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The religion effect on corporate cash holding in China: Buddhism and Taoism

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Abstract

Buddhism and Taoism have been deeply rooted in China for generations and both of them have a profound impact on the local culture and social norms. By employing 23,999 firm-year observations between 2008 and 2018, we examine how local religious norms affect corporate cash policies. We provide strong evidence that religiosity significantly reduces the level of corporate cash holdings, by mitigating financial constraints and earnings management of the listed companies. Managers from religious areas make more effective investments and distribute more dividends. Furthermore, our findings document that religion has a more pronounced influence on cash holdings amongst the firms with the smaller size, lower leverage, higher marketization, effective internal control and facing fierce market competition. Overall, Buddhism and Taoism, constituting the main religious norms in China, significantly optimize the firms' cash holdings and firm value.

KEYWORDS

Buddhism, cash holdings, religion, Taoism

JEL CLASSIFICATION

G30, M41, Z12

1 | INTRODUCTION

Religion, as an important part of social norms, plays a crucial role in the social mechanism to influence human beliefs and behaviour (Cialdini & Goldstein, 2004; Kennedy & Lawton, 1998; Sunstein, 1996). As an ethical guideline, it is strongly believed to lead to more ethical conduct. Thus, exploring the effect of the religion of individuals on their business life has been described as 'one of the great uncharted areas' for both academia and practitioners.

Prior literature shows that religion has a strong impact on economic choices in various contexts. For example, Barro and McCleary (2003) document that religious beliefs influence personality traits, which in turn influence economic performance. Conroy and Emerson (2004) and Longenecker et al. (2004) look at the context of financial reporting and suggest that highly religious individuals are more likely to consider accounting manipulation as an unethical practice. Terpstra et al. (1993) and Weaver and Agle (2002) show that religious social norms can reduce agency costs. Besides, extensive studies have shown the

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effect of religion on many other aspects of corporate finance such as corporate risk exposure, financial reporting and the cost of capital (Dyreng et al., 2012; Grullon et al., 2010; He & Hu, 2016; Hilary & Hui, 2009).

In contrast to the burgeoning literature on the association between religion and the economic choices mentioned above, few studies examine the influence of religious beliefs on the cash holding of a company. Prior work focuses on the relationship between cash holdings and executive compensation, independent directors, bank monitoring, and institutional investors (Dittmar & Mahrt-Smith, 2007; Harford et al., 2008 and Liu & Mauer, 2011). However, Chen et al. (2014) argue that cash holding decisions cannot be effectively studied without considering the national culture. By examining a diverse group of countries with different governance structures and different stages of financial development, they show that a higher degree of religiosity is associated with more accumulated cash holdings of the local government.

The religiosity also affects the cash holding choices at the company level. Hu et al. (2019), being the only study providing empirical evidence on how local Protestant belief affects corporate cash holdings, states that religiosity shall affect the corporate cash holdings for two reasons. First, Religious adherents are more risk-averse (Hilary & Hui, 2009; Dyreng et al., 2012). And second, religious norms are believed to be associated with better corporate governance and stronger work ethics (Callen & Fang, 2015, 2010; Halek & Eisenhauer, 2001; McGuire, Newton, et al., 2012; McGuire, Omer, & Sharp, 2012; Stulz & Williamson, 2003; Weber, 1905). Therefore, higher levels of religious adherence in a company should be associated with more conservative and ethical corporate decisions, as evidenced by Dyreng et al. (2012), Grullen et al. (2010), and He and Hu (2016) who find that firms located in areas with higher religiosity are less likely to overstate earnings, engage in tax avoidance and tax sheltering behaviour, or initiate other unethical practice such as backdating options or exploiting shareholders and debtholders. Consistent with their conjecture, Hu et al. (2019) find that firms located in areas with more Protestants hold fewer cash reserves.

Our study extends the literature by studying the impact of religiosity on corporate cash holding decisions in China. Since the 1990s, China has been playing a crucial role in the global economy, especially in financial markets. China, like the majority of other eastern countries, distinguishes itself from western countries in religion and culture for generations. The effects of religion on China's economy cannot be simply referred to by the evidence from Western countries. Moreover, China's religious context is a very interesting setting to be explored amongst others. Historically, China was the country of origin for a variety of the most enduring religious-philosophical traditions of the world. Confucianism and Taoism, later joined by Buddhism, constitute the 'Three Teachings' that have shaped Chinese culture and tradition. There are no clear boundaries between the intertwined religious systems that are co-existing and non-exclusive. They have a profound impact on the local culture in the literature, art and ideology. According to the official data from the National Religious Affairs Administration, there are more than 13,000 Buddhist temples open to the public. The Chinese Luxury Consumer White Paper 2012, jointly published by the Industrial Bank and Hurun Report, shows that 39% of the intellectuals and businessmen have faith in Buddhism. The mainstream literature examines the influence of Western religions, particularly Christianism and Catholicism, on corporate decisions. However, the role of local religious belief on corporate cash holding in Eastern countries has long been missing. Hence, our study is not only necessary but also meaningful in filling such a void.

Using a sample of 23,999 firm-year observations from the Chinese stock market between 2007 and 2018, we examine how local religious adherence affects corporate cash policies. Relying on geographic proximity-based religiosity measures, we provide strong evidence that religiosity significantly reduces the level of corporate cash holdings. Specifically, religion optimizes the level of corporate cash holdings through mitigating financial constraints and earnings management. This is because religion as an effective mechanism enhances mutual trust and helps the local religious groups. The borrowings and commercial credit supply amongst enterprises located in areas with strong religious traditions will alleviate the financing constraints and lower precaution motivation. Also, managers in such firms are less self-interested and tend to distribute cash to shareholders through dividend payments, thereby leading to low cash reserves. The findings are robust to various specifications of the cash holding, and different distance criteria in defining religiosity. Our further analyses show that religion has a more pronounced influence on cash holdings amongst firms with a smaller size, lower leverage ratio, higher marketization, fierce market competition, and more effective internal control.

Our study contributes to the literature in the following aspects. First, it extends the literature on corporate cash holdings, particularly, the effect of religious social norms on the firms' cash holding decisions. Hu et al. (2019), claiming to be the first study linking the local religious norms with free cash flow agency problems, only look at how local Protestant values affect the corporate cash holdings in the United States. However, the religious belief in Eastern countries like China, where Buddhism and Taoism constitute the main religious norms, is very different from that in Western countries where most

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adherents are Christian or Catholic. Hence, our study provides new evidence on how eastern religion affects corporate behaviours. Second, our study contributes to the literature on corporate governance, particularly on agency issues. Our findings that religious norms are associated with lower cash holdings and higher dividend payments, and their interaction with the internal and external corporate governance, suggest that social religious norms are important determinant factors for corporate governance. Third, this study distinguishes itself from the existing studies based on the Chinese context (e.g., Du 2013a, 2013b; Du et al., 2013a, 2013b; Chen et al., 2013). Existing studies shed light on whether and how religion affects corporate behaviour such as corporate governance, especially owner–manager agency conflicts between the controlling shareholders and minority shareholders, and corporate social responsibility (such as philanthropic donations). But there is little empirical evidence on how religion affects corporate cash policies. Last but not least, our empirical findings provide a useful and important reference to policymakers, investors, and corporate managers.

The remainder of the study is organized as follows. Section 2 provides the literature review and hypotheses development. Section 3 describes the data and methodology. Section 4 discusses the empirical findings and further tests. Section 5 conducts.

2 | LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A burgeoning literature investigates whether religion, as part of social norms, influences corporate behaviours. The link between local religious norms and corporate behaviours arises from theories in organizational psychology and social norms. Organizational psychology theory posits that individual preference affects corporate behaviours. Theoretically, Wegner et al. (1987) suggests that different attributes of people are an important determinant of organizational behaviours. Following Wegner et al. (1987), come up with the 'moral communities' theoretical hypothesis and test it. They find that the salience of religious social norms in a community plays a significant role in the individuals' adherence to a social norm. Therefore, the firms' culture and behaviours could be affected by local religious norms and exhibit the attributes of local religious adherents. (El-Halaby et al., 2021; Tsendsuren et al., 2021). Recently, Alnori et al. (2021) find the determinant factors of corporate cash holdings in the Gulf Cooperation Council (GCC). Faysal et al.'s (2021) document significantly relationship between corporate governance mechanisms and the cost of equity capital in emerging markets. Al-Najaf et al. (2018) show a significant effect of Islamic sacred months on stock markets in Iran and Iraq.

On the other theoretical stream, Kohlberg (1984), Sunstein (1996) and Villani et al. (2019) suggest that the social norm theory posits that social norms influence behaviour because individuals prefer to conform to their peer group and thereby avoid the costs or penalties associated with rejecting the standards, values, or beliefs that are considered acceptable or appropriate. According to the theory, it predicts that managers who themselves may not be religious believers will be affected by the religious norms in a local geographic area, because the religious social norms of the local population are an important element of the environment in which managers live and operate. (Kohlberg 1984; Sunstein, 1996; Cialdini & Goldstein, 2004; El Ghoul et al., 2012; Du, 2013b; Zahedi et al., 2021; Ho et al., 2021).

Prior literature documents that firms headquartered in the places with deeper religious cultures have fewer agency conflicts (El Ghoul et al., 2012), lower risk exposure (Hilary & Hui, 2009), and fewer lawsuits incurred (Grullon et al., 2010; McGuire, Newton, et al., 2012; McGuire, Omer, & Sharp, 2012) and higher earnings quality (Dyreng et al., 2012; McGuire, Newton, et al., 2012; McGuire, Omer, & Sharp, 2012). Honesty and risk aversion are defined as two important traits of religious believers. Religious individuals are commonly regarded as more risk-averse than non-religious individuals (Miller, 2000; Miller & Hoffman, 1995). And managers of firms in religious areas are less likely to be the target of a class-action lawsuit (Grullon et al., 2010; McGuire, Newton, et al., 2012; McGuire, Omer, & Sharp, 2012).

The strong work ethics feature indicates the managers' self-discipline and less self-interested, which in turn more attuned to shareholder interests. It helps to mitigate the agency conflicts between managers and shareholders. Jensen (1986) and Stulz (1990) develop the free cash flow agency problem theory, predicting that self-interested managers tend to pursue their own interests at the expense of shareholders and therefore stockpile cash instead of disgorging cash to shareholders to obtain flexibility in the future investment and keep them out of market control. Harford et al. (2008) report that the U.S. firms with weaker governance structures tend to hold fewer cash reserves because they have greater capital expenditures and acquisitions and pay fewer dividends to shareholders. Without a control mechanism, it is difficult to convince self-interested managers to disgorge cash reserves to shareholders. Local religious culture, as an effective mechanism, enhances mutual trust and help the local residents. The borrowings and commercial credit supply amongst enterprises in areas with strong religious traditions will alleviate the financing

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constraints and lower precaution motivation. A stronger work ethic and greater honesty make the managers less motivated by self-interest, thereby reducing the agency problem between shareholders and managers. Recently, Qiao et al. (2022) document that narcissistic leaders significantly affect the firms' cash holdings. The essence of both Buddhism and Taoism highlights honesty, strong work ethics and mutual trust and help. With respect to honesty, whilst the existing literature provides little robust evidence to characterize the religious as more honest than the non-religious per se (Weaver and Agle, 2002), it does suggest that all individuals, both religious and non-religious, hold internalized moral norms such as honesty in order to maintain positive self-concept (Mazar et al., 2008). When many members of the geographic region are religious, the corporate managers will be deeply influenced by the religious believers surrounding them. Social norms emerge out of interaction amongst group members (in this case managers and religious individuals), with sanctions for deviation coming from social networks, not the legal system (Cialdini and Trost, 1998).

Therefore, we develop the following hypotheses:

Hypothesis 1. Religion will significantly reduce the level of corporate cash holdings.

Hypothesis 2. Firms located in the region with high religiosity have fewer agency conflicts and are more likely to keep lower cash reserves through investments and dividend payout.

3 | DATA AND METHODOLOGY

3.1 | Sample selection

Our sample data cover the firms listed on Shanghai Stock Exchange (SHSE) and Shenzhen Stock Exchange (SZSE), during the period from 2007[1] to 2018. Consistent with the majority of empirical studies, we exclude all financial firms because of their difference from other companies in cash reserves and cash flows, the operating, investing and financing activities. All accounting data used in this analysis are collected from the China Stock Market and Accounting Research (CSMAR) and WIND Databases. Firm-year observations with transaction status of ST (special treatment), *ST (suspension from trading) or PT (particular transfer) are deleted. We drop firm-year observations with missing values. Furthermore, to mitigate the influence of outliers, we winsorize all continuous variables at the 1st and 99th percentiles. The selection process results in a sample of 23,999 firm-year observations, although the number of observations varies depending on the type of test conducted. In all regressions, standard errors are clustered by firm.

3.2 | Variables definition

3.2.1 | Proxy of religious social norms

A 2015 Gallup poll reported that 90% of Chinese citizens classify themselves as atheists or non-religious.[2] However, the actual number is unobservable, because many people are potentially affected by various religions on their behaviour or pattern of thoughts but they would not classify themselves as a member of a certain group. According to the social norm theory, to avoid the sanction from norm deviation, a manager will conform to norms that the social group adheres to. Such conformity occurs if a manager changes behaviour to align with socially acceptable behaviour in a geographic region where the manager's preferences are congruent with local social norms. Managers may be non-religious believers, but they are more likely to be influenced by the religious norms in a geographic area (Du et al., 2013b; El Ghoul et al., 2012). Therefore, following Du et al. (2015), we measure the religious social norms of a firm by the number of religious sites within a certain kilometres radius around the firm's registered place, labelled as ***REL_D***. The religious sites identified in this study refer to the famous Buddhist monasteries or temples and Taoist temples. Famous and representative monasteries and temples have more far-reaching influence in the local areas of their historical development and religious heritage. Hence, the religious site is an indicator of the religious intensity of the people in the vicinity, and thus the distance between a religious site and a firm can reflect religious influence or religious atmosphere in a region. Our analysis utilizes 100/200/300 km as the distance criteria (the upper limits) to identify the number of religious sites and define the variables of REL100, REL200 and REL300, respectively.

The reasons why we use the geographical proximity-based method to measure REL are as follows. First, it has been generally argued that a questionnaire is the most reliable method to explore whether the managers believe in Buddhism or Taoism. However, it is difficult to obtain direct data from the CEO, Chairman and directors on the board in China (Du, 2014). A 2015 Gallup poll reported that 90% of Chinese citizens classify themselves as atheists or non-religious.[3] However, the actual number is

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unobservable because many people are potentially affected by various religions on their behaviour or pattern of thoughts but they would not classify themselves as a member of a certain group. According to the social norm theory, to avoid the sanction from norm deviation, a manager will conform to norms that the social group adheres to. Such conformity occurs if a manager changes behaviour to align with socially acceptable behaviour in a geographic region where the manager's preferences are congruent with local social norms. Managers may be non-religious believers, but they are more likely to be influenced by the religious norms in a geographic area (Du et al., 2013b; El Ghoul et al., 2012). Therefore, following Du et al. (2015), we measure the religious social norms of a firm by the number of religious sites within a certain kilometres radius around the firm's registered place, labelled as ***REL_D***.

Second, the number of religious sites is an indicator of the religious intensity of the people in the vicinity. According to the official data published by the National Religious Affairs Administration (2015), China has more than 33,000 Buddhist monasteries and more than 8,200 Taoist temples.[4] All have various impacts on the surrounding population and listed firms. We simply focus on the provincial- and national-level religious sites in this study, due to their more far-reaching influence in the local area of their historical development, and religious heritage.

