Manuscript Title: The impact of religion on classification shifting in the presence of corporate governance and BIG 4 audit.

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ABSTRACT

This study examines the extent to which religious socials norms of the firm's environment would affect classification shifting and whether such impact would be altered in the presence of firm specific corporate governance characteristics, such as board independence and BIG4 audit. Using a sample of 23,164 U.S. firm-year observations between 2000 and 2015, we find that managers would be deterred to shift revenue items and core expenses from/into special items so as to inflate core earnings in a religious social norm's environment. The religion through the ethical channel would act as a deterrent to unethical managerial behaviour such as classification shifting. We also show that the religion would complement corporate governance and auditor characteristics to mitigate classification shifting. We report results with some variability as we examine the ethical role of religion in reducing classification shifting in rural vs urban areas, in low vs high religious areas, as well as in pre and post financial crisis periods. Finally, we show that regulation also plays a role as the SOX Act (2002) appears to curb opportunistic managerial behaviour, even more so in a religious social norm's environment.

Keywords: Classification Shifting, Religiosity, Corporate Governance, BIG4 Audit.

1. INTRODUCTION

The objective of this study is to provide an empirical assessment of the extent to which religious social norms of the firms' environment would affect misclassification of income-decreasing special items or special revenue items so as to impact upon reported core earnings. To this day, the literature is agnostic on the impact of religion on classification shifting. Prior research (see Conroy and Emerson 2004; McGuire et al., 2012; Dyreng et al., 2012; and Hilary and Hui, 2009; Callen et al., 2011) focuses on the impact of religiosity on financial misreporting, and it reports that the former would act as a deterrent to the latter. The impact of religion on business ethics (Weaver and Agle, 2002; Longenecker, et al., 2004; Vitell 2009; Cai and Shi, 2017), on credit ratings (Cai and Shi, 2017), on audit (Leventis, et al. 2015) and on tax avoidance (Boone, et al. 2013) has also been explored. However, the impact of religion on classification shifting remains to a large extent unexplored. We fill this gap in the literature and examine managers' opportunistic misclassification of revenue and/or expense items in a religious social norm environment, also in the presence of certain corporate governance and BIG4 audit practices. This is of some importance because firms may be tempted to believe that unethical classificatory behaviour does not need much consideration since it is an accounting practice within the law. Regrettably, as classification shifting through window dressing type of manipulation might boost revenue in the short-term and conceal costs (Arel et al., 2012), it could uphold the true information set and in a 'cherry picking' manner would reveal instead what unethical business managers would favour to reveal.

There are numerous studies on classification shifting (Zalata and Roberts, 2017; Fan et al. 2010; McVay, 2006) that argue that misclassifying core expenses or revenue items into special items aims at influencing perceptions of the firms' performance in an unethical manner (Zalata and Roberts, 2017, Fan et al., 2010). As classification shifting is often disguised as a standard accounting practice and may involve a plethora of accounting items in financial statements, while it is within the boundaries of most regulatory accounting frameworks, it is rather hard to detect in practice.[1] Yet, despite the challenges to detect classification shifting, it is of

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[1] Misclassification in expense items (cost of goods sold, selling, general and administrative expenses) is reported in Zalata and Roberts, (2016) and (2017), Behn, et al. (2013) and Haw, et al. (2011). Managers might also misclassify expenses in discontinued operations as operating expenses (Barua, Lin and Sbaraglia, 2010) and shift

importance to study given its popularity among practitioners in recent years, also in light of ethical concerns about its use (Zalata and Roberts 2017 and 2016). In fact, Zalata and Roberts (2017) strongly argue that classification shifting is not ethical. In this paper, we explore this channel of classification shifting that we call the ethical channel. In particular, we build on previous studies that show an association between religion and business ethics (Weaver and Agle, 2002; Longenecker, et al., 2004; Conroy and Emerson, 2004; Vitell 2009; Cai and Shi, 2017). This strand of research reasons that religion would improve business ethics. Yet, the role of religion in relation to deviations from widely accepted ethical behaviour at firm level has not been given the due attention. However, such deviations may lead to high debt levels or even to catastrophic business failure (Longenecker, et al., 2004; Vitell 2009; Cai and Shi, 2017). Alas, in the case of a business failure a close scrutiny of the underlying firm's ethical behaviour either comes late or comes ex post the event of the failure (Schwartz, 2016; Kaplan et al., 2009; Staubus, 2005). In a recent paper, Baiada-Hireche and Garmilis (2016) indicate that long-term successful business practices are associated with sound ethical behaviour at firm level. Of course, it is not without challenges to identify business ethics at firm level. We reason that classification shifting would provide a way of identifying unethical behavior at firm level in a timely manner, thereby allowing us to examine the impact of religion on the former through the ethical channel.

To this end, a careful examination, for example, of shifting core expenses to boost reported core earnings would reveal deviations from ethical behaviour at firm level. Having identified classification shifting at firm level as unethical accounting practice, we would consider, thereafter, what would be the impact of religion on classification shifting. It might be the case that religion could be of importance for classification shifting and thereby for business ethics at firm level. For example, it could be the case that religion would reduce classification shifting by strengthening the information content of financial statements and by enhancing, thereby, business ethics. In addition, as classification shifting could be related to corporate governance and audit practices, we propose also to examine whether the interaction between religion,

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extraordinary items into operating expense to inflate core earnings. Malikov, et al. (2017), Noh, et al. (2017) refer to misclassification of other income or revenues from non-operating activities as operating revenues to influence market perceptions, influence share price or beat analysts' benchmarks.

corporate governance and auditor characteristics would influence misclassification of core expenses and/or revenue.

Measuring religion has its own challenges. Most studies opt for the definition of religion as reported by Religious Congregations and Membership Study (RCMS), which provides a religiosity index that measures the strength of religious social norms.[2] The Association of Religion Data Archive (ARDA) provides data for religiosity index for U.S. Counties. Herein, we follow the definition by Religious Congregations and Membership Study (RCMS), which is the norm in the literature (McGuire et al., 2012; Dyreng et al, 2012; Hilary and Hui, 2009). Having identified religiosity in U.S., we opt for McVay (2006) expectation model to assess the existence of classification shifting in the U.S..[3] Our sample covers every state in the U.S. and employs all county-level religious dataset.

This paper contributes to the literature in several ways: firstly, we are the first to measure the impact of religion on classification shifting. Secondly, we include individual and interactive terms between religiosity and corporate governance variables. Thirdly, we examine the association between religiosity and auditor tenure as well as religiosity and BIG4 auditors (see Zalata and Roberts, 2016), by including both individual and interaction terms. Such interactions might be of importance. Fourth, we examine at a robustness stage whether our findings hold using different definitions for religiosity and various measures of unexpected core earnings. We also examine as part of robustness test whether the regulatory framework such as the Sarbanes–Oxley (SOX) Act 2002 and the financial crisis would impact upon the effect of religiosity on classification shifting.

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[2] The term religiosity describes religious adherents in a county which consist of all members, full members, communicants or non- communicants, baptized or non-baptized, regular attendants, participants of weekly religious activities and those who consider religion as important part of their life (see Religious Congregations and Membership Study (RCMS), 2010).

[3] We ensure at this stage that any association found between religiosity and classification shifting would be tested against previous criticism. So, following Fan et al. (2010) we exclude contemporaneous accruals from the original McVay (2006) model. We respond to the call by Callen et al., (2011) and McGuire et al., (2012) to examine the extent to which religion affects earnings management on a broader scale by exploring the association between religiosity and misclassification of special items. We also replace total accruals by working capital accruals (which exclude depreciation expense and other exceptional items) to avoid any bias associated with original McVay's (2006) model as reported by Athanasakou, et al. (2009). In addition, we examine the geographical dispersion, high and low religious areas, rural and urban areas.

We find a significant negative association between religious social norms and classification shifting, suggesting that in a religious social norms environment, managers' incentive to classification shifting is subdued. Our evidence shows that the religion through the ethical channel acts as a deterrent to unethical managerial behaviour such as classification shifting. We also observe that religion is negatively related to classification shifting in firms located in both rural and urban areas in the light of the low (high) earnings quality often associated with urban (rural) firms respectively. We interact religiosity and corporate governance variables, auditor tenure, BIG4 auditors and find that in a religious social norms environment, the effect of corporate governance, auditor tenure and BIG4 auditor on classification shifting is more pronounced and carries a negative sign. Thus, religiosity complements corporate governance, auditor tenure and BIG4 auditors to mitigate managers' incentives to misclassify special revenue items or core expenses so as to inflate the reported core earnings. In further analysis, we show that religiosity impacts upon firms in geographic centralised areas, pre and post financial crisis period, complements the SOX Act (2002) to curb opportunistic managerial misclassification behaviour, and serves as a monitoring mechanism to complement existing governance structures and external monitoring.

The rest of the study is organised as follows. In section 2, we discuss the literature and develop the hypotheses. Section 3 covers research design, empirical methodology and estimation equations. Section 4 discusses data collection, sampling and descriptive statistics. The regression results are discussed in section 5. Section 6 presents results of robustness tests and further sensitivity analyses. Lastly, section 7 provides conclusion and future research.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Classification Shifting and Religious Social Norms

Social norm theory posits that managers who work in an environment with diverse social norms exhibit varied behaviours (Tayler and Bloomfield, 2010). Individuals' decisions are shaped and influenced by the moral values and social norms of the environment where they live or work. The role of religion on business ethics literature (Conroy and Emerson, 2004; Longenecker et al., 2004) indicate that providing misleading financial information is ethically and morally

unacceptable. For instance, prior research has established relationship between religion and personal behaviour (Lehrer, 2004, p. 180), religion and development (Mersland, D'Espallier and Supphellen, 2012), religion, economic attitudes and household income (Renneboog and Spaenjers, 2011). Previous researchers have also indicated that religion affects individuals' behaviour and that religiosity enhances individual's ethical values and attitudes (Tayler and Bloomfield, 2010; Vitell, 2009). This view is also corroborated by Parboteeah, Hoegl and Cullen (2008) who find that individual's level of religiosity is positively correlated with high ethical values. Sunder (2005) underscores the importance of religious values to the stakeholders of the firm and finds that the absence of religiosity can potentially harm stakeholders and affect the whole system and performance of the organisation.

