environment do not generally engage in unethical behavior. Instead they are more likely to maintain high moral and ethical standards and they find it more rewarding and satisfying when their behavior is consistent with high moral values and ethical norms of the environment in which they operate.

Impact of Religiosity on Managerial Behavior. Several researchers extended the research on religiosity to economics and business environment and examined whether religious beliefs would have an impact on human behavior in making economic decisions (Bruce 1993; Shariff and Norenzayan 2007; Norenzayan and Shariff 2008) and business decisions (Stern 2000; Schultz, Zelezny, and Dalrymple 2000; Gardner and Stern 2002).[3] Hilary and Hui (2009) focused on the human behavior within the corporate environment and examined whether religiosity had an effect on investment decisions. They find that managers of firms headquartered in the US counties with high religiosity values exhibit higher risk aversion in their investment decisions.

Extending the research to the business environment, some researchers have examined how managers behave in reporting earnings and restating the reporting earnings. Based on an experimental study, Conroy and Emerson (2004) find that religiosity is negatively associated with the use of "accounting tricks to conceal", and they conclude that the use of accounting manipulation is lower for managers who have higher church attendance. McGuire et al. (2012) report that financial reporting irregularities are lower for firms with headquarters in high religiosity areas compared to the firms that are headquartered in low religiosity areas, whereas Dyreng et al. (2012) report that firms

[3] Barro and McCleary (2003), Guiso et al. (2006), and Lehrer et al. (2004) have previously examined the impact of religion on individuals' economic and business behavior, whereas Lehrer et al. (2004) focused on the religion's impact on economic decisions by individuals. Barro and McCleary (2003) and Guiso et al. (2006) examined the overall economic outcome as a result of the influence of religion on human economic behavior.

headquartered in high religiosity counties are associated with lower likelihood of financial restatements. Overall, the findings of these studies show that religiosity has a significant impact on managers' behavior and as a result of religiosity's impact on managers' behavior there is lower earnings manipulation and also the number of statements of the reported earnings is lower. These findings suggest that there is an improvement in the quality of information prepared by managers of firms located in high religiosity counties.

Religiosity in Auditing Environment. Evaluation of religiosity's impact on auditors' behavior has also recently been examined by some researchers. Omer et al. (2013) report that auditors with offices in high religiosity areas issue more going concern opinions compared to auditors from low religiosity areas. This finding suggests that auditors in high religiosity areas are more concerned about the quality of audited information, which will have an impact on their reputation. In another study Jha and Chen (2015) evaluated the impact of social capital and religiosity of counties in which the auditors' client firms are headquartered on their audit fees. They report that audit fees are negative associated with social capital and religiosity values. Their findings are confirmed by another study by Leventis et al. (2015). We extend this line of research and examine whether religiosity values also influence auditor behavior, which will have an impact on auditor risk and auditor effort. Since determination of audit fees is influenced both by the quality of information on which audit is performed and by the extent of audit risk and audit efforts, we examine in this study how religiosity values impact auditor risk and auditor effort, which are reflected in audit fees, whereas earlier studies (Jha and Chen 2015; Leventis et al. 2015) have focused on the quality of information prepared by the client firms on which audit is performed.

Hypothesis Development

Consistent with evidence documented in the social sciences literature, we argue that the religiosity values of counties in which auditors operate will also influence their behavior. The religiosity values fostering social norms and ethical standards of counties that influence individuals' behavior (e.g. Layman 1997a; Layman and Carmines 1997b; Cornwall 1989; Sunstein 1996; Kennedy and Lawton 1998), will also mold auditors' outlook and perceptions. Thus, based on the evidence that high religiosity values have a negative impact on managers' propensity to risk exposure (e.g. Hillary and Hui 2009; McGuire et al. 2012), we argue that high religiosity values of counties in which auditors operate will also have a significant impact on the risk exposure behavior of auditors. Auditors operating in the high religiosity counties are expected to have lower propensity to risk because they would be concerned about the quality of their product, i.e. audited financial statements, which will affect their reputation in the audit market. Thus, auditors will be motivated to reduce their audit risk so that they can reduce uncertainty in achieving high quality results that enhance their reputation.

In order to reduce their risk, auditors will readjust their client portfolio. They will focus more on clients that have lower business risk. This argument is similar to the evidence documented by Hogan and Martin (2009) that auditors reduced their risk by realigning their client portfolio after enactment of the 2002 Sarbanes Oxley Act. Their findings suggest that high quality auditors (Big 4) replaced their high risk clients with less risky clients, and high risky clients switched to non-Big 4 auditors. To test the validity of this argument, we evaluate difference in the overall risk of client portfolio of auditors operating in high religiosity areas and low religiosity areas. We expect overall business risk of the client firms of auditors operating in high religiosity areas is comparatively lower compared to that of the client firms of auditors operating in low religiosity areas.

Additionally, we present that religiosity has a significant impact on auditors' perception and recognition of reliability of information generated by managers for audit purposes. The reliability of information generated by managers depends on several factors, such as the effectiveness of internal control system, managers reporting targets, managers' motivation and behavior in reporting earnings, etc. In addition, it depends on auditors' perception and recognition of the reliability of information generated by managers, which will be influenced by the religiosity values of counties in which managers and auditors operate. Covey and Merrill (2008) explain that trust means confidence and the opposite of trust is distrust or suspicion, whereas Marshall (2000) argues that "trust building actually helps people to develop respect and understanding".

Guiso et al. (2006) further explain that trust building is influenced by the religious beliefs and social behavior in which individuals are born and in which they operate. Based on these arguments, we present that auditors' behavior with regard to trust of managers will be influenced by the religiosity environments in which managers are operating. Auditors will be more careful in trusting the reliability of information if it is generated by managers operating in low religiosity areas. On the other hand, high social, moral and ethical values of counties will foster trust, cooperation, and good understanding between auditors and managers.

Consequently, auditors will have higher trust in the reliability of information generated by managers from high religiosity counties. The existing evidence has already documented that the reliability of information generated by managers for audit purposes is expected to be high if firms are headquartered in high religiosity counties because of lower discretionary accruals and lower restatements by firms in these counties (McGuire et al. 2012; Dyreng et al. 2012).

Based on the above arguments, we present that lower clients' business risk will result in lower auditors' risk and the higher quality of information on which audit is performed will

result in lower audit effort as a result of lower number of tests and procedures conducted on information with high reliability. Because data to evaluate audit effort are publicly not available, we use audit fees as a proxy for audit effort and risk. In addition to audit fees, we also evaluate the impact of religiosity by examining the difference in overall business risk of auditors operating in high and low religiosity counties. Based on the above argument, we hypothesize that higher religiosity values that result in reduction of audit risk and audit effort are negatively associated with audit fees.[4]

H1: Audit fees are negatively associated with auditors' religiosity values, especially when firms are also headquartered in high religiosity counties.

It is further argued in the literature (Chalfant and Heller 1991) that differences in the social fabric in the urban areas will create diversity in managers' and auditors' religious beliefs and in their moral and ethical norms. Because people in urban areas may come from different regions of the country with different religious beliefs, and there will be diversity in their social, moral and ethical values. On the other hand, movement of people in rural areas is limited, which will result in higher uniformity in the religious beliefs in rural environment (Urcan, 2007). Based on these arguments, we develop the following hypothesis:

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[4] It is also possible that auditors' decisions on audit fees is influenced by their desire to convey a positive message to the client firms and to the society at large that their behavior is consistent with the social and ethical norms of the environment in which they operate. They may especially be interested to convey this positive message to create a positive image for themselves, which may create a goodwill for them among their present and potential clients. Though audit fees are determined in competitive business environments, which discourage firms to overcharge their clients, auditors in high religiosity environments will attempt to reduce the scope of their audit work by conducting absolute essential audit tests and procedures to maintain the reliability of information and avoid unnecessary tests and procedures, and this will result in lower audit fees, especially when their client firms are also headquartered in high religiosity areas.

H2: The negative association between audit fees and religiosity values is stronger when firms' headquarters and auditors' offices are located in rural rather than urban high religiosity areas.

RESEARCH METHODOLOGY

Sample

We start the sample selection process on all firms included in the *Audit Analytics* database. We merge a*udit Analytics* data with *Compustat* data to obtain information on firm-specific variables. Then, we merge this dataset separately with the two religiosity datasets, i.e. the religiosity dataset developed by the American Religion Data Archive (ARDA)[5] and the dataset developed by Gallup organization. Thus, our sample consists of two final samples, one based on the ARDA data and the other based on the Gallup data. Earlier studies have used either ARDA or Gallup data. We conduct the main analyses on ARDA data and conduct sensitivity tests on the Gallup data. The sample size of both data differ significantly because ARDA covers a 10-year period from 2000 through 2010, whereas Gallup data covers a 3-year period from 2008 through 2010. Both data sets are prepared on the county basis. We conduct our main tests on the county basis and in addition we conduct a test on the Metropolitan Statistical Area (MSA), consistent with some of the previous studies.

We use the US Census Bureau and religiosity databases for obtaining information on different demographic variables that are used as control variable in our regression analyses. As a result of this screening process, several observations are dropped because of missing values for some of these control variables. Thus, the final sample for the ARDA database consists of 12,705 observations, whereas the total sample for the Gallup database consists of 1,663

[5] This data set was initially collected by the Glenmary Research Center, and it provided statistics by county for 133 Judeo-Christian church bodies, which included information on the number of churches and the number of members of each church in every county.

observations.[6] Different steps involved in the data screening process are described in Table 1.