Third, the geographical-based variables have been supported by the previous studies (e.g., El Ghoul et al., 2012, 2013; Du et al., 2014; Du et al., 2015). Following prior literature, we collect and sort the registered addresses of each firm-year observation and religious sites, and then use the Google-earth map to collect the respective longitudes and latitudes of each firm's registered address and the location of each Buddhist monastery (Taoist temple). Subsequently, we calculate the distance between the location of each famous Buddhist monastery (Taoist temple) and a firm's address. Finally, we use the natural logarithm of the number of famous Buddhist monasteries (Taoist temples) within a certain radius around a listed firm's registered address to proxy for the degree of religiosity. The religious sites identified in this study refer to the famous Buddhist monasteries or temples and Taoist temples. Hence, the religious site is an indicator of the religious intensity of the people in the vicinity, and thus the distance between a religious site and a firm can reflect religious influence or religious atmosphere in a region. Our analysis utilizes 100/200/300 km as the distance criteria (the upper limits) to identify the number of religious sites and define the variables of *REL100, REL200* and *REL300*, respectively.

3.2.2 | Measuring corporate cash holdings

Strictly following the previous cash holding literature, we use two cash holdings variables: (1) monetary funds plus transactional financial assets divided by total assets minus cash and cash equivalents (e.g. Chen et al., 2014), labelled as ***Cash1***; And (2) the ratio of cash and cash equivalents to total assets (e.g. Hu et al., 2019), labelled as ***Cash2***.

3.3 | Methodology

To test our hypotheses, we use multivariate regressions to examine the effect of religious social norms on corporate cash holdings in this section, with various controls for firm-specific variables. We take into account several determinants that could be related to both cash holdings and local religious norms based on the prior literature. Equation (1) is our main specification. According to our first hypothesis, the coefficient on ***REL_D***, $\boldsymbol{\beta_1}$ is expected to be negative,

$$CashHolding_{i,t} = \beta_0 + \beta_1 * REL\_D_{i,t} + \beta_2 * Controls_{i,t} + \beta_3 * \sum Industry_{i,t} + \beta_4 * \sum Year_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where ***REL_D*** is the natural logarithm of the number of religious sites within a certain kilometres radius around a firm's registered location, and we use 100/200/300 km as the distance criteria to define the firm's surrounding area.

According to the prior literature, firms with higher leverage ratios and more acquisition activities tend to reserve less cash, whilst firms with greater investment opportunities and higher R&D intensity have a preference to hold more cash. Therefore, we include ***Size, Lev and Growth*** and ***CAPEX*** as control variables. ***Size*** is measured as the natural logarithm of the total assets at the year-end; ***Lev*** is total liabilities divided by total assets; ***Growth*** indicates the change in sales deflated by lagged total assets; ***CAPEX*** refers to capital expenditures scaled by total non-cash assets. Other firm-level control variables are ***LOSS***, a dummy variable, equals to 1 if a firm reports negative net income in the year, and 0 otherwise; ***ROA*** indicates return on total assets, measured as net operating income deflated by total assets; ***INT*** refers to the interest payment divided by total assets at the year-end; ***DIV*** refers to the dividend payable divided by total assets at the year-end. From the economic perspective, we also include the provincial ***GDP*** measured by the natural logarithm of local GDP, and the marketization index (Fan et al., 2015), labelled as ***SCORE***, to control for the

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regional or provincial difference in the level of development.

We also follow the literature on corporate governance and include the following variables to further control some governance traits: ***TOP1*** is the largest shareholding by the controlling shareholder; ***DUAL***, a dummy variable, equals to 1 if the CEO and the chairman are the same person, and 0 otherwise; ***IND*** is the ratio of independent directors in the board; And ***BOARD*** is measured as the natural logarithm of total number of directors.

In addition, following McGuire, Newton, et al. (2012); McGuire, Omer, and Sharp (2012) and Du et al. (2015), we incorporate some demographic control variables in each province, such as the population and income: ***POPUL*** is the natural logarithm of the population for each province in millions; ***INCOME*** stands for the average province-level income per capita. All variables and their measurements are defined and explained in the appendix. W control for industry and year fixed effects in all regressions, and standard errors are clustered by firm (Table B1, Appendix B).

4 | EMPIRICAL RESULTS

4.1 | Descriptive statistics

Table 1 provides the descriptive statistics on firm fundamental variables and ***Religion*** measures. ***Cash1*** (monetary funds plus transactional financial assets divided by total assets minus cash and cash equivalents) has a mean of 0.255 and a standard deviation of 0.282. It presents that the level of cash holdings varies from firm-to-firm, some of them have big differences in cash holdings. ***Cash2*** (cash to total assets) has a mean of 0.179, a median of 0.144 and a standard deviation of 0.128. Overall, the statistics of ***Cash2*** are lower than those of ***Cash1***, and the ***Cash1*** seems to be more right-skewed with a much greater maximum and standard deviation.

The mean values of REL100, REL200 and REL300 reveal that the average number of religious sites (i.e. province-widely famous Buddhist monasteries or temples and Taoist temples) located within a radius of 100, 200 and 300 km around a listed firm's registered address is 2, 5 and 9, respectively. Similarly, the maximum values of

TABLE 1 Descriptive statistics

Variables	*N*	Minimum	Mean	Median	p25	p75	Maximum	SD
Cash1	23,999	0.004	0.255	0.167	0.099	0.298	3.059	0.282
Cash2	23,999	0.003	0.179	0.144	0.089	0.232	0.773	0.128
REL100	23,999	0.000	0.714	0.000	0.000	1.386	2.485	0.901
REL200	23,999	0.000	1.100	0.693	0.000	2.303	3.332	1.204
REL300	23,999	0.000	1.381	1.099	0.000	2.773	3.829	1.427
Size	23,999	18.720	22.050	21.880	21.130	22.790	26.250	1.292
Lev	23,999	0.035	0.450	0.445	0.282	0.607	1.896	0.219
Growth	23,999	−0.717	0.215	0.122	−0.012	0.293	7.527	0.567
CAPX	23,999	0.000	0.052	0.037	0.015	0.073	0.292	0.050
ROA	23,999	−0.660	0.054	0.052	0.029	0.082	0.322	0.069
LOSS	23,999	0.000	0.095	0.000	0.000	0.000	1.000	0.293
INT	23,999	0.000	0.001	0.000	0.000	0.001	0.141	0.007
DIV	23,999	0.000	0.001	0.000	0.000	0.000	0.032	0.003
TOP1	23,999	0.079	0.351	0.332	0.232	0.454	0.759	0.149
IND	23,999	0.250	0.372	0.333	0.333	0.429	0.600	0.053
BOARD	23,999	1.609	2.150	2.197	2.079	2.197	2.708	0.200
DUAL	23,999	0.000	0.235	0.000	0.000	0.000	1.000	0.424
SCORE	23,999	2.530	7.816	7.965	6.615	9.533	10.920	1.804
GDP	23,999	6.681	10.220	10.260	9.753	10.850	11.490	0.806
POPUL	23,999	6.314	8.505	8.641	7.913	9.010	9.337	0.658
INCOME	23,999	9.820	10.950	10.980	10.690	11.220	11.810	0.423

Notes: All the variables are defined in the appendix. We winsorize the top and bottom 1% of each variable's distribution to control for the influence of extreme observations (similarly hereinafter).

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REL100, REL200 and REL300 indicate that the maximum coverage located within a radius of 100, 200 and 300 km around a listed firm's registered address is 12, 33 and 46, respectively.

We first conduct a simple univariate test on the impact of religion on firm cash holdings. In so doing, we separate the same firms into two groups: firms with/without religious sites within a radius of 100 km around the firms. Table 2 presents the means and medians on all the variables of these two groups of firms. As shown in Table 2, in contrast to the firms with religious sites around, those without tend to maintain a higher level of cash holdings. The differences in mean and median values of ***Cash1*** are 0.068 and 0.027, respectively, both at the 1% significance level. The differences in ***Cash2*** support this. The results in Table 2 support the Hypothesis H1 that religious traditions have a significantly negative impact on corporate cash holdings. Our results suggest that the attribute of stronger work ethics exerts more influence on corporate cash policies than the trait of risk aversion. This finding is consistent with Hu et al.'s (2019) observation in the United States.

We also look at the Spearman and Pearson correlation amongst the main variables in this analysis, as reported in Table 3. As expected, corporate cash holdings (both ***Cash1 and Cash2***) are significantly negatively correlated with REL100, REL200 and REL300 at the 1% significance level, another evidence to support our first hypothesis.

4.2 | Regression analysis

To have a more thorough investigation of our research question whilst controlling for possible contamination of other effects, we perform the following multivariate regressions. Table 4 presents the regression results of Equation (1) for the influence of Religion on corporate cash holdings, where the dependent variables are ***Cash1*** for the models (1) to (3) and ***Cash2*** for the models (4)–(6).

$$CashHolding_{i,t} = \beta_0 + \beta_1 * REL\_D_{i,t} + \beta_2 * Controls_{i,t} + \beta_3 * \sum Industry_{i,t} + \beta_4 * \sum Year_{i,t} + \varepsilon_{i,t} \quad (1)$$

From Table 4, we can see that the coefficients on our religious adherence proxies REL100, REL200 and REL300 are all significantly negative at the 99% confidence level. Columns (1), (2) and (3) tabulate the impact of Buddhism and Taoism on Cash1, whilst columns (4), (5) and (6) tabulate the effect of Buddhism (Taoism) on Cash2. REL100/200/300 indicates the degree of Buddhism (Taoism) within 100/200/300 km radius around the firm's registered address, respectively. We incorporate a set of control variables including the industry and year fixed effects. The results in Table 4 indicate that the coefficients of REL100, REL200 and REL300 are all significantly negative at the 1% level, which strongly support Hypothesis 1. It suggests that local religious environment has a negative effect on firms' cash holdings, that is, firms located in the area with a greater number of famous Buddhist monasteries and Taoist temples tend to keep lower level of cash holdings.

For the control variables, the coefficients of SIZE, ROA, Leverage, Top 1, DUAL and CAPEX are consistent with our predictions. First, firm size has a negative effect on cash holdings, implying a larger firm requires less cash holding, because it has other substitute resources. Second, ROA is positively associated with corporate cash holdings. This is reasonable because more income generated from the operations provide more cash to the firm. Third, leverage has a negative effect on the firm's cash holdings. It indicates that the available access to debt financing helps a firm relieve its resource constraints to alleviate the need for the precautionary cash holding. It reflects that debt is a substitute for cash. Fourth, largest shareholding (Top1) and CEO duality (DUAL) have a positive effect on cash holdings. It is consistent with the previous studies (Opler et al., 1999; Dittmar & Mahrt-Smith, 2007; Harford et al., 2008; Lee and Park, 2016), which suggest that corporate governance characteristics influence corporate cash holding policies. Finally, CAPEX is negatively correlated with cash holdings, elaborating that firms keep less cash when they have more capital expenditures.

Overall, the findings show that firms located in a stronger Buddhism and Taoism environment keep less cash reserves, indicating that Buddhism and Taoism, constituting the main religious norms in China, have shaped the Chinese culture and influenced the ethical behaviour in business. It leads to the reduced managerial incentives of keeping higher cash reserves. It shows that firms located in an area with a stronger religious atmosphere tend to maintain a lower level of cash holdings. Such an effect is robust as we use different cash holding measures, and different religious adherence proxies.

Though we have established the relation between religious social norms and corporate cash holdings, we conduct the following tests to further check the robustness of our results.

4.2.1 | Endogeneity concern

One concern regarding our results is that the relationship between religious social norms and the firms' cash

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TABLE 2 Mean and median difference test

	Without religious sites nearby			With religious sites nearby				
Variables	***N***	**Mean**	**Median**	***N***	**Mean**	**Median**	**Mean-diff**	**Wald χ^2**
Cash1	13,322	0.285	0.18	10,677	0.217	0.153	0.068***	136.834***
Cash2	13,322	0.193	0.154	10,677	0.161	0.134	0.032***	139.890***
Size	13,322	21.744	21.611	10,677	22.427	22.298	−0.684***	1354.177***
Lev	13,322	0.392	0.373	10,677	0.523	0.525	−0.130***	1597.691***
Growth	13,322	0.227	0.145	10,677	0.2	0.096	0.027***	218.717***
CAPX	13,322	0.058	0.043	10,677	0.045	0.03	0.013***	345.290***
ROA	13,322	0.055	0.054	10,677	0.052	0.049	0.003***	78.605***
LOSS	13,322	0.09	0	10,677	0.101	0	−0.011***	8.836***
INT	13,322	0.001	0	10,677	0.001	0	−0.000***	362.338***
DIV	13,322	0.001	0	10,677	0.001	0	−0.001***	1997.266***
TOP1	13,322	0.338	0.317	10,677	0.366	0.35	−0.028***	142.015***
IND	13,322	0.374	0.333	10,677	0.37	0.333	0.004***	1.267
BOARD	13,322	2.122	2.197	10,677	2.185	2.197	−0.063***	550.147***
DUAL	13,322	0.316	0	10,677	0.133	0	0.183***	1109.529***
SCORE	13,322	7.809	8.002	10,677	7.826	7.83	−0.017	26.945***
GDP	13,322	10.33	10.395	10,677	10.081	10.08	0.249***	875.464***
POPUL	13,322	8.577	8.694	10,677	8.416	8.571	0.161***	289.281***
INCOME	13,322	10.986	11.031	10,677	10.897	10.939	0.090***	272.365***

Notes: This table presents the firm-level statistics for comparing firms with or without religious sites (i.e. province-widely famous Buddhist monasteries or temples and Taoist temples) located within a radius of 100 km around a listed firm's registered address, including their mean and median values. *T*-test for mean difference, the Wilcoxon rank-sum test for median difference. We also report the significance of the difference value.

*Significance at the 10% level.

**Significance at the 5% level.

***Significance at the 1% level.

TABLE 3 Spearman and Pearson correlation

	Cash1	Cash2	REL100	REL200	REL300
Cash1	1	0.990***	−0.079***	−0.096***	−0.100***
Cash2	0.930***	1	−0.081***	−0.099***	−0.100***
REL100	−0.086***	−0.087***	1	0.910***	0.880***
REL200	−0.110***	−0.110***	0.890***	1	0.980***
REL300	−0.120***	−0.120***	0.860***	0.970***	1

Notes: Column (REL100), (REL200) and (300) present the Spearman coefficient; column (Cash1) and (Cash2) describe the Pearson coefficient.

*Significance at the 10% level.

**Significance at the 5% level.

***Significance at the 1% level.

holding is driven by some other unknown variables that are omitted from the regression, which will cause the endogeneity issue in our analysis. To address this concern, we perform the following two tests to check the robustness of our results.