There is a plethora of studies (McVay 2006; Fan et al., 2010; Haw et al. 2011; Behn et al., 2013; Zalata and Robert, 2017 and 2016) that show evidence of classification shifting whilst there is no study that links religion with classification shifting. Moreover, we know the importance of classification shifting from the literature (McVay 2006; Fan et al., 2010; Zalata and Robert, 2017 and 2016). There is evidence that earnings management in terms of accruals management involves borrowing earnings from future periods either through acceleration of revenues or delaying of expenses (Donelson, Mcinnis & Mergenthaler, 2013; Gerakos and Kovrijnykh, 2013). On the other hand, real-activities management involves the provision of discounts to boost sales and cutting down of discretionary expenses such as advertising and research and development costs so as to increase reported earnings (Wongsunwai, 2013). However, classification shifting is rather complicated and harder to detect as it involves classifying operating expenses as discontinued operations (Barua et al., 2010), classifying operating expenses as extraordinary, classifying operating expenses as special items (McVay, 2006) and classifying other operating income as special items (Noh et al, 2017). McVay (2006) indicates that classification shifting re-arranges income statement items and does not change the bottom-line reported earnings. Zalata and Robert, (2017, 2016) and Fan et al., (2010) indicate that all methods of earnings management raise expectations of future performance but real-activities and accrual-based earnings management have the effect of reducing future or past earnings. This leads to a compromise in reputation and the quality of financial reporting. With income-decreasing classification shifting, McVay (2006) indicates that core earnings are

inflated as recurring items are shifted to non-recurring and exceptional items, leading to a positive relationship between core earnings and special items. Therefore, as there is no implication for future reported earnings, there is limited external monitoring and vigilance from auditors.

Our contribution to the above discussion posits that religiosity in a firm's environment could complement existing managerial monitoring mechanism to mitigate unethical misclassification behaviour. Previous studies that have established the association between religion and earnings management (McGuire et al., 2012; Dyreng et al, 2012; Hilary and Hui, 2009) ignore classification shifting as an earnings management method. We fill this gap in the earnings management literature and argue that this is of importance because of the underlying characteristics of classification shifting. Note that classification shifting does not involve GAAP violation as it does not change bottom-line or future profits. To this end, it might be lawful, but it is not ethical. Given that it is not a GAAP violation, auditors and regulators also do not scrutinize classification shifting as they do for accrual-based and real-activities earnings management (Fan et al., 2010; McVay, 2006). There is some evidence that religion could mitigate accrual earnings management as clearly this practice is not within the law (Fan et al., 2010; McVay, 2006). A question that emerges is whether religious social norms would have a mitigation impact on unethical accounting practices that do not involve either law or violate GAAP regulations. Given that such an accounting practice is clearly not right from an ethical point of view. This discussion postulates the following hypothesis:

H1: The religiosity of the firms' environment would mitigate classification shifting.

2.2 Classification Shifting, Religiosity and Corporate Governance

Zalata and Roberts (2016) observe that high quality internal governance in the board and audit committees mitigate classification shifting. Li Lin and Hwang (2010) indicate that strong corporate governance acts as a form of monitoring mechanism, controls devious managerial behaviour, moderates classification shifting and reduces information risk. Given this evidence, it is of interest to further investigate the impact of religion on classification shifting in the

presence of specific corporate governance structures. It could be the case that there are complexities to be revealed when it comes to the impact of religion on classification shifting, as the former could affect the latter through an indirect channel. If such indirect channel exists, it could be revealed by including interactions between religion and corporate governance variables. Therefore, we shall investigate the impact of interaction between corporate governance, defined as presence of audit committee, strong board size and independent board, and religiosity of the firms' environment on classification shifting.

The interaction between corporate governance and religion could amplify the effect of the latter on classification shifting as underlying synergies might be at play. Previous research (see Ho, 2010) argues that religiosity is a significant cultural value that would influence the ethical perception of the managers. Therefore, one would expect that strong governance would enhance the effect of religiosity on the ethical behaviour of the organization. Herein, we further examine the role of an independent board. Such board could act at a higher level of religiosity and thereby enact a more ethical tone for the business that, in turn, would further moderate classification shifting. But this is a testable hypothesis that is subject to testing. Following the above, we test for the following hypothesis:

H2: The interactions between religiosity and corporate governance would mitigate classification shifting.

2.3 Classification Shifting, Religiosity and Auditor Characteristics

Several studies (Haw et al., 2011; Francis and Yu, 2009) show that auditor characteristics could complement existing corporate governance mechanisms and reduce accruals earnings management. Empirical evidence indicates that Big4 auditors would lower the magnitude of discretionary accruals (Choi et al., 2012; Asthana and Boone, 2012; Francis and Wong, 2008). Eshleman and Guo (2014) argue that Big4 auditors have better training programmes and provide higher audit quality due to their size. Furthermore, Haw et al. (2011) find that classification shifting decreases when firms are audited by the Big4 in East Asia whilst external auditors with short tenures are associated with lower earnings quality. On the other hand,

Hohenfels (2016) observe that longer auditor tenure impairs auditor independence and lowers audit quality. Similarly, Francis and Wong (2008) observe that auditor tenure negatively affects audit quality, earnings management, lawsuit against auditors and investors' confidence.[4]

Despite the reported mixed findings of the impact of auditor tenure, further complexities exist as Behn et al., (2013) and Fan et al., (2010) argue that auditors and regulators might scrutinise less classification shifting activities, because misclassification does not change GAAP earnings. If this is indeed the case, then business ethics might be at risk.

We focus on a missing link in the literature by examining whether auditor characteristics could interact with religious social norms of the firms' environment and whether such interactions have an impact on misclassification. Given that religion is found to positively affect business ethics (see Weaver and Agle, 2002; Longenecker, McKinney and Moore, 2004), it could be the case that religion could interact with auditor characteristics and mitigate classification shifting through its support for ethical behaviour. To this end, in the empirical application, we consider how auditors in Big4 and auditors with tenure interact with religion and thereby their effect on classification shifting.[5] The following hypothesis is formulated for testing:

H3: The interaction between religion and auditor characteristics would mitigate classification shifting.

3. DATA AND DESCRIPTIVE STATISTICS

3.1 Measuring Religiosity

We utilise religious dataset published by Religious Congregations and Membership Study (RCMS) to measure the strength of religious social norms. We use these datasets to create our proxy for religiosity. The religiosity dataset is derived from Association of Statisticians of American Religious Bodies (ASARB). The results of these surveys are published on the website of Association of Religion Data Archive (ARDA). The survey consists of an average

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[4] On the contrary, Kwon et al., (2014) and Davis et al., (2009) find that auditor tenure provides incentives for firms to engage in accruals management to either beat or meet analyst forecast.

[5] In this study, the term Big 4 refers to the Big 5 or Big 4 accounting firms in line with studies by Eshleman and Guo, (2014).

of 173 religious' bodies[6] and a total of 248,957 congregations with an average of 150,686,156 adherents. This represents 51.9% of the average U.S. population during the period between 2000 and 2010. The average percentage of population showing religiosity and religious adherents from each U.S. County is 64.4% and respondents exceeded 55.9% of the total population from each U.S. County. Religious adherents consist of all members, full members, communicants or non- communicants, baptized or non-baptized, regular attendants, participants of weekly religious activities and those who consider religion as important part of their life.

The data set is then scaled by the total county population as reported by U.S. Census Bureau of that same period. Conceptually, the higher the percentage of religious adherents in a county, the higher the impact of religious social norm on the firms headquartered in that county. Therefore, we use total number of religious adherents per capita in line with prior studies (McGuire et al. 2012). Overall, we identify 698 distinctive counties that are the headquarters of at least one of the firms on the Compustat annual database used in our analyses between 2000 and 2015. The county-level religiosity scores are matched to their respective U.S. States by merging them by year using the state code identifiers from the Compustat's company location code where firms are headquartered to derive the State-level religious dataset. We use religious dataset covering all U.S. States. The data requirement for each dependent and independent variable is a function of the number of observations and test required for the analysis.

Table 1 below provides descriptive statistics for the measure of RELIGIOSITY (REL). Table 1 shows that religiosity in the U.S. is declining from an average of approximately 53% in 2000 to an average of 48% in 2010 in each county. This is consistent with the 2008 American Religious Identification Survey, which reports a substantial decline in religiosity among U.S. population between 1990 and 2008. Table 1 indicates that approximately 54% of all people in

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[6] Of this, there were on average 154 Christian denominations and associations (including Messianic Jews, Latter-Day Saints, and Universalist groups); there were also counts of Shinto, Sikh, Jain, National Spiritualist Association Congregations, and several congregations and adherents from three Buddhist groupings, four Hindu groupings, Baha's, four Jewish groupings, Zoroastrians and Muslims.

each U.S. county are affiliated with a religion, attend a religious activity or considers religion as important in their life.

(Insert Table 1 Here)

In the robustness analysis, we use Gallup religious database for the twenty most and least religious U.S. States for the same period. Based on the responses collected by Gallup, on whether religion is important, respondents attend religious activities weekly or are affiliated with religion, Mississippi came out, as the most religious state, whilst Vermont is the least religious state. The most religious states are mainly in the South, with the exception of Utah, while the least religious states are concentrated in New England and the West.

(Insert Table 2 here)

3.2 Control Variables

In line with prior research (Fan et al., 2010), we include lagged core earnings (CE_{t-1}) because of the unrelenting nature of core earnings. Following Nassim and Penman (2001), we include asset turnover ratio (ATO_t) so as to consider the negative association between profit margin and ATO_t. McVay (2006) indicates that inclusion of ATO_t is crucial because changes to the operating strategies are associated with firms that have large income-decreasing special items. For example, firms can change their profit and sales mix to affect the level of core earnings. Previous studies (Fan et al., 2010) observe that earnings performance of firms is influenced by accruals and cash flows earnings components. They observe that accruals manipulation could result in high or low accruals figure, which can affect firm's performance. Therefore, we include lagged by one year operating accruals ($ACCRUALS_{t-1}$) and $ACCRUALS_t$ at current year in the model. We also include the change in sales ($\Delta SALES_t$) and the percentage change in sales ($NEG_{\Delta SALES_t}$), if $\Delta SALES_t$ is less than 0, otherwise zero.

In addition, we include the return on assets (ROA). Cohen and Zarowin (2010) observe that firm performance influences earnings management and the poorer the performance of the firm, the higher the misclassification of special items to increase reported core earnings. Thus, we anticipate a negative coefficient on ROA. We consider the impact of firm size (SIZE) to control for the existing variations in accruals behaviour between large and small firms. Prior studies

(Ashbaugh et al., 2006) indicate that small firms are more likely to engage in earnings manipulations than large firms. Therefore, depending on the size of the firms in the sample, we expect a negative or positive association between classification shifting and SIZE. To secure external financing, prior studies indicate that management might manage reported earnings upwards. We control for this by including the leverage (LEV), estimated as the ratio of long-term debt to total assets. Badertscher (2011) reports that firms with leverage are likely to manage earnings to meet debts covenants. When firms are engaged in misclassification, a positive relationship between LEV and unexpected core earnings is expected. Finally, consistent with McGuire et al., (2012), we control for population, income levels, education level, age, proportion of minority and political affiliations in the counties and states to avoid the results being driven by geographic or demographic differences.