Model

We use a variation of the classic audit fee model developed by Simunic (1980) that has been used by several studies in different variations (DeFond and Subramanyam 2002; Wheisenant, Sankaragurusuvamy, and Raghunandan 2003; Francis, Reichelt, and Wang 2005a; Krishnan, Raghunandan, and Yang 2007). The model used in this study is consistent with the model recently used by Blankley, Hurtt, and MacGregor (2012), except for the test variable of auditors' religiosity (REL_A) and the following additional control variables: geographic variables, earnings quality variable, and state-based cost control variables that may also have an impact on audit fees or on the association between audit fees and religiosity. All variables are defined in Appendix A.

$$LAF_{i,t} = \beta_0 + \beta_1 \mathrm{R}\,EL_A_{i,t} + \beta_2 AuditFeeControls + \beta_3 GeographicControls + \beta_4 EQ + \beta_5 \mathrm{Cos}\,tState + \varepsilon_{i,t} \quad (1)$$

Variable Measurements. Dependent variable: LAF. We use natural log of audit fees as the dependent variable.[7] We conduct the robustness test using audit fee premium as the dependent variable, which is calculated as the difference between actual and estimated audit fees for each firm.

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[6] The final number of observations used in this study may differ from the number of observations used in other studies based on these databases because of the differences in the control variables used in the studies. The missing values in the control variables results in reduction of the number of observations for the final sample on which tests are conducted. It, however, needs to be pointed out that the small difference in the number of observations is not likely to affect the results because the total number of observations is large enough to provide reliable results.

[7] An alternative to LAF is to scale the audit fee variables by total assets. (Ashbaugh et al. 2003). We use the log of audit fees because it is commonly used in the audit fee studies.

Research variables: REL_A. The variable of interest is the test variable of county-based religiosity score of auditors (REL_A). We also develop a MSA-based religiosity score, where the MSA

Table 1. Sample Selection.

Panel A: Sample based on ARDA Data: Year 2000-2010	
Firm year observations from Audit Analytics	150,908
Less:	
Firm year has more than one observation	(6,701)
No. of Audit Fee data not available	(55,732)
No. of Business Segment data not available	(26,703)
No. of SIC code missing and financial services	(10,040)
Missing values from Compustat\CRSP	(20,233)
Missing values from Religiosity and Geographic variables	(16,947)
Missing values from the Cost of Doing Business and CPI	(1,847)
Final Sample	12,705

Panel B: Sample based on Gallup Data: Year 2008-2010	
Firm year observations from Audit Analytics	38,802
Less:	
More than one audit fee data in one year	(1,723)
Financial Data missing on Compustat	(14,328)
Data missing on Business Segment	(6,896)
Excluding SIC 6000-6999	(1,779)
County of the firm headquarters missing from Gallup data	(12,318)
Missing value from Cost of Doing Business and CPI	(125)
Final Sample	1,663

Table 1 shows the sample selection process. To form the sample, we start with audit analytic to collect audit fee and other audit-related data from 2000 to 2010 for analyses based on ARDA data. We get 150,908 observations from this database. If a client has two or more auditors in a year, we add audit fees of auditors for the specific year to convert it to one observation for the year. Second, we drop observations if data is missing on the business segments. Third, we exclude firms with missing SIC code or with financial services SIC code from 6000 through 6999. In the final step, we eliminate observations if data on the Cost of Doing Business and CPI are not available. A similar screening process is adopted to obtain observations from the Gallup dataset for the period 2008 through 2010.

refers to the Metropolitan Statistical Area, and tests are conducted on the MSA scores.

Control variables. We control for normal audit effort and audit risk by including the control variables used in earlier studies (Simunic 1980; Palmrose 1986; Francis, LaFond, Olsson, and Schipper 2005b; Hay, Knechel, and Ling 2008). The audit effort measures relate to the firm size in terms of assets (LTA), mergers (MERGER), foreign operations (FOREIGN), number of business segments (SEG), and whether auditor's opinion is a going concern opinion (OPINION). The audit risk measures are the current ratio (CR), ratio of current assets to total assets (CA_TA), accounts receivables and inventory (ARINV), return on assets (ROA), whether loss is reported (LOSS), intangibles (INTANG), and financial leverage (LEV) that captures the client's long-term financial structure. Additionally, we control for the internal control weaknesses (MATWEAK) (Ettredge, Li, and Sun 2006; Doyle, Ge, and McVay 2007), and for firm's growth and risk (STDRET).[8]

We include a variable of BUSY for firms with fiscal year-end as December 31st because of busy time for auditors when firms' fiscal year-end coincides with the calendar year-end, and also include industry and year dummies (Ashbaugh et al. 2003) to control for the effect of these variables on audit fees. In addition, we use discretionary accruals quality (DAQ) or accruals quality (AQ)[9] to control for the effect of earnings quality on the association between audit fees and religiosity. The AQ and DAQ (discretionary accrual quality) are determined based on the model suggested by Dechow and Dichev (2002) (see Appendix B).

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[8] Hilary and Hui (2009) use four different variables to reflect risk. Consistent with them, we also replace STDROA with four different variables and conduct regression including each of these variables individually. These variables are: STDRET, Inventory (INV), R&D, and GROWTH.

[9] Several proxies can be used for earnings quality. Lately, McGuire et al. (2012) have used the accruals quality as the dependent variable in their analyses on religiosity. Moreover, accrual quality as a proxy for earnings quality has been used by other studies as well (Jaggi, Leung, and Gul 2009). Therefore, we also decided to use accruals quality as a proxy for earnings quality.

The following religiosity-related control variables are included in the model: TOTPOP, EDU, MALE, MARRIED, MONEY, MINORITY and AGE (Hilary and Hui 2009). We control for the effects of cost of living (CPI) and cost structure of firms (COSTBUS) because of their differences across counties that may have an impact on audit fees across counties. In a separate test, we also use the variable of social capital (SOCIALCAPITAL) to evaluate whether its inclusion will weaken the association between audit fees and religiosity. Data for CPI, COSTBUS, and SOCIALCAPITAL are extracted from the NUMBEO, CNBC and NERCRD data bases respectively.

RESULTS

Descriptive Statistics

Descriptive statistics for ARDA and Gallup databases are provided in Table 2. Panel A of Table 2 contains descriptive statistics on ARDA data for different variables used in the analyses, whereas Panel B contains descriptive statistics on the variables of sample observations based on the Gallup dataset.[10] The ARDA religiosity scores are generated based on church attendance of people throughout the USA. Though actual data of this database are available only for years 2000 and 2010, the existing studies have linearly interpolated the database values to estimate data for the period from 2001 through 2009 (Alesina and Ferrara 2000; Hilary and Hui 2009). Consistent with the procedures used by earlier studies, we generate religiosity values for years 2001 through 2009 and use data for the 2000-2010 period in the analyses. The Gallup data, on the other hand, is based on a survey of individuals in the USA and covers the period from 2008 through 2010. The results based on the Gallup data would be used to test the robustness of finding.

[10] These averages are similar to the averages reported by McGuire et al. (2012). Their religiosity scores are also based on the Gallup survey from 2006 through 2008.

Whereas the variable of religiosity score (REL) based on ARDA data reflects the number of religious adherents in a county in relation to the county's total population as reported by the US Census Bureau, the religiosity score for the Gallup data is calculated on the basis of the proportion of responses to each of the three questions contained in the questionnaire.[11] Five different religiosity scores based on the Gallup data are used in our analyses.[12] As discussed in footnote No. 4, the term auditors' religiosity refers to the religiosity values of counties in which auditors' offices are located, whereas managers' religiosity refers to the religiosity values of counties in which firms are headquartered.

The means of religiosity scores for auditors (REL_A) are 0.43 and 0.40 for ARDA and Gallup databases respectively. The mean of religiosity scores for managers (REL) are also the same as that of auditors, even though auditors' offices and the firm's headquarters of some firms are located in different counties. Correlations among religiosity and demographic variables for ARDA database are provided in Panel C of Table 2, and correlations among audit fees, religiosity scores for ARDA database and control variables are provided in Panel D. The correlation results show that auditors' religiosity (REL_A)[13] and

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[11] The Gallup organization data is based on interviews conducted with individuals in the whole country from 2008 through 2010, and it contains interviewees' responses to three questions related to their religious beliefs and affiliations: (1) Are you affiliated with a particular religion? (2) Is religion important in your daily life? (3) Do you attend religious services weekly? The data set provided by the Gallup organization contains information on different items by counties, and we use data on the three religion-related questions for developing a religiosity index by counties.

[12] Two religiosity scores are based on all three questions, i.e. an average of scores for three questions, and a combined score based on the factor analysis of three elements. Three scores are developed based on individual questions.

[13] Auditors' religiosity score refers to the religiosity score of counties in which auditors' office are located.

managers' religiosity (REL)[14] values are negatively correlated with audit fees (LAF), and the correlation is statistically significant, suggesting that higher religiosity is associated with lower audit fees.

Test Results

Firm Risk on Auditors' Client Portfolios. First, we conduct a test on the business risk of client portfolios of auditors operating in high and low religiosity counties. The risk analyses are based on the firms 'operating risk, reflected by the standard deviations of reported earnings and return on assets. Tests are specifically conducted to evaluate whether there are differences in the mean of standard deviations of reported earnings and that of the return of assets of client firms audited by auditors with offices in high and low religiosity areas. The results show that the means of standard deviations for the reported earnings as well as for returns on assets are lower for the client firms of auditors operating from high religiosity areas and the differences are statistically significant (t-stat. = 3.24 and p-value = 0.001 for reported earnings; t-stat. = 7.22 and p-value = 0.000 for returns on assets).

