Vol. 25 No. 2 (2024): Journal of Accounting, Ethics & Public Policy, JAEPP
e-ISSN 2956-8390; ISSN1089652X

Does Religiosity and LGBTQ Inclusiveness Impact The Probability of Financial Statement Manipulation?

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Doi: 10.60154/jaepp.2024.v25n2p52

Submitted: 28 March 2024
Accepted: 07 June 2024
Published: 08 June 2024

Cite As:
Foster B.P. & Preece D. (2024). *Does Religiosity and LGBTQ Inclusiveness Impact The Probability of Financial Statement Manipulation?*. Journal of Accounting, Ethics & Public Policy, JAEPP, 25 (2), 52. https://doi.org/10.60154/jaepp.2024.v25n2p52

Abstract

Previous research finds that greater gender diversity and inclusion in firms, on boards of directors, and on audit committees, improves the quality of financial reporting, lowers the likelihood of accounting restatements, and decreases the likelihood of financial misconduct. This is the first study to examine whether lesbian, gay, bisexual, transgendered, queer, or questioning (LGBTQ) diversity in companies will also result in higher ethical actions regarding financial statements. With regression analyses, this study examines whether companies' Corporate Equality Index (CEI) ratings of support for the LGBTQ community, as a measure of diversity, help explain companies' M-scores or manipulation scores, a measure of accounting-based earnings manipulation. Likewise, we examine if the religiosity of the county where a company is headquartered influences the company's manipulation score because previous research finds that companies headquartered in more religious areas are less likely to engage in financial misconduct. We conduct OLS and logistic regression analysis with M-score as the dependent variable, and headquarters area religiosity and company CEI ratings as independent variables of interest. Regression results provide little indication that the people's religiosity in the county where a corporate headquarters is located affects the firm's M-score. However, we find that the higher the CEI rating, the lower the probability of financial statement manipulation as measured by the M-score. This study sheds light on an underexplored aspect of corporate governance and diversity, further reinforcing the notion that diversity benefits companies in many ways, including those tied to governance.

Keywords: Diversity, Religiosity, LGBTQ, Corporate Equality Index, M-score, Earnings Management, Financial Manipulation

Introduction

Much research has focused on the impact of diversity on everything from corporate earnings and stock price performance to other measures of financial performance, such as risk-adjusted returns and Tobin's q. In this study, we consider diversity and its impact on financial misconduct. Earnings management is an issue at many companies. It involves the strategic manipulation of financial statements to either achieve desired financial goals or present a more positive outlook of company performance. Company managers may manipulate earnings to smooth earnings, meet investor expectations, allow managers to meet performance targets for the purpose of earning bonuses or stock options, manage taxes, and so on. In some cases, earnings management is legal, and in others, it skirts the boundaries of moral ethical, and legal breach.

Recent studies have examined the impact of diversity on earnings management and financial misconduct. Traditionally, studies have prioritized gender and ethnicity as key indicators of diversity within companies. For example, researchers such as Felix, et al. (2021) and Wahid (2019) consider the impact of, primarily, gender diversity on the quality of financial reporting and financial misconduct and fraud. Previous research generally finds that greater diversity on boards and audit committees improves the quality of financial reporting, lowers the likelihood of accounting restatements, and decreases the likelihood of financial misconduct.

Examining LGBTQ diversity and its relation to performance, Foster, et al. (2020) find that higher Corporate Equality Index (CEI) scores are related to higher market values as measured by Tobin's q. The CEI is a tool developed by the Human Rights Campaign (HRC), a leading LGBTQ advocacy organization in the United States. The index serves as a benchmarking tool for evaluating workplace policies and practices related to LGBTQ inclusion and equality.

Previous research also finds a positive correlation between some accounting measures and the religiosity of the population in an area (e.g., a country or a county within the United States) where corporate headquarters, auditors' offices, and client offices are located. In addition to considering LGBTQ diversity's effect on financial statement manipulation, we examine whether the religiosity of the county where a company is headquartered influences the company's M-score. The "manipulation score" or M-score, developed by Messod Beneish (1999), is a screening model used to assess the likelihood of earnings manipulation by companies. The metric uses eight factors, described below, to predict accounting-based earnings manipulation.

We posit that the more religious the county of corporate headquarters, the more "moral" the company will be and the lower the probability of financial manipulation as measured by the M-score.

This study considers LGBTQ diversity and religiosity related to financial statement manipulation and fraud. We use the Corporate Equality Index (CEI) ratings of support for the lesbian, gay, bisexual, transgendered, queer, or questioning (LGBTQ) community as an alternative measure of diversity and examine whether companies with high CEI scores have lower M-scores. We predict that, consistent with prior research that predominantly emphasizes gender diversity, the inclusion of LGBTQ diversity will correlate with increased ethical behavior concerning financial reporting, consequently leading to reduced M-scores.