3.3 Data, Sample Selection and Descriptive Statistics

We collect financial data from the annual Compustat database between 2000 and 2015. We also obtain additional data from other sources including, Annual Reports, Audit Analytics, CRSP and I/B/E/S. Firms with missing data and those with less than 15 firm-year observations are excluded in line with prior research (Haw et al., 2011). To shun bias and avoid creation of outliers resulting from the inclusion of insignificant firms in the sample, we exclude any observation with sales revenue less than $1,000,000 (Fan et al., 2010; McVay, 2006) as sales is used as a deflator for the majority of the variables. Utilities firms and financial services companies have different reporting environment and regulations; therefore, we do not include them in our sample in line with prior studies (Fan et al., 2010). We classify industries using Fama and French (1997) industry classification code. Our final sample includes 23,164 firm-year observations. This final sample is used to estimate the normal or expected core earnings.

(Insert Table 3 here)

Table 3 above presents descriptive statistics for our regression variables for all firms. The mean, median, standard deviation, first quartile and third quartile are reported. The dependent variable UNEXP_CE has a mean of 0.002 (approximately zero). The median of UNEXP_CE is 0.001 with a standard deviation 0.069. The mean SPITEM is positive (0.002) indicating income-decreasing special items. The mean and median of income-increasing special items are

positive 0.021 and 0.011 respectively. Also, the mean (median) REL×SPITEM and REL×REVT, indicating the interaction between religiosity (REL) and income-decreasing special items (SPITEM) and religiosity and special revenue are approximately zero. The other distributions are similar and consistent with prior research (Fan et al, 2010). For example, the mean and median board size is approximately 11 and ranges between 10 and 11, which is consistent with prior studies (Haw et al., 2011; Lipton and Lorsch, 1992). The mean board independence shows a slight surge to an approximately 67% consistent with prior studies in the U.S. (Abbot et al., 2003 reported 61%; Frankel et al., 2011 reported 66 %). Similarly, audit committee size is in line with prior studies in the U.S. (Mangena and Pike, 2005). All other univariate statistics and distributions for all variables appear similar to McVay (2006) and Fan et al. (2010).

4. RESEARCH DESIGN AND EMPIRICAL METHODOLOGY

4.1 Unexpected Core Earnings and Classification Shifting

To estimate classification shifting, firstly, we focus on the allocation of expenses between core expenses and special items. Secondly, we focus on misclassification of special revenue items into total revenue to increase reported core earnings. If classification shifting takes place, then core expenses or revenue items are misclassified so as to overstate core earnings. We employ the McVay's (2006) and Athanasakou et al. (2009) expectation model that take the following form:

$$NOR\_CE_t = \beta_0 + \beta_1 CE_{t-1} + \beta_2 ATO_t + \beta_3 ACCRUALS_{t-1} + \beta_4 ACCRUALS_t \qquad (1)$$
$$+ \beta_5 \Delta SALES_t + \beta_6 NEG\_\Delta SALES_t + \varepsilon_t \ ,$$

where NOR_CE_t is the core earnings before non-core special items and depreciation, calculated as (Sales – Cost of Goods Sold – Selling, General and Administrative Expenses)/Sales. CE_{t-1} is the lagged core earnings; ATO_t is the asset turnover ratio. In line with prior studies (McVay, 2006; Fan et al., 2010), we include $ACCRUALS_{t-1}$, which is prior year operating accruals and $ACCRUALS_t$, which is current year accruals. $\Delta SALES_t$ is change in sales and $NEG\_\Delta SALES_t$ is the percentage change in sales, where $\Delta SALES$ is less than 0, otherwise zero. Please note

that we estimate panel regressions but we opt to drop the subscript i in models, that indicates firm, for simplicity.

4.2 Religion and Classification Shifting

We follow McVay (2006) model to test whether firms shift core expenses into special items or special revenue into normal revenue in order to increase their core earnings. We receive information about core expenses or special revenue from the income statement. Core expenses are relatively steady, while special items are infrequent or unusual in nature (Fan et al., 2010; McVay, 2006). When firms engage in classification shifting, unexpected core earnings would increase. The model that we test takes the following form:

$$UNEXP\_CE_t = \beta_0 + \beta_1 SPITEM_t + \beta_2 REVT + \varepsilon_{t,} \qquad (2)$$

where $UNEXP\_CE_t$, is the unexpected core earnings, calculated as the difference between reported and normal or expected core earnings from equation (1). The variable of interest $SPITEM_t$ is income-decreasing special items scaled by sales and REVT is total revenue scaled by total assets. When firms shift core expenses to income-decreasing special items, they increase both core earnings and income-decreasing special items. Similarly, when firms classify special revenues as normal revenues they would increase both core earnings and total revenues (Fan et al., 2010; McVay, 2006). Therefore, we expect the coefficients β_1 and β_2 in equation 2 above to be positive.

Furthermore, we interact religiosity (REL) with special items (SPITEM) and total revenue (REVT) to examine model (3).

$$UNEXP\_CE_t = \beta_0 + \beta_1 SPITEM + \beta_2 REL_t + \beta_3 REL \times SPITEM_t + \beta_4 REVT_{t-1} +$$
$$\beta_5 REL \times \text{REVT} + \beta_6 CONTROL\ VARIABLES + \varepsilon_t \qquad (3)$$

where firm-level control variables are; SIZE, LEV, CASFO, ROA, MBV and demographic control variables are; AGE, EDUC, POPN, MIN, POL AND INCOME as defined in Appendix A.[7]

In addition, we augment model 3 to include the interaction between REL and SPITEM, and between REL and REVT as well as firm-level control variables as shown in models (4), (5) and (6) below:

$UNEXP\_CE = \beta_0 + \beta_1\ SPITEM + \beta_2 REL + \beta_3\ REL \times SPITEM + \beta_4\ SIZE + \beta_5\ LEV + \beta_6\ CASFO + \beta_7\ ROA + \beta_8\ BMV + \beta_9\ BIG4 + \beta_{10}\ ANALYST\_FOL + Demographic\ Control\ Variables + Year\ Fixed\ Effects + Industry\ Fixed\ Effects.$ 　　　　(4)

$UNEXP\_CE = \beta_0 + \beta_1\ REVT + \beta_2 REL + \beta_3\ REL \times REVT + \beta_4\ SIZE + \beta_5\ LEV + \beta_6\ CASFO + \beta_7\ ROA + \beta_8\ BMV + \beta_9\ BIG4 + \beta_{10}\ ANALYST\_FOL + Demographic\ Control\ Variables + Year\ Fixed\ Effects + Industry\ Fixed\ Effects.$ 　　(5)

$UNEXP\_CE = \beta_0 + + \beta_1\ SPITEM + \beta_2 REL + \beta_3\ REL \times SPITEM + \beta4\ REVT + \beta5\ REL \times REVT + \beta6\ SIZE + \beta7\ LEV + \beta8\ CASFO + \beta9\ ROA + \beta10\ BMV + \beta11\ BIG4 + \beta_{12}\ ANALYST\_FOL + Demographic\ Control\ Variables + Year\ Fixed\ Effects + Industry\ Fixed\ Effects.$ 　(6)

To test Hypothesis 1, we examine the coefficient of the religiosity of firms' environment (REL) and the interaction between REL and SPITEM (REL×SPITEM) in equation (4). In equation (5), we examine the individual effect of REL and the interaction between REL and REVT (REL×REVT), whilst in equation (6) we test for individual effects and interactions between REL and REVT and between REL and SPITEM. We expect religiosity to mitigate managers' incentive to misclassify core expenses or special revenue to increase reported core earnings

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[7] We exclude current accruals from equation (1). Fan et al., (2010) attribute McVay's (2006) estimation of expected core earnings to possible bias because of the inclusion of contemporaneous accruals in expected core earnings values. These studies argue that the inclusion of current accruals results in the creation of a mechanical bias leading to a positive association between unexpected core earnings (dependent variable) and special items (independent variable). This, therefore, suggests that the misclassification of core earnings into special items reported by McVay (2006) is not classification shifting but could imply model bias. In the further supplemental analyses, we estimate the validity and results for both McVay (2006) and Fan et al (2010) models to assess the impact of religiosity on classification shifting and interact religiosity with corporate governance variables, BIG4 auditors and auditor tenure.

because of ethical and moral issues. Therefore, we anticipate a negative coefficient on REL, REL×SPITEM and REL×REVT.

We test Hypothesis 2 to assess the impact of REL, REL×SPITEM and REL×REVT on UNEXP_CE considering also the underlying corporate governance. Initially, we control for corporate governance variables and test the interaction between REL and corporate governance variables. In particular, we use board size (BODSIZE), number of independent directors (BODIND) and audit committees' size (AUCOM) as proxies for corporate governance in line with prior studies (Zalata and Robert, 2016; Haw et al., 2011). The interactions between REL and governance variables are: REL×BODSIZE; REL×BODIND and REL×AUCOM. Note that board and audit committee characteristics are tested separately to avoid multicollinearity problems. We expect a significant and negative relationship between misclassification and REL×BODSIZE; REL×BODIND and REL×AUCOM. The following regression model is employed to test this expectation:

$$UNEXP\_CE = \beta_0 + \beta_1\ SPITEM + \beta_2 REL + \beta_3 REL\ x\ SPITEM + \beta_4 REVT + \beta_5\ REL\ x\ REVT + \beta_6 BODSIZE + \beta_7 BODIND + \beta_8 AUCOM + \beta_9\ REL \times BODSIZE + \beta_{10} REL \times BODIND + \beta_{11} REL \times AUCOM + \beta_{12}\ SIZE + \beta_{13} LEV + \beta_{14} CASFO + \beta_{15} ROA + \beta_{16} BMV + Demographic\ Control\ Variables + Year\ Fixed\ Effects + Industry\ Fixed\ Effects.\ (7)$$