The results thus indicate that the client portfolios of auditors with offices in high religiosity areas are associated with lower client risk compared to the client portfolio of auditors with offices in low religiosity areas. The results are similar to the results on discretionary accruals of firms located in high versus low religiosity areas (McGuire et al. 2012; Dryeng et al. 2012). Overall, the results, consistent with our expectation, show that firm risk for the client portfolios of auditors with offices in the high religiosity areas is lower compared to that of the client portfolio of auditors with office in low religiosity areas.

[14] Managers' religiosity score refers to the religiosity score of counties in which firms' headquarters are located.

Regression Results

Association between Audit Fees and Auditors' religiosity. We first conduct a test on the total sample of firms based on the religiosity scores of counties where auditors' offices are located (N=12,705) (based on ARDA dataset). We estimate Eq. (1) using the clustered standard errors at the firm and county levels to control for cross-sectional dependence (Petersen 2009). The regression results are contained in Table 3.

The results in Model 1 show that the coefficient of auditors' religiosity (REL_A) is negative and statistically significant at the 1 percent level (β_1 = -0.49; t-stat. = -4.91), indicating that higher values of auditors' religiosity are associated with lower audit fees. Lower audit fees for auditors operating from high religiosity counties suggests that audit risk and audit effort are lower as a result of higher religiosity values.

Joint Effect of Auditors' and Managers' Religiosity on Audit Fees. We conduct two tests to examine how audit fees are influenced jointly by the auditors' and managers' religiosity values. First, we also conduct a test on firms whose headquarters and auditors' offices are located in the same county by dropping observations where auditors' offices and firms' headquarters are

Table 2. Descriptive Statistics.

Panel A: Descriptive Statistics based on ARDA (N=12,705)

Variable	Mean	SD	Q1	Median	Q3
LAF	12.98	1.47	11.92	12.98	13.97
REL_A	0.43	0.19	0.27	0.41	0.57
REL_M	0.43	0.20	0.27	0.40	0.56
SOCIAL CAPITAL	0.17	0.18	0.27	0.41	0.59
LTA	5.04	2.40	3.52	5.05	6.64
BIG5	0.73	0.45	0.00	1.00	1.00
CR	3.58	5.43	1.38	2.29	4.07
CA_TA	0.58	0.24	0.41	0.60	0.78
ARINV	0.25	0.20	0.10	0.22	0.37
ROA	-0.74	14.89	-0.21	0.01	0.07
LOSS	0.47	0.50	0.00	0.00	1.00
FOREIGN	0.54	0.50	0.00	1.00	1.00
MERGER	0.15	0.35	0.00	0.00	0.00
BUSY	0.65	0.48	0.00	1.00	1.00
LEV	0.18	0.76	0.00	0.04	0.20
INTANG	0.15	0.18	0.00	0.07	0.24
SEG	0.59	0.72	0.00	0.00	1.10
TENURE	7.56	3.32	5.00	7.00	11.00
OPINION	0.02	0.13	0.00	0.00	0.00
MATWEAK	0.02	0.13	0.00	0.00	0.00
TOTPOP	10.41	1.59	9.73	10.40	11.30
EDU	27.54	4.13	20.00	30.00	30.00
MALE	97.45	2.36	95.00	98.00	99.00
MARRIED	58.69	2.23	57.00	58.00	60.00
MONEY	10.74	0.10	11.00	11.00	11.00
MINORITY	23.76	9.04	20.00	20.00	30.00
AGE	0.74	1.31	0.08	0.39	0.90
FIRM_RISK	-1.05	1.56	-2.90	0.00	0.00
DAQ	0.42	0.80	0.22	0.61	0.92
COSTBUS	40.17	9.62	35.00	41.00	50.00
CPI	82.71	6.23	79.00	85.00	93.00

Panel B: Descriptive Statistics for Gallup Database (N=1,663)

Variable	Mean	SD	Q1	Media	Q3
LAF	12.99	1.48	11.93	13.09	13.99
REL_A	0.40	0.20	0.23	0.40	0.54
REL_M	0.40	0.21	0.23	0.39	0.53
LTA	4.82	2.52	3.36	4.87	6.50
BIG5	0.67	0.47	0.00	1.00	1.00
CR	3.49	6.48	1.32	2.22	3.81
CA_TA	0.59	0.25	0.41	0.61	0.80
ARINV	0.24	0.19	0.09	0.21	0.36

ROA	-0.88	9.19	-0.26	0.00	0.06
LOSS	0.51	0.50	0.00	1.00	1.00
FOREIGN	0.51	0.50	0.00	1.00	1.00
MERGER	0.14	0.34	0.00	0.00	0.00
BUSY	0.66	0.47	0.00	1.00	1.00
LEV	0.19	0.88	0.00	0.02	0.21
INTANG	0.16	0.20	0.00	0.07	0.26
SEG	0.52	0.69	0.00	0.00	1.10
TENURE	6.74	3.37	4.00	6.00	10.00
OPINION	0.03	0.16	0.00	0.00	0.00
MATWEAK	0.03	0.16	0.00	0.00	0.00
TOTPOP	10.37	1.55	9.53	10.20	11.20
EDU	27.99	4.11	20.00	30.00	30.00
MALE	97.36	2.29	95.00	99.00	99.00
MARRIED	58.53	2.28	57.00	57.00	60.00
MONEY	10.76	0.11	11.00	11.00	11.00
MINORITY	26.67	9.95	20.00	30.00	30.00
AGE	0.83	1.21	0.08	0.48	1.14
FIRM_RISK	-1.57	1.72	-3.40	0.00	0.00
DAQ	0.47	0.78	0.30	0.67	0.94
COSTBUS	41.12	9.47	35.00	44.00	50.00
CPI	83.24	5.87	81.00	85.00	85.00

located in different counties. This screening process reduces the number of observations to 11,021. The results (Model 2) based on the slightly reduced sample show that the religiosity coefficient is significantly negative (β_1=-0.54; t-stat. = -4.64) and it is slightly higher than the religiosity coefficient for the total sample, suggesting that the joint impact of auditors' and managers' religiosity values may have a strong impact on audit fees. In other words, the negative association between audit fees and religiosity is stronger when auditors' offices as well as firm headquarters are located in high religiosity counties. This result suggests that lower audit and lower audit effort as a result of higher quality of information generated by managers operating in the high religiosity counties result even in lower audit fees.

Second, we conduct the test by splitting the sample into the groups of high and low religiosity counties where firms are headquartered to identify subsamples of firms with high and low managers' religiosity. This split is based on the median values of

managers' religiosity, where firms with high managers' religiosity are coded as 1 and the firms with low managers' religiosity values are coded as 0. We conduct tests on the two subsamples separately and the results are contained in Table 5.

The results show that auditors' religiosity coefficient is negative for both subsamples. The coefficient (β_1) is equal to -1.08 (t-stat. = -4.32) for firms with managers' low religiosity values and it is -0.38 (t-stat. = 2.82) for firms with high religiosity values. The F-value test on the two religiosity values shows that there is a significant difference in the coefficients of two subsamples. The results thus show that the impact of religiosity on auditors' behavior is stronger when managers' religiosity is low. The results of a test on the total sample with an interaction variable between auditors' religiosity and dummy variable for managers' religiosity are consistent with the results for the subsamples. Audit fees are especially lower when both auditors and managers are from high religiosity counties.

Panel C: Correlation Coefficients among Demographic Variables based on ARDA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1)REL_A		**0.88**	-0.01	**-0.09**	**-0.11**	**-0.36**	**0.06**	**-0.34**	**-0.44**	**0.15**
(2)REL_M	**0.90**		**-0.03**	**-0.18**	**-0.14**	**-0.34**	**0.11**	**-0.40**	**-0.47**	**0.20**
(3)SOCIAL CAPITAL	**0.07**	**0.07**		**0.06**	**0.08**	**-0.14**	0.01	**0.03**	**-0.06**	**-0.06**
(4)TOTOPO	**0.08**	**0.03**	**0.26**		**0.43**	**-0.58**	**-0.44**	**0.49**	**-0.15**	**-0.54**
(5)EDU	**-0.23**	**-0.26**	**0.20**	**0.25**		**-0.18**	**-0.43**	**0.84**	**0.09**	**-0.17**
(6)MALE	**-0.52**	**-0.53**	**-0.30**	**-0.43**	**0.03**		**0.49**	-0.01	**0.15**	**0.25**
(7)MARRIED	0.01	**0.05**	**-0.03**	**-0.38**	**-0.41**	**0.33**		**-0.53**	**-0.38**	**0.09**
(8)MONEY	**-0.35**	**-0.40**	**0.17**	**0.33**	**0.87**	**0.09**	**-0.53**		**0.33**	**-0.18**
(9)MINORITY	**-0.46**	**-0.49**	**-0.22**	**-0.24**	**0.17**	**0.22**	**-0.42**	**0.30**		**0.21**
(10)AGE	**-0.31**	**-0.29**	**-0.29**	**-0.85**	**-0.15**	**0.47**	**0.09**	**-0.14**	**0.55**	

Panel D: Correlation among Religiosity, Audit Fee, and Control Variables based on ARDA