Propensity Score matching(PSM)

To mitigate the endogeneity problem, we first adopt the nearest neighbourhood Propensity Score Matching. Based on the prior literature, we select firm size, leverage, market value, dividend payout, local GDP , population and average income per capita to conduct the PSM. Table 5 presents the regression results on our matched sample. We can see that all the coefficients on the religious social norm proxies are significantly negative (with one exception where the coefficient is marginally significant at the 90% level), indicating the same conclusion as we draw from Table 4—the religious social norm

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TABLE 4 Cash holdings regressions

	(1)	(2)	(3)	(4)	(5)	(6)
	Cash1	Cash1	Cash1	Cash2	Cash2	Cash2
REL100	−0.013***			−0.005***		
	(−3.25)			(−2.64)		
REL200		−0.011***			−0.005***	
		(−3.73)			(−3.10)	
REL300			−0.010***			−0.004***
			(−3.83)			(−3.27)
Size	−0.006*	−0.006	−0.005	−0.004**	−0.003*	−0.003*
	(−1.71)	(−1.56)	(−1.46)	(−2.07)	(−1.93)	(−1.83)
Lev	−0.414***	−0.412***	−0.411***	−0.187***	−0.186***	−0.186***
	(−17.78)	(−17.73)	(−17.69)	(−19.15)	(−19.02)	(−18.93)
Growth	−0.003	−0.003	−0.003	−0.001	−0.001	−0.001
	(−0.94)	(−0.97)	(−0.99)	(−0.42)	(−0.45)	(−0.48)
CAPX	−0.575***	−0.586***	−0.591***	−0.233***	−0.237***	−0.240***
	(−11.02)	(−11.20)	(−11.28)	(−9.55)	(−9.76)	(−9.86)
ROA	0.315***	0.316***	0.317***	0.171***	0.172***	0.172***
	(5.63)	(5.66)	(5.67)	(7.05)	(7.08)	(7.08)
LOSS	0.013	0.014	0.014	0	0	0
	(1.53)	(1.57)	(1.57)	(0.08)	(0.05)	(0.05)
INT	1.058**	1.063**	1.065**	0.012	0.013	0.014
	(2.12)	(2.13)	(2.15)	(0.05)	(0.06)	(0.07)
DIV	−0.339	−0.259	−0.243	−0.001	0.034	0.043
	(−0.36)	(−0.28)	(−0.26)	(−0.00)	(0.08)	(0.10)
TOP1	0.077***	0.076***	0.076***	0.034***	0.034***	0.033***
	(3.43)	(3.36)	(3.35)	(3.18)	(3.12)	(3.10)
IND	0.021	0.019	0.019	0.017	0.016	0.016
	(0.37)	(0.34)	(0.34)	(0.62)	(0.59)	(0.59)
BOARD	0.017	0.018	0.018	0.014	0.014	0.014
	(1.03)	(1.06)	(1.09)	(1.58)	(1.61)	(1.63)
DUAL	0.023***	0.022***	0.022***	0.010***	0.010***	0.010***
	(3.06)	(2.98)	(2.95)	(3.19)	(3.09)	(3.05)
SCORE	−0.007*	−0.006	−0.006	−0.003	−0.002	−0.002
	(−1.76)	(−1.58)	(−1.57)	(−1.38)	(−1.23)	(−1.21)
GDP	−0.031*	−0.034**	−0.034**	−0.017*	−0.018**	−0.018**
	(−1.83)	(−2.02)	(−1.99)	(−1.91)	(−2.06)	(−2.05)
POPUL	0.053***	0.056***	0.055***	0.027***	0.029***	0.028***
	(3.07)	(3.26)	(3.22)	(3.09)	(3.24)	(3.22)
INCOME	0.168***	0.166***	0.164***	0.080***	0.079***	0.079***
	(6.15)	(6.14)	(6.10)	(6.19)	(6.15)	(6.14)
_cons	−1.335***	−1.327***	−1.318***	−0.597***	−0.595***	−0.592***
	(−4.28)	(−4.30)	(−4.28)	(−4.04)	(−4.07)	(−4.05)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	23,999	23,999	23,999	23,999	23,999	23,999

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TABLE 4 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)
adj. R^2	0.217	0.217	0.217	0.228	0.228	0.228
F	26.321	26.341	26.379	38.957	39.021	39.136

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

has a significant negative impact on the firms' cash holdings.

Instrument variables

To further address the endogeneity concern, we conduct the two-stage least-squares regression. Previous studies show that people with greater exposure to war become more religious and stay that way long after the war has ended. For example, Henrich et al. (2019) conduct a survey and report a strong and consistent relationship between war exposure and religiosity. The more an individual or their family was hurt by the war, the more likely that person was to attend religious services and participate in religious groups and rituals. Therefore, we infer that as the number of religious believers increases, the number of religious temples is also increased. This analysis uses the number of the wars (labelled as ***War_num***) incurred during the period of Wei Jin[5] Southern and Northern Dynasties in China as the instrument variable which is relatively exogenous.

Firstly, we match the historical administrative regions during the Wei-Jin North and South Dynasties with current administrative regions of China's provinces and cities. Second, we count the number of wars that occurred in various provinces and cities during the Wei-Jin North and South Dynasties.[6] We delete the firm-year observations in Xinjiang, Tibet, Ningxia and Heilongjiang in the two-stage least-squares regressions because of the ineffective matches.

Table 6 illustrates the two-stage least-squares regression results for the effect of Religion (i.e. war number here) on corporate cash holdings. Column (1) of Table 6 reports that the estimated coefficient of the number of wars occurred during Wei-Jin North and South Dynasties is 0.099, at the 1% significance level. As expected, it indicates that the higher numbers of wars occurred, the more religious temples around are established. In addition, the weak instrument Wald test results indicate that the instruments are valid, with F-statistics of 653.946, p-values of 0.000. Column (2) presents the second-stage regression results, indicating that the instruments are valid, and the sign is consistent with that from the basic regression results.

Following prior literature, we also use the average number of religious sites (REL100_adj) within a radius of 100 km around a listed firm as the instrument variable. On the one hand, the average number of religious sites within a radius of 100 km around a listed firm's registered address is related to the distribution of religious temples nearby the listed company. On the other hand, the average number of religious sites (REL100_adj) does not influence the listed firm's cash holdings. We reproduce the results using the two-stage least-squares approach by Hausman test and DWH test. As expected, Column (3) of Table 6 reports that the estimated coefficient of the average number of religious sites (REL100_adj) is 0.998, significant at the 1% level. Moreover, the weak instrument Wald test results show that the instrument (REL100_adj) is valid, with F-statistics of 10. Column (4) presents the second-stage regression results, indicating the instrument variable estimation results are significant ، and the sign is consistent with that from the basic regression results.

4.2.2 | Reverse causality concern

Another concern regarding the relation between the local religious culture and corporate cash holdings is the direction of the causality. The question is whether the deeper religious culture exerts great influence on the firms to comply with the social norms, or the behaviour of the firms attracts people with certain faith to work and settle down in the region.

To address this concern, we reproduce the results using the two-stage least-squares approach. Following Aggarwal et al. (2011), we define the corporate cash holdings ***(Cash1)*** as independent variable, REL100, REL200 and REL300 lead by one or two years as the dependent variables. If the reverse causality concern does exist, then the coefficient of ***Cash1*** should be significantly negative. We tabulate the results in Table 7. From Columns (1) to (3), it shows that the estimated coefficients of ***Cash1*** are all negative but not significant. Column (4) to (6) illustrates the estimated coefficients of ***Cash1*** are all positive but also not significant. The results in Table 7 indicates that the level of cash holding in enterprises does not affect the distribution of religious sites, that is, there is no two-way causal relationship between religious tradition and cash holdings.

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TABLE 5 Regression results of PSM

	(1)	(2)	(3)	(4)	(5)	(6)
	Cash1	Cash1	Cash1	Cash2	Cash2	Cash2
REL100	−0.011**			−0.004*		
	(−2.28)			(−1.85)		
REL200		−0.008**			−0.004**	
		(−2.45)			(−2.11)	
REL300			−0.008***			−0.003**
			(−2.61)			(−2.33)
Size	−0.005	−0.005	−0.004	−0.002	−0.002	−0.002
	(−1.19)	(−1.08)	(−1.02)	(−1.12)	(−1.02)	(−0.96)
Lev	−0.364***	−0.363***	−0.363***	−0.166***	−0.166***	−0.166***
	(−13.61)	(−13.59)	(−13.59)	(−14.11)	(−14.11)	(−14.10)
Growth	−0.002	−0.002	−0.002	0.000	0.000	0.000
	(−0.43)	(−0.43)	(−0.45)	(0.17)	(0.16)	(0.14)
CAPX	−0.525***	−0.531***	−0.537***	−0.225***	−0.229***	−0.232***
	(−8.79)	(−8.95)	(−9.03)	(−7.42)	(−7.55)	(−7.64)
ROA	0.319***	0.321***	0.321***	0.168***	0.168***	0.168***
	(4.61)	(4.63)	(4.63)	(5.51)	(5.52)	(5.53)
LOSS	0.017	0.018	0.018	0.000	0.001	0.001
	(1.51)	(1.54)	(1.55)	(0.07)	(0.10)	(0.11)
INT	0.874*	0.895**	0.897**	−0.028	−0.020	−0.020
	(1.92)	(1.98)	(1.99)	(−0.11)	(−0.08)	(−0.08)
DIV	0.315	0.360	0.371	0.110	0.130	0.135
	(0.24)	(0.27)	(0.28)	(0.18)	(0.21)	(0.22)
TOP1	0.078***	0.077***	0.077***	0.032**	0.032**	0.032**
	(2.93)	(2.88)	(2.88)	(2.37)	(2.33)	(2.33)
IND	0.084	0.082	0.083	0.048	0.048	0.048
	(1.28)	(1.26)	(1.26)	(1.44)	(1.42)	(1.43)
BOARD	0.018	0.019	0.019	0.015	0.016	0.016
	(0.84)	(0.87)	(0.90)	(1.45)	(1.48)	(1.51)
DUAL	0.014*	0.014*	0.014*	0.008**	0.008**	0.008**
	(1.73)	(1.69)	(1.66)	(2.06)	(2.01)	(1.97)
SCORE	−0.005	−0.004	−0.004	−0.001	−0.001	−0.001
	(−1.19)	(−1.07)	(−1.07)	(−0.57)	(−0.46)	(−0.44)
GDP	−0.026	−0.029	−0.028	−0.015	−0.016	−0.016
	(−1.35)	(−1.49)	(−1.45)	(−1.45)	(−1.58)	(−1.56)
POPUL	0.042**	0.045**	0.045**	0.022**	0.024**	0.023**
	(2.12)	(2.29)	(2.25)	(2.13)	(2.28)	(2.26)
INCOME	0.150***	0.148***	0.147***	0.069***	0.068***	0.068***
	(4.69)	(4.74)	(4.73)	(4.42)	(4.47)	(4.46)
_cons	−1.213***	−1.205***	−1.200***	−0.526***	−0.527***	−0.527***
	(−3.28)	(−3.33)	(−3.33)	(−2.96)	(−3.01)	(−3.01)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	10,857	10,857	10,857	10,857	10,857	10,857
Adj. R^2	0.174	0.174	0.174	0.182	0.183	0.183
F	13.476	13.496	13.544	18.801	18.866	18.971

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

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TABLE 6 Cash holdings 2SLS regressions

	1st stage (1) REL100	2nd stage No. of the wars during the dynasties (2) Cash1	1st stage (3) REL100	2nd stage Average no. of religious sites located within 100 km (4) Cash1
War_num	0.099***			
	(8.52)			
REL100		−0.038***		−0.015***
		(−2.93)		(−6.88)
REL100_adj			0.998***	
			(13.97)	
Size	0.144***	−0.001	0.003***	−0.006***
	(9.91)	(−0.47)	(3.79)	(−3.62)
Lev	0.421***	−0.423***	0.024***	−0.413***
	(5.34)	(−34.82)	(4.97)	(−42.52)
Growth	−0.076***	−0.005	−0.001	−0.003
	(−6.56)	(−1.40)	(−1.06)	(−1.08)
CAPX	−2.080***	−0.672***	−0.043***	−0.577***
	(−9.63)	(−14.26)	(−2.91)	(−16.54)
ROA	−0.319*	0.313***	0.012	0.314***
	(−1.71)	(9.32)	(0.97)	(10.27)
LOSS	−0.022	0.014*	0	0.012*
	(−0.64)	(1.82)	(0.04)	(1.79)
INT	−3.316*	1.057***	0.102	1.053***
	(−1.80)	(3.37)	(0.45)	(4.00)
DIV	1.61***	−0.084	−0.427	−0.324
	(3.45)	(−0.11)	(−1.31)	(−0.49)
TOP1	0.037	0.089***	0.007	0.077***
	(0.35)	(7.18)	(1.57)	(6.78)
IND	0.191	−0.002	0.009	0.021
	(0.73)	(−0.06)	(0.56)	(0.60)
BOARD	0.038	0.015	0.002	0.017*
	(0.45)	(1.36)	(0.36)	(1.75)
DUAL	−0.201***	0.019***	−0.004***	0.023***
	(−7.27)	(3.72)	(−2.70)	(5.69)
SCORE	0.005	−0.007**	0.002	−0.007***
	(0.24)	(−2.46)	(1.55)	(−2.92)
GDP	−0.132	−0.031***	−0.012**	−0.031***
	(−1.29)	(−2.59)	(−2.39)	(−3.14)
POPUL	0.04	0.041***	0.008**	0.053***
	(0.36)	(3.48)	(1.97)	(5.44)
INCOME	0.850***	0.163***	0.003	0.169***
	(5.52)	(8.38)	(0.61)	(12.27)
_cons	−10.319***	−1.238***	0.697***	−1.346***
	(−6.08)	(−5.58)	(11.73)	(−8.60)
Industry/Year	Yes	Yes	Yes	Yes
N	21,478	21,478	23,999	23,999
adj. R^2	0.318	0.22	0.993	0.217

(Continues)

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TABLE 6 (Continued)

	1st stage (1) REL100	2nd stage No. of the wars during the dynasties (2) Cash1	1st stage (3) REL100	2nd stage Average no. of religious sites located within 100 km (4) Cash1
F/Wald χ^2	61.28	6165.66	9.90E+04	6708.88

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

4.3 | Investigation of mechanism path

After establishing the robust relationship between the religious social norms and the corporate cash holdings, we further explore the underlying mechanism by examining how the religious social norm affects the firms' cash holding.

4.3.1 | Religion reduces corporate cash precaution motivation

The existing literature (Keynes 1936; Opler et al. 1999; Bates et al. 2009) establishes the precautionary motive theory that firms keep high cash holdings to hedge against future uncertainty or investment opportunities, and thus boost firm value. The precaution motivation is based on the assumption that enterprises are confronted with severe financing constraints. Those firms faced with external uncertainty or good investment opportunities are difficult to obtain the external capital funds at a lower cost, hence required to keep a higher level of cash. Almeida et al. (2004) argue that financially constrained firms are positively sensitive to cash flows, whilst non-financially constrained firms have no systematic association with cash flows.

Religion as an effective mechanism can enhance mutual trust and help between the local residents. The borrowings and commercial credit supply amongst enterprises in areas with strong religious tradition will alleviate the financing constraints and lower preventive motivation. Based on Hadlock and Pierce (2010), we construct an SA index to measure the firms' financial constraints. We estimate the following regression models:

$$\text{Cash1}_{i,t} = \alpha_0 + \alpha_1 \times \text{Reli100/200/300}_{i,t} + \alpha_2 \times Controls_{i,t} + \sum Industry_{i,t} + \sum Year_{i,t} + \varepsilon_{i,t}, \quad (2)$$

$$\text{SA}_{i,t} = \gamma_0 + \gamma_1 \times \text{Reli100/200/300}_{i,t} + \gamma_2 \times Controls_{i,t} + \sum Industry_{i,t} + \sum Year_{i,t} + \varepsilon_{i,t}, \quad (3)$$

$$\text{Cash1}_{i,t} = \beta_0 + \beta_1 \times \text{Reli100/200/300}_{i,t} + \beta_2 \text{SA}_{i,t} + \beta_3 \times Controls_{i,t} + \sum Industry_{i,t} + \sum Year_{i,t} + \varepsilon_{i,t}. \quad (4)$$

Table 8 presents the regression results. In Column (1), the estimated coefficient of Reli100 on Cash1 is −0.013, significant at the 1% level. Column (2) investigates the effect of independent variable Reli100 on the financial constraints (SA), with the coefficient of Reli100–0.005 ، significant at the 1% level. These results show that in areas with stronger religious adherents, enterprises face lower financing constraints. Column (3) combines both ***Reli100*** and Financing Constraints ***(SA)*** ، the coefficients are negative at the 1% significance level. To test the validity of the mediator variable, this analysis conducts Sobel test with Z statistics of 8.666, at the 1% significance level. It shows that financial constraints act as a partial mediator between religion and corporate cash holdings. Greater religious adherents of a region reduce the financial constraints of the firms locally, and thus reduces their cash holding incentives. Columns (4) to (9) provide the similar results as Columns (1) to (3) when we use alternative religious proxies.