Finally, we test Hypothesis 3 to assess the extent to which the interaction term between religiosity and auditor characteristics impact classification shifting. We include individual effects and interactions between religiosity and Big 4 auditor (REL×BIG4) and between religiosity and auditor tenure (REL×TEN). We test the auditor characteristics separately to avoid multicollinearity problems. We anticipate significant and negative relationship between misclassification and REL×BIG4; REL×TEN. The following regression model is used:

$$UNEXP\_CE = \beta_0 + \beta_1\ SPITEM + \beta_2 REL + \beta_3 REL\ x\ SPITEM + \beta_4 REVT + \beta_5\ REL\ x\ REVT + \beta_6 BIG4 + \beta_7 TEN + \beta_8 REL\ x\ BIG4 + \beta_9\ REL \times TEN + \beta_{10}\ SIZE + \beta_{11} LEV + \beta_{12} CASFO + \beta_{13} ROA + \beta_{14} BMV + Demographic\ Control\ Variables + Year\ Fixed\ Effects + Industry\ Fixed\ Effects\ (8)$$

5. EMPIRICAL REGRESSION RESULTS AND DISCUSSIONS

5.1 Evidence on Hypothesis 1: Religion and classification shifting

In Table 4, initially, we include SPITEM in Model (2) to provide specific regression results, following the empirical approach from specific to general. Note the coefficient on SPITEM is positive and significant (p-value = 0.002), suggesting that firms in the U.S. inflate core earnings by misclassifying core expenses into special items. When we include REVT in Model (2), the coefficient on REVT is positive and significant (p-value = 0.001). Finally, we include both SPITEM and REVT and observe a significant positive relationship between unexpected core earnings and both SPITEM and REVT. The result indicates that when revenue move upwards or core expenses move downwards on the income statement, then we would expect that unexpected core earnings (UNEXP_CE) would increase, suggesting that firms might be involved in misclassification of special items to increase reported core earnings. This is consistent with prior findings that unexpected core earnings increase with special items. Firms with huge write-offs and restructuring charges tend to perform poorly but the converse is equally true for firms with special items (McVay, 2006; Fan et al., 2010).

(Insert Table 4 here)

Based on Hypothesis 1, we examine the association between religiosity (REL) and unexpected core earnings (UNEXP_CE) as well as the interaction between REL and SPITEM as the variable of interest (REL×SPITEM). We run regressions using fixed effects to account for heterogeneity across firms and the results are shown in Table 5 (see Model 5 above). We find that religiosity is negatively related to UNEXP_CE, (p-value = 0.004). Similarly, we find a significantly negative relationship between REL×SPITEM and UNEXP_CE (p-value = 0.001). In Table 5 Model (6), we interact REL with REVT and report the regression results of UNEXP_CE on REL x REVT. The results show a significant negative relationship between UNEXP_CE and REL x REVT (p-value = 0.000). We include all the variables of interest in Model (7) and re-run our regression. The results are consistent with previous findings as shown in Table 5. That is, religiosity mitigates managers' incentive to misclassify revenue items upwards to increase reported core earnings. Therefore, our results suggest that in a religious

social norm environment, managers possibly deem it unacceptable, unethical and morally wrong to engage in classification shifting to boost core earnings to signal managers' inside information to investors, raise the expectation of the market or beat/meet earnings benchmarks. Perhaps, as indicated by prior studies (McVay, 2006; Fan et al. 2010) this might be due to the limited scrutiny of auditors and other external monitoring often associated with classification shifting. The result is also consistent with prior studies (McGuire et al 2012), which observe that accruals earnings management are negatively related to the religiosity of the firms' environment. This is a noble contribution to literature as our study is the first to study the association between the unethical, and thereby opportunistic, classification shifting and religiosity of the firm's environment.

(Insert Table 5 here)

Moreover, we find that the firm-level control variables are associated with UNEXP_CE in line prior studies (Zalata and Roberts, 2016). For example, the coefficient of ROA is negative and significant at 1%, suggesting that firms engage in misclassification when they perform poorly. Market book value (MBV) is negative and significant, suggesting that firms are less likely to engage in classification shifting when the book value is high. Similarly, SIZE is negatively, but insignificantly, associated with UNEXP_CE, indicating that the sample includes larger firms than smaller firms. Ashbaugh-Skaife et al. (2006) observe that small firms are more likely to manipulate reported profits than large firms. The impact of classification shifting decreases, the greater the size of the firm. We observe a positive and significant relationship at 5% level between leverage (LEV) and UNEXP_CE. Baderstscher (2011) indicates that managers manipulate reported earnings upwards to meet debt covenants or contracts. The BIG4 audit, analyst following and demographic control variables such as population, income levels, education and age exhibit their expected sign and significant/insignificant levels in line with prior studies (McGuire et al. 2012).

5.1.1 Religiosity and Classification Shifting in High vs Low Religiosity Counties

The above results and analyses have provided clear evidence that religiosity of the firm's environment influences classification shifting negatively and significantly. However, these results do not reveal the extent to which the level (high or low) of religiosity in an area will

affect classification shifting. We test this by empirically breaking down the datasets into two sub-samples in line with prior research (McGuire et al., 2012), comprising of high and low religious areas. We define high (low) religious areas as above (below) the median religiosity figure of 52% in our sample. We expect that a highly religious environment will affect classification shifting at higher levels of magnitude and significance than areas with low religiosity figures[8]. Table 6 above presents the results of the analysis of high and low religious areas on managerial opportunistic classification shifting behaviour. Interestingly, we observe a strong negative and significant impact of RELxSPITEM on UNEXP_CE in high religiosity areas. Similarly, there is a negative relationship at 1% significance level (p-value<0.03) between REVT and UNEXP_CE at the high religiosity areas. We note that the association between REL×SPITEM, REL×REVT and UNEXP_CE at the low areas is negative at 5% significance level. This reinforces the findings that religious social norms influence classification shifting, and that the effect is acute especially in highly religious environments.

(Insert Table 6 here)

5.1.2 Religiosity and Classification Shifting in Rural vs Urban Areas

We provide a sensitivity analysis by considering the impact of religiosity on rural vs urban areas. The literature observes that earnings quality is associated with firms in rural areas (Loughran and Schulz, 2005). This point is further strengthened when firms in rural areas are audited by the BIG4 auditors and have strong internal controls (Dechow et al., 2012). To examine whether religious social norms have an impact on firms located in urban and rural areas, we opt for the sub-samples of urban and rural areas. In line with Loughran and Schulz (2005),[9] we classify Metropolitan Statistical Area (MSA) in each county with over five million populations as urban area and repeat the main test using the urban and rural sub-samples. Table 7 presents the results of the analysis of the relationship between REL×SPITEM, REL x REVT

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[8] We break our sample into high and low religiosity areas because prior studies (McGuire et al., 2012; Callen et al., 2011; Dyreng et al., 2012) indicate that a highly religious environment has significant influence on attitudes and behaviour of the people living in that environment.

[9] Loughran and Schulz (2005) define urban areas as the most-populated areas with an average of over five million residents in the MSA within the county. We replicate our analysis based on their definition and find that the inferences remain the same.

and UNEXP_CE for firms located in urban and rural areas. Indeed, the conclusions remain the same using both rural and urban sub-samples. We find that both REL×SPITEM and REL× REVT are negatively and significantly (at 1% level, p-value = 0.004) associated with UNEXP_CE, suggesting that the negative association between religious social norms and misclassification is not solely down to the high (low) earnings quality associated with rural (urban) areas as previously reported in the literature (Loughran and Schulz, 2005). Indeed, note that the magnitude of the interaction terms REL×SPITEM and REL× REVT, also magnitude of the REL, is higher in the urban areas compared to rural areas. Thus, religious social norms are more effective to reduce classification shifting in highly populated areas. Overall, the findings are robust and clearly demonstrate that religiosity of the firms' environment mitigates classification shifting.

(Insert Table 7 here)

5.1.3 Religiosity and Classification Shifting: Geographical Dispersion

McGuire et al. (2012) indicate that firms are geographically dispersed with geographic segments often located in areas far away from their corporate headquarters. Some of these segments have autonomous structures which allow them to make decisions on behalf of the corporate headquarters. Therefore, it could be the case that geographical dispersion could affect the impact of religion on classification shifting. For example, the segmental reports of firms located away from the headquarters could be influenced by the religious social norms of the area where these firms are located. Consequently, we employ two sub-samples in line with the geographic segments data from the Compustat to assess whether the results differ based on the geographic dispersion of the firm. Following prior research (McGuire et al., 2012), we utilise the geographic segments data from the Compustat annual database. Thereafter, we find the mean and median of the segments and observe that 2.05 represent the mean of segments, the median segment is 1.04 and the maximum number of geographic segments is 35. Therefore, we classify firms with two or less geographic segments as being centralized and those firms with more than two geographic segments as geographically dispersed.

Table 8 shows the regressions results of geographically centralised and dispersed segments. We find that the association between religion and unexpected core earnings is significantly

negative at 1% in the geographically centralised sample, consistent with the earlier findings. For example, the coefficient on both REL x SPITEM and REL x REVT are negative and significant at 1% level. In contrast, the relationship between religiosity and unexpected core earnings is negative, but not significant, in the geographically dispersed sample. This result suggests that the geographic dispersion influences the extent to which religious social norms subdue expense or revenue misclassification to increase reported core earnings. Furthermore, the results confirm that religious social norms in the firms' environment have negative impact on expense or revenue misclassification, in particular for the centralised firms.

(Insert Table 8 Here)

To consider possible selection bias in Table 8, we examine whether the difference in the size of the two sub-samples affects reported results . So, we run centralised regressions using 4,541 firm year observations to maintain consistency across both sub-samples size. The untabulated results are similar and consistent with the ones reported in Table 8. The coefficient of SPITEM is positive and significantly related to UNEXP_CE. In addition, the coefficients on both REL x SPITEM and REL x REVT are negative and significant at 1% level. This suggests that our results are not prone or subject to sample selection bias.

5.1.4. Validity of McVay's (2006) Model

In Table 9, we estimate the results for both Athanasakou et al. (2009) and Fan et al. (2010) expectation models. To test the validity of Fan et al. (2010) model, we drop contemporaneous accruals. We find that UNEXP_CE is positively and significantly (p-value =0.002) associated with SPITEM and REVT. Also, interactions terms, REL×SPITEM and REL× REVT are negatively and significantly (p-value < 0.001) associated with UNEXP_CE. Thus, the results are similar to McVay's (2006), suggesting that our initial findings of misclassification of core expenses and revenue items rooted in McVay's (2006) expectation model is bias free. Furthermore, in line with Athanasakou et al. (2009), we employ working capital accruals as proxy for total accruals as also in Fan et al (2010) expectation models. Athanasakou et al. (2009) argue that the substitution of working capital accruals is important because total accruals in the McVay's (2006) model comprise of depreciation expenses and special items accruals, which are likely to introduce bias. Therefore, we provide regression results using working capital accruals. Results hold and inferences remain similar to McVay's (2006).