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1)LAF		**-0.03**	**-0.04**	**0.83**	**0.47**	**-0.11**	**-0.22**	**-0.02**	**0.09**	**-0.29**	**0.49**	**0.13**
(2)REL_A	**-0.03**		**0.90**	**0.08**	**0.07**	**-0.07**	**-0.15**	**0.10**	0.00	**-0.09**	-0.01	0.01
(3)REL_M	**-0.04**	**0.88**		**0.07**	**0.07**	**-0.05**	**-0.14**	**0.08**	0.00	**-0.07**	**-0.02**	**0.02**
(4)LTA	**0.83**	**0.09**	**0.08**		**0.57**	**-0.05**	**-0.32**	**-0.04**	**0.15**	**-0.40**	**0.46**	**0.15**
(5)BIG5	**0.48**	**0.07**	**0.07**	**0.57**		**0.05**	**-0.06**	**-0.11**	**0.04**	**-0.18**	**0.24**	**0.08**
(6)CR	**-0.04**	**-0.12**	**-0.11**	0.00	**0.16**		**0.31**	**-0.17**	**0.03**	**0.06**	**-0.07**	**-0.05**
(7)CA_TA	**-0.25**	**-0.16**	**-0.15**	**-0.37**	**-0.07**	**0.50**		**0.27**	**0.02**	**0.14**	**-0.09**	**-0.16**
(8)ARINV	**0.05**	**0.11**	**0.10**	**0.02**	**-0.07**	**-0.13**	**0.18**		**0.04**	**-0.19**	**0.10**	**-0.03**
(9)ROA	**0.33**	**0.08**	**0.07**	**0.46**	**0.22**	**0.09**	**-0.13**	**0.25**		**-0.06**	**0.05**	**0.02**
(10)LOSS	**-0.29**	**-0.09**	**-0.08**	**-0.41**	**-0.18**	**-0.02**	**0.16**	**-0.23**	**-0.85**		**-0.25**	**-0.07**
(11)FOREIGN	**0.50**	-0.01	**-0.02**	**0.48**	**0.24**	**0.02**	**-0.11**	**0.16**	**0.29**	**-0.25**		**0.12**
(12)MERGER	**0.14**	0.01	0.01	**0.16**	**0.08**	**-0.04**	**-0.17**	-0.01	**0.07**	**-0.07**	**0.12**	
(13)BUSY	**0.04**	**0.04**	**0.05**	0.01	**0.05**	**-0.01**	-0.01	**-0.16**	**-0.12**	**0.10**	**-0.02**	**0.03**
(14)LEV	**0.22**	**0.16**	**0.15**	**0.29**	**0.07**	**-0.33**	**-0.43**	**0.07**	0.01	**-0.05**	**0.07**	**0.07**
(15)INTANG	**0.35**	**0.05**	**0.03**	**0.33**	**0.09**	**-0.26**	**-0.56**	**-0.02**	**0.12**	**-0.13**	**0.24**	**0.31**

(16)SEG	**0.34**	**0.13**	**0.12**	**0.34**	**0.10**	**-0.14**	**-0.25**	**0.19**	**0.17**	**-0.17**	**0.24**	**0.12**
(17)TENURE	**0.44**	0.00	0.01	**0.49**	**0.40**	**0.12**	**-0.09**	**-0.02**	**0.26**	**-0.22**	**0.23**	**0.07**
(18)OPINION	**-0.16**	-0.01	0.00	**-0.19**	**-0.17**	**-0.15**	-0.01	**-0.02**	**-0.16**	**0.11**	**-0.12**	**-0.02**
(19)MATWEAK	**-0.03**	**-0.03**	**-0.02**	**-0.07**	**-0.10**	**-0.04**	0.01	**0.02**	**-0.06**	**0.06**	0.00	**-0.02**
(20)FIRMRISK	**-0.38**	**0.12**	**0.13**	**-0.26**	**-0.04**	**-0.07**	**0.04**	0.01	**-0.17**	**0.15**	**-0.17**	**-0.02**
(21)DAQ	**0.14**	**0.03**	**0.03**	**0.14**	**0.06**	**0.07**	-0.01	**0.04**	**0.17**	**-0.17**	**0.08**	**0.03**
(22)COSTBUS	0.00	**-0.53**	**-0.60**	**-0.13**	-0.01	**0.22**	**0.26**	**-0.17**	**-0.15**	**0.16**	**0.02**	0.01
(23)CPI	0.00	**-0.16**	**-0.20**	**-0.08**	**0.06**	**0.18**	**0.19**	**-0.16**	**-0.11**	**0.12**	**-0.01**	0.01

Panel D-Continue: Correlation among Religiosity, Audit Fees, and Control variable

	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
(1)LAF	**0.05**	**-0.02**	**0.23**	**0.37**	**0.45**	**-0.17**	**-0.03**	**-0.36**	**0.18**	**-0.02**	0.01
(2)REL_A	**0.04**	**0.03**	**0.02**	**0.14**	**-0.02**	-0.01	**-0.03**	**0.15**	-0.01	**-0.39**	**-0.03**
(3)REL_M	**0.05**	**0.03**	0.00	**0.12**	-0.01	0.00	**-0.02**	**0.16**	**-0.02**	**-0.44**	**-0.06**
(4)LTA	0.01	**-0.06**	**0.22**	**0.37**	**0.49**	**-0.22**	**-0.06**	**-0.26**	**0.15**	**-0.12**	**-0.05**
(5)BIG5	**0.05**	**-0.05**	**0.03**	**0.10**	**0.40**	**-0.17**	**-0.10**	**-0.04**	**0.02**	**-0.02**	**0.05**
(6)CR	**0.01**	**-0.07**	**-0.18**	**-0.14**	**0.02**	**-0.06**	**-0.02**	0.01	0.01	**0.12**	**0.07**
(7)CA_TA	-0.01	**-0.09**	**-0.56**	**-0.23**	**-0.07**	**-0.02**	0.01	**0.03**	-0.01	**0.24**	**0.15**
(8)ARINV	**-0.15**	0.00	**-0.17**	**0.13**	**-0.06**	0.00	**0.02**	**0.03**	**0.03**	**-0.16**	**-0.15**
(9)ROA	**-0.02**	**-0.02**	**0.03**	**0.03**	**0.06**	**-0.12**	0.00	**-0.03**	**0.06**	**0.02**	**0.02**
(10)LOSS	**0.10**	**0.06**	**-0.06**	**-0.17**	**-0.23**	**0.11**	**0.06**	**0.14**	**-0.15**	**0.16**	**0.11**
(11)FOREIGN	**-0.02**	**-0.04**	**0.14**	**0.25**	**0.22**	**-0.12**	0.00	**-0.16**	**0.09**	**0.02**	**-0.02**
(12)MERGER	**0.03**	-0.01	**0.29**	**0.12**	**0.07**	**-0.02**	**-0.02**	**-0.01**	**0.04**	0.01	0.01
(13)BUSY		**0.03**	**0.05**	**0.01**	**0.02**	**0.02**	-0.01	0.01	**-0.02**	0.00	**0.06**
(14)LEV	**0.03**		**0.02**	0.00	**-0.02**	**0.05**	**0.02**	**0.03**	0.00	**-0.05**	**-0.01**
(15)INTANG	**0.05**	**0.24**		**0.20**	**0.03**	-0.01	0.01	**-0.07**	**0.04**	**-0.06**	**-0.03**
(16)SEG	0.01	**0.20**	**0.29**		**0.15**	**-0.06**	-0.01	**-0.08**	**0.07**	**-0.15**	**-0.06**
(17)TENURE	**0.04**	**0.09**	**0.11**	**0.14**		**-0.17**	**-0.13**	**-0.18**	**0.12**	**-0.03**	**0.04**
(18)OPINION	**0.02**	0.01	**-0.05**	**-0.06**	**-0.16**		**0.20**	**0.07**	**-0.04**	0.00	**-0.02**
(19)MATWEAK	-0.01	0.01	0.01	-0.01	**-0.13**	**0.20**		**0.02**	**0.02**	0.01	0.00
(20)FIRMRISK	0.01	**0.02**	**-0.11**	**-0.09**	**-0.18**	**0.07**	**0.03**		**-0.05**	-0.01	-0.01
(21)DAQ	**-0.02**	0.00	**0.07**	**0.07**	**0.10**	**-0.03**	0.01	**0.08**		**-0.03**	**-0.02**
(22)COSTBUS	-0.01	**-0.22**	**-0.09**	**-0.14**	**-0.02**	-0.01	0.01	-0.01	**-0.04**		**0.60**
(23)CPI	**0.03**	**-0.16**	**-0.07**	**-0.08**	**0.04**	**-0.02**	0.00	-0.01	**-0.03**	**0.67**	

(continued on next page)

Table 2 shows summary statistics. Sample descriptive statistics based on the ARDA database are presented in Panel A. All variables are defined in Appendix A. Sample descriptive statistics based on Gallup database are presented in Panel B. Panel C & D present the Pearson (Spearman) correlations above (below) the diagonal, they are based on a sample of 12,705 firm-year observations. Only TOTPOP is based on the county level, whereas all other geographic control variables are based on the state level. The main analyses are based on ARDA data and robustness tests are conducted on Gallup data. All continuous variables are winsorized to the 1st and 99th percentiles of their distributions. Bold text indicates statistical significance at the level of 0.05 or better. Variables are defined in Appendix A.

Table 3. Regression Results on the Association Between Audit Fees and Auditors' Religiosity.