4.3.2 | Religion mitigates accrual earnings management

Agency theory states that managers may unethically grab private benefits at the expense of shareholders (Jensen and Meckling, 1979). Prior literature documents that religious social norms are significantly negatively associated with owner–manager agency costs. Religion can curb managers from unethical business practices (McGuire, Newton, et al., 2012; McGuire, Omer, & Sharp, 2012). In China, both Buddhism and Taoism emphasize honesty. Buddhism teaches that desire is a source of suffering. Interdependence, impermanence, and non-self are well known as the three core tenets of Buddhism. The moral doctrine in Buddhism is synthesized in four

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TABLE 7 Reverse causality test

	Year t–1			Year t–2		
	(1) REL100 $_{t-1}$	(2) REL200 $_{t-1}$	(3) REL300 $_{t-1}$	(4) REL100 $_{t-2}$	(5) REL200 $_{t-2}$	(6) REL300 $_{t-2}$
Cash1	−0.058	−0.076	−0.092	0.008	0.037	0.049
	(−1.15)	(−1.19)	(−1.21)	(0.14)	(0.50)	(0.56)
Size	0.125***	0.193***	0.247***	0.112***	0.174***	0.224***
	(8.44)	(10.12)	(11.16)	(7.26)	(8.79)	(9.73)
Lev	0.429***	0.646***	0.773***	0.432***	0.649***	0.770***
	(5.11)	(5.88)	(6.16)	(4.97)	(5.70)	(5.95)
Growth	−0.089***	−0.121***	−0.146***	−0.071***	−0.105***	−0.125***
	(−7.21)	(−7.59)	(−7.55)	(−5.56)	(−6.39)	(−6.35)
CAPX	−2.025***	−3.413***	−4.288***	−1.936***	−3.276***	−4.078***
	(−8.68)	(−11.56)	(−12.40)	(−7.47)	(−9.95)	(−10.56)
ROA	−0.255	−0.153	−0.099	−0.236	−0.089	−0.003
	(−1.36)	(−0.63)	(−0.34)	(−1.23)	(−0.36)	(−0.01)
LOSS	−0.036	−0.020	−0.022	−0.031	−0.017	−0.021
	(−1.10)	(−0.50)	(−0.46)	(−0.92)	(−0.39)	(−0.41)
INT	−5.807***	−6.839***	−7.196***	−7.140***	−8.355***	−8.260***
	(−3.31)	(−3.17)	(−2.93)	(−3.73)	(−3.40)	(−2.87)
DIV	13.036***	22.736***	27.104***	12.628***	22.600***	26.708***
	(2.97)	(3.83)	(3.95)	(2.76)	(3.70)	(3.81)
TOP1	0.060	−0.053	−0.078	0.137	0.045	0.047
	(0.57)	(−0.39)	(−0.50)	(1.24)	(0.31)	(0.28)
IND	0.050	−0.098	−0.075	0.002	−0.154	−0.139
	(0.19)	(−0.28)	(−0.19)	(0.01)	(−0.42)	(−0.33)
BOARD	0.043	0.120	0.196	0.048	0.125	0.212
	(0.51)	(1.11)	(1.58)	(0.55)	(1.12)	(1.63)
DUAL	−0.223***	−0.329***	−0.386***	−0.224***	−0.331***	−0.384***
	(−7.66)	(−8.38)	(−8.27)	(−7.16)	(−7.88)	(−7.69)
SCORE	0.088***	0.168***	0.189***	0.099***	0.188***	0.213***
	(4.76)	(6.31)	(5.94)	(4.93)	(6.53)	(6.18)
GDP	−0.313***	−0.649***	−0.677***	−0.344***	−0.720***	−0.762***
	(−3.47)	(−5.34)	(−4.89)	(−3.54)	(−5.52)	(−5.12)
POPUL	0.221**	0.542***	0.542***	0.235**	0.587***	0.597***
	(2.32)	(4.41)	(3.95)	(2.33)	(4.55)	(4.13)
INCOME	0.970***	0.989***	0.943***	0.979***	0.984***	0.935***
	(6.96)	(5.64)	(4.69)	(6.76)	(5.41)	(4.48)
_cons	−11.355***	−12.574***	−12.934***	−11.374***	−12.293***	−12.552***
	(−7.49)	(−6.53)	(−5.77)	(−7.08)	(−6.01)	(−5.27)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	20,099	20,099	20,099	17,436	17,436	17,436
adj. R^2	0.263	0.269	0.284	0.253	0.252	0.265
F	45.864	57.444	66.352	43.487	52.755	59.450

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

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TABLE 8 Mediator effect test of financing constraints

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Cash1	SA	Cash1	Cash1	SA	Cash1	Cash1	SA	Cash1
Reli100	−0.013***	−0.005***	−0.016***						
	(−3.25)	(−4.56)	(−3.74)						
Reli200				−0.011***	−0.004***	−0.013***			
				(−3.73)	(−5.11)	(−4.30)			
Reli300							−0.010***	−0.004***	−0.012***
							(−3.83)	(−5.83)	(−4.47)
SA			−0.386***			−0.390***			−0.394***
			(−5.26)			(−5.31)			(−5.37)
Size	−0.006*	0.252***	0.091***	−0.006	0.252***	0.093***	−0.005	0.252***	0.094***
	(−1.71)	(14.69)	(5.01)	(−1.56)	(14.58)	(5.10)	(−1.46)	(14.54)	(5.18)
Lev	−0.414***	−0.019**	−0.421***	−0.412***	−0.019**	−0.419***	−0.411***	−0.018**	−0.419***
	(−17.78)	(−2.46)	(−18.66)	(−17.73)	(−2.41)	(−18.61)	(−17.69)	(−2.33)	(−18.56)
Growth	−0.003	0.002*	−0.003	−0.003	0.002*	−0.003	−0.003	0.001	−0.003
	(−0.94)	(1.70)	(−0.78)	(−0.97)	(1.67)	(−0.81)	(−0.99)	(1.60)	(−0.84)
CAPX	−0.575***	0.027*	−0.565***	−0.586***	0.023*	−0.577***	−0.591***	0.019	−0.583***
	(−11.02)	(1.94)	(−10.93)	(−11.20)	(1.68)	(−11.13)	(−11.28)	(1.42)	(−11.23)
ROA	0.315***	0.022*	0.323***	0.316***	0.022*	0.325***	0.317***	0.023*	0.325***
	(5.63)	(1.70)	(5.85)	(5.66)	(1.75)	(5.89)	(5.66)	(1.76)	(5.90)
LOSS	0.013	−0.008***	0.009	0.013	−0.008***	0.01	0.013	−0.008***	0.01
	(1.53)	(−4.13)	(1.16)	(1.57)	(−4.09)	(1.20)	(1.57)	(−4.09)	(1.20)
INT	1.058**	−1.024***	0.663	1.063**	−1.022***	0.664	1.065**	−1.023***	0.662
	(2.12)	(−4.60)	(1.47)	(2.13)	(−4.58)	(1.49)	(2.15)	(−4.60)	(1.49)
DIV	−0.339	−0.923**	−0.695	−0.259	−0.894*	−0.608	−0.243	−0.878*	−0.589
	(−0.36)	(−2.02)	(−0.77)	(−0.28)	(−1.95)	(−0.67)	(−0.26)	(−1.91)	(−0.66)
TOP1	0.077***	−0.006	0.075***	0.076***	−0.007	0.073***	0.076***	−0.007	0.073***
	(3.43)	(−1.06)	(3.34)	(3.36)	(−1.15)	(3.25)	(3.35)	(−1.18)	(3.23)
IND	0.021	−0.095***	−0.016	0.019	−0.096***	−0.018	0.019	−0.096***	−0.019
	(0.37)	(−5.44)	(−0.28)	(0.34)	(−5.48)	(−0.32)	(0.34)	(−5.49)	(−0.33)
BOARD	0.017	−0.003	0.016	0.018	−0.003	0.017	0.018	−0.003	0.017
	(1.03)	(−0.61)	(0.97)	(1.06)	(−0.58)	(1.00)	(1.09)	(−0.53)	(1.04)
DUAL	0.023***	−0.003*	0.022***	0.022***	−0.004**	0.021***	0.022***	−0.004**	0.021***
	(3.06)	(−1.90)	(2.92)	(2.98)	(−2.05)	(2.82)	(2.95)	(−2.18)	(2.78)

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TABLE 8 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SCORE	−0.007*	0.004***	−0.005	−0.006	0.004***	−0.004	−0.006	0.004***	−0.004
	(−1.76)	(3.57)	(−1.34)	(−1.58)	(3.77)	(−1.13)	(−1.57)	(3.84)	(−1.11)
GDP	−0.031*	−0.001	−0.031*	−0.034**	−0.002	−0.035**	−0.034**	−0.002	−0.034**
	(−1.83)	(−0.20)	(−1.86)	(−2.02)	(−0.44)	(−2.07)	(−1.99)	(−0.45)	(−2.04)
POPUL	0.053***	−0.004	0.051***	0.056***	−0.003	0.055***	0.055***	−0.003	0.054***
	(3.07)	(−0.87)	(2.99)	(3.26)	(−0.63)	(3.20)	(3.22)	(−0.64)	(3.16)
INCOME	0.168***	−0.026***	0.158***	0.166***	−0.027***	0.155***	0.164***	−0.027***	0.154***
	(6.15)	(−3.48)	(5.76)	(6.14)	(−3.56)	(5.73)	(6.10)	(−3.61)	(5.67)
_cons	−1.335***	−3.745***	−2.782***	−1.327***	−3.741***	−2.785***	−1.318***	−3.741***	−2.793***
	(−4.28)	(−39.59)	(−6.90)	(−4.30)	(−39.32)	(−6.98)	(−4.28)	(−39.40)	(−7.01)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

immeasurable: compassion, loving and kindness, empathetic joy and equanimity. Managers' opportunistic behaviour, such as earnings management, is essentially against the religious doctrine from both Buddhism and Taoism. Hence, firms that are more affected by religious social norms such as Buddhism and Taoism are less likely to engage in earnings management, and hence, they are less incentive to have extra cash holdings.

To test this conjecture, we perform the following regression tests, where the accrual earnings management, measured as ***AbsDa***, is used as the mediator variable. The regression results are reported in Table 9.

$$\mathrm{Cash1}_{i,t} = \alpha_0 + \alpha_1 \times \mathrm{Reli100/200/300}_{i,t} + \alpha_2 \times \mathit{Controls}_{i,t} + \sum \mathit{Industry}_{i,t} + \sum \mathit{Year}_{i,t} + \varepsilon_{i,t}, \tag{2}$$

$$\mathrm{AbsDa}_{i,t} = \gamma_0 + \gamma_1 \times \mathrm{Reli100/200/300}_{i,t} + \gamma_2 \times \mathit{Controls}_{i,t} + \sum \mathit{Industry}_{i,t} + \sum \mathit{Year}_{i,t} + \varepsilon_{i,t} \tag{5}$$

$$\mathrm{Cash1}_{i,t} = \beta_0 + \beta_1 \times \mathrm{Reli100/200/300}_{i,t} + \beta_2 \mathrm{AbsDa}_{i,t} + \beta_3 \times \mathit{Controls}_{i,t} + \sum \mathit{Industry}_{i,t} + \sum \mathit{Year}_{i,t} + \varepsilon_{i,t} \tag{6}$$

Column (1) reports the estimated coefficient of Reli100 is −0.007, significant at the 10% level, Column (2) investigates the impact of Reli100 on accrual earnings management, and the estimated coefficient of Reli100 is −0.002, significant at the 5% level. It indicates that firms located in the areas with deeper religious culture are less likely to engage in accrual earnings management. Column (3) shows the estimated coefficients of Reli100 and AbsDa are −0.007 at the 10% significance level, and 0.095 at the 5% significance level. We also conduct the Sobel test, with the Z-statistic of 2.347, significant at the 5% level. It indicates that the accrual earnings management is a partial mediator between religion and corporate cash holdings—religious social norm reduces the earnings management of the firms, and thus reduces their cash holdings. Columns (4) to (9) provide robust evidence with different religious proxies.

4.3.3 | Religion, corporate investment and dividend payout policy

The association between cash holdings and corporate governance is influenced by the investment environment confronted by the company (Chen & Chuang, 2009). For example, companies with a large number of investment

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TABLE 9 Mediator effect test of earnings management

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Cash1	Absda	Cash1	Cash1	Absda	Cash1	Cash1	Absda	Cash1
Reli100	−0.007*	−0.002**	−0.007*						
	(−1.74)	(−2.29)	(−1.70)						
Reli200				−0.006*	−0.001**	−0.006*			
				(−1.88)	(−2.32)	(−1.84)			
Reli300							−0.005*	−0.001*	−0.005*
							(−1.76)	(−1.84)	(−1.72)
Absda			0.095**			0.095**			0.095**
			(2.52)			(2.53)			(2.53)
Size	0.001	−0.005***	0.002	0.002	−0.005***	0.002	0.002	−0.005***	0.002
	(0.38)	(−8.03)	(0.51)	(0.44)	(−7.95)	(0.58)	(0.46)	(−7.99)	(0.59)
Lev	−0.389***	0.027***	−0.391***	−0.388***	0.027***	−0.391***	−0.388***	0.027***	−0.391***
	(−16.94)	−6.86	(−17.10)	(−16.87)	−6.83	(−17.03)	(−16.82)	−6.77	(−16.98)
Growth	−0.003	0.024***	−0.005	−0.003	0.024***	−0.005	−0.003	0.024***	−0.005
	(−0.86)	(13.83)	(−1.54)	(−0.89)	(13.8)	(−1.58)	(−0.89)	(13.84)	(−1.58)
CAPX	−0.513***	−0.067***	−0.507***	−0.517***	−0.067***	−0.511***	−0.518***	−0.067***	−0.512***
	(−9.61)	(−5.84)	(−9.52)	(−9.69)	(−5.86)	(−9.60)	(−9.70)	(−5.81)	(−9.60)
ROA	0.246***	−0.092***	0.254***	0.247***	−0.092***	0.255***	0.247***	−0.092***	0.256***
	(4.17)	(−4.87)	(4.27)	(4.19)	(−4.85)	(4.29)	(4.20)	(−4.84)	(4.30)
LOSS	0.006	0.018***	0.004	0.006	0.018***	0.004	0.006	0.018***	0.004
	(0.67)	(7.84)	(0.46)	(0.68)	(7.86)	(0.48)	(0.68)	(7.85)	(0.48)
INT	−2.323***	0.236	−2.345***	−2.330***	0.235	−2.353***	−2.310***	0.241	−2.333***
	(−3.05)	(0.85)	(−3.11)	(−3.06)	(0.85)	(−3.11)	(−3.04)	(0.87)	(−3.10)
Div	0.267	0.406*	0.229	0.302	0.412*	0.263	0.306	0.408*	0.267
	(0.27)	(1.68)	(0.23)	(0.31)	(1.71)	(0.27)	(0.31)	(1.69)	(0.27)
TOP1	0.074***	0.004	0.073***	0.073***	0.004	0.073***	0.073***	0.004	0.073***
	(3.17)	(1.07)	(3.15)	(3.13)	(1.02)	(3.11)	(3.13)	(1.02)	(3.11)
IND	−0.023	−0.005	−0.022	−0.024	−0.005	−0.024	−0.024	−0.005	−0.024
	(−0.39)	(−0.44)	(−0.38)	(−0.42)	(−0.47)	(−0.41)	(−0.41)	(−0.46)	(−0.41)
BOARD	0.014	−0.007**	0.015	0.014	−0.007**	0.015	0.015	−0.007**	0.015
	(0.83)	(−2.27)	(0.87)	(0.84)	(−2.25)	(0.88)	(0.85)	(−2.24)	(0.9)