We find little indication that the religiosity of the people in the county where a corporate headquarters is located affects the firm's M-score. However, we find that the higher the CEI rating, the lower the probability of manipulation as measured by the M-score. This finding further reinforces the notion that diversity benefits companies in several ways, including those tied to governance, earnings management, financial reporting, and financial misconduct. This study contributes to the literature on financial reporting and ethics and governance in financial reporting. Additionally, this study contributes to the growing literature on the potential benefits of greater diversity in firms.

The next section discusses literature related to the impact of religiosity on the ethical management of financial statements and earnings. The relationship between diversity and financial misconduct is discussed in the following section. A description of the M-score and its calculation follows. Then, analyses and results are presented and discussed. The paper ends with a discussion of implications and conclusions from the analyses.

Religiosity and Financial Accounting Practices

Research suggests that human behavior is influenced by religion. Religion and place are related and are studied explicitly by The University of Southern California's Center for Religion and Civic Culture (USC Dorsife, 2021). The way religion is experienced daily depends to some degree on "place" characteristics, according to the USC Center. That location would impact religious behavior makes sense, considering the various roles churches play in different communities.

For example, in poverty-stricken inner cities, churches may focus more on outreach, feeding the homeless, and finding shelter for the unhoused. In contrast, a suburban church in a wealthy part of the country may focus more on providing opportunities for parishioners to engage in the arts, bringing in guest musicians or exhibitions. Churches in more affluent areas may provide

funding, rather than hands-on action, to support mission activities. In either case, one might expect a moral foundation for the community and a message supporting ethical behavior for citizens and businesses. Research suggests that people and the businesses they work for are ultimately influenced by the level of religion, or lack thereof, in a place. In this study, we examine the influence of the religiosity of company headquarters' counties on companies' propensity to manipulate earnings as measured by the M-score.

McGuire, et al. (2012) examine the impact of religion on financial reporting. Noting that prior research suggests that religiosity reduces one's tolerance for unethical business activities, the authors hypothesize that firms located in more religious areas will be less likely to engage in irregular financial reporting. The authors find evidence supporting this hypothesis. Firms headquartered in more religious areas generally have lower incidences of improper financial reporting. The authors also find evidence that suggests companies headquartered in areas with strong social norms favor real earnings management over accruals manipulation. They conclude that strong social norms may provide a mechanism for reducing agency costs. Dyreng et al. (2012) also find that firms headquartered in counties with higher proportions of religious adherence exhibit fewer financial restatements.

Kanagaretnam et al. (2015) follow the work of McGuire, et al. (2012), examining the relationship between religiosity and earnings manipulation in the banking industry. Again, making the argument that religiosity can result in more ethical behavior in businesses, the authors examine whether banks in regions with higher religiosity have lower levels of earnings management. The research focuses on banks across countries and finds, as hypothesized, that religiosity is negatively related to income-increasing earnings management. They also find that banks in more religious regions are less likely to manipulate earnings to avoid a loss for a year or use manipulation to meet or beat the prior years' earnings.

Additionally, Kanagaretnam et al., examine the use of the banks' loan loss reserve to manipulate earnings. Some banks manipulate loan-loss reserves, the amount banks set aside to cover bad loans, to increase earnings in certain reporting periods. However, the authors find that the greater the religiosity of the area, the less banks use loan loss reserves to improve earnings. The authors also examine the 2007 – 2009 financial crisis period and find banks in highly religious areas had better performance and reported less asset deterioration in loan portfolios.

Similarly, Chircop et al. (2017) find that bank branches located in geographic areas of higher religious adherence exhibit less risky lending practices than bank branches in less religious areas. In this study the authors break out religiosity in even greater detail, looking at the level of religiosity of the area in which the bank branch resides, not simply the bank or bank

holding company's headquarters. They find that the religiosity of the area in which the headquarters is located does not fully capture the risk-mitigating effects of religion on bank behavior and that risk taking activities are lessened, even at the branch level, by increased levels of religiosity in the area.

Several studies have examined the impact of compensation clawback provisions on earnings management (for example, Levine and Smith, 2019; Chan, et al., 2015; and Mahmood, et al., 2021). These studies generally find that clawback features reduce financial misstatements and give investors more certainty in the financial information they receive from firms. Sari and Sholihin (2019) take it one step further and examine whether clawback features change how religion influences earnings management. They find that clawbacks strengthen the negative influence of religion on accruals management.