			MODEL 1			MODEL 2			MODEL3		
			County-based Auditor REL			County based Manager REL=Auditor REL			MSA Auditor REL		
	Test Variable	Exp.	Coeff	t-Stat	Sig.	Coeff	t-Stat	Sig.	Coeff	t-Stat	Sig.
β1	REL_A	-	-0.49	-4.91	***	-0.54	-4.64	***	-2.73	-2.10	**
	Control Variables										
β_2	LTA	+	0.47	48.87	***	0.49	51.05	***	0.90	4.42	***
β_3	BIG5	+	0.17	4.98	***	0.15	4.26	***	-1.37	-2.04	**
β_4	CR	-	-0.02	-3.59	***	-0.03	-4.75	***	0.00	-0.06	
β_5	CA_TA	+	0.37	3.99	***	0.44	4.66	***	1.32	2.16	**
β_6	ARINV	+	0.14	1.59		0.20	2.27	**	-1.01	-0.82	
β_7	ROA	-	0.00	-2.06	**	-0.03	-5.76	***	0.09	1.23	
β_8	LOSS	+	0.16	7.36	***	0.18	7.90	***	0.51	1.07	
β_9	FOREIGN	+	0.21	7.24	***	0.18	5.98	***	0.26	0.48	
β_{10}	MERGER	?	-0.10	-4.13	***	-0.09	-3.73	***	-0.33	-0.88	
β_{11}	BUSY	+	0.07	2.71	***	0.09	3.26	***	0.11	0.36	
β_{12}	LEV	+	0.03	2.31	**	0.02	1.79	*	0.00	0.00	
β_{13}	INTANG	+	0.45	5.21	***	0.54	6.09	***	0.07	0.06	
β_{14}	SEG	+	0.14	7.26	***	0.12	6.35	***	-0.01	-0.12	

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β_{15}	TENURE	?	0.02	4.16	***	0.02	3.65	***	-0.04	-1.05	
β_{16}	OPINION	+	-0.09	-1.14		0.02	0.31		1.21	1.55	
β_{17}	MATWEAK	+	0.02	0.25		0.08	1.21		1.12	2.09	**
β_{18}	TOTPOP	?	-0.03	-1.89	*	-0.05	-2.25	**	0.66	2.05	**
B_{19}	EDU	?	0.02	2.91	***	0.03	3.04	***	0.17	1.73	*
β_{20}	MALE	?	-0.05	-4.07	***	-0.06	-4.2	***	0.22	1.52	
β_{21}	MARRIED	?	0.05	3.73	***	0.04	3.21	***	-0.20	-1.91	*
β_{22}	MONEY	?	0.70	1.63		0.55	1.22		-7.07	-1.28	
β_{23}	MINORITY	?	0.02	7.39	***	0.02	6.6	***	0.02	0.72	
β_{24}	AGE	?	0.02	1.85	*	0.02	1.55		0.00	2.51	**
β_{25}	FIRMRISK	+	0.05	4.69	***	0.01	1.1		-12.28	-1.53	
β_{26}	DAQ	+	0.09	8.08	***	0.11	9.86	***	0.35	0.99	
β_{27}	COSTBUS	+	-0.01	-4.2	***	-0.01	-3.05	***	-0.10	-2.55	**
β_{28}	CPI	+	0.01	2.8	***	0.01	2.41	**	0.05	1.73	*
β_0	Intercept		3.79	0.97		6.37	1.51		63.37	1.47	
β_{29}	Industry		Yes			Yes			Yes		
β_{30}	Year		Yes			Yes			Yes		
	N		12,705			11,021			90		
	Adj. R-square		0.77			0.78			0.93		
	F test Model 1 β1 = Model 2 β1					F-value=5.22			P-value=0.02		

Table 3 presents the association between auditor's religiosity and audit fees. Model 1 is based on the total sample and the REL_A variable is based on the religiosity value of the counties where auditors' offices are located; Model 2 is based on the sample of observations when firms' headquarters and auditors' offices are in the same county and Model 3 is based on the MSA religiosity score, where MSA refers to the Metropolitan Statistical Areas. Variables are defined in Appendix A. ***, **, * indicate statistical significance at 1%, 5% and 10% level, respectively.

Table 4. Joint Effect of Managers' and Auditors' Religiosity on Audit Fees.

			MODEL 1			MODEL 2			MODEL 3		
			Total Sample			Low Manager Religiosity			High Manager Religiosity		
	Test Variable	Exp.	Coeff	t-Stat	Sig.	Coeff	t-Stat	Sig.	Coeff	t-Stat	Sig.
β_1	REL_A	-	-0.24	-1.91	*	-1.08	-4.32	***	-0.38	-2.82	***
β_2	REL_M_D	-	0.29	2.73	***						
β_3	REL_A*REL_M_D	+	-0.70	-2.8	***						
	Control Variables										
β_4	LTA	+	0.47	49.18	***	0.44	36.23	***	0.52	37.72	***
β_5	BIG5	+	0.16	4.85	***	0.21	5.05	***	0.14	2.67	***
β_6	CR	-	-0.02	-3.59	***	-0.02	-2.57	**	-0.02	-2.49	**
β_7	CA_TA	+	0.35	3.78	***	0.25	2.17	**	0.56	4.27	***
β_8	ARINV	+	0.14	1.65	*	0.23	2.1	**	-0.01	-0.11	
β_9	ROA	-	0.00	-2.06	**	0.00	-2.12	**	-0.02	-2.32	**
β_{10}	LOSS	+	0.16	7.33	***	0.14	5.19	***	0.18	5.47	***
β_{11}	FOREIGN	+	0.21	7.14	***	0.20	5.52	***	0.17	4.29	***
β_{12}	MERGER	?	-0.10	-4.08	***	-0.08	-2.46	**	-0.08	-2.46	**
β_{13}	BUSY	+	0.08	2.77	***	0.05	1.61		0.11	2.82	***
β_{14}	LEV	+	0.03	2.25	**	0.02	0.65		0.03	2.67	***
β_{15}	INTANG	+	0.45	5.25	***	0.30	2.8	***	0.64	5.36	***
β_{16}	SEG	+	0.14	7.38	***	0.12	4.9	***	0.15	5.75	***
β_{17}	TENURE	?	0.02	4.19	***	0.01	2.26	**	0.03	4.2	***
β_{18}	OPINION	+	-0.10	-1.2		-0.18	-2.01	**	0.08	0.54	
β_{19}	MATWEAK	+	0.02	0.23		0.02	0.26		0.00	0.03	
β_{20}	TOTPOP	?	-0.03	-1.44		-0.09	-2.04	**	0.02	0.51	
β_{21}	EDU	?	0.03	3.24	***	0.01	1.01		0.03	1.97	**
β_{22}	MALE	?	-0.05	-4	***	-0.09	-5.35	***	0.06	1.38	
β_{23}	MARRIED	?	0.05	3.8	***	0.08	4.68	***	-0.03	-0.84	
β_{24}	MONEY	?	0.56	1.29		1.37	1.98	**	0.41	0.67	

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β_{25}	MINORITY	?	0.02	7.38	***	0.04	5.76	***	0.02	4.76	***
β_{26}	AGE	?	0.01	1.3		-0.32	-2.73	***	0.01	1.03	
β_{27}	FIRMRISK		0.05	4.8	***	0.03	2.31	**	0.05	3.3	***
β_{28}	DAQ	+	0.09	8.02	***	0.07	4.44	***	0.10	6.02	***
B_{29}	COSTBUS	+	-0.01	-4.22	***	-0.01	-1.74	*	-0.02	-3.89	***
β_{30}	CPI	+	0.01	2.41	**	-0.01	-2.25	**	0.02	3.47	***
β_{0}	Intercept		5.19	1.31		0.67	0.11		-1.58	-0.27	
β_{31}	Industry		Yes			Yes			Yes		
β_{32}	Year		Yes			Yes			Yes		
	N		12,705			6,866			5,839		
	Adj. R-square		0.7747			0.7734			0.7950		

This table presents the results based on the impact of managers' religiosity on the association between audit fees and auditors' religiosity. Model 1 is based on the total sample with an interaction variable, whereas Models 2 and 3 are based on the subsamples of low and high managers' religiosity respectively. Variables are defined in Appendix A. ***, **, * indicate statistical significance at 1%, 5% and 10% level, respectively.

Tests Based on the MSA Religiosity Values. Prior studies have also conducted tests on the religiosity values at the MSA level (e.g. McGuire et al. 2012). Consistent with earlier studies, we also conduct an additional test on the MSA religiosity values. We have identified 90 MSA observations in the total sample (this number of MSA is consistent with earlier studies, such as McGuire et al. 2012). The results are contained in Model 3. These results are similar to the results based on the county-level observations reported under Model 1, i.e. audit fees are negatively associated with religiosity values (β_1 = -2.73; t-stat. = -2.10).

Overall Results on Hypothesis H1. Overall, the above results show that audit fees are lower when auditors' religiosity values are high, and especially when firms are also headquartered in high religiosity counties. These results are consistent with our hypothesis H1 that higher religiosity values influence auditors' behavior that results in lower audit risk and audit effort that results in audit fees.

Test Results based on the Gallup Data. We conduct tests on the Gallup data to evaluate whether our results are database sensitive. We use the following five different religiosity indices based on the three Gallup religiosity elements (1) index based on the cluster analysis of three components of religiosity, (2) index based on an average of three components, and (3) indices based on three individual religiosity components. The results (untabulated) for all five tests are similar to our main test results reported in Table 3. These findings thus confirm that our results are not database sensitive, and thus they provide additional support to our hypothesis H1 that audit fees are negatively associated with auditors' religiosity.