(Insert Table 9 here)

5.2 Evidence on Hypothesis 2: Religiosity, Corporate Governance Variables and Classification Shifting

We test Hypothesis 2 to assess the impact of the interaction between religiosity and governance variables on unexpected core earnings so as to ensure that previous findings are robust in the presence of internal corporate governance. We include BODSIZE, BODIND and AUCOM in line with prior research (Zalata and Roberts, 2016). Thereafter, we focus on the interaction between REL×BODSIZE, REL×BODIND and REL×AUCOM. As indicated in Table 10, we find a significant negative relationship (p-value = 0.001) between REL×SPITEM and UNEXP_CE. The coefficient on REL x REVT and UNEXP_CE is negative and significant (-0.13). Consistent with prior research (Haw et al., 2011), the results show that there is a negative association at 5% significant level between UNEXP_CE and BODSIZE, and between UNEXP_CE and BODIND at 10% significant level, suggesting that corporate governance mechanism within the firms' in our sample mitigates misclassification of core expenses or special revenue items. The relationship between UNEXP_CE and AUCOM is negative but not significant. With regards to the interactions, we also find significant (1%) negative association between REL×BODSIZE, REL×BODIND, REL×AUCOM and UNEXP_CE. These results suggest that: firstly, large board size constrains classification shifting and this may be due to the size or the presence of financial experts on the board. This is consistent with the findings of (Peasnell et al. (2005) and Xie et al. (2003) who observe that the optimal board size influences managerial decision and financial reporting quality. Secontly, results also suggest that misclassification is less common in firms with large number of independent directors, which confirms the arguments that independent directors on the board are able or are more likely to confront or monitor aggressive misreporting of financial information (Zalata and Robert, 2016). In summary, the results suggest that REL complements BODSIZE, BODIND and AUCOM to mitigate classification shifting, and the impact becomes relatively more pronounced in a religious social norms environment.

(Insert Table 10 here)

5.3. Testing Hypothesis 3: Religiosity, Auditor Characteristics and Classification Shifting.

We test Hypothesis 3 to assess the extent to which the interaction term between religiosity and auditor characteristics impact classification shifting. Prior studies (Haw et al., 2011; Francis and Yu, 2009) observe that auditor characteristics (BIG4 and auditor tenure) are negatively associated with accruals earnings management since high quality auditors complement existing corporate governance mechanism. However, Zalata and Roberts (2016) indicate that auditors provide limited scrutiny of expense misclassification due to the fact that misclassification does not violate the GAAP/FASB accounting rules. Therefore, we proceed now to examine the extent to which the interaction between religiosity and auditor characteristics impact on classification shifting. Panel A in Table 11 reports the regression results when we include only income-decreasing special items (SPITEM) in Model (5). The results show a positive and significant co-efficient of (0.14). The coefficient on REL×BIG4 is negative and significant (-0.13). Similarly, the interaction term REL×SPITEM×BIG4 shows a significant and negative coefficient of (-0.25), indicating that in a religious social norm environment, misclassification behaviour is constrained substantially, and this is induced by BIG4 auditors. These results imply that, even though, BIG4 auditors might pay less attention to expense misclassification (see Zalata and Roberts 2016), BIG4 auditors complements religiosity and existing monitoring mechanisms to mitigate unethical misclassification in a religious social norms environment. In Model (6), we include only special revenue and observe a significant positive relationship between REVT and SPITEM (0.06), but the coefficient on REVT×BIG4 is negative but not significant (-0.03). Thereafter, we interact REL, REVT and BIG4, and the results show that the coefficient on REL×REVT×BIG4 is negative and significant (-0.18). When both REVT and SPITEM are included in Model (7), the results and inferences remain the same. The coefficient on SPITEM×BIG4 is -0.05 and that of REVT×BIG4 is -0.04, though significance is an issue. The coefficient on REL×SPITEM×BIG4 is -0.17 and REL×REVT×BIG4 is -0.16, both being negative and significant at 10%. Overall, we report evidence that firms with BIG4 auditors in high religious counties engage less in classification shifting. Note though that there is some variability in the significance of such an effect.

(Insert Table 11 here)

In Table 11, Panel B, we report regression results to indicate whether auditor's tenure and the interaction between auditor's tenure and religiosity affects classification shifting. We include SPITEM in Model (5) and report that its coefficient is positive and significant at 1%, while the coefficient for SPITEM×TEN is negative, but not significant, suggesting that auditor's tenure might not mitigate classification shifting. We include the interaction between REL and TEN as well as REL, SPITEM and TEN in Model (5). The coefficient on REL×TEN is negative and significant at 5% and the coefficient on REL×SPITEM×TEN is also negative and significant, implying that auditor tenure alone does not mitigate misclassification behaviour. Perhaps, this is the case because of certain degree of familiarity between the auditor and management as the former serves for a longer period. We also control for REVT in Model (6). The coefficient of REVT is positive and significant at 1%. On the other hand, the results for interactive terms REL x TEN and REL×REVT×TEN show negative signs, though there is significance for the latter interaction. These results demonstrate that religiosity in a firm's environment mitigates special revenue misclassification and this negative impact is induced by auditor tenure. For robustness test, we include both SPITEM and REVT in Model (7) and the results remain the same.

Overall our reported results indicate that classification shifting is subdued in a religious social norm environment and that religiosity complements the existing monitoring mechanism such as corporate governance and audit practices.

6. ROBUSTNESS CHECKS

6.1. Testing Misclassification in Pre and Post Sarbanes-Oxley (SOX) Act (2002) and the Financial Crisis Period

To ensure that the results of our study are not influenced by confounding effects of various events that took place during the study period, we examine the extent to which religiosity affects misclassification of special items in the pre and post SOX Act (2002) or the financial crisis in 2007-2009. Cohen and Zarowin (2010) indicate that the SOX enactment brought about an improvement in the reliability of financial information and a reduction of financial statement fraud by strengthening the corporate governance and improving the liquidity of firms. They

observe that the level of real activities increases, but accruals management decreases, after the enactment of SOX Act in 2002.

To examine the impact of regulation and financial crisis, we select sub-samples as follows: prior and after the implementation of the SOX Act in 2002; and the period prior (2003-2006), during the financial crisis (2007-2009), and post the financial crisis period (2010-2015). Thereafter, we run regressions to examine the impact of religious social norms on misclassification during the sub-samples.

The regression results in Table 12 show that firms in the U.S. engage in misclassification to boost reported core earnings in pre and post SOX Act (2002), as well as during and post the financial crisis. Prior to the enactment of SOX Act (2002), the results show a positive and significant co-efficient (0.32) between SPITEM and UNEXP_CE. Similarly, the results in post-SOX and financial crisis periods show a positive and significant relationship between SPITEM and UNEXP_CE respectively. However, the effect is remarkable and much more pronounced during the financial crisis period (0.49). This suggests that during the financial crisis period, firms in the U.S. opportunistically engaged in unethical classification shifting, perhaps, to avoid reporting losses or to boost their reported core earnings (McVay, 2006). The relationship between REVT and UNEXP_CE is also positive and significant in pre-and post-SOX Act (2002) and/or financial crisis period (0.19; 0.14 and 0.23 respectively). These results also imply that classification shifting is a prevalent issue among firms in the U.S. to boost reported core earnings and such effects are acute during the financial crisis period. The financial crisis brought hardship upon firms and affected investor confidence globally. Perhaps, the increase in the degree of misclassification during financial crisis can also be partly attributed to the limited auditor scrutiny or non-FASB/GAAP violation (Zalata and Roberts, 2015; McVay, 2006). It could also mean that firms opportunistically engage in misclassification in the post-SOX or during the financial crisis period to boost investors' confidence, increase firm mangers' private benefits, meet or beat analysts forecast (Kothari et al., 2016, Zalata and Robert, 2015) due to poor financial performance. On the contrary, the interactive terms REL x SPITEM and REL x REVT both carry a negative sign and are significant across all sub-samples suggesting that religiosity in a firm's environment would continue to mitigate misclassification. Note

though that such effects are much more pronounced post-SOX enactment and post the financial crisis.

(Insert Table 12 Here)

6.2. Alternative Measure of Religiosity

Although the measure of religious social norm is supported by prior studies (McGuire et al. 2012; Callen et al 2011; Grullon et al. 2010), we conduct further robustness tests to ensure that the results are free from potential bias and do not rely on generalisation of religious datasets across several years. We follow McGuire et al. (2012) and use different source of religious datasets collected by Gallup survey for the study period.[10] We run regressions for only the twenty U.S. States with available Gallup religious datasets. The inferences still remain the same when religiosity is measured by a simple aggregate of the responses to the three Gallup questions on religion. Specifically, the coefficients on REL x SPITEM and REL x REVT are negative and significant (-0.13 and -0.11 respectively), indicating that religiosity mitigates unethical classificatory behaviour.

7. CONCLUSION

Consistent with prior studies (Fan et al., 2010; McVay, 2006), we demonstrate that special items increase with unexpected core earnings, hence, the positive relationship between special items and unexpected core earnings. We contribute to financial reporting and earnings management literature and provide evidence that religiosity is negatively associated with upward and downward unethical classification shifting.

Overall, our results suggest that religious social norms of the firm environment subdue misclassification behaviour and complements existing monitoring systems put in place by management. In particular, for the first time, we show that religiosity complements corporate governance and auditor characteristics to subdue misclassification. We provide first time evidence to indicate the negative influence of religious social norms in subduing management

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[10] Thereafter, we take a sub-sample of our original data based on the twenty most and least religious states in the U.S. as reported by Gallup survey in Table 2. We surrogate our original religious datasets by Gallup religious datasets for the twenty U.S. States and merge them into the Compustat financial data file using the state code identifiers.

incentive to shift core expense or revenue items into special items. We document first time evidence of misclassification in pre and post SOX Act (2002), rural and urban areas, geographically centralised and dispersed segments. In general, our results indicate that in a religious social norm environment, managers have disincentive to signal information to investors to increase reported core earnings.

Our findings show that religion through the ethical channel would improve firm's ethical behaviour. The study highlights the complementary role of religion to directly halt misclassification, whilst it does so also indirectly through its interactions with corporate governance and audit practices. Therefore, religiosity provides a platform upon which the management could further strengthen the existing corporate governance structures and audit practices. This is important because, although religion is scarcely discussed in secular organisations, understanding its role in shaping corporate financial reporting is valuable from an ethical point of view. The present results are useful for regulators, external monitors and investors alike as they indicate that religion subdues misreporting and strengthens the existing monitoring mechanism put in place by management to mitigate unethical classification shifting behaviour.