Most of the studies mentioned above and many other previous studies examining the impact of religiosity on financial reporting and managerial decisions have used information archived at the Association of Religion Data Archives (ARDA). ARDA stores data from many sources, including data collected from the Religious Congregations Membership Study (RCMS) surveys overseen by the Association of Statisticians of American Religious Bodies (ASARB). Survey results reflect religious participation by U.S. geographic area. (For example, see: Wei and Zhu, 2023; Chorou, et al., 2020; Chircop, et al., 2017; Cui et al., 2015). ARDA data provides the basis for constructing the religiosity of the county in which corporate headquarters reside, a key independent variable of interest. Following previous research, we construct a measure of religiosity based on the ARDA archived survey data by U.S. county. Corporate headquarters' addresses are obtained from the Compustat data set.

Hypothesis one states:

Hypothesis 1: Companies located in counties that have higher levels of religiosity, as measured by the proportion of the population who are religious adherents, will be less likely to engage in earnings manipulation, as measured by the M-score.

Diversity and Accounting Practices

Several studies have examined earnings management in a variety of contexts. In a literature review linking Corporate Social Responsibility (CSR) and earnings management, Velte (2020) looks for common threads in the literature that indicate CSR lowers earnings management and financial manipulation. The author reviews 33 studies, basing conclusions on the agency and stewardship models of corporate governance. He finds that most studies in the research area support the notion that CSR reduces earnings management. Velte maintains that this is in line with the stewardship model

of corporate governance, which suggests that managers with a mindset towards stewardship focus on the ethical management of corporate resources and see the firm as having a broader mission than short-term profit maximization.

Felix, et al. (2021) examine the diversity of audit committees and their relation to the quality of companies' financial reporting. The authors find that the greater the diversity on the audit committee, the fewer restatements a firm has. They also find that strong CEOs appear to be reined in by more diverse audit committees and argue that a strong and diverse audit committee may restrain accounting opportunism. The authors assert that auditing committee diversity is essential to many positive benefits related to accounting reporting, reducing earnings management, and constraining potential misconduct/opportunism.

In a study examining gender diversity on boards of directors, Wahid (2019) finds that companies with gender-diverse boards commit fewer financial reporting mistakes and engage in less financial fraud. A study of U.K. companies by Arun, et al. (2015) finds similar results. Likewise, Ho et al. (2015) find that female CEOs are associated with greater accounting conservatism. In the same vein of gender diversity and earnings management, Garcia-Sanchez, et al. (2017) find that a gender-diverse board of directors, combined with accounting expertise on audit committees, is associated with accounting conservatism and higher earnings quality in a cross-country bank sample. They find that the integrity of financial reporting is boosted by a combination of a more gender-diverse board and a financially experienced audit team.

In a related study, Labelle, et al. (2010) find, as hypothesized, a negative relationship between corporate business ethics, proxied by diversity management (DM) and poor financial reporting quality, proxied by the magnitude of financial earnings management. The DM score is a part of Jantzi Research ratings that in part examine whether corporations integrate DM criteria into investment decisions. The authors use a conceptual model of corporate moral development advanced by Reidenbach and Robin (1991). Their findings suggest that corporations that having higher rankings on diversity management have better quality financial reporting.

In a survey of corporate governance and earnings management, Man and Wong (2013) illustrate the many different corporate governance mechanisms that may curtail earnings management. The authors take a positive view and assert that corporate governance can mitigate or even eliminate earnings management. Surveying the earnings management literature, the authors note several effective ways that governance can reduce earnings management. Everything from board independence to strong audit

committees and putting directors with financial expertise on boards of directors can have positive effects.

Additionally, Man and Wong (2013) note that diversity, in this case gender diversity on boards, can have a positive impact. For example, women, according to the study, can build trust leadership, which requires managers to share information. As a result, managers become risk averse to managing earnings in an opportunistic fashion, or worse, to committing fraud. While we do not examine gender diversity in this study, we do hypothesize that LGBTQ diversity will also have a positive influence on financial reporting. For the same reasons, LGBTQ diversity can promote trust and more open communication, which can lead to managers either being afraid to act opportunistically, or better still, managers who do not want to engage in morally gray activities as they feel part of something bigger, a team.

To extend the research on the impact of diversity on financial reporting quality, we focus on LGBTQ rather than gender diversity, as in most previous studies. Managers who are committed to CSR are, according to Velte (2020), more likely to ethically treat financial reporting and earnings management based on the stewardship model. So, companies that embrace diversity, and specifically LGBTQ diversity, may be more likely to ethically treat financial reporting and avoid earnings management as well.