Results on Control Variables. The results on control variables show that the coefficients of all control variables are in the expected direction and are also consistent with earlier studies. The coefficient for internal control weaknesses (MATERIAL) is,

however, insignificant. Consistent with Hilary and Hui (2009) and McGuire et al. (2012), we use county-level values for the population variable and the state-level values for other demographic variables because of non-availability of data for all years. Given the possibility that the use of values for different levels for geographic control variables may introduce bias in the analyses (Doogar et al. 2014), we conduct an additional analysis using the county-level values for all demographic variables by interpolating data for the missing years. The results (untabulated) based on the county-level values for all control variables are almost the same as reported in the Table.

Robustness Tests

Movement of Auditors' offices from High to Low religiosity counties and vice versa. We test the robustness of our findings by examining the association between the change in audit fees and the movement of auditors' office from high to low religiosity areas and vice versa. We use the following change regression model to evaluate the difference in audit fees.

$$\Delta LAF_{i,t} = \beta_0 + \beta_1 \Delta REL_A_{i,t} + \beta_2 \Delta AuditFeeControls + \beta_3 \Delta GeographicControls + \beta_4 \Delta EQ + \beta_5 \Delta Cost State + \varepsilon_{i,t} + \epsilon \quad (2)$$

First, we test the impact of auditor's move from a low religiosity county to a high religiosity county. The results of this test are reported in Table 5:

The results show that the coefficient of change in auditors' religiosity score (ΔREL_A) is significantly negative (β_1 = -0.60, t-stat. = -3.28) when auditors' offices move from low to high religiosity counties, suggesting lower audit fees when this type of move takes place. On the other hand, the results show a significantly positive coefficient (β_1 = 0.57, t-stat = 2.36) association when there is a move of auditors' offices from high to low religiosity counties, suggesting higher audit fees in his case.

These results thus show that religiosity has a strong impact on auditors' risk behavior that is reflected in audit fees.[15]

Impact of Urban/Rural Location on the Association between Religiosity and Audit Fees. We capture the impact of urban and rural dichotomy by classifying auditors' offices based on their urban and rural locations, which is decided on the basis of the following three criteria. First, we classify the offices as urban offices when they are located within 25 miles' radius of the Top Five US metropolitan cities, which are: York City, Chicago, Los Angeles, Houston and Philadelphia.[16] Second, we increase the number of large cities to Top Ten by adding the following five cities to the list of Top Five cities: Phoenix, San Antonio, San Diego, Dallas and San Jose.[17] Third, we rank the auditor office locations based on their population, and the firms in the upper half (higher population) are classified as urban locations and the lower half rural locations. We conduct separate tests on the subsamples belonging to rural and urban locations. The results on urban and rural locations of firms based on the criterion of 25 miles radius of Top Five Cities are presented in Table 8.[18]

The results for the subsamples show that the coefficient of auditors' religiosity (REL_A) is negative and statistically significant at the one percent level for rural firms (β_1= -0.37; t= -3.65), whereas it is negative but insignificant for the subsample of firms located in urban areas (β_1 = -0.49; t-stat. = -1.59). These results thus support our expectation in hypothesis H2 that the negative association between audit fees and religiosity is stronger

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[15] We also conduct a test when firm's headquarters move from a low religiosity county to a high religiosity county, and the results (untabulated) also show that audit fees become lower, suggesting that higher earnings quality also reduces audit fees.

[16] We follow Uysal, Kedia, and Panchapagesan (2008) to calculate the distance between the location of the firm and five biggest cities.

[17] The large cities are defined based on the United States Bureau Census.

[18] The results for other tests are similar to the results reported in Table 8.

when auditors' offices are located in rural areas with religiosity values. We also conduct tests by including the variable of RURAL in equation (1), where RURAL is coded as 1 for rural locations and 0 for urban locations, and an interaction variable between RURAL and REL_A. The results are consistent with the results based on the subsamples.

Sensitivity Test Results

It is possible that lower audit fees are the result of other factors that are not influenced by the religiosity values. Therefore, we conduct additional tests by isolating the impact of other relevant factors. First, we isolate the effect of firm-specific risk factors. Second, we isolate the social capital on our results. Third,

Table 5. Impact of Changes in Audi tors' Office on the Association between Audit Fees and Auditors' Religiosity.

			Move of Auditor Office					
			Low to High MODEL 1			High to Low MODEL 2		
	Test Variable	Exp.	Coeff	t-Stat	Sig.	Coeff	t-Stat	Sig.
β_1	ΔREL_A	-	-0.60	-3 .28	***	0.57	2.36	**
	Control Variables							
β_2	ΔLTA	+	0.41	24.3	***	0.42	24.4	***
β_3	ΔBIG5	+	0.22	3.10	***	0.19	3.01	***
β_4	ΔCR	-	-0.00	-1.58		-0.00	-4.50	***
β_5	ΔCA_TA	+	0.35	2.33	**	0.05	0.35	
β_6	ΔARINV	+	0.10	0.62		0.41	2.62	***
β_7	ΔROA	-	-0.00	-3.67	***	-0.00	-3.77	***
β_8	ΔLOSS	+	0.23	4.35	***	0.16	3.86	***
β_9	ΔFOREIGN	+	0.18	3.37	***	0.13	2.17	**
β_{10}	ΔMERGER	?	-0.10	-1.00		-0.10	-1.05	
β_{11}	ΔBUSY	+	0.05	0.91		0.09	1.48	
β_{12}	ΔLEV	+	0.03	1.38		-0.00	-0.03	
β_{13}	ΔINTANG	+	0.49	3.12	***	0.20	1.27	
β_{14}	ΔSEG	+	0.12	3.24	***	0.10	2.49	**
β_{15}	ΔTENURE	?	0.01	1.32		0.01	0.66	
β_{16}	ΔOPINION	+	-0.00	-0.09		-0.20	-2.24	**
β_{17}	ΔMATWEAK	+	0.08	0.64		-0.10	-0.75	
β_{18}	ΔTOTPOP	?	-0.10	-1.86	*	-0.00	-0.79	
β_{19}	ΔEDU	?	0.02	1.25		0.03	1.88	*
β_{20}	ΔMALE	?	-0.00	-0.74		-0.00	-1.87	*
β_{21}	ΔMARRIED	?	0.00	-0.21		0.06	3.17	***
β_{22}	ΔMONEY	?	-0.10	-0.17		0.76	0.89	
β_{23}	ΔMINORITY	?	0.02	4.63	***	0.03	6.62	***
β_{24}	ΔAGE	?	-0.00	-1.44		0.00	-0.02	
β_{25}	ΔFIRM_RISK	+	-0.10	-4.63	***	-0.10	-5.20	***
β_{26}	ΔDAQ	+	-0.10	-2.57	**	0.02	1.10	
β_{27}	ΔCOSTBUS	+	-0.00	-1.11		-0.00	-2.68	***
β_{28}	ΔCPI	+	0.01	1.00		0.01	1.97	**
β_0	Intercept		-0.10	-2.54	**	-0.00	-0.92	
B_{29}	Industry		Yes			Yes		
β_{30}	Year		Yes			Yes		
	N		1,125			1,542		
	Adj. R-square		0.72			0.68		

The table reports regression results based on the move of auditor office across counties with different religiosity values. Model 1 is based on the firms associated when auditor office moves to a high religiosity county from a low religiosity county; Model 2 is based on the move of auditor office to a low religiosity county from high religiosity county. All the variables are defined as the changes from last year to this year. Variables are defined in Appendix A. ***, **, * indicate statistical significance at 1%, 5% and 10% level, respectively.

Table 6. Association between Audit Fees and Auditors' Religiosity in Rural/Urban Areas.

			MODEL 1: Rural Area			MODEL 2: Urban Area		
	Test Variable	Exp.	Coeff	t-Stat	Sig.	Coeff	t-Stat	Sig.
β_1	REL_A	-	-0.37	-3.65	***	-0.49	-1.59	
	Control Variables							
β_2	LTA	+	0.45	43.44	***	0.47	20.03	***
β_3	BIG5	+	0.20	5.68	***	0.04	0.56	
β_4	CR	-	-0.02	-3.23	***	-0.02	-1.92	*
β_5	CA_TA	+	0.33	3.30	***	0.43	2.37	**
β_6	ARINV	+	0.15	1.56		-0.06	-0.33	
β_7	ROA	-	0.00	-1.99	**	-0.01	-3.38	***
β_8	LOSS	+	0.19	8.00	***	0.23	4.98	***
β_9	FOREIGN	+	0.19	6.21	***	0.21	3.18	***
β_{10}	MERGER	?	-0.08	-3.34	***	-0.09	-1.60	
β_{11}	BUSY	+	0.09	2.97	***	0.14	2.31	**
β_{12}	LEV	+	0.04	2.97	***	0.05	0.44	
β_{13}	INTANG	+	0.44	4.80	***	0.42	2.15	**
β_{14}	SEG	+	0.14	7.25	***	0.11	2.39	**
β_{15}	TENURE	?	0.02	3.23	***	0.02	2.38	**
β_{16}	OPINION	+	-0.06	-0.69		0.27	1.82	*
β_{17}	MATWEAK	+	0.05	0.71		-0.29	-1.03	
B_{18}	TOTPOP	?	-0.02	-1.23		0.04	0.67	
B_{19}	EDU	?	0.01	1.57		0.00	-0.17	
β_{20}	MALE	?	-0.04	-2.69	***	-0.08	-3.10	***
β_{21}	MARRIED	?	0.03	2.22	**	0.05	1.89	*
β_{22}	MONEY	?	0.59	1.25		1.03	1.11	
β_{23}	MINORITY	?	0.02	5.68	***	0.03	2.97	***
B_{24}	AGE	?	0.02	2.29	**	-0.15	-2.09	**
β_{25}	FIRM RISK	+	-0.11	-14.50	***	-0.08	-4.75	***
β_{26}	DAQ	+	0.07	5.59	***	0.04	2.15	**
β_{27}	COSTBUS	+	-0.01	-2.54	***	0.00	0.10	
B_{28}	CPI	+	0.01	2.27	**	-0.02	-1.83	*
β_0	Intercept		4.55	1.03		4.44	0.52	
B_{29}	Industry		Yes			Yes		
β_{30}	Year		Yes			Yes		
	No		5,953			6,752		
	Adj. R-square		0.78			0.93		
F test Model 1 β_1 = Model 2 β_1			F-value=114.56			P-value<0.001		