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TABLE 9 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
DUAL	0.017**	0.003**	0.017**	0.017**	0.003**	0.016**	0.017**	0.003**	0.016**
	(2.22)	(2.13)	(2.18)	(2.19)	(2.12)	(2.16)	(2.20)	(2.18)	(2.16)
SCORE	−0.004	−0.001	−0.004	−0.004	−0.001	−0.004	−0.004	−0.001	−0.004
	(−1.11)	(−1.22)	(−1.09)	(−1.02)	(−1.14)	(−1.00)	(−1.04)	(−1.21)	(−1.02)
GDP	−0.041**	0.005	−0.041**	−0.043**	0.005	−0.043**	−0.042**	0.005	−0.043**
	(−2.36)	(1.63)	(−2.40)	(−2.47)	(1.53)	(−2.50)	(−2.44)	(1.60)	(−2.47)
POPUL	0.055***	−0.005	0.056***	0.057***	−0.005	0.057***	0.056***	−0.005	0.057***
	(3.18)	(−1.47)	(3.21)	(3.28)	(−1.37)	(3.31)	(3.25)	(−1.43)	(3.28)
INCOME	0.145***	0	0.145***	0.144***	−0.001	0.144***	0.143***	−0.001	0.143***
	(5.31)	(−0.06)	(5.32)	(5.30)	(−0.15)	(5.31)	(5.26)	(−0.23)	(5.27)
_cons	−1.232***	0.182***	−1.249***	−1.219***	0.186***	−1.237***	−1.209***	0.191***	−1.227***
	(−3.88)	(3.21)	(−3.92)	(−3.88)	(3.29)	(−3.92)	(−3.85)	(3.37)	(−3.90)
Industry	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	19,546	19,546	19,546	19,546	19,546	19,546	19,546	19,546	19,546
adj. R^2	0.2	0.133	0.201	0.2	0.133	0.201	0.2	0.133	0.201
F	20.714	30.255	20.344	20.704	30.19	20.332	20.703	30.131	20.332

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

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opportunities have a strong incentive to hold cash to maintain their competitive position. If their interests are protected by corporate governance, then shareholders will accept the situation that large amounts of cash are held by these growing companies. Ferreira and Vilela (2004) find that cash holdings are positively affected by investment opportunities and cash flows. Sheu and Lee (2012) present a significant correlation between excessive cash and capital expenditure. The difference in cash deployment is reflected in the difference in the firms' investment and payout policies. To check this mechanism, we estimate Equations (7)–(9) to examine the impact of religious tradition on corporate cash holdings for different investment channels in China.

$$\begin{aligned} Inv_{i,t} = {} & \beta_0 + \beta_1 \times Cash1_{i,t} + \beta_2 ReliX_{i,t} + \beta_3 \\ & \times ReliX_{i,t} Cash1_{i,t} + \beta_4 \times Controls_{i,t} + \sum Industry_{i,t} \\ & + \sum Year_{i,t} + \varepsilon_{i,t}, \end{aligned} \tag{7}$$

$$\begin{aligned} RD_{i,t} = {} & \beta_0 + \beta_1 \times Cash1_{i,t} + \beta_2 ReliX_{i,t} + \beta_3 \\ & \times ReliX_{i,t} Cash1_{i,t} + \beta_4 \times Controls_{i,t} + \sum Industry_{i,t} \\ & + \sum Year_{i,t} + \varepsilon_{i,t}, \end{aligned} \tag{8}$$

$$\begin{aligned} Div_{i,t} = {} & \beta_0 + \beta_1 \times Cash1_{i,t} + \beta_2 ReliX_{i,t} + \beta_3 \\ & \times ReliX_{i,t} Cash1_{i,t} + \beta_4 \times Controls_{i,t} + \sum Industry_{i,t} \\ & + \sum Year_{i,t} + \varepsilon_{i,t}. \end{aligned} \tag{9}$$

In Equation (7), the explanatory variable ***Inv*** is the level of investments, referring to cash paid for the purchase and construction of fixed asset plus other long-term assets minus net cash recovered from the disposal of fixed asset and intangible assets and other long-term assets, divided by total assets recovered at the beginning of the year. In Equation (8), the explanatory variable ***RD*** refers to the R&D expenditures, calculated as the ratio of R&D expenditures to total assets. The dependent variable in Equation (9), ***Div***, is the dividend payout calculated as the ratio of dividend payout to total assets. In all the regressions specified above, the coefficients on the interaction term of ***ReliX*Cash1*** capture the impact of religion on the relation between cash holdings and various investment spending. The regression results are reported in Table 10.

Columns (1), (4) and (7) show that the coefficients of ***Reli100*Cash1*** when ***Inv*** is the dependent variable are significantly positive, suggesting that firms located in regions with more religious cultures tend to spend more on capital investment. This finding contrast with that from Hu et al. (2019) who document that firms located in counties with more Protestants tend to spend less in both capital expenditure. In model (2), (5) and (8) where the dependent variables are ***RD***, the coefficients on the interacting terms are all significantly negative, meaning that firms located in regions with more religious sites spend less in R&D, a finding that is more consistent with the theories that religion increases risk aversion. Model (3), (6) and (9) examine the effect on dividend payment. We can see that the coefficients on the interacting terms are all significantly positive, suggesting that giving the same cash level, firms in religion intensive area are more likely to distribute cash to their shareholders as dividends, which also explains their lower level of cash holdings.

4.4 | Additional tests

4.4.1 | Religion, firm characteristics heterogeneity and cash holdings

Previous studies find that the heterogeneity of corporate characteristics affects the level of cash holdings. Basil (2013) documents that company size is an important factor in determining cash holdings. Colquitt et al. (1999) compare the differences in cash holdings between different property-liability insurers and identify that larger insurance companies with higher leverage held less cash. Small-sized enterprises facing greater financing constraints with higher precaution motivations, will keep a higher level of cash holdings. After documenting that religious tradition can ease the financially constrained firms, we would like to ask whether this effect differs across firms with different size.

To answer this question, we separate our sample companies into large and small ones based on their total assets and run regressions separately. The results are reported in Table 11. We can see that there is an obvious difference in the effect of religiosity on cash holdings between large and small firms, with the effect only significantly appearing amongst small firms but missing amongst large firms. The Suest test of the difference between the groups is statistically significant at the 1% level. Our results show that the negative relation between religiosity and cash holdings is mainly driven by the findings on small firms, whilst such relation does not hold for large firms.

4.4.2 | Religion, leverage heterogeneity and corporate cash holdings

The heterogeneity of a firm's leverage and capital structure are critical factors to analyse the cash structure.

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TABLE 10 Religion, corporate investment and dividend payout

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Inv	RD	Div	Inv	RD	Div	Inv	RD	Div
Cash1	0.0023***	0.0005*	−0.0002**	0.0019**	0.0006**	−0.0002**	0.0017**	0.0007**	−0.0002**
	(2.99)	(1.86)	(−2.01)	(2.56)	(2.03)	(−2.33)	(2.29)	(2.11)	(−2.53)
Reli100	−0.0020***	0	0.0001						
	(−5.97)	(−0.36)	(1.31)						
Reli100*Cash1	0.0024***	−0.0006***	0.0003***						
	(3.21)	(−3.09)	(2.93)						
Reli200				−0.0017***	0	0.0001*			
				(−7.00)	(0.03)	(1.95)			
Reli200*Cash1				0.0020***	−0.0005***	0.0003***			
				(3.67)	(−3.29)	(3.22)			
Reli300							−0.0015***	0	0.0001*
							(−7.13)	(0.20)	(1.93)
Reli300*Cash1							0.0018***	−0.0005***	0.0002***
							(3.97)	(−3.42)	(3.46)
Size	0.0025***	0.0002***	−0.0001***	0.0025***	0.0002***	−0.0001***	0.0026***	0.0002**	−0.0001***
	(10.95)	(2.61)	(−3.01)	(11.08)	(2.59)	(−3.25)	(11.09)	(2.57)	(−3.31)
Lev	0.0005	−0.0013***	0.0009***	0.0007	−0.0013***	0.0008***	0.0007	−0.0013***	0.0008***
	(0.37)	(−3.49)	(2.83)	(0.47)	(−3.55)	(2.71)	(0.49)	(−3.55)	(2.70)
Growth	0.0188***	0	0	0.0188***	0	0	0.0188***	0	0
	(16.96)	(−0.06)	(0.85)	(16.96)	(−0.02)	(0.91)	(16.97)	0	(0.91)
CAPX	1.2726***	0.0037***	−0.0030***	1.2714***	0.0037***	−0.0028***	1.2711***	0.0037***	−0.0028***
	(16.92)	(3.13)	(−5.66)	(16.90)	(3.11)	(−5.32)	(16.87)	(3.07)	(−5.28)
ROA	0.0002	−0.0012	0.0030***	0.0002	−0.0011	0.0029***	0.0002	−0.0011	0.0029***
	(0.06)	(−1.01)	(5.67)	(0.06)	(−0.95)	(5.64)	(0.05)	(−0.92)	(5.60)
LOSS	−0.0008	−0.0002	0.0004***	−0.0008	−0.0002	0.0004***	−0.0008	−0.0002	0.0004***
	(−1.07)	(−1.27)	(4.15)	(−1.04)	(−1.24)	(4.11)	(−1.06)	(−1.22)	(4.09)
INT	−0.0384	0.0011	0.0003	−0.0372	0.0012	0.0005	−0.0359	0.0011	0.0005
	(−1.29)	(0.26)	(0.03)	(−1.23)	(0.27)	(0.05)	(−1.18)	(0.26)	(0.05)
TOP1	0.0038***	−0.0024***	−0.0002	0.0036**	−0.0024***	−0.0002	0.0036**	−0.0024***	−0.0002
	(2.62)	(−4.42)	(−1.06)	(2.51)	(−4.44)	(−0.98)	(2.50)	(−4.45)	(−0.97)

(Continues)

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TABLE 10 (Continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
IND	−0.0111***	0.0019	0.0002	−0.0114***	0.0019	0.0003	−0.0114***	0.002	0.0003
	(−2.61)	(1.25)	(0.42)	(−2.68)	(1.25)	(0.43)	(−2.69)	(1.25)	(0.43)
BOARD	−0.0038***	0	0	−0.0038***	0	0	−0.0037***	0	0
	(−3.07)	(0.04)	(0.15)	(−3.04)	(0.06)	(0.09)	(−3.02)	(0.07)	(0.05)
DUAL	0.0013***	0.0003*	−0.0001**	0.0012***	0.0003*	−0.0001**	0.0012***	0.0003*	−0.0001**
	(3.03)	(1.78)	(−2.24)	(2.86)	(1.77)	(−1.99)	(2.87)	(1.79)	(−1.97)
SCORE	−0.0002	0	0	−0.0002	0	0	−0.0002	0	0
	(−0.89)	(−0.10)	(−0.01)	(−0.62)	(−0.05)	(−0.25)	(−0.64)	(−0.07)	(−0.23)
GDP	−0.0006	−0.0017***	0.0002	−0.0009	−0.0017***	0.0002	−0.0008	−0.0017***	0.0002
	(−0.51)	(−3.78)	(0.91)	(−0.77)	(−3.87)	(1.15)	(−0.68)	(−3.85)	(1.11)
POPUL	0.0009	0.0014***	−0.0004*	0.0012	0.0014***	−0.0005**	0.0011	0.0014***	−0.0005**
	(0.80)	(2.87)	(−1.93)	(1.06)	(2.95)	(−2.16)	(0.97)	(2.93)	(−2.12)
INCOME	0.0006	0.0033***	−0.0004	0.0004	0.0033***	−0.0004	0.0001	0.0032***	−0.0004
	(0.35)	(4.22)	(−1.19)	(0.23)	(4.18)	(−1.20)	(0.07)	(4.17)	(−1.14)
Div	0.1156	0.0068		0.1226	0.0076		0.1214	0.0076	
	(1.02)	(0.40)		(1.27)	(0.44)		(1.25)	(0.44)	
_cons	−0.0640***	−0.0322***	0.0088**	−0.0628***	−0.0319***	0.0090**	−0.0604***	−0.0317***	0.0088**
	(−3.32)	(−3.68)	−2.27	(−3.26)	(−3.64)	−2.33	(−3.15)	(−3.63)	−2.3
Industry/year	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	23,401	23,999	23,999	23,401	23,999	23,999	23,401	23,999	23,999
adj. R^2	0.866	0.074	0.05	0.866	0.074	0.051	0.866	0.074	0.051
F	1.10E+03	6.7545	13.6017	1.10E+03	6.7436	13.4482	1.10E+03	6.7433	13.451

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

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TABLE 11 Religion, firm characteristics heterogeneity and cash holdings

	Different groups by firm size					
Dependent variable: Cash1	(1) Large	(2) Small	(3) Large	(4) Small	(5) Large	(6) Small
Reli100	−0.003	−0.022***				
	(−0.82)	(−3.24)				
Reli200			−0.000	−0.021***		
			(−0.01)	(−4.33)		
Reli300					0.001	−0.020***
					(0.33)	(−4.80)
Lev	−0.212***	−0.552***	−0.214***	−0.544***	−0.215***	−0.542***
	(−8.38)	(−16.87)	(−8.45)	(−16.70)	(−8.45)	(−16.62)
Growth	0.004	−0.011*	0.004	−0.011*	0.004	−0.011**
	(1.15)	(−1.93)	(1.23)	(−1.95)	(1.27)	(−1.96)
CAPX	−0.407***	−0.769***	−0.402***	−0.796***	−0.399***	−0.813***
	(−6.96)	(−9.96)	(−6.89)	(−10.27)	(−6.84)	(−10.44)
ROA	0.414***	0.312***	0.416***	0.310***	0.416***	0.309***
	(4.84)	(4.37)	(4.86)	(4.36)	(4.86)	(4.34)
LOSS	0.021**	0.018	0.021**	0.019	0.021**	0.019
	(2.04)	(1.53)	(2.07)	(1.54)	(2.08)	(1.55)
INT	−4.232***	2.285***	−4.192***	2.257***	−4.178***	2.235***
	(−4.44)	(3.92)	(−4.41)	(3.92)	(−4.40)	(3.91)
Div	0.275	0.336	0.233	0.488	0.207	0.510
	(0.27)	(0.23)	(0.23)	(0.33)	(0.20)	(0.35)
TOP1	0.050**	0.092**	0.050**	0.089**	0.050**	0.088**
	(2.24)	(2.42)	(2.21)	(2.36)	(2.20)	(2.34)
IND	0.066	−0.077	0.063	−0.078	0.062	−0.083
	(1.06)	(−0.81)	(1.02)	(−0.82)	(1.00)	(−0.87)
BOARD	0.022	0.006	0.021	0.006	0.020	0.006
	(1.28)	(0.21)	(1.23)	(0.22)	(1.19)	(0.19)
DUAL	0.008	0.030***	0.009	0.027**	0.009	0.026**
	(1.03)	(2.75)	(1.13)	(2.55)	(1.18)	(2.47)
SCORE	−0.000	−0.009	−0.001	−0.009	−0.001	−0.009
	(−0.04)	(−1.56)	(−0.12)	(−1.43)	(−0.18)	(−1.44)
GDP	−0.038*	−0.031	−0.037*	−0.036	−0.036*	−0.035
	(−1.82)	(−1.26)	(−1.81)	(−1.47)	(−1.77)	(−1.44)
POPUL	0.042**	0.066***	0.042**	0.072***	0.041**	0.071***
	(2.00)	(2.71)	(1.99)	(2.94)	(1.97)	(2.92)
INCOME	0.108***	0.223***	0.104***	0.226***	0.103***	0.225***
	(3.42)	(5.60)	(3.34)	(5.70)	(3.31)	(5.70)
_cons	−0.895***	−1.982***	−0.857**	−2.006***	−0.848**	−1.986***
	(−2.61)	(−4.39)	(−2.52)	(−4.47)	(−2.50)	(−4.44)
inter-group coefficient difference	19.62***		47.71***		63.79***	
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	12,000	11,999	12,000	11,999	12,000	11,999
adj. R^2	0.148	0.243	0.148	0.245	0.148	0.246
F	8.950	18.573	8.922	18.650	8.948	18.750