The HRC, a civil rights organization, works to achieve LGBTQ equality. The HRC publishes an index, the CEI, to provide information on employers' LGBTQ diversity and inclusion policies and efforts. According to the HRC, the CEI assesses various aspects of corporate policies and practices, including non-discrimination policies, benefits for LGBTQ employees and their families, organizational LGBTQ competency and training, and public commitment to LGBTQ equality (HRC.org, 2024). HRC employees evaluate each organization's publicly stated company policies and benefits. Companies are rated on a scale of 0 to 100 based on their performance in these areas. A high CEI score indicates a comprehensive implementation of policies and practices supportive of LGBTQ employees. The CEI is released annually.

The CEI is widely recognized and used by companies, employees, investors, and consumers as a measure of a company's commitment to LGBTQ equality and diversity in the workplace. While other organizations and measures exist, such as the Stonewall Workplace Equality Index in the United Kingdom, and Out Leadership, a global proponent of LGBTQ rights, the HRC and the CEI are the most well-known and respected in the U.S. Perhaps even more important than its function as a benchmarking tool is that the HRC and more specifically, the CEI score, encourages companies to improve their LGBTQ-inclusion and support policies and practices over time. Its reputation

and use in prior studies indicate that the HRC's CEI is an appropriate source to use as a measure in this relatively underexamined area of diversity.

Based on previous findings regarding diversity and earnings management, we hypothesize the following:
Hypothesis 2: Companies rated as having higher levels of LGBTQ diversity, as measured by the CEI, will be less likely to engage in earnings manipulation, as measured by the M-score.

Popular public opinion, as expressed on television, social media, and in the press is that religious people are less likely to support LGBTQ-inclusive policies. This perception has likely intensified in the recent divisive political climate in the U.S. By extension, one could surmise that the more religious the community, the less support for the LGBTQ population. However, Foster, et al. (2021) find, in contrast to this popular point of view, that the religiosity of the community where a company's headquarters resides has virtually no impact on its CEI score. In this study, we consider whether either of these factors, religiosity or LGBTQ inclusiveness, impact the likelihood of a company manipulating its financial statements as measured by the M-score.

Methodology

Sample

We consider unique Compustat observations for companies with U.S. headquarters, a minimum of $10 million in assets and sales, and publicly traded common shares from 2012 to 2019. Due to the requirement of a lag year needed to construct some variables, companies need complete data in the years 2011 through 2019. The period over which the sample is derived, 2011–2019, reflects relatively stable economic conditions. The period is after the 2007-2009 financial crisis and pre-Covid19. Also, unlike Beneish (1999) and Beneish et al. (2013), our entire sample period is after the application of the Sarbanes-Oxley Act and other regulatory changes of the early 2000's.

The sample is limited to publicly traded companies with complete data included in the Compustat database. The companies must also have received a CEI score from the HRC. The typical company in the sample is a large, publicly traded company headquartered in the U.S. These criteria result in 3,190 observations from Compustat. Some of these observations do not have the consecutive year observations necessary to calculate some relevant variables and are thus deleted. We also delete financial companies from SIC codes in the 6000s, following Beneish, et al. (2013). After making the described adjustments, the final sample size includes 2,072 observations.

Table 1, Panel A provides information on how the 2,072 usable observations are derived and the number of usable observations per year. The

HRC has steadily increased the number of CEI ratings it provides on companies, as shown in Panel B. As such, the usable observations in the sample increase each year. The sample comes from various industries ranging from oil and gas extraction (70 observations) to business services (210 observations). (A detailed sample breakdown by industry is available by request from the authors.)

Table 1. Sample

Panel A: Sample Selection	
Total unique Compustat observations with U.S. headquarters, a minimum of $10 million in assets and sales, and publicly traded common shares: 2012-2019	49,045
Observations without a CEI or with incomplete data	43,783
Observations without two consecutive years of data necessary and observations from the 6000s SICs	3,190
Total Sample Observations	2,072

Panel B: Sample Breakdown by fiscal year	Observations
2012	181
2013	214
2014	221
2015	253
2016	278
2017	287
2018	309
2019	329
Total	2,072

Proxy for Probability of Financial Statement Manipulation, M-Score

Beneish (1999) developed a financial manipulation model using data from 74 financial statement manipulators and matched companies from 1982 to 1992. The model uses eight factors to predict accounting-based earnings manipulation. Beneish finds that the model is quite accurate in distinguishing between companies the SEC cited for financial manipulation, and those that were not.