This table presents results on the comparison of association between audit fees and religiosity for auditors' located in urban and rural areas. Model 1 is presents the results when auditor office is located in the rural areas, whereas results in Model 2 are based on auditor offices in urban areas. Variables are defined in Appendix A. ***, **, * indicate statistical significance at 1%, 5% and 10% level, respectively.

we control for accrual quality, which may be affecting information quality.

Test Results by including firm-specific risk factors. It could be argued that lower audit fees may be the result of lower firm-specific risk factors that are not included in our control variable. We control for different firm-specific risk factors in evaluating the association between audit fees and religiosity values of counties in which auditors' offices are located. Consistent with Hilary and Hui (2009), we conduct tests using the following variables as proxies for firm risk: STDROA, INV, R&D, and market to book ratio (GROWTH). We also use the skewness of ROA as a proxy for risk factor (Chang, Monahan, and Ouazad, 2013). The results (untabulated) remain unchanged in every case.

As a proxy for the overall risk of firm, Hilary and Hui (2009) use the standard deviation of income before taxes scaled by total assets. We conduct additional analyses using this proxy for firms' overall risk. We divide the sample into high and low risk firms based on the median value of this variable. Firms with median value and above are considered high risk firms and are code them as 1, and firms below median are considered low risk firms and are coded as 0. We conduct tests on the high and low risk firms separately and also on the total sample using an interaction variable between religiosity and risk factor. The results based on the two subgroups are contained in Table 7.

The religiosity coefficient for low risk firms is negative (β= -0.29; t-stat. = -2.33) and it is also negative for high risk firms (β_1= -0.69; t-stat. = -5.09), suggesting that audit fees are negatively associated with religiosity values both for high and low risk firms. A comparative evaluation of the two coefficients, however, indicates that the negative coefficient is stronger for high risk firms (F-test results show that the difference between the two coefficients is statistically significant) suggesting that auditors' religiosity plays an important role in reducing audit fees, especially when firm-specific risk is high. The test results based on the total

sample with an interaction variable between religiosity and firm-specific factor are similar to the results reported earlier. The results show that the impact of auditors' religiosity on audit fees is slightly moderated when firm-specific risk factor is low.

Social Capital versus Religiosity Values and Audit Fees. Jha and Chen (2015) document that the impact of social capital of counties in which firms are headquartered is stronger on

Table 7. Isolation of Firm-Specific Risks on the Association between Audit Fee and Auditors' Religiosity.

			MODEL 1 Total Sample			MODEL 2 Low Firm-Risk			MODEL 3 High Firm-Risk		
	Test Variable	Exp.	Coeff	t-Stat	Sig.	Coeff	t-Stat	Sig.	Coeff	t-Stat	Sig.
β_1	REL_A	-	-0.60	-5.25	***	-0.29	-2.33	**	-0.69	-5.09	***
β_2	Risk	-	-0.17	-3.34	***						
β_3	REL_A*Risk	+	0.23	2.03	**						
	Control Variables										
β_4	LTA	+	0.47	45.98	***	0.56	46.04	***	0.39	32.24	***
β_5	BIG5	+	0.16	4.64	***	0.06	1.28		0.29	6.76	***
β_6	CR	-	-0.02	-3.63	***	-0.02	-1.67	*	-0.02	-2.97	***
β_7	CA_TA	+	0.34	3.65	***	0.47	3.15	***	0.22	2.07	**
β_8	ARINV	+	0.11	1.27		0.15	1.08		0.16	1.52	
β_9	ROA	-	0.00	-2.04	**	-0.79	-5.77	***	0.00	-1.99	**
β_{10}	LOSS	+	0.16	7.16	***	0.09	2.45	**	0.09	2.82	***
β_{11}	FOREIGN	+	0.21	7.38	***	0.20	4.92	***	0.20	5.61	***
β_{12}	MERGER	?	-0.10	-4.09	***	-0.09	-3.14	***	-0.08	-2.15	**
β_{13}	BUSY	+	0.08	3.04	***	0.12	3.64	***	0.03	0.91	
β_{14}	LEV	+	0.04	2.85	***	-0.14	-1.92	*	0.03	2.32	**
β_{15}	INTANG	+	0.45	5.11	***	0.56	4.66	***	0.37	3.52	***
β_{16}	SEG	+	0.14	7.24	***	0.10	4.46	***	0.11	3.96	***
β_{17}	TENURE	?	0.02	4.22	***	0.02	2.62	***	0.02	2.78	***
β_{18}	OPINION	+	-0.04	-0.46		-0.10	-0.62		-0.15	-1.89	*
β_{19}	MATWEAK	+	0.01	0.16		0.20	1.76	*	-0.03	-0.39	
β_{20}	TOTPOP	?	-0.03	-1.89	*	-0.01	-0.61		-0.05	-1.86	*
β_{21}	EDU	?	0.02	2.76	***	0.02	2.05	**	0.03	2.72	***
β_{22}	MALE	?	-0.06	-4.16	***	-0.05	-3.08	***	-0.04	-2.26	**
β_{23}	MARRIED	?	0.05	3.75	***	0.05	3.65	***	0.02	1.52	
β_{24}	MONEY	?	0.73	1.69	*	0.69	1.5		0.42	0.64	

(continued on next page)

β_{25}	MINORITY	?	0.03	7.29	***	0.02	6.65	***	0.03	5.85	***
β_{26}	AGE	?	0.02	1.7	*	0.02	2.47	**	0.01	0.33	
β_{27}	DAQ	+	0.09	7.97	***	0.16	11.82	***	0.04	2.88	***
β_{28}	COSTBUS	+	-0.01	-4.24	***	-0.01	-2.77	***	-0.02	-5.24	***
B_{29}	CPI	+	0.01	2.76	***	0.01	2.2	**	0.02	3.74	***
β_0	Intercept		3.81	0.96		2.45	0.57		6.85	1.18	
β_{31}	Industry		Yes			Yes			Yes		
β_{32}	Year		Yes			Yes			Yes		
	N		12,075			6,352			6,353		
	Adj. R-square		0.77			0.80			0.70		
F test Model 2 β_1 = Model 3 β_1						F-value= 22.54			P-value<0.001		

This table presents the results showing the impact of firm risk on the association between audit fees and auditors' religiosity. Model 1 is based on the total sample with an interaction variable, whereas Models 2 and 3 are based on the subsamples of low and high firm risk respectively. All variables are defined in Appendix A. ***, **, * indicate statistical significance at 1%, 5% and 10% level, respectively.

audit fees compared to that of religiosity values. We argue that it will be more appropriate to compare the impact of social capital values with religiosity values of counties where auditors' offices are located. We conduct a test using social and religiosity values of counties where auditors' offices are located by including the variable of social capital in the regression model.[19] The results are reported in Table 8.

The results show that coefficients for REL_A ($\beta 1$ = -0.32, t-stat. = -3.45) and also social capital ($\beta 2$ = -0.11; t-stat. = -2.45) are negative and statistically significant. The F-test results on the difference in coefficients of religiosity and social capital show that the coefficient of social capital is significantly smaller compared to that of the religiosity coefficient. Thus, our findings show that the religiosity values of counties in which auditors' offices are located

[19] We would, however, like to point out that religiosity and social capital differ in their definitions and contents. Whereas social capital refers to the mutual trust in society and between auditors and managers in this case (Jha and Chen 2015), religiosity fosters norms and beliefs that have an impact on auditors' and managers' behavior. Moreover, the social capital index used by Jha and Chen (2015) is based on the measures of two networks, i.e. the number of social and civic association, and the number of nongovernment organizations (NG) in counties, whereas the religiosity index is based on the religious adherents' percentages or individual responses to religious beliefs and their religious affiliations. This makes the nature of the two indices very different. As a result of these differences, counties with high and low religiosity and social capital in the US differ, and thus the sample firms with high and low scores are not the same based on the religiosity and social capital indices.

Table 8. Impact of Religiosity versus Social Capital on Audit Fees.