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

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TABLE 12 Religious tradition, leverage heterogeneity and corporate cash holdings

	Groups by different leverage ratio					
Dependent variable: Cash1	(1) High	(2) Low	(3) High	(4) Low	(5) High	(6) Low
Reli100	0.001	−0.029***				
	(0.25)	(−4.15)				
Reli200			0.002	−0.025***		
			(0.56)	(−4.90)		
Reli300					0.001	−0.021***
					(0.32)	(−4.72)
Size	−0.007**	−0.039***	−0.007**	−0.037***	−0.007**	−0.037***
	(−2.28)	(−5.51)	(−2.33)	(−5.22)	(−2.28)	(−5.19)
Growth	0.002	−0.020***	0.002	−0.020***	0.002	−0.020***
	(0.55)	(−2.85)	(0.57)	(−2.89)	(0.55)	(−2.90)
CAPX	−0.276***	−0.939***	−0.273***	−0.960***	−0.275***	−0.963***
	(−6.10)	(−10.55)	(−6.05)	(−10.77)	(−6.04)	(−10.80)
ROA	0.295***	0.601***	0.295***	0.601***	0.295***	0.605***
	(6.56)	(6.87)	(6.56)	(6.87)	(6.56)	(6.89)
LOSS	−0.013**	0.006	−0.013**	0.007	−0.013**	0.008
	(−1.99)	(0.35)	(−2.00)	(0.40)	(−1.99)	(0.44)
INT	−0.643*	−10.575**	−0.642*	−10.497**	−0.644*	−10.411**
	(−1.77)	(−2.10)	(−1.77)	(−2.09)	(−1.77)	(−2.07)
Div	0.092	−2.477	0.068	−2.275	0.086	−2.204
	(0.12)	(−1.48)	(0.09)	(−1.37)	(0.11)	(−1.33)
TOP1	−0.018	0.186***	−0.018	0.184***	−0.018	0.184***
	(−0.88)	(4.84)	(−0.87)	(4.79)	(−0.88)	(4.78)
IND	0.021	−0.040	0.021	−0.042	0.021	−0.044
	(0.44)	(−0.38)	(0.44)	(−0.40)	(0.44)	(−0.42)
BOARD	0.029**	−0.011	0.028**	−0.010	0.028**	−0.011
	(2.01)	(−0.35)	(2.00)	(−0.33)	(2.01)	(−0.35)
DUAL	0.012	0.023**	0.012	0.022*	0.012	0.022*
	(1.58)	(2.06)	(1.61)	(1.92)	(1.58)	(1.92)
SCORE	−0.004	−0.009	−0.005	−0.008	−0.004	−0.008
	(−1.29)	(−1.36)	(−1.37)	(−1.19)	(−1.33)	(−1.20)
GDP	−0.011	−0.036	−0.010	−0.043	−0.011	−0.042
	(−0.67)	(−1.27)	(−0.63)	(−1.52)	(−0.67)	(−1.48)
POPUL	0.025	0.067**	0.025	0.074**	0.025	0.073**
	(1.46)	(2.33)	(1.43)	(2.57)	(1.46)	(2.52)
INCOME	0.101***	0.251***	0.100***	0.249***	0.101***	0.246***
	(3.55)	(5.69)	(3.57)	(5.69)	(3.63)	(5.63)
_cons	−0.848***	−1.602***	−0.839***	−1.614***	−0.850***	−1.583***
	(−2.78)	(−2.90)	(−2.78)	(−2.95)	(−2.83)	(−2.90)
inter-group coefficient difference	50.64***		73.26***		65.80***	
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	12,000	11,999	12,000	11,999	12,000	11,999
adj. R^2	0.096	0.183	0.096	0.184	0.096	0.184
F	9.923	14.694	9.923	14.789	9.918	14.761

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

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TABLE 13 Religion, internal governance and cash holdings

	Groups by the quality of internal control					
Dependent variable: Cash1	(1) High	(2) Low	(3) High	(4) Low	(5) High	(6) Low
Reli100	−0.023***	−0.003				
	(−4.36)	(−0.66)				
Reli200			−0.019***	−0.003		
			(−4.88)	(−1.00)		
Reli300					−0.016***	−0.003
					(−4.84)	(−1.16)
Size	0.010**	−0.018***	0.011**	−0.017***	0.011**	−0.017***
	(2.04)	(−4.53)	(2.26)	(−4.44)	(2.35)	(−4.38)
Lev	−0.582***	−0.302***	−0.580***	−0.301***	−0.578***	−0.301***
	(−18.13)	(−12.22)	(−18.10)	(−12.21)	(−18.03)	(−12.18)
Growth	−0.001	−0.005	−0.001	−0.005	−0.001	−0.005
	(−0.18)	(−0.91)	(−0.28)	(−0.92)	(−0.31)	(−0.92)
CAPX	−0.700***	−0.423***	−0.715***	−0.428***	−0.721***	−0.432***
	(−10.28)	(−7.65)	(−10.44)	(−7.75)	(−10.47)	(−7.80)
ROA	0.160	0.283***	0.167*	0.283***	0.171*	0.283***
	(1.61)	(5.63)	(1.67)	(5.63)	(1.71)	(5.63)
LOSS	0.058**	−0.000	0.058**	−0.000	0.060**	−0.000
	(2.11)	(−0.04)	(2.12)	(−0.04)	(2.16)	(−0.04)
INT	−2.405**	0.789*	−2.421**	0.786*	−2.414**	0.786*
	(−2.53)	(1.77)	(−2.57)	(1.76)	(−2.57)	(1.77)
Div	−0.720	−0.077	−0.646	−0.036	−0.602	−0.028
	(−0.64)	(−0.07)	(−0.57)	(−0.03)	(−0.53)	(−0.03)
TOP1	0.066**	0.090***	0.063**	0.090***	0.063**	0.089***
	(2.34)	(3.69)	(2.25)	(3.67)	(2.24)	(3.67)
IND	−0.129*	0.145**	−0.134*	0.144**	−0.133*	0.144**
	(−1.71)	(2.28)	(−1.78)	(2.28)	(−1.77)	(2.28)
BOARD	−0.018	0.046**	−0.018	0.046**	−0.017	0.047**
	(−0.87)	(2.34)	(−0.87)	(2.36)	(−0.83)	(2.37)
DUAL	0.027***	0.019**	0.026**	0.018**	0.025**	0.018**
	(2.62)	(2.32)	(2.52)	(2.28)	(2.50)	(2.26)
SCORE	−0.003	−0.008*	−0.002	−0.008*	−0.002	−0.008*
	(−0.70)	(−1.95)	(−0.40)	(−1.90)	(−0.43)	(−1.88)
GDP	−0.049**	−0.017	−0.055***	−0.018	−0.054***	−0.018
	(−2.39)	(−0.87)	(−2.72)	(−0.91)	(−2.64)	(−0.92)
POPUL	0.071***	0.037*	0.077***	0.038*	0.075***	0.038**
	(3.37)	(1.91)	(3.66)	(1.96)	(3.58)	(1.96)
INCOME	0.176***	0.150***	0.172***	0.150***	0.169***	0.150***
	(4.99)	(5.15)	(4.92)	(5.20)	(4.84)	(5.20)
_cons	−1.548***	−1.071***	−1.518***	−1.079***	−1.496***	−1.080***
	(−3.76)	(−3.29)	(−3.72)	(−3.34)	(−3.68)	(−3.34)
inter-group coefficient difference	24.28***		27.02***		25.56***	
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	12,000	11,999	12,000	11,999	12,000	11,999

(Continues)

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TABLE 13 (Continued)

	Groups by the quality of internal control					
Dependent variable: Cash1	(1) High	(2) Low	(3) High	(4) Low	(5) High	(6) Low
adj. R^2	0.258	0.175	0.258	0.175	0.259	0.175
F	19.010	17.304	19.083	17.324	19.117	17.366

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

Ozkan and Ozkan (2004) conduct an empirical analysis on the determinant factors in corporate cash holdings, based on the U.K. sample data and find that leverage is one of the important factors. Basil (2013) has the same finding in Brazil, Russia, India and China.

The lower level of the enterprise's leverage ratio implies that the enterprise has less external debt, lower interest cost, is less financially constrained, thus retain more cash in hand. On the other hand, the lower leverage ratio also means that enterprises have fewer external financing channels with high financing costs. They are more financially constrained and hold less cash reserves. In summary, the relation between the leverage and cash holding is ambiguous and this is particularly true under the impact of religious social norms. We hence investigate how religiosity affects the relationship between capital structure and cash holding.

We divide our sample firms into two groups based on their leverage ratio and run the regression (1) separately. The regression results are shown in Table 12, where columns (1), (3) and (5) are results from the high-leverage group, and columns (2), (4) and (6) show the results from the low-leverage group. We can see that whilst the coefficients on religiosity proxies are all insignificantly different from 0 for all the high-leverage firms, they are all significantly negative for the low-leverage firms. And the Suest test of intergroup difference was statistically significant at the 1% level. Such results indicate that the observed negative relation between cash holding and religiosity is mainly driven by low-leveraged companies, whilst such a connection is missing amongst high-leverage firms.

4.4.3 | Religion, internal governance and cash holdings

Prior literature shows that the level of internal governance will affect the financial decision-making behaviour of listed companies. Good and sound internal control of an enterprise is an important internal governance mechanism, and the improvement of the quality of internal control of enterprises helps to restrain the private agent behaviour and the tunnel hollowing behaviour of major shareholders. Harford et al. (2008) argue that companies with weak corporate governance structures have fewer cash reserves. Najah et al. (2013) state that multiple major shareholders improve the quality of internal controls, reduce the agency costs of the company's cash holdings, and increase the valuation of the company's cash holdings. Hence, we ask whether the quality of internal control of enterprises promotes or reduces the impact of religiosity on cash holdings.

We use the internal control quality index of the firms developed by China Dibo Company to measure the quality of internal control and divide all our sample firms into high-quality and low-quality groups based on the index. Regression results on the two samples are shown in Table 13. Surprisingly, we can see that the negative relation between religiosity and cash holding only appears amongst firms with better internal control, whilst such relation is absent from firms with poor internal control. The Suest test of the difference between the groups was statistically significant at the 1% level, suggesting that the findings between these two groups are statistically significant.

4.4.4 | Religion, external governance and corporate cash holdings

The perfection of the formal system is an important external governance mechanism for enterprises. A sound formal system can effectively protect the legitimate rights and interests of shareholders, thus promoting the transparency and standardization of enterprises, but the formal system is inevitably flawed, where the informal system of religious tradition can effectively supplement. Du (2013) documents that religion can effectively reduce the company's first type of agency costs, that is, to mitigate the conflicts of interest between controlling shareholders and management. Besides, Du (2014) further found that religion could also effectively reduce the company's second type of agency costs by reducing the tunnelling effect of controlling shareholders. Hence, this

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TABLE 14 Religion, external governance and corporate cash holdings

	Groups by marketization					
Dependent variable: Cash1	(1) High	(2) Low	(3) High	(4) Low	(5) High	(6) Low
Reli100	−0.023***	−0.004				
	(−3.77)	(−0.84)				
Reli200			−0.017***	−0.004		
			(−3.84)	(−1.16)		
Reli300					−0.015***	−0.005
					(−3.88)	(−1.45)
Size	0.001	−0.010**	0.001	−0.010**	0.001	−0.009**
	(0.15)	(−2.29)	(0.18)	(−2.23)	(0.21)	(−2.15)
Lev	−0.505***	−0.345***	−0.502***	−0.345***	−0.502***	−0.344***
	(−13.58)	(−13.31)	(−13.53)	(−13.22)	(−13.51)	(−13.15)
Growth	0.003	−0.007*	0.003	−0.007*	0.002	−0.008*
	(0.54)	(−1.72)	(0.52)	(−1.73)	(0.50)	(−1.74)
CAPX	−0.701***	−0.470***	−0.709***	−0.476***	−0.712***	−0.482***
	(−8.55)	(−8.05)	(−8.64)	(−8.16)	(−8.64)	(−8.28)
ROA	0.186**	0.410***	0.190**	0.410***	0.191**	0.411***
	(2.35)	(5.76)	(2.40)	(5.76)	(2.42)	(5.76)
LOSS	0.000	0.020**	0.000	0.021**	0.000	0.021**
	(0.00)	(2.06)	(0.02)	(2.08)	(0.04)	(2.08)
INT	2.375***	0.200	2.409***	0.202	2.416***	0.201
	(2.75)	(0.38)	(2.81)	(0.38)	(2.83)	(0.38)
Div	−1.042	0.186	−0.957	0.212	−0.962	0.234
	(−0.72)	(0.16)	(−0.66)	(0.19)	(−0.66)	(0.21)
TOP1	0.108***	0.044*	0.106***	0.043	0.106***	0.043
	(3.20)	(1.65)	(3.15)	(1.62)	(3.15)	(1.61)
IND	−0.072	0.090	−0.073	0.090	−0.073	0.090
	(−0.78)	(1.41)	(−0.80)	(1.40)	(−0.79)	(1.40)
BOARD	−0.005	0.025	−0.004	0.025	−0.003	0.026
	(−0.21)	(1.22)	(−0.14)	(1.22)	(−0.11)	(1.23)
DUAL	0.026**	0.017*	0.025**	0.016*	0.025**	0.016*
	(2.37)	(1.93)	(2.35)	(1.88)	(2.34)	(1.84)
GDP	−0.032	−0.046***	−0.036	−0.047***	−0.036	−0.047***
	(−0.71)	(−2.98)	(−0.79)	(−3.08)	(−0.80)	(−3.05)
POPUL	0.051	0.054***	0.049	0.056***	0.050	0.056***
	(1.21)	(2.91)	(1.14)	(3.06)	(1.18)	(3.06)
INCOME	0.155***	0.149***	0.134***	0.151***	0.137***	0.151***
	(2.98)	(5.13)	(2.59)	(5.24)	(2.64)	(5.24)
_cons	−1.165*	−1.087***	−0.893	−1.114***	−0.927	−1.123***
	(−1.88)	(−3.22)	(−1.46)	(−3.35)	(−1.51)	(−3.39)
inter-group coefficient difference	20.32***		18.08***		15.31***	
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	11,132	12,867	11,132	12,867	11,132	12,867
adj. R^2	0.244	0.199	0.244	0.199	0.244	0.199
F	15.255	18.180	15.212	18.192	15.234	18.237

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

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TABLE 15 Religion, market competitions and cash holdings