The Beneish model postulates that companies are more likely to manipulate earnings under particular circumstances. Generally, companies are more likely to manipulate earnings if gross margins are decreasing, general selling and administrative expenses are increasing, leverage is increasing, and sales are growing. These ratios and factors are combined into a single score that indicates the likelihood that a company's reported earnings have been manipulated. The model is probabilistic and cannot predict with 100% certainty that a company will manipulate earnings. However, the M-score can be used to detect fraud. Cornell students famously used the M-score model to predict that Enron was manipulating its earnings. Wall Street did not heed the

students' findings. Enron's stock price nearly doubled before its dramatic fall and the firm's ultimate bankruptcy.

Beneish, et al. (2013) provide an example of the predictive ability of the 1999 model using data from 17 high-profile non-financial company fraud cases from 1998 to 2002. The Beneish model suggests -1.78 is the cutoff between likely and unlikely to manipulate earnings. Companies with higher M-scores (e.g., -1.3), are more likely to manipulate earnings, while companies with lower M-scores (e.g., -2.1) are less likely to manipulate. Using the cutoff point of -1.78, the model flagged 12 of the 17 fraud cases at least one year before the fraud was discovered.

We follow the methodology of Beneish, et al. (2013). The 2013 study's results are highly similar to those reported in the 1999 Beneish study. The financial ratios used to generate the M-score are related to the lengthening (or shortening) of days sales outstanding in accounts receivables, increasing (or decreasing) gross margins, improving (or worsening) asset quality, growing (or shrinking) sales growth, increasing (or decreasing) depreciation relative to net property plant and equipment, increasing (or decreasing) operating expenses, the firm's accruals relative to the total assets of the firm, and increasing (or decreasing) leverage. The eight financial ratios are calculated as follows:

1) DSR (days sales in receivables index) = $(\text{receivables}_t/\text{sales}_t)/(\text{receivables}_{t-1}/\text{sales}_{t-1})$
2) GMI (gross margin index) = $((\text{sales}_{t-1}\text{-cost of goods sold}_{t-1})/\text{sales}_{t-1})/((\text{sales}_t\text{-cost of goods sold}_t)/\text{sales}_t)$
3) AQI (asset quality index) = $(1\text{-}((\text{net property plant and equipment}_t + \text{current assets}_t)/\text{total assets}_t))/(1\text{-}((\text{net property plant and equipment}_{t-1} + \text{current assets}_{t-1})/\text{total assets}_{t-1}))$;
4) SGI (sales growth index) = $\text{sale}_t/\text{sale}_{t-1}$;
5) DEPI (depreciation index) = $(\text{depreciation}_{t-1}/(\text{depreciation}_{t-1}+ \text{net property plant and equipment}_{t-1})/((\text{depreciation}_t/(\text{depreciation}_t + \text{net property plant and equipment}_t)$;
6) SGAI (sales, general, and administrative expense index) = (selling general and administrative $\text{expense}_t/\text{sales}_t)/$ (selling general and administrative $\text{expense}_{t-1}/\text{sales}_{t-1}$);
7) Accruals= (income before extraordinary items_t - net cash flow from $\text{operations}_t)/\text{total assets}_t$;
8) LEVI (leverage index) = $((\text{current liabilities}_t + \text{long-term debt}_t)/\text{total assets}_t)/ ((\text{current liabilities}_{t-1} + \text{long-term debt}_{t-1})/\text{total assets}_{t-1})$;

The M-score is calculated as follows:

M-score= -4.84 + 0.920*DSR + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI
- 0.172*SGAI + 4.679*Accruals - 0.327*LEVI.

Descriptive statistics for M-score variable and its components

Table 2 contains the variables included in the analyses and their definitions. Table 3 reports the M-score's mean, median, and standard deviation, along with the components used to calculate the scores. The means and medians for the components of the M-score are close to those found by Beneish (1999), except for accruals. We follow Beneish, et al. (2013) in calculating accruals as (income before extraordinary items - net cash flow from operating activities)/total assets. Because the sample is limited to companies for which a CEI is available, our sample consists of relatively large companies compared to the two previous studies. Consequently, we expect and find less accruals manipulation (i.e., lower M-scores) in our sample than those of the previous two studies, because larger companies are typically more heavily audited and scrutinized by investors than smaller companies.