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Appendix A: The following table shows the measurement of variables in the study.

Variables	Proxy	Definition
Religiosity	*REL*	Strength of religiosity for each U.S. county measured by Association of Statisticians of American Religious Bodies (ASARB) surveys. The results of these surveys are published on the website of Association of Religion Data Archive (ARDA). The average of each county religiosity score is weighted by the county's population.
Normal Core Earnings	NOR_CE	This is the core earnings that is actually expected to occur in the normal course of business activity devoid of classification shifting. The study follows McVay (2006) expectation model in equation 1.
Reported Core Earnings	REP_CE	Estimated as sales – cost of goods sold – selling, general and administration expenses. Depreciation and Amortization are excluded from Cost of Sales, Selling, General and Administrative Expenses.
Unexpected Core Earnings	UNEXP_CE	Is the difference between reported core earnings and normal or expected core earnings (McVay, 2006).
Special Items	SPTIEM	Income-Decreasing Special Items as a Percentage of Sales, calculated as [Special Items (#17)]/Sales (#12) when Special Items are income-decreasing, and 0 otherwise (McVay, 2006)
Total Revenue	REVT	Total revenue scaled by total assets
Asset Turnover	ATO	Sales scaled by average net operating assets. Where net operating assets is the difference between operating assets and operating liabilities. Operating assets = Total assets – Cash and Cash equivalent. Operating Liabilities = Total assets – Total debt - Book value of common equity – Preferred equity – Minority interests.
Percent change in sales	ΔSales	$(Sales_t - Sales_{t-1})/ Sales_{t-1}$
% change in Sales	NEG_ΔSales	where ΔSALES is less than 0, otherwise zero
Cash flow from operation	CASFO	Is the cash flow from operational activities scaled lagged total assets
Total Assets	TA	Measured as total Non-current assets plus total current assets
Size of the Firm	SIZE	The natural log of total assets
Return on Assets	ROA	Measured as net income before extraordinary items divided by average total assets
Leverage	LEV	Financial leverage, measured as total debts scaled by total equity

Market to Book Value	MBV	Measured as total assets divided by market capitalization
Reported Loss	LOSS	An indicator variable that equals 1 if income before extraordinary items was negative in the current or previous two fiscal years, and 0 otherwise;
Audit Committee Presence	AUCOM	A dummy variable coded as 1 if the company has an audit committee, otherwise zero.
Independent Board	BODIND	Calculated as the number of independent directors divided by the total number of directors on the board. Defined as non-executive directors holding less than 5% of the voting securities and having no direct or indirect interest or relationship that could reasonably influence their objective judgment and decision making
Board Size	BODSIZE	Total number of directors on the board
Religiosity interacts Board size	RELBODSIZE	Religiosity multiplied by Board Size
Religiosity interacts Board independence	RELBODIND	Religiosity multiplied by Board independence
Religiosity interacts Audit Committee	RELAUCOM	Religiosity multiplied by Audit committee
BIG4 Auditors	BIG4	Is an indicator variable that equals 1 if a company's auditing firm is one of the BIG4 auditors, otherwise zero (0)
Audit Tenure	TEN	The natural log of the number years the auditor has been with the company.
Analysts Following	ANA_FOL	Natural log of the number of analyst following the firm
Total Accruals	TAC	Difference between earnings before extraordinary items and discontinued operations and the cash flow from operational activities scaled by lagged total assets
Operating Accrual	ACCRUALS	Operating Accrual = (Net income before extraordinary items – cash flow from operation)/Sales.
Working Capital Accruals	WC_ACCRUALS	Measured as earnings before extraordinary items plus depreciation and amortisation minus cash flow from operational activities.

Table 1: Descriptive Statistics for Religiosity.

Variable	Mean	Std. Dev.	Q1	Median	Q3	Skewness	Kurtosis
REL	53.5	18.07	36.27	52.47	63.33	0.83	2.69
RELAdh – 2000	53	18.6	39.4	51.1	64.7	0.74	2.98
RELAdh – 2010	48	15.6	24.6	46.8	52.3	0.88	2.68

Notes: *Religiosity (*REL) = is the variable of interest, measured as the average of US counties religiosity score weighted by the county's population for the period, 2000 and 2010. RELAdh = a measure of religious adherence for US counties in, 2000 and 2010. Association of Statisticians of American Religious Bodies (ASARB) collects religiosity dataset, which are published by the Association of Religion Data Archive (ARDA).

Table 2: Comparison of Most and Least Religious States in the US.

Ten Most Religious States in US	Ranking Top States	Ten Least Religious States in US	Ranking Bottom States
Mississippi	1	Vermont	1
Utah	2	New Hampshire	2
Alabama	3	Maine	3
Louisiana	4	Massachusetts	4
South Carolina	5	Oregon	5
Tennessee	6	Nevada	6
Georgia	7	Washington	7
Arkansas	8	Connecticut	8
North Carolina	9	Hawaii	9
Oklahoma	10	District of Columbia	10

Notes: Table 2 shows comparison of most and least religious states in the US compiled by Gallup. Since 1965, Gallup has conducted interviews about US adults' religiosity. The results over the years suggest that religious attitudes are very stable, consistent with ASARB studies. The percentage of US adults who consider religion to be important according to Gallup are as follows: 1990 = 58 percent; 2000 = 58 percent; 2005 = 55 percent; 2006 = 56 percent; 2007 = 56 percent; 2008 = 54 percent; 2009 = 56 percent; 2010 = 56 percent

Table 3: Descriptive Statistics for the Full Sample

Variables	Mean	Median	S.D.	25%	75%
SALES (in M)	1627.363	202.597	3441.067	30.883	1159.031
UNEXP_CE	0.002	0.003	0.069	-0.003	0.004
SPITEM	0.002	0.001	0.012	0.001	0.008
REVT	0.021	0.011	0.061	0.001	0.029
RELxSPITEM	-0.004	-0.003	0.002	-0.001	0.003
RELxREVT	0.005	0.003	0.159	0.000	0.109
BODSIZE	11.428	11.303	4.196	9.597	13.245
BODIND	0.670	0.720	0.078	0.650	0.770
AUCOM	5.458	5.256	2.284	4.125	5.502
REL×BODSIZE	6.905	6.960	1.862	6.226	7.558
REL×BODIND	0.081	0.108	0.033	0.055	0.32
REL×AUCOM	3.567	3.744	1.097	3.726	3.834
ATO	2.143	1.782	1.531	0.950	2.981
CHANGE_ATO	0.029	0.004	0.376	-0.135	0.141
ACCRUALS	-0.019	0.028	0.201	-0.035	0.077
ACCRUALS$_{t-1}$	-0.026	0.029	0.254	-0.030	0.078
ΔSALES	0.096	0.058	0.300	-0.055	0.191
NEG_ΔSALES	0.075	0.043	0.359	-0.048	0.176
SIZE	5.680	5.190	1.760	3.390	6.860
LEV	0.151	0.101	0.162	0.001	0.252
CASFO	0.072	0.089	0.156	0.045	0.141
ROA	-0.311	0.042	0.141	-0.032	0.084
MBV	2.012	1.754	1.212	1.024	2.912

Notes: UNEXP_CE = computed as the difference between reported core earnings (REP_CE) and expected core earnings (NOR_CE) for each firm (McVay, 2006). REP_CE is the reported core earnings estimated as sales – cost of goods sold – selling, general and administration expenses. Depreciation and Amortization are excluded from Cost of Sales, Selling, General and Administrative Expenses. BODSIZE = total number of directors on the board; BODIND = calculated as the number of independent directors divided by the total number of directors on the board; AUCOM = audit committee REL×BODSIZE = religiosity multiplied by board size; REL×BODIND = religiosity multiplied by board independence; REL×AUCOM = religiosity multiplied by audit committee. REVT is total revenue scaled by total assets. REL×REVT =religiosity multiplied by total revenue scaled by total assets. ATO is Sales scaled by average net operating assets. Where net operating assets is the difference between operating assets and operating liabilities. Operating assets = Total assets – Cash and Cash equivalent. Operating Liabilities = Total assets – Total debt - Book value of common equity – Preferred equity – Minority interests. ACCRUALS is calculated as (Net income before extraordinary items – cash flow from operation)/Sales. ΔSales is (Sales$_t$ – Sales$_{t-1}$)/ Sales$_t$ and NEG_ΔSales is where ΔSALES is less than 0, otherwise zero. SIZE is the natural log of total assets, LEV is the financial leverage measured as the total debts scaled by total equity, CASFO is the cash flow from operational activities scaled lagged total assets ROA is measured as net income before extraordinary items divided by average total assets and MBV is measured as total assets divided by market capitalization. All other variables are defined above and in the Appendix A.

Table 4: Regression of Unexpected Core Earnings on Special Expenses and Special Revenue.

Variables	SPITEM		REVT		SPITEM & REVT	
	Coefficient	t-values	Coefficient	t-values	Coefficient	t-values
Intercept	0.002	0.33	-0.010	-2.47**	-0.08	-2.30***
SPITEM	0.31	3.11***			0.46	4.20***
REVT			0.13	3.65***	0.14	3.57***
Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	23,164	23,164	23,164	23,164	23,164	23,164
Adjusted R^2	0.05	0.05	0.06	0.06	0.09	0.09

Notes: We use *,**,*** in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. We show co-efficient estimates and t-statistics in separate columns. *SPITEM* = income-decreasing special items scaled by sales, REVT is total revenue scaled by total assets. The parameters are estimated based on the following model: All variables are defined in Appendix A.