			MODEL 1		
	Test Variable	Exp.	Coeff	t-Stat	Sig.
β_1	REL_A	-	-0.32	-3.45	***
β_2	SOCIALCAPITAL	-	-0.11	-2.45	**
	Control Variables				
β_3	LTA	+			
β_4	BIG5	+	0.45	45.66	***
β_5	CR	-	0.19	5.77	***
β_6	CA_TA	+	-0.02	-3.51	***
β_7	ARINV	+	0.30	3.28	***
β_8	ROA	-	0.16	1.90	*
β_9	LOSS	+	-0.00	-2.03	**
β_{10}	FOREIGN	+	0.19	8.50	***
β_{11}	MERGER	?	0.19	6.75	***
β_{12}	BUSY	+	-0.08	-3.46	***
β_{13}	LEV	+	0.09	3.29	***
β_{14}	INTANG	+	0.05	3.21	***
β_{15}	SEG	+	0.40	4.73	***
β_{16}	TENURE	?	0.14	7.82	***
β_{17}	OPINION	+	0.02	3.68	***
β_{18}	MATWEAK	+	-0.05	-0.61	
β_{19}	TOTPOP	?	0.04	0.64	
β_{20}	EDU	?	-0.01	-0.55	
β_{21}	MALE	?	0.02	1.96	**
β_{22}	MARRIED	?	-0.03	-2.41	**
β_{23}	MONEY	?	0.03	2.71	***
β_{24}	MINORITY	?	0.43	1.03	
β_{25}	AGE	?	0.02	8.12	***
β_{26}	FIRM RISK	+	0.01	1.14	
β_{27}	DAQ	+	-0.11	-15.8	***
β_{28}	COSTBUS	+	0.06	5.68	***
β_0	CPI	+	-0.01	-3.75	***
B_{29}	Intercept		0.01	3.88	***
β_{30}	Industry		4.97	1.28	***
β_{31}	Year		Yes		**
	N		Yes		
	Adj. R-square		12,467		
F test	$\beta_1 = \beta_2$		F-value=47.68	P-value<0.001	

This table shows the association between auditor's religiosity and audit fees in relation to the association between audit fees and social capital. We include social capital in the model and compare the influence of religiosity and social capital on audit fees. Variables are defined in Appendix A. ***, **, * indicate statistical significance at 1%, 5% and 10% level, respectively.

have a stronger impact on auditors' risk behavior and hence on audit fees than social capital values.[20]

Test Results based on Audit Fee Premium. We use audit fee premium as the dependent variable in place of the log of audit fee to evaluate whether the results remain the same. Audit fee premium is obtained by running the audit fee model, where premium is reflected by the residual of this model. The audit premium is used as a proxy for additional audit risk and effort. The results (untabulated) show that the religiosity coefficient is significantly negative, suggesting that higher religiosity is associated with lower premium.

Test Results based on Non-audit Fees. We conduct a test using non-audit fees as the dependent variable to examine whether the negative association also holds for non-audit fees. The results (untabulated) show that the association between non-audit fees and religiosity is insignificant. These results indicate that the impact of religiosity is more relevant for audit risk, which is an important component of audit fees, but not for non-audit fees.

Impact of Firm Complexity reflected by Geographic Diversity. It is argued in the literature that higher complexity as a result of diversification results in lower accuracy in analysts' earnings forecasts (Duru and Reeb 2002), suggesting that firm complexity reflected by diversification can be expected to have a negative impact on information quality that impacts analysts' forecast accuracy. Extending this line of research, we examine whether the impact of religiosity on audit fees differs when firms are geographically diversified, i.e. are located in different areas, compared to the firms located in one area. Because firms with

[20] We also split the sample into the subsamples of high and low religiosity values and conducted tests separately on both subsamples. The results indicate that the religiosity coefficients in both cases are significantly negative. The religiosity coefficient for the high social capital subsample is -0.45 whereas it is -0.57 for the low social capital subsample.

different locations may be audited by auditors from different counties with differing religiosity values, which may suggest that is no uniformity in the auditors' behavior for the same firm. We test the impact of firm complexity on the association between religiosity and audit fees by including the variable of No_Dispersion, which is coded as 1 for non-diversified firms and 0 for diversified firms,[21] and also an interaction between REL and No_Dispersion. The variable of No_Dispersion is based on the geographic segments of the firms; a firm with offices dispersed over more than one county is classified as a diversified firm, while a firm with one location is classified as a non-diversified firm.[22] We conduct tests on the subsamples of diversified and non-diversified firms and on the total sample by including the variable of No_Dispersion and an interaction variable between No_Dispersion and religiosity.

The test results (untabulated) based on the subsamples show that the REL_A coefficient is significantly negative and statistically significant for the subsample with No_Dispersion (β_1 = -0.40; t-stat. = -4.00), whereas REL_A coefficient is insignificant for the subsample of firms with dispersion (β_1 = -0.19; t-stat. = -1.30). The results for the total sample show that coefficient of the interaction variable is significantly negative at 1 percent level. Thus, the results of the total sample are consistent with the results for the subsamples. These results indicate that religiosity is negatively associated with audit fees for firms with no geographic segments, and the impact of religiosity on audit fees is diluted when firms have offices scattered over different locations.

Impact of Potential Litigation on the Association between Audit Fees and Religiosity. It is well documented in the

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[21] Based on our criterion of classification, we identify 8,390 observations as non-diversified and 2,631 observations diversified.

[22] This classification is consistent with the classification used by Duru and Reeb (2002) who examine the impact of international diversification on analysts' forecast accuracy and bias.

literature that litigation risk potential may enhance audit risk (Seetharaman, Gul, and Lynn 2002). Firms belonging to the industry groups that are considered to be associated with high risk are classified as firms with high risk potential.[23] Our search indicates that 6,259 observations are associated with low litigation risk. We conduct a test on the total sample by including an interaction variable between the dummy variable for high and low Litigation potential and Religiosity, and also on subsamples of firms with high and low litigation potential. The results (untabulated) based on the total sample as well as on the subsamples show that religiosity has no impact on audit fees for firms belonging to the industry groups with high litigation potential. These results suggest that even high religiosity values do not reduce audit fees when legal risk is high.

Impact of Corporate Governance on the Association between Audit Fees and Religiosity. We evaluate whether a strong and weak corporate governance will have a differential impact on the association between religiosity and audit fees. We use board independence as a proxy for the corporate governance strength; the corporate governance is considered strong when corporate boards are independent (John and Senbet 1998). The board is considered independent when more than 50% of board members have no affiliation with management, and is coded as 1. We conduct a test on the total sample by including the dummy variable of board independence and an interaction variable between religiosity and board independence as well as on the subsamples of firms with independent and non-independent corporate boards.

The results (untabulated) based on the total sample as well as on the subsamples show that the negative association between audit fees and religiosity scores is strong when corporate boards are

[23] Firms belonging to the following industry groups are considered to have higher potential risk: Bio-Technology (SIC 2833 to 2836), Computer Hardware firms (SIC 3570 to 3577), Electronics (SIC 3600 to 3674), Retailing (SIC 5200 to 5961), and Computer Software (SIC 7371 to 7379) (Gong, Li, and Xie 2009).

not independent, i.e. weak corporate governance. This finding suggests that religiosity has a limited effect on reducing audit fees when corporate governance is strong. A probable explanation for this finding is that firms with strong corporate governance already have lower audit fees and religiosity has little impact on reducing audit fees further. On the other hand, religiosity plays a role in reducing audit fees if firms have weak corporate governance. This finding suggests that religiosity may serve as a substitute for weak corporate governance in reducing audit fees. (Callen and Fang, 2015).

CONCLUSION

This study extends research on the impact of religiosity on auditors' behavior, and examines the influence of religiosity on audit risk and audit effort, which are reflected in audit fees. We argue that high religiosity environments are likely to reduce audit risk because of the client portfolio realignment and lower audit effort as a result of higher auditors' trust of information generated by managers on which audit is performed. We examine difference in the business risk of the clients of auditors operating from high and low religiosity areas, and we find that the business risk is lower for the client portfolio of auditors operating from the high religiosity areas. Since audit risk and audit effort determine audit fees, we use audit fees as proxy for both of them and conduct a regression test to evaluate the association between religiosity and audit fees. The results of our tests confirm that there is a negative association between religiosity values and audit fees, suggesting that higher religiosity values of counties where auditors' offices are located, especially when client firms are also headquartered in high religiosity counties, reduce audit risk and effort, which result in lower audit fees. We find the negative association between audit fees and religiosity even after we control for the impact of earnings quality, and other firm specific risk factors. Additional tests on the association between the change in audit fees and change in the

auditors' offices from high to low and low to high religiosity are consistent with our main results.

The results on additional analyses show that the association is stronger when the auditors operate from high religiosity counties that are rural in nature compared to the counties that are urban. The results also show that geographic diversification dilutes uniformity in the religious views of managers because some offices of the firms may be located in the religious areas while others may be located in non-religious areas. Additionally, we find no impact of religiosity on audit fees of firms if they belong to industries with high legal liability potentials. The impact of religiosity on audit fees is stronger when corporate governance is weak, suggesting that religiosity may serve as a substitute for strong corporate governance to moderate audit fees.

Overall, our findings confirm that high religiosity values encourage auditors to reduce their risk exposure to enhance the reliability of audited information, which will enhance their reputation. Moreover, higher religiosity values encourage auditors to trust higher reliability of information prepared by managers operating in high religiosity counties which will also reduce audit effort. Our findings confirm that reduction in audit risk and audit effort is reflected in lower audit fees.

The findings of this study, however, need to be interpreted with caution. The reliability of results depends on the reliability of religiosity data. The methodology used in the paper only indicates that there is an association between audit fees and religiosity values, and do not provide any evidence on the causal effect relationship audit risk and audit effort, reflected by audit fees, and religiosity values. It is also possible that our results may also suffer from the omitted variable problem.

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