Table 2: Variable Descriptions

Variable	Description
Panel A:	Variables related to M-score from Beneish et al., 2013, p. 76:
DSR	Days sales in receivables = (receivablest/salest)/(receivablest-1/salest-1)
GMI	Gross margin index = ((sales t-1-cost of goods sold t-1)/sales t-1)/((sales t-cost of goods sold t)/salest)
AQI	Asset acquisition index = (1-((net property plant and equipmentt + current assetst)/total assetst))/(1-((net property plant and equipmentt-1 + current assetst-1) /total assetst-1));
SGI	Sales growth index = salet/ salet-1;
DEPI	Depreciation index = (depreciationt-1/(depreciationt-1+ net property plant and equipmentt-1) /((depreciationt/(depreciationt+ net property plant and equipmentt);
SGAI	Selling and administrative expenses to sales index = (selling general and administrative expenset/salest)/(selling general and administrative expenset-1/salest-1);
Accruals	Accruals = (income before extraordinary itemst - net cash flow from operationst)/total assetst;
LEVI	Leverage = ((current liabilitiest + long-term debtt)/total assetst)/ ((current liabilitiest-1 + long-term debtt-1)/total assetst-1).
M-score	Calculation for M-score= -4.84 + 0.920*DSR + 0.528*GMI + 0.404*AQI + 0.892*SGI + 0.115*DEPI - 0.172*SGAI + 4.679*Accruals - 0.327*LEVI.
Panel B:	Other variables included in the analysis

CEI	Corporate Equality Index = Human Rights Campaign Corporate Equality Index related to that year of operation.
Alladherent	Religious adherents per 1000 = Religious adherents of any religion per 1000 residents of headquarters' county per Association of Religion Data Archives (ARDA) 2010 survey
logAT	log of total assets = log of company ending total assets for fiscal years
logCntyPop	Headquarters county population log = log of the County population in 2010 (i.e., the year of the ARDA data)
Manip1	Manipulation variable 1 = 1, if M-score among 25% highest M-scores, = 0 if M-score among 50% lowest M-scores.
Manip2	Manipulation variable 2 = 1, if M-score among 10% highest M-scores, = 0 if M-score among 50% lowest M-scores.
Manip3	Manipulation variable 3 = 1, if M-score among 10% highest M-scores, = 0 if M-score among 50% lowest M-scores.
Manip4	Manipulation variable 4 = 1, if M-score > -1.78% highest M-scores, = 0 if M-score among 50% lowest M-scores.

Table 3. Descriptive Statistics for M-score Variable and Components

Variable	**Mean**	**Median**	**Std Dev**
DSR	**1.028**	**1.008**	**0.193**
GMI	**0.997**	**0.998**	**0.105**
AQI	**1.035**	**0.993**	**0.269**
SGI	**1.034**	**1.033**	**0.134**
DEPI	**1.063**	**1.006**	**0.264**
SGAI	**1.013**	**1.001**	**0.119**
LEVI	**1.038**	**1.014**	**0.139**
Accruals	**-0.052**	**-0.047**	**0.066**
M-score	**-2.660**	**-2.659**	**0.359**
n= 2072			

Religiosity Measure

To develop the variable of interest for religiosity, we use data available in ARDA from the RCMS survey for 2010 church congregation and member information. The study collects data on the number of churches, the number of members and the number of adherents per participating denomination at the state and county level. Denominations included in the dataset run the gamut from Catholic to Evangelical Protestant to Judaism to Hinduism to Latter Day Saints (Mormonism).

While perhaps not perfect, ARDA's RCMS data is the most comprehensive data on religion available in the U.S. and is used by researchers and scholars working in the area. Few previous studies delve into the specific denominations. In one study that does consider at least some specific denominations, Dyreng et al. (2012) find similar results when using the overall religious adherence sample and when separately controlling for Catholic and

Protestant religious adherence. Following previous research mentioned above, we construct a religiosity variable called Alladherent, which reflects the number of a particular U.S. county's religious adherents per 1000 population. Sample companies' corporate headquarter addresses are available in Compustat by state and city. The Compustat city address and RCMS U.S. county information are manually matched to construct the sample.

Statistical Results

We use the M-score and categorical variables based on companies' M-scores to test our hypotheses. To construct the categorical variable Manip (i.e., manipulation), we break the sample firms into groups with high and low M-scores. $Manip_1 = 1$ for the 25% of observations with the highest M-scores and 0 for the 50% with the lowest M-scores. This variable allows us to capture the relationship between the independent variables of interest and the probability of manipulation. Panel A of Table 4 provides descriptive statistics, and Panel B reports Pearson correlations for model variables. The variables are winsorized at the 1% level in all reported analyses. Our analysis is conducted with 2,072 observations using data from 2012 (with the lag year 2011) through 2019. Due to deleted observations to create the categorical variable, $Manip_1$, has 1,554 observations.

Neither CEI nor Alladherent (which reflects the number of adherents to any religion per 1000 residents of headquarters' county per ARDA 2010 survey) correlate significantly with the M-score. However, CEI is negative and significantly correlated with the manipulation variable, $Manip_1$, while Alladherent is not significantly correlated. This means that companies with higher CEI indexes (i.e., strong commitment to LGBTQ equality and diversity in the workplace) are less likely to have high M-scores (i.e., less likely to manipulate earnings). CEI and Alladherent are significantly correlated at a relatively low -0.109, implying a slightly negative relationship between the CEI's LGBTQ-friendly rating and the level of religiosity of the county where a company is headquartered.