	Groups by product market competitions (Lerner index)					
Dependent variable: Cash1	(1) High	(2) Low	(3) High	(4) Low	(5) High	(6) Low
Reli100	−0.020***	−0.005				
	(−3.36)	(−1.07)				
Reli200			−0.018***	−0.003		
			(−4.25)	(−0.96)		
Reli300					−0.015***	−0.004
					(−3.96)	(−1.21)
Size	−0.003	−0.007*	−0.002	−0.007*	−0.002	−0.007*
	(−0.60)	(−1.79)	(−0.32)	(−1.78)	(−0.31)	(−1.70)
Lev	−0.565***	−0.288***	−0.563***	−0.288***	−0.562***	−0.287***
	(−18.10)	(−10.15)	(−18.05)	(−10.14)	(−17.99)	(−10.12)
Growth	−0.009**	0.006	−0.009**	0.006	−0.009**	0.006
	(−2.36)	(0.92)	(−2.38)	(0.92)	(−2.40)	(0.91)
CAPX	−0.661***	−0.476***	−0.675***	−0.478***	−0.678***	−0.483***
	(−9.34)	(−7.65)	(−9.54)	(−7.65)	(−9.57)	(−7.69)
ROA	0.368***	0.132**	0.378***	0.132**	0.379***	0.133**
	(3.97)	(2.27)	(4.09)	(2.27)	(4.11)	(2.28)
LOSS	0.042*	−0.017**	0.044*	−0.017**	0.043*	−0.017**
	(1.86)	(−2.13)	(1.95)	(−2.13)	(1.92)	(−2.13)
INT	0.335	0.860*	0.314	0.867*	0.321	0.865*
	(0.48)	(1.72)	(0.46)	(1.73)	(0.47)	(1.73)
Div	−2.076	1.217	−2.001	1.236	−2.000	1.267
	(−1.60)	(1.14)	(−1.53)	(1.16)	(−1.54)	(1.19)
TOP1	0.096***	0.052**	0.095***	0.051*	0.094***	0.051*
	(3.10)	(1.98)	(3.04)	(1.94)	(3.03)	(1.93)
IND	−0.069	0.055	−0.066	0.053	−0.067	0.053
	(−0.84)	(0.83)	(−0.81)	(0.80)	(−0.82)	(0.80)
BOARD	−0.038	0.058***	−0.037	0.058***	−0.037	0.058***
	(−1.64)	(2.84)	(−1.61)	(2.85)	(−1.60)	(2.88)
DUAL	0.029***	0.014	0.028***	0.014*	0.028***	0.014
	(2.84)	(1.64)	(2.73)	(1.65)	(2.73)	(1.60)
SCORE	−0.007	−0.008*	−0.006	−0.008*	−0.006	−0.007*
	(−1.20)	(−1.74)	(−1.02)	(−1.71)	(−1.04)	(−1.67)
GDP	−0.050**	−0.013	−0.054**	−0.014	−0.053**	−0.014
	(−2.23)	(−0.62)	(−2.41)	(−0.65)	(−2.36)	(−0.67)
POPUL	0.066***	0.042**	0.069***	0.043**	0.069***	0.043**
	(2.89)	(2.02)	(3.06)	(2.06)	(3.01)	(2.07)
INCOME	0.169***	0.163***	0.167***	0.161***	0.165***	0.161***
	(4.52)	(4.89)	(4.48)	(4.89)	(4.42)	(4.92)
_cons	−1.130**	−1.478***	−1.135**	−1.459***	−1.113**	−1.466***
	(−2.54)	(−4.03)	(−2.57)	(−4.02)	(−2.52)	(−4.06)
inter-group coefficient difference	13.018***		23.738***		17.698***	
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	12,000	11,999	12,000	11,999	12,000	11,999

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TABLE 15 (Continued)

	Groups by product market competitions (Lerner index)					
Dependent variable: Cash1	(1) High	(2) Low	(3) High	(4) Low	(5) High	(6) Low
adj. R^2	0.270	0.164	0.271	0.164	0.271	0.164
F	22.198	12.387	22.250	12.388	22.271	12.429

*Significance at the 10% level.
**Significance at the 5% level.
***Significance at the 1% level.

paper further examines the interaction between the formal system and informal system (religious tradition).

We use China's Marketization Index developed by Fan et. al, (2015) to measure the degree of formal system construction in each province and city, and divide the sample firms into higher and lower groups according to the Marketization Index, and run regressions separately. The regression results are shown in Table 14. The results show that the negative impact of religiosity on cash holdings only appears in provinces or cities with high Marketization, and the Suest test again confirms the difference in the results from the two subsamples. Such results suggest that the marketization will promote the optimization influence of religious tradition on corporate cash holdings and that the role of religious tradition as an informal system needs to depend on the construction of the formal system.

4.4.5 | Market competitions

Existing literature shows that competition in the product market is important external governance. On one hand, market competition has the elimination effect. If the managers invest in negative NPV projects, resulting in a decline in the value of cash holdings, then management will face the risk of business failure and dismissal, thereby help to alleviate the agency problems. On the other hand, market competition has a benchmarking effect. It helps to reduce the information asymmetry inside and outside the company and makes possible the horizontal comparison of product quality and profitability. It is helpful in objectively evaluating the management's business performance and strengthening supervision and governance. In addition, the fierce competition in the market means that enterprises face greater external uncertainty, which will encourage enterprises to hold more cash to prevent uncertainty, thereby increasing the cash holdings. Chen et al. (2019) document that the average cash holdings and characteristics of peer companies have a significant impact on the ratio of cash to total assets, and that companies with higher research and development spending were more likely to mimic the cash held by competitors, and that peer effects were an important determinant of cash policy for the U.S. manufacturers. Therefore, we further test whether the relation between the market competition in the product market and the cash holding reflects more precaution motivation (increasing cash holdings) or more agent cost motivation (reducing cash holdings).

We adopt the Lerner Index to measure the competitiveness of the firms' market, the larger the Lerner index, the much fiercer the competition in the market. We further divide the sample data into a higher Lerner Index group and a lower Lerner Index group. The regression results are shown in Table 15. The results suggest that religious social norms have a significant impact on the firms' cash holdings only in the highly competitive markets. But for firms from low competition market, the effect is insignificant. The Suest test confirms that the difference in the effect of the two groups of firms is statistically significant at the 1% level. Such results show that the fierce competition in the product market improves the optimization effect of the religious tradition on cash holdings, and thus alleviate greater agency cost motivation than the precaution motivation.

4.4.6 | Religion, political corruption and cash holding

It is necessary for firms to take government factors into account such as corruption when making cash holding decisions. The expropriation theory (i.e. shielding assets hypothesis) argues that firms would shield their liquid assets such as cash and cash equivalents when they are susceptible to greater risk of political extraction (Caprio et al., 2013). Firms located in a corrupt environment tend to reduce their cash holdings by investing more in tangible assets that are harder to extract or paying more dividends to protect against political expropriation (Myers and Rajan, 1998; Caprio et al., 2013). Smith (2016) also

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TABLE 16 Religion, political corruption and cash holdings: High corruption vs. Low corruption

Cash1	(1) High corruption	(2) Low corruption	(3) High corruption	(4) Low corruption	(5) High corruption	(6) Low corruption
REL100	−0.014**	−0.021***				
	(−2.54)	(−3.70)				
REL200			−0.013***	−0.016***		
			(−3.22)	(−3.96)		
REL300					−0.013***	−0.014***
					(−3.59)	(−3.88)
Size	−0.008*	−0.003	−0.007	−0.003	−0.006	−0.002
	(−1.66)	(−0.57)	(−1.40)	(−0.51)	(−1.26)	(−0.45)
Lev	−0.386***	−0.473***	−0.384***	−0.471***	−0.382***	−0.471***
	(−12.47)	(−14.85)	(−12.39)	(−14.78)	(−12.34)	(−14.73)
Growth	−0.004	−0.002	−0.004	−0.002	−0.004	−0.002
	(−0.76)	(−0.49)	(−0.81)	(−0.50)	(−0.83)	(−0.51)
CAPEX	−0.527***	−0.657***	−0.544***	−0.668***	−0.556***	−0.672***
	(−7.41)	(−8.67)	(−7.62)	(−8.81)	(−7.75)	(−8.85)
ROA	0.306***	0.421***	0.307***	0.424***	0.308***	0.425***
	(3.00)	(4.29)	(3.01)	(4.32)	(3.03)	(4.32)
LOSS	0.001	0.026**	0.001	0.027**	0.001	0.027**
	(0.09)	(2.12)	(0.10)	(2.17)	(0.11)	(2.16)
INT	0.101	2.020***	0.117	2.023***	0.125	2.028***
	(0.18)	(3.15)	(0.21)	(3.16)	(0.23)	(3.18)
Div	0.477	−0.649	0.543	−0.496	0.584	−0.489
	(0.41)	(−0.50)	(0.47)	(−0.38)	(0.50)	(−0.37)
TOP1	0.058*	0.086***	0.055*	0.084***	0.054*	0.083***
	(1.88)	(2.76)	(1.81)	(2.66)	(1.77)	(2.65)
IND	0.059	−0.012	0.056	−0.016	0.056	−0.015
	(0.80)	(−0.15)	(0.77)	(−0.19)	(0.76)	(−0.18)
Board	0.042	−0.001	0.041	−0.001	0.042	−0.001
	(1.61)	(−0.06)	(1.61)	(−0.04)	(1.63)	(−0.03)
DUAL	0.031***	0.023**	0.030***	0.023**	0.029***	0.023**
	(2.97)	(2.16)	(2.85)	(2.13)	(2.79)	(2.12)
GDP	−0.036*	−0.078***	−0.041**	−0.075***	−0.040**	−0.073***
	(−1.91)	(−4.04)	(−2.12)	(−3.92)	(−2.11)	(−3.83)
POPUL	0.047**	0.094***	0.052**	0.092***	0.052**	0.090***
	(2.14)	(3.93)	(2.37)	(3.86)	(2.36)	(3.79)
Income	0.170***	0.209***	0.181***	0.198***	0.178***	0.195***
	(3.85)	(5.61)	(4.12)	(5.46)	(4.06)	(5.42)
_cons	−1.380***	−1.689***	−1.507***	−1.590***	−1.483***	−1.562***
	(−2.94)	(−3.96)	(−3.22)	(−3.82)	(−3.19)	(−3.80)
inter-group coefficient difference	2.23		0.68		0.05	
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	9216	11587	9216	11587	9216	11587

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TABLE 16 (Continued)

Cash1	(1) High corruption	(2) Low corruption	(3) High corruption	(4) Low corruption	(5) High corruption	(6) Low corruption
adj. R^2	0.214	0.234	0.215	0.235	0.215	0.235
F	14.300	18.068	14.291	18.051	14.332	18.102

Notes: Following prior literature (Smith, 2016; Xu and Go, 2017; Brown et al., 2021), our proxy for political corruption (*CORRUPTION*) is conviction-based measure. It is the provincial number of officials of vice county-division rank (*xianchuji*) and above investigated in the registered cases on corruption per 100 thousand people, which stems from the Procuratorial Yearbook of China. The registered cases mainly include the ones involving the misappropriation of public property, extortion and acceptance of bribes, abuse of power and dereliction of duty. We believe this is an appropriate proxy that can capture the anti-corruption efforts devoted by provinces. Larger ratios indicate higher provincial-level corruption. The corruption and firm-level data are matched using the zip code for each firm's registered address. We find that the effects of Buddhism and Taoism on the firm's level of cash holdings are stronger in the low corruption group. Overall, our results highlight the complexity of religious phenomena, suggesting that religion negatively affects corporate cash holdings and this negative effect aggravates as the anti-corruption intensity increases. *T* statistics are in parentheses.

*Significance at the 10% level.

**Significance at the 5% level.

***Significance at the 1% level.

provides robust evidence those firms in the U.S. prone to keep lower cash balances and higher leverages to shield against political rent-seeking.

Since 2012, a large-scale systematic anti-corruption campaign has been put in place in China. The literature on China's recent anti-corruption campaign demonstrates that stricter supervision and harsher punishments associated with corruption effectively suppress political rent-seeking (Li et al., 2017). Anti-corruption has been regarded as a positive indicator of better government quality and will influence corporate cash holding decisions. According to the statistics on the website of the Central Commission for Discipline Inspection (CCDI), the average number of officials of deputy prefecture-department rank and above investigated for corruption was only around 30 from 2003 to 2012, whilst this number soared to 186 and 473 in 2013 and 2014, respectively. Geographically, since the beginning of 2016, there has been at least one provincial-level official investigated for corruption in each of the 31 provinces. Amongst the provinces, Shanxi, Guangdong, Sichuan and Henan have seen the highest number of corruption cases (Xu and Go, 2017).

High levels of corruption in a country are detrimental to the overall well-being of the economy (Gokcekus and Ekici, 2020). Corruption has long been considered as lack of ethics (Kayes, 2006). Less ethical oversight indicates a friendlier environment for corruption. In places with higher corruption, managers may have lower ethical sensibilities (Parsons et al., 2018). As a result, shareholders facing higher agency costs may demand higher dividend payout, and thereby reducing corporate cash holdings.

Our proxy for political corruption (CORRUPTION) is conviction-based measure. It is the provincial number of officials of vice county-division rank and above investigated in the registered cases on corruption per 100,000 people, which stems from the Procuratorial Yearbook of China. The registered cases mainly include the ones involving the misappropriation of public property, extortion and acceptance of bribes, abuse of power and dereliction of duty. Depending on the median value of Corruption in year t, we divide the full sample into two groups: high corruption and low corruption. Larger ratio indicates higher provincial-level corruption.

The regression results in Table 16 report that religion negatively affects corporate cash holdings and this negative effect aggravates as the anti-corruption intensity increases. It reveals that the negative effect of Buddhism (Taoism) on cash holdings is more pronounced amongst the firms in provinces with low corruption (i.e., strong anti-corruption intensity). This finding supports that the anti-corruption campaign in China can be viewed as a positive indicator of better government quality and institutional development and will help firms make more profitable corporate cash decisions.