$UNEXP\_CE = \beta_0 + \beta_1\ SPITEM + \beta_2\ REVT.$

Table 5: Regression of Unexpected Core Earnings on Special Items Expenses and Special Revenue

Variables	Model (5)		Model (6)		Model (7)	
	Coefficient	t-values	Coefficient	t-values	Coefficient	t-values
Intercept	-0.07	-1.61	0.06	1.74*	-0.04	-1.30
SPITEM	0.28	3.78***			0.16	3.41***
REVT			0.16	4.35***	0.12	3.97***
REL	-0.34	-3.74***	-0.30	3.38**	-0.28	-2.76**
REL×SPITEM	-0.23	-2.92***			-0.19	-2.56**
REL×REVT			-0.09	-7.88***	-0.08	-4.51**
SIZE	-0.03	-1.45	-0.05	-1.17	-0.06	-1.19
LEV	0.07	2.26**	0.09	2.53**	0.10	2.68**
CASFO	0.09	1.10	0.02	1.07	0.05	1.15
ROA	-0.06	3.37***	-0.16	2.37**	-0.18	2.39**
MBV	-0.03	-2.07**	-0.04	-1.77*	-0.06	-1.78*
BIG4	-0.04	-1.62	-0.03	-1.22	-0.04	-1.28
ANA_FOL	-0.04	-1.56	-0.02	-1.36	-0.04	-1.42
Demographic Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	23,164	23,164	23,164	23,164	23,164	23,164
Adjusted R^2	0.16	0.16	0.18	0.18	0.24	0.24

Notes: We use *,**,*** in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. We show co-efficient estimates and t-statistics in separate columns. *SPITEM* = income-decreasing special items scaled by sales, REVT is total revenue scaled by total assets, *REL* = religiosity of the firms' environment, *REL×SPITEM* = interaction between religiosity and income-decreasing special items. *REL×REVT* = interaction between religiosity and total revenue scaled by total assets. SIZE is the natural log of total assets, LEV is the financial leverage measured as the total debts scaled by total equity, CASFO is the cash flow from operational activities scaled by lagged total assets. ROA is measured as net income before extraordinary items divided by average total assets and MBV is measured as total assets divided by market capitalization. BIG4 is an indicator variable that equals 1 if a firm is audited by the BIG4, otherwise zero and ANLYST_FOL represents the natural log of the number of financial analyst following the firm. The parameters are estimated based on the following model: All variables are defined in Appendix A.

$UNEXP\_CE = \beta_0 + + \beta_1 SPITEM + \beta_2 REL + \beta_3 SPITEM \times REL + \beta_4 REVT + \beta_5 REVT \times REL + \beta_6 SIZE + \beta_7 LEV + \beta_8 CASFO + \beta_9 ROA + \beta_{10} BMV + \beta_{11} BIG4 + \beta_{12} ANALYST\_FOL + Demographic Control Variables + Year Fixed Effects + Industry Fixed Effects$

Table 6: Classification Shifting in High and Low Religiosity Areas

Variables	HIGH		LOW	
	Coefficient	t-values	Coefficient	t-values
Intercept	-0.08	-0.060	-0.03	-0.077
SPITEM	0.08	3.16***	0.04	2.45**
REVT	0.18	3.85***	0.09	2.20**
REL	-0.36	-3.09***	-0.07	-1.46
REL×SPITEM	-0.26	-3.28***	-0.06	-1.09
REL×REVT	-0.14	-3.09***	-0.08	-1.39
SIZE	-0.08	-2.45**	-0.05	-2.04**
LEV	0.08	1.61	0.08	1.32
CASFO	0.15	2.91**	0.11	0.62
ROA	-0.05	-2.18**	-0.12	-1.78*
MBV	-0.06	-1.69*	-0.05	-1.19
BIG4	-0.04	-1.54	-0.03	-0.89
ANA_FOL	-0.03	-1.21	-0.02	-1.02
Demographic Controls Variables	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.27	0.27	0.22	0.22
Observations	14,124	14,124	8,566	8,566

Notes: We use *,**,*** in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. We show co-efficient estimates and t-statistics in separate columns. *SPITEM* = income-decreasing special items scaled by sales, REVT is total revenue scaled by total assets, *REL* = religiosity of the firms' environment, REL×SPITEM = interaction between religiosity and income-decreasing special items. REL×REVT = interaction between religiosity and total revenue scaled by total assets. SIZE is the natural log of total assets, LEV is the financial leverage measured as the total debts scaled by total equity, CASFO is the cash flow from operational activities scaled by lagged total assets. ROA is measured as net income before extraordinary items divided by average total assets and MBV is measured as total assets divided by market capitalization BIG4 is an indicator variable that equals 1 if a firm is audited by the BIG4, otherwise zero and ANLYST_FOL represents the natural log of the number of financial analysts following the firm. The parameters are estimated based on the following model: All variables are defined in Appendix A.

$UNEXP\_CE = \beta_0 + + \beta_1\ SPITEM + \beta_2 REL + \beta_3\ SPITEM \times REL + \beta_4\ REVT + \beta_5\ REVT \times REL + \beta_6\ SIZE + \beta_7\ LEV + \beta_8\ CASFO + \beta_9\ ROA + \beta_{10}\ BMV + \beta_{11}\ BIG4 + \beta_{12}\ ANALYST\_FOL + Demographic\ Control\ Variables + Year\ Fixed\ Effects + Industry\ Fixed\ Effects$

Table 10: Impact of Religiosity and Governance Variables on Classification Shifting

	Coefficient	t-value
Intercept	-0.08	-1.37
SPITEM	0.06	2.94***
REVT	0.19	3.50***
REL	-0.12	-3.64***
RELxSPITEM	-0.15	-3.12***
RELxREVT	-0.13	-3.82***
BODSIZE	-0.03	-2.22**
BODIND	-0.04	-1.74*
AUCOM	-0.02	-0.74
REL×BODSIZE	-0.24	-3.92***
REL×BODIND	-0.39	-3.67***
REL×AUCOM	-0.17	-2.87***
SIZE	-0.02	-1.17
LEV	0.11	1.78*
CASFO	0.03	0.86
ROA	-0.07	-1.19
MBV	-0.03	-1.81*
ANALY_FOL	-0.4	-1.37
Demographic Controls	Yes	Yes
Year Fixed Effects	Yes	Yes
Industry Fixed Effects	Yes	Yes
Adjusted R^2	0.52	0.52
Observations	23164	23164

We use *,**,*** in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. We show co-efficient estimates and t-statistics in separate columns. *SPITEM* = income-decreasing special items scaled by sales, REVT is total revenue scaled by total assets. *REL* = religiosity of the firms' environment, REL x SPITEM = interaction between religiosity and income-decreasing special items. REL×REVT = interaction between religiosity and total revenue scaled by total assets. SIZE is the natural log of total assets, LEV is the financial leverage measured as the total debts scaled by total equity, CASFO is the cash flow from operational activities scaled by lagged total assets. ROA is measured as net income before extraordinary items divided by average total assets and MBV is measured as total assets divided by market capitalization. BODSIZE = total number of directors on the board; BODIND = calculated as the number of independent directors divided by the total number of directors on the board; AUCOM = a dummy variable coded as 1 if the company has an audit committee, otherwise zero; REL×BODSIZE = religiosity multiplied by board size; REL×BODIND = religiosity multiplied by board independence; REL×AUCOM = religiosity multiplied by audit committee; The parameters are estimated based on the following model. All variables are defined in the Appendix A.

$UNEXP_CE = \beta_0 + \beta_1 SPITEM + \beta_2 REL + \beta_3 RELSPITEM + \beta_4 REVT + \beta_5 REVT \times REL + \beta_6 BODSIZE + \beta_7 BODIND + \beta_8 AUCOM + \beta_9 RELxBODSIZE + \beta_{10} RELxBODIND + \beta_{11} RELxAUCOM + \beta_{12} SIZE + \beta_{13} LEV + \beta_{14} CASFO + \beta_{15} ROA + \beta_{16} BMV + Demographic Control Variables + Year Fixed Effects + Industry Fixed Effects

Table 11: Regression of Unexpected Core Earnings on Special Items Expenses and Special Revenue: Auditor Characteristics & Religiosity.

Panel A: BIG4 Auditors						
Variables	**Model (5)** **SPITEM**		**Model (6)** **REVT**		**Model (7)** **SPITEM & REVT**	
	Coefficient	**t-values**	**Coefficient**	**t-values**	**Coefficient**	**t-values**
Intercept	-0.05	-0.37	0.07	1.31	0.06	0.80
SPITEM	0.14	2.03**			0.16	2.05**
SPITEM×BIG4	-0.04	-1.09			-0.05	-1.54
REVT			0.06	2.05**	0.09	1.97**
REVT×BIG4			-0.03	-1.23	-0.04	-1.36
REL×SPITEM×BIG4	-0.25	-2.21**			-0.17	-1.81**
REL×REVT×BIG4			-0.18	-2.14**	-0.16	-1.98**
REL×BIG4	-0.13	-1.94**	-0.05	-2.32**	-0.07	-2.33**
BIG4	-0.08	-1.24	-0.03	-1.42	-0.09	-0.883
Demo. Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	23,164	23,164	23,164	23,164	23,164	23,164
Adjusted R^2	0.09	0.09	0.08	0.08	0.11	0.11
Panel B: Auditor Tenure						
Intercept	-0.04	-0.39	-0.02	-0.54	-0.03	0.69
SPITEM	0.33	2.94***			-0.30	2.86***
SPITEM×TEN	-0.06	-1.38			-0.08	-1.21
REVT			0.02	3.09***	0.02	3.04***
REVT×TEN			-0.09	-2.40**	-0.08	-2.68**
REL×SPITEM×TEN	-0.05	-2.45**			-0.07	3.15***
REL×REVT×TEN			-0.06	2.31**	-0.08**	-2.39**
RELTEN	-0.04	-2.08**	-0.08	-1.82*	-0.07*	-1.78*
TEN	-0.02	-0.88	-0.04	-1.54	-0.05	-1.55
Demo. Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	23,164	23,164	23,164	23,164	23,164	23,164
Adjusted R^2	0.08	0.08	0.06	0.06	0.09	0.09

Notes: We use *,**,*** in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. We show co-efficient estimates and t-statistics in separate columns. Dependent Variable = UNEXP_CE, *SPITEM* = income-decreasing special items scaled by sales, REVT is total revenue scaled by total assets. *REL* = religiosity of the firms' environment, BIG4 is an indicator variable that equals 1 if a firm is audited by the BIG4 auditing firm, otherwise zero. *SPITEM*×BIG4 = interaction between BIG4 auditors and total revenue by total assets. REVT×BIG4 = interaction between BIG4 and total revenue scaled by total assets. REL×SPITEM×BIG4 = interaction among religiosity, BIG4 auditors and income-decreasing special items. REL×*REVT*×BIG4 = interaction among religiosity, BIG4 auditors and total revenue scaled by total assets. REL×BIG4 = interaction between BIG4 and religiosity. TEN = is the natural log of the number of years the auditor has been with the company. SPITEM×TEN = interaction between income-decreasing special items and auditor tenure. REVT×TEN = interaction between total revenue scaled by total assets and auditor tenure. REL×TEN = interaction between auditor tenure and religiosity. The parameters are estimated based on the following model: All variables are defined in Appendix A.
UNEXP_CE = β₀ + β₁ SPITEM + β₂REL + β₃REL x SPITEM + β₄REVT + β₅ REL x REVT +β₆BIG4 + β₇TEN + β₈REL x BIG4 + β₉ REL×TEN + β₁₀ SIZE + β₁₁LEV + β₁₂CASFO + β₁₃ROA + β₁₄BMV + Demographic Control Variables + Year Fixed Effects + Industry Fixed Effects

Table 9: Religiosity and Different Models of Classification Shifting.