Table 4. Descriptive Statistics and Correlations

Panel A: Descriptive Statistics			
Variable	**Mean**	**Median**	**Std Dev**
M-score	-2.66	-2.66	0.36
$Manip_1$	0.33	0.00	0.47
CEI	70.30	90.00	34.96
Alladherent	507.61	516.61	95.43
logCntyPop	13.87	13.89	1.03
logAT	9.42	9.35	1.24

Panel B: Pearson Correlations					
Coefficients and significance levels					
	$Manip_1$	**CEI**	**All adherent**	**logCnty Pop**	**logAT**
M-score	**0.792*** **	-0.021	-0.038	**-0.062*** **	0.027
$Manip_1$		**-0.069*** **	-0.019	**-0.059*** **	-0.010
CEI			**-0.109*** **	**0.091*** **	**0.173*** **
Alladherent				**0.098*** **	0.000
logCntyPop					0.028

P-value < 0.01*, P-value < 0.05**, P-value < 0.10***
n = 2,072 for all variables except $Manip_1$ which has n = 1,554.

Regression Models for Hypothesis Testing

We use the M-score and a categorical variable $Manip_i$ based on companies' M-scores to test our hypotheses. We first conduct OLS regression analysis with M-score as the dependent variable in Model 1. We then conduct logistic regression analysis with the categorical variable $Manip_i$ in Model 2. In Model 2, we code $Manip_1$ as 1 for observations with high M-scores, and 0 for the 50% of observations with the lowest M-scores. (We construct four different $Manip_i$ variables at differing levels of M-scores as cut-offs for the $Manip_i$ = 1 category.)

1. $\text{M-SCORE}_t = \alpha_1 + \alpha_2(\text{CEI}_t) + \alpha_3(\text{Alladherent}) + \alpha_4(\text{logCntyPop}) + \alpha_5(\text{logAT}_t) + \sum \text{Yr}_{it} + \sum \text{2-digit SIC}_{it} + e$
2. $\text{Manip}_{it} = \alpha_1 + \alpha_2(\text{CEI}_t) + \alpha_3(\text{Alladherent}) + \alpha_4(\text{logCntyPop}) + \alpha_5(\text{logAT}_t) + \sum \text{Yr}_{it} + \sum \text{2-digit SIC}_{it} + e$

From the ARDA archive dataset, we use the number of residents per 1000 in the headquarters county that adheres to a religious denomination (All_D_AdherPer1000) as the religiosity variable of interest to test Hypothesis 1. A significant negative coefficient on All_D_AdherPer1000 would support the hypothesis that the more religious the county of firm headquarters, the less likely the company is to manipulate financial statements. CEI is the measure used to test Hypothesis 2. A significant negative coefficient on CEI would support Hypothesis 2, that the more LGBTQ-diverse/supportive the company is, the less likely it will manipulate financial statements.

We control for the headquarters' counties' population (log of the ARDA's RCMS data reported county population, logCntyPop). People in highly populated urban areas and less populated counties may have different levels of acceptance and inclusion of LGBTQ diversity and/or religiosity. Dyreng et al. (2012) also control for U.S. county size in their models. Earlier studies control for company size with various measures such as the log of total

assets, log of market value, or log of annual sales. Larger companies may be more likely to have higher CEIs and be less likely, due to greater scrutiny and market discipline, to manipulate their financial statements. Consequently, we also include the log of total assets, (logAT) in the model to control for size.

Regression Results

Table 5 presents the OLS and logistic regression results. Column 1 contains the results from the OLS regression results from Model 1. Using the continuous M-score as the dependent variable, only the company size variable (logAT) is significant; neither CEI nor Alladherent are significant. We follow Benieish et al. (2013) and construct a categorical variable, Manip to compare companies with a greater likelihood of manipulation to a group less likely to manipulate. We next used logistic regression in Model 2 with Manip as a dependent variable to better distinguish between the high M-score versus low M-score companies. Analyses are run with samples A, B, C, and D, using increasingly more stringent cutoff levels for companies to be classified in the high M-score group, coded as 1. (See Table 2 for variable definitions).

Alladherent is insignificant with a negative sign in all columns of Table 5 except column 5. All variables are significant in Sample D analysis (column 5), including Alladherent with a low, but positive coefficient. The extreme difference in the number of observations in the Manip = 0 category (1056) compared to the Manip= 1 category (45) may impact these results. We do not conclude that these results provide clear evidence that the religiosity of the corporate headquarters' population decreases, or increases the probability of financial statement manipulation. Thus, we cannot accept our Hypothesis 1.