Variables	Athanasakou et al. (2009) Model		Fan et al. (2010) Model	
	Coefficient	t-values	Coefficient	t-values
Intercept	-0.08	-0.65	-0.05	-0.73
SPITEM	0.07	3.27***	0.08	2.96***
REVT	0.16	3.78***	0.12	2.24**
REL	-0.12	-2.93***	-0.17	-3.65***
REL×SPITEM	-0.15	-3.09***	-0.13	-3.07***
REL×REVT	-0.09	-3.83***	-0.11	-2.48**
SIZE	-0.03	-2.14**	-0.04	-2.48**
LEV	0.19	1.41	0.03	1.56
CASFO	0.19	1.49	0.13	1.48
ROA	-0.08	-1.71*	-0.09	-1.67*
MBV	-0.07	-2.04**	-0.04	-2.28**
BIG4	-0.04	-1.22	-0.05	-1.09
ANA_FOL	-0.03	-1.37	-0.04	-1.27
Demographic Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.53	0.53	0.46	0.46
Observations	23164	23164	23164	23164

Notes: We use *,**,*** in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. We show co-efficient estimates and t-statistics in separate columns. *SPITEM* = income-decreasing special items scaled by sales, REVT is total revenue scaled by total assets. *REL* = religiosity of the firms' environment, REL×SPITEM = interaction between religiosity and income-decreasing special items. REL× REVT = interaction between religiosity and total revenue scaled by total assets. SIZE is the natural log of total assets, LEV is the financial leverage measured as the total debts scaled by total equity, CASFO is the cash flow from operational activities scaled by lagged total assets. ROA is measured as net income before extraordinary items divided by average total assets and MBV is measured as total assets divided by market capitalization. BIG4 is an indicator variable that equals 1 if a firm is audited by the BIG4, otherwise zero and ANLYST_FOL represents the natural log of the number of financial analysts following the firm. The parameters are estimated based on the following model: All variables are defined in Appendix A.

$UNEXP\_CE = \beta_0 + + \beta_1 SPITEM + \beta_2 REL + \beta_3 SPITEM \times REL + \beta_4 REVT + \beta_5 REVT \times REL + \beta_6 SIZE + \beta_7 LEV + \beta_8 CASFO + \beta_9 ROA + \beta_{10} BMV + \beta_{11} BIG4 + \beta_{12} ANALYST\_FOL + Demographic Control Variables + Year Fixed Effects + Industry Fixed Effects$

Table 7: Impact of Religion on Classification Shifting in Urban and Rural Areas

Variables	URBAN		RURAL	
	Coefficient	t-values	Coefficient	t-values
Intercept	-0.06	-0.70	-0.09	-0.47
SPITEM	0.07	2.28**	0.04	2.69**
REVT	0.15	3.62***	0.11	2.20**
REL	-0.12	-3.21***	-0.09	-3.01***
REL×SPITEM	-0.13	-3.45***	-0.11	-3.17***
REL×REVT	-0.14	-3.09***	-0.08	-2.27**
SIZE	-0.08	-2.32**	-0.05	-1.74*
LEV	0.06	1.06	0.00	1.01
CASFO	0.16	2.23**	0.08	2.18**
ROA	-0.06	-1.77*	-0.07	-1.75*
MBV	-0.06	-1.04	-0.05	-1.02
BIG4	-0.03	-1.36	-0.02	-1.49
ANAL_FOL	-0.04	-1.26	-0.03	-1.09
Demographic Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.37	0.37	0.33	0.33
Observations	18,124	18,124	4,253	4,253

Notes: We use *,**,*** in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. We show co-efficient estimates and t-statistics in separate columns. *SPITEM* = income-decreasing special items scaled by sales, REVT is total revenue scaled by total assets. *REL* = religiosity of the firms' environment, REL×SPITEM = interaction between religiosity and income-decreasing special items. REL×REVT = interaction between religiosity and total revenue scaled by total assets. SIZE is the natural log of total assets, LEV is the financial leverage measured as the total debts scaled by total equity, CASFO is the cash flow from operational activities scaled by lagged total assets. ROA is measured as net income before extraordinary items divided by average total assets and MBV is measured as total assets divided by market capitalization. BIG4 is an indicator variable that equals 1 if a firm is audited by the BIG4, otherwise zero and ANLYST_FOL represents the log of the number of financial analysts following the firm. The parameters are estimated based on the following model: All variables are defined in Appendix A.

$UNEXP\_CE = \beta_0 + + \beta_1 SPITEM + \beta_2 REL + \beta_3 SPITEM \times REL + \beta_4 REVT + \beta_5 REVT \times REL + \beta_6 SIZE + \beta_7 LEV + \beta_8 CASFO + \beta_9 ROA + \beta_{10} BMV + \beta_{11} BIG4 + \beta_{12} ANALYST\_FOL + Demographic\ Control\ Variables + Year\ Fixed\ Effects + Industry\ Fixed\ Effects$

Table 8: Regressions of Religion on Classification Shifting Using Geographic Centralised and Dispersed Segments Sub-samples

Variables	Centralised Segments		Dispersed Segments	
	Coefficient	t-values	Coefficient	t-values
Intercept	-0.07	-0.71	-0.04	-0.83
SPITEM	0.06	2.96***	0.04	2.82***
REVT	0.13	3.35***	0.10	2.09**
REL	-0.18	-4.29***	-0.12	-1.53
REL×SPITEM	-0.16	-3.42***	-0.09	-1.48
REL×REVT	-0.12	-3.92***	-0.07	-1.32
SIZE	-0.06	-2.36**	-0.04	-2.43**
LEV	0.19	1.41	0.03	1.56
CASFO	0.19	1.49	0.13	1.48
ROA	-0.07	-1.78*	-0.08	-1.72*
MBV	-0.09	-2.18**	-0.03	-2.32**
BIG4	-0.05	-1.02	-0.05	-1.09
ANA_FOL	-0.04	-1.32	-0.04	-1.27
Demographic Controls	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adjusted R^2	0.38	0.38	0.32	0.32
Observations	18,623	18,623	4,541	4,541

Notes: We use *,**,*** in a two tailed test to respectively indicate statistical significance at 10 percent, 5 percent and 1 percent levels. We show co-efficient estimates and t-statistics in separate columns. *SPITEM* = income-decreasing special items scaled by sales, REVT is total revenue scaled by total assets. *REL* = religiosity of the firms' environment, REL×SPITEM = interaction between religiosity and income-decreasing special items. REL× REVT = interaction between religiosity and total revenue scaled by total assets. SIZE is the natural log of total assets, LEV is the financial leverage measured as the total debts scaled by total equity, CASFO is the cash flow from operational activities scaled by lagged total assets. ROA is measured as net income before extraordinary items divided by average total assets and MBV is measured as total assets divided by market capitalization. BIG4 is an indicator variable that equals 1 if a firm is audited by the BIG4, otherwise zero and ANLYST_FOL represents the natural log of the number of financial analysts following the firm. The parameters are estimated based on the following model: All variables are defined in appendix A.

$UNEXP\_CE = \beta_0 + + \beta_1 SPITEM + \beta_2 REL + \beta_3 SPITEM \times REL + \beta_4 REVT + \beta_5 REVT \times REL + \beta_6 SIZE + \beta_7 LEV + \beta_8 CASFO + \beta_9 ROA + \beta_{10} BMV + \beta_{11} BIG4 + \beta_{12} ANALYST\_FOL +$ *Demographic Control Variables + Year Fixed Effects + Industry Fixed Effects*

Table 12: Religiosity and Misclassification in Pre and Post Sarbanes Oxley Act (2002) and Financial Crisis Periods

Variables	2000-2002		2003-2006		2007-2009		2010-2015	
	Coefficient	t-values	Coefficient	t-values	Coefficient	t-values	Coefficient	t-values
Intercept	-0.05	-0.72	-0.04	-0.74	-0.06	-0.77	-0.04	-0.64
SPITEM	0.32	4.52***	0.17	2.44**	0.49	6.48***	0.18	2.34**
REVT	0.19	3.98***	0.14	2.37*	0.23	5.29***	0.12	2.18***
REL	-0.26	-3.52***	-0.25	-2.28**	-0.31	-3.83***	-0.27	-3.66***
REL×SPITEM	-0.17	-3.64***	-0.20	-2.42**	-0.25	-3.79***	-0.20	-3.87***
REL×REVT	-0.07	-3.26***	-0.07	-2.56**	-0.14	-3.58***	-0.09	-3.91***
SIZE	-0.03	-1.32	-0.02	-1.03	-0.06	-1.39	-0.02	-1.12
LEV	0.06	2.35**	0.04	2.24**	0.09	3.56***	0.04	2.26**
CASFO	0.04	1.28	0.02	1.12	0.04	1.26	0.03	1.16
ROA	-0.06	-2.36**	-0.03	-2.14**	-0.09	-3.46***	-0.04	-2.18**
MBV	-0.01	-2.42**	-0.02	-2.08**	-0.08	-2.38**	-0.06	-1.78*
BIG4	-0.02	-1.49	-0.02	-1.20	-0.04	-1.53	-0.04	-1.28
ANA_FOL	-0.02	-1.63	-0.02	-1.44	-0.03	-1.49	-0.04	-1.44
Demo. Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,054	3,054	6,126	6,126	4,703	4,703	9,281	9,281
Adjusted R^2	0.29	0.29	0.31	0.31	0.29	0.29	0.30	0.30

The study uses *, **, *** in a two-tailed test to respectively indicate statistical significance at 10, 5, and 1 percent levels. All variables are defined in Table 3. Coefficients and t-values are shown in separate columns. The parameters are estimated based on the following model:

$UNEXP\_CE = \beta_0 + + \beta_1 SPITEM + \beta_2 REL + \beta_3 SPITEM \times REL + \beta_4 REVT + \beta_5 REVT \times REL + \beta_6 SIZE + \beta_7 LEV + \beta_8 CASFO + \beta_9 ROA + \beta_{10} BMV + \beta_{11} BIG4 + \beta_{12} ANALYST\_FOL + Demographic\ Control\ Variables + Year\ Fixed\ Effects + Industry\ Fixed\ Effects$