Logistic regression results for Model 2 with the different subsamples, reported in columns 2 - 5, provide evidence that companies with higher CEIs exhibit a lower probability of financial statement manipulation. Results for subsamples A, C, and D (columns 2, 4, and 5), indicate that CEI is negative and significant (at the 5% level), and CEI is marginally significant for Sample B (column 3), at p-value of 0.066. In Sample D, we use the most stringent criteria for Manip = 1, based on the Beneish et al. (2013) cutoff of -1.78 M-score. Using different cutoff levels to construct the Manip categorical dependent variable produce similar results.These results provide evidence to accept Hypothesis 2, that companies with higher CEI ratings exhibit lower probabilities of financial statement manipulation.

Table 5. Results from Regression Analyses Coefficients and significance levels					
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
	OLS	**Logistic regression, Manip as dependent variable Model 2**			
	Full Sample	**Sample A**	**Sample B**	**Sample C**	**Sample D**
Dependent Var Independent Vars	**M-score**	**Manip$_1$**	**Manip$_2$**	**Manip$_3$**	**Manip$_4$**
Intercept	**-2.690*** **	0.189	-0.993	-1.928	**-5.279*** **
CEI	-0.000	**-0.004** **	*-0.005**	**-0.008** **	**-0.002*** **
Alladherent	-0.000	-0.000	-0.002	-0.001	**0.000*** **
logCntyPop	-0.011	**-0.125** **	0.026	-0.022	**-0.045*** **
logAT	**0.019 *** **	0.069	-0.010	0.077	**0.071*** **
Two-digit SIC	Yes	Yes	Yes	Yes	Yes
Year variables	Yes	Yes	Yes	Yes	Yes
Adjusted R square	0.097				
-2 Log Likelihood		1792.85	1024.84	629.88	348.62
n =	2,072	1,554 =	1,244 =	1,139 =	1,081 =
n, Manip = 1		518 +	208 +	103 +	45 +
n, Manip = 0		1036	1036	1036	1036

P-value < 0.01***, P-value < 0.05**, P-value < 0.10*

Conclusion

In this study, we examine the impact of religiosity and LGBTQ support on a company's likelihood of manipulating earnings. Earnings management is a concerning trend as companies face more pressure to meet investor expectations and managers see compensation tied to short-term performance. We expected that, in keeping with related research on diversity and religiosity, both would lead to lower levels of earnings management and manipulation. We find no support that the level of religiosity of the county in which a company is headquartered reduces a company's likelihood of manipulating earnings. However, results indicate that the higher the CEI rating (i.e., the LGBTQ support metric), the lower the likelihood of manipulation. These results suggest that LGBTQ diversity, as indicated by the CEI, may provide a positive impact on financial reporting, similar to gender diversity, contributing to the literature on the benefits of diversity in companies.

The implications for these and previous findings related to financial misconduct, or lack thereof, are relevant to investors, companies, policymakers and regulators alike. When all the members of an organization's management and/or board of directors look and think alike, they may engage

in collective rationalization (Johansson, 2017). Greater diversity leads to more people challenging assumptions and policies. If financial metrics start to deteriorate, diversity of opinions may produce more creative solutions to problems rather than managers resorting to earnings management and possibly financial misconduct.

Studies regarding earnings management and financial statement manipulation are relevant to a wide constituency and have implications for governance. Policymakers and regulatory bodies may need to examine corporate diversity in a broader context. Gender diversity has been a fruitful area of research, in part because the data on board makeup, C-suite makeup, and so on are easy to access, at least for publicly traded companies. This study adds to that literature by finding a way to examine an underexplored aspect of diversity, that related to gender and sexual identity.

A limitation is that our results may not be generalizable to other, broader groups of firms. The CEI measure is limited to companies with U.S. operations and is typically only provided for larger organizations. Future research breaking down the U.S. sample in other ways and examining religiosity and CEI in separate models could provide more understanding of CEI ratings on the probability of financial statement manipulation. Testing the impact of similar measures of LGBTQ equality available for companies in other countries, could provide further confirmation of the benefits of LGBTQ diversity. Also, future research could examine whether benefits from various types of diversity, such as gender, race/ethnicity, age, and LGBTQ have similar or different impacts on financial reporting, and financial manipulation and misconduct. Earnings management is not likely going away. Finding ways to mitigate it through diversity and other means, is important for society.

Conflict of Interest: The authors reported no conflict of interest.

Data Availability: All data are included in the content of the paper.

Funding Statement: The authors did not obtain any funding for this research.

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