4.4.7 | Religion, cash holdings and firm value

Extant literature (Keynes 1936; Opler et al. 1999; Bates et al. 2009) establishes the precautionary motive theory that firms keep high cash holdings to hedge against future uncertainty or investment opportunities, thus boost firm value. Dittmar et al. (2003) show that enterprises in the countries with poor investor protection hold twice as much cash as those in the countries with good investor protection. Pinkowitz et al. (2006) document that the relation between cash holdings and firm value is weaker in countries with poor investor protection than in other countries. Neither its legal nor

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TABLE 17 Religion, corporate cash holdings and firm values

	Firm value: ROA			Firm value: TobinQ		
	(1)	(2)	(3)	(4)	(5)	(6)
Cash1	0.010***	0.008***	0.008***	0.637***	0.587***	0.580***
	(3.65)	(3.24)	(2.94)	(6.01)	(5.84)	(5.74)
REL100	−0.002**			−0.002		
	(−2.18)			(−0.08)		
REL100*Cash1	0.006*			0.028		
	(1.76)			(0.31)		
REL200		−0.001*			0.007	
		(−1.87)			(0.31)	
REL200*Cash1		0.006**			0.092	
		(2.46)			(1.27)	
REL300			−0.001*			0.015
			(−1.86)			(0.75)
REL300*Cash1			0.006***			0.082
			(2.82)			(1.39)
Size	0.006***	0.006***	0.005***	−0.764***	−0.769***	−0.772***
	(7.97)	(7.90)	(7.84)	(−22.71)	(−22.74)	(−22.81)
Lev	−0.056***	−0.057***	−0.057***	−0.967***	−0.982***	−0.987***
	(−13.62)	(−13.68)	(−13.69)	(−4.87)	(−4.95)	(−4.97)
Growth	0.012***	0.012***	0.012***	0.216***	0.217***	0.217***
	(14.33)	(14.36)	(14.35)	(6.96)	(6.99)	(6.99)
CAPEX	0.064***	0.066***	0.066***	1.031***	1.108***	1.149***
	(6.66)	(6.82)	(6.90)	(3.23)	(3.47)	(3.60)
LOSS	−0.122***	−0.122***	−0.122***	0.079*	0.080*	0.080*
	(−48.27)	(−48.22)	(−48.21)	(1.65)	(1.68)	(1.68)
INT	0.322*	0.329*	0.331*	10.108**	10.283**	10.342**
	(1.80)	(1.84)	(1.86)	(2.50)	(2.56)	(2.57)
Div	1.361***	1.340***	1.330***	32.143***	31.238***	30.904***
	(6.08)	(6.03)	(5.97)	(2.95)	(2.87)	(2.84)
TOP1	0.034***	0.035***	0.035***	0.943***	0.969***	0.981***
	(7.40)	(7.46)	(7.50)	(6.44)	(6.55)	(6.64)
IND	−0.037***	−0.037***	−0.037***	1.984***	1.979***	1.977***
	(−3.23)	(−3.27)	(−3.28)	(5.44)	(5.43)	(5.42)
BOARD	0.002	0.002	0.002	0.096	0.090	0.087
	(0.68)	(0.64)	(0.62)	(0.93)	(0.88)	(0.85)
DUAL	0.000	0.001	0.001	0.097**	0.106**	0.110**
	(0.31)	(0.48)	(0.54)	(2.10)	(2.31)	(2.38)
Market	0.000	0.000	0.000	−0.061**	−0.065**	−0.067**
	(0.22)	(0.13)	(0.11)	(−2.12)	(−2.23)	(−2.29)
GDP	−0.000	0.000	0.000	−0.051	−0.037	−0.033
	(−0.02)	(0.06)	(0.10)	(−0.41)	(−0.30)	(−0.26)
POPUL	0.002	0.002	0.002	0.066	0.054	0.051
	(0.52)	(0.46)	(0.43)	(0.55)	(0.45)	(0.42)

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TABLE 17 (Continued)

	Firm value: ROA			Firm value: TobinQ		
	(1)	(2)	(3)	(4)	(5)	(6)
INCOME	0.001	0.000	−0.000	0.552***	0.529***	0.524***
	(0.20)	(0.05)	(−0.00)	(3.02)	(2.91)	(2.88)
Top2_10	−0.025***	−0.026***	−0.027***	−1.454***	−1.516***	−1.545***
	(−5.00)	(−5.25)	(−5.29)	(−8.80)	(−9.10)	(−9.17)
Big4	0.002	0.001	0.001	0.570***	0.565***	0.562***
	(0.53)	(0.48)	(0.48)	(6.82)	(6.73)	(6.67)
_cons	−0.067	−0.057	−0.053	12.705***	13.028***	13.128***
	(−1.16)	(−1.00)	(−0.94)	(5.83)	(6.02)	(6.07)
Industry/Year	Yes	Yes	Yes	Yes	Yes	Yes
N	23,985	23,985	23,985	23,985	23,985	23,985
Adj. R^2	0.429	0.429	0.430	0.444	0.444	0.445
F	95.106	95.264	95.236	114.571	113.846	114.138

Notes: The dependent variable, firm value in year *t*, measured by *ROA* and *TobinQ*. $Controls_{i,t}$ represents a set of control variables defined in Appendix A. In addition, we control for *Top2_10* (the sum of the shareholdings of the second- to tenth-largest shareholders) and *Big4* (whether the auditing firm is big four). Firm and year fixed effects are considered. The interaction term, $REL_{i,t} * Cash1_{i,t}$, is adopted to examine how cross-sectional variations in cash holdings and the degree of religiosity change the firms' value. Columns (1) to (3) show the effects of the combination of cash holdings and degree of religiosity within a radius of 100/200/300 km around a listed firm's registered address on its firm value (*ROA*). The estimated coefficients of *REL100*Cash1*, *REL200*Cash1* and *REL300*yyyCash1* on *ROA* are 0.006, 0.006 and 0.006, are significantly positive at the 10%, 5% and 1% levels, respectively. The results indicate that firms located in regions with strong religious culture (Buddhism and Taoism) will significantly optimize their cash holdings and thus boost firm value. However, regression analysis of variation in *TobinQ* in columns (4) to (6) provides no evidence that religion increases the value of cash to shareholders. Overall, our findings demonstrate that local religious norms are prone to induce firms to keep optimal level of cash reserves to maximize the shareholders wealth. *T* statistics are in parentheses.

*Significance at the 10% level.

**Significance at the 5% level.

***Significance at the 1% level.

financial system is well developed, Chinese-listed firms are characterized with poor investor protection, yet China has been one of the fastest growing economies (Allen et al., 2005). Does the impact of religion on cash holdings enhance the firm value?

We explore whether the impact of local religiosity on the cash holdings will ultimately enhance the firm value by the following specification:

$$Value_{i,t} = \beta_0 + \beta_1 REL_{i,t} + \beta_2 Cash1_{i,t} + \beta_3 REL_{i,t} * Cash1_{i,t} + \beta_4 Controls_{i,t} + \beta_5 Controls_{i,t} + \sum Industry_{i,t} + \sum Year_{i,t} + \varepsilon_{i,t} \quad (10)$$

The dependent variable, *Value*, refers to the firm value in year *t*, measured by *ROA* and *TobinQ* (firm's total market value divided by total asset). $Controls_{i,t}$ represents a set of control variables defined in Appendix A (Table A1). In addition, we control for *Top2_10* (the sum of the shareholdings of the second- to tenth-largest shareholders) and *Big4* (whether the auditing firm is big four). Firm and year fixed effects are considered. The interaction term, $REL_{i,t} * Cash1_{i,t}$, is adopted to examine how cross-sectional variations in cash holdings and the degree of religiosity change the firms' value.

Columns (1) to (3) in Table 17 show the effects of the combination of cash holdings and degree of religiosity within a radius of 100/200/300 km around a listed firm's registered address on its firm value (*ROA*). The estimated coefficients of *REL100*Cash1*, *REL200*Cash1* and *REL300*Cash1* on *ROA* are 0.006, 0.006 and 0.006, respectively, are significantly positive at the 10%, 5% and 1% levels. The results indicate that firms surrounded by deep religious culture (Buddhism and Taoism) will significantly optimize their cash holdings and thus boost firm value. However, the estimated coefficients of *REL100*Cash1*, *REL200*Cash1* and *REL300*Cash1* on *TobinQ* in columns (4) to (6) present insignificant results. Regression analysis of variation in *TobinQ* provides no evidence that religion increases the value of cash to shareholders. Overall, our findings demonstrate that local religious norms are prone to induce firms to keep optimal level of cash reserves to maximize the shareholders wealth.

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5 | CONCLUSION AND IMPLICATION

The essence of both Buddhism and Taoism emphasizes honesty, strong work ethics, mutual trust and help. Whilst the existing literature provides little robust evidence to characterize the religious as more honest than the non-religious per se (Weaver and Agle, 2002), it does suggest that all individuals, both religious and non-religious, hold internalized moral norms such as honesty in order to maintain positive self-concept (Mazar et al., 2008). Social norms emerge out of interaction amongst group members (in this case managers and religious individuals), with sanctions for deviation coming from social networks, not the legal system (Cialdini and Trost, 1998). A stronger work ethic and greater honesty make the managers less motivated by self-interest, thereby reducing the agency problem between shareholders and managers. Local religious culture, as an effective mechanism, enhances mutual trust and helps the local residents. The borrowings and commercial credit supply amongst enterprises in areas with a stronger religious atmosphere will alleviate the financing constraints and earnings management.

This study examines how local religious social norm influences corporate cash policies, by investigating 23,999 firm-year observations from the Chinese stock market for the period 2007–2018. Based on the geographic-proximity-based religion variables, we provide robust evidence that religion significantly reduces the level of cash holdings. Specifically, religion optimizes the level of corporate cash holdings through mitigating financial constraints and earnings management. Managers deeply affected by the religious norms in a geographic area are more likely to invest effectively and distribute more cash to shareholders through dividend payments. Our further analyses show that religion has a more pronounced influence on cash holdings amongst firms with smaller sizes, lower leverage ratios, higher marketization, fierce market competition and more effective internal control.

The results are robust to an extensive series of tests, including using different measures of cash holdings and different distance criteria as the upper limit, controlling for corporate governance mechanisms, demographic variables, and institutional block ownership as well as corporate governance characteristics, using the two-stage least-squares approach to control for reverse causality, and addressing the omitted variables issue.

Our study has several implications. Prior literature shows that countries with strong governance systems, such as institutional development, legal protection of shareholders and corporate governance, can reduce agency problems and consequently cash holdings (Harford et al., 2008). Therefore, we reconsider and test some mechanisms, which could substitute for the beneficial impact of religiosity amongst non-religious people.

China began its transition from a centrally planned system to a market economy in 1987, and the market-oriented reforms have resulted in decisive progress but also a widening regional disparity within the country. We propose that marketization is the degree to of allocating economic resources is dominant by the market, which plays a very important role in corporate behaviours. Despite the same legal origin, the degree of marketization varies widely amongst different regions in China due to different histories, regional economic development choices and social or cultural factors (Fan et al., 2010). Regional marketization differences within China provide a unique setting to explore the impacts of Buddhism and Taoism on corporate cash holdings under different marketization environments.

Thus, we use China's Marketization Index developed by Fan (2017) as the proxy for the degree of marketization in different regions that listed firms are registered to run an additional test (in section 7.2 from pages 27 to 28). The regression results are reported in Table 12, suggesting that the improvement of marketization can enhance the negative effect of religious norms on corporate cash holdings. The improvement of marketization could substitute for the beneficial impact of religiosity amongst non-religious people in corporate cash policies. In a word, the significant role of religious culture (Buddhism and Taoism) as an informal system in corporate behaviours needs to be supplemented by the perfection of a formal system.

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DATA AVAILABILITY STATEMENT

Data available on request from the authors - The data that support the findings of this study are available from the corresponding author upon reasonable request.

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ENDNOTES

[1] The reason why our sample data begining from 2007 is that all enterprises in China are compulsory to adopt the new accounting

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standards from 2007 since when there is a substantial change for Chinese accounting standards to converge with IFRS.

[2] https://www.chinahighlights.com/travelguide/religion.htm

[3] https://www.chinahighlights.com/travelguide/religion.htm

[4] http://www.sara.gov.cn/zjhdcsjbxx/index.jhtml is the official website of National Religious Affairs Administration.

[5] The Wei, Jin and Southern and Northern Dynasties were a period of long-standing disunion and hostility between various rivalling regimes within China. Over 30 regimes claimed the founding of a certain 'empire'. These regimes were involved in constant, devastating wars, as one defeated, annexed or replaced another, until being reunified under the Northern Wei Dynasty in 439. The period is collectively called the 16 Kingdoms (317–430). Political chaos and civil characterized much of the history of Wei, Jin and Southern and Northern Dynasties, the longest period of disunion in China. According to the historical data (Shi, 2000), there were 1677 wars that occurred during that period. The Wei, Jin and Southern & Northern Dynasties were no doubt an age riddled with civil wars and political chaos, which result in an increasing demand for religious belief. It was a fairly impressive period for Chinese religion and culture.

[6] If the ancient division of the region covers the current several provinces and cities, the total number of wars is evenly distributed to the covered provinces and cities. For example, the ancient Capital was composed of the current Beijing, Tianjin and Hebei Province, with a total of 116 wars during the Wei-Jin North–South Dynasties. Then, 40 wars were counted to Beijing, 38 wars to Tianjin and the left 38 wars to Hebei Province.

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APPENDIX A

TABLE A1 Variable definitions

Variable type	Variables name	Variables	Variable definitions
Dependent variable	Corporate cash holdings	Cash1	(Monetary funds + transactional financial assets)/(total assets-cash and cash equivalents)
		Cash2	(Cash and cash equivalents)/total assets
Independent Variable	Religion	REL100	The natural logarithm of Buddhist monasteries and Taoist temples within a radius of 100 km around a listed firm's registered address
		REL200	The natural logarithm of Buddhist monasteries and Taoist temples within a radius of 200 km around a listed firm's registered address
		REL300	The natural logarithm of Buddhist monasteries and Taoist temples within a radius of 300 km around a listed firm's registered address;
Control Variables	Firm Size	Size	Measured as the natural logarithm of the total assets at the year-end
	Leverage	Lev	Total liabilities/total assets
	Capital Expenditure	CAPEX	Capital expenditures scaled by total non-cash assets
	Growth Rate	Growth	The change in sales deflated by lagged total assets
	ROA	ROA	Net operating income deflated by total assets
	LOSS	LOSS	Dummy variable, equals to 1 if a firm reports negative net income in the year, otherwise 0
	Interest expenses rate	INT	The interest payments/total assets at year-end
	Dividend payout ratio	DIV	Dividend payable/total assets at year-end
	Largest shareholdings	TOP1	The largest shareholding held by the controlling shareholder
	Independent directors	IND	The ratio of independent directors within the board
	Board size	BOARD	Measured as the natural logarithm of total number of directors
	Duality	DUAL	A dummy variable, equals to 1 if the CEO and the chairman are the same person, otherwise 0
	Marketization Index	SCORE	The marketization index according to Fan et al. (2015)
	GDP	GDP	The natural logarithm of local GDP
	Population	POPUL	The natural logarithm of population for each province in millions
	average income per capita	INCOME	The average province-level income per capita
	Industry	Industry	CSRC issued *Guidelines for the Industry Classification of Listed Companies (2012 Revision)*. To ensure comparability of data, we have made manual adjustments to the industry classification of listed companies prior to 2012 in accordance with the 2012 industry classification standards by CSRC
	Year	Year	Fiscal year from 1 January to 31 December

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TABLE B1 Investment activities and dividend payouts and cash holdings: without the effects of Buddhism and Taoism

	(1)	(2)	(3)
	Investment	R&D	Div
Cash1	0.0036***	0.0003	−0.0001
	(5.03)	(1.11)	(−0.57)
Size	0.0023***	0.0002**	−0.0001***
	(10.28)	(2.39)	(−2.64)
Lev	0.0001	−0.0014***	0.0009***
	(0.06)	(−3.75)	(3.09)
Growth	0.0189***	0.0000	0.0000
	(17.10)	(0.21)	(0.65)
ROA	0.0008	−0.0012	0.0030***
	(0.21)	(−1.02)	(5.66)
LOSS	−0.0008	−0.0002	0.0004***
	(−1.05)	(−1.26)	(4.14)
INT	−0.0320	0.0023	−0.0005
	(−1.05)	(0.53)	(−0.05)
Top1	0.0037***	−0.0024***	−0.0002
	(2.59)	(−4.42)	(−1.05)
IND	−0.0113***	0.0019	0.0003
	(−2.65)	(1.23)	(0.44)
BOARD	−0.0039***	0.0000	0.0000
	(−3.09)	(0.02)	(0.20)
DUAL	0.0015***	0.0004**	−0.0002***
	(3.64)	(2.03)	(−2.96)
Market	−0.0004	−0.0000	0.0000
	(−1.41)	(−0.18)	(0.18)
GDP	−0.0001	−0.0017***	0.0002
	(−0.10)	(−3.75)	(0.78)
POPUL	0.0006	0.0013***	−0.0004*
	(0.49)	(2.84)	(−1.85)
Income	−0.0007	0.0031***	−0.0002
	(−0.43)	(4.06)	(−0.77)
_cons	−0.0481**	−0.0302***	0.0072*
	(−2.49)	(−3.48)	(1.86)
N	23,401	23,999	23,999
adj. R^2	0.866	0.072	0.047
F	1.1e+03	7.0144	13.8518

Notes: To make the study more comprehensive, we run an additional test without the presence of proxies for Buddhism and Taoism, and find no significant correlation between cash holding and R&D expenses (dividend payouts). The regression results are shown as above. One possible explanation is that firms in a strong Buddhism and Taoism environment exhibit better quality of ethics, and they are prone to optimizing cash holdings through distributing more cash to shareholders and spending more in capital investment rather than risky R&D expenses.

*Significance at the 10% level.

**Significance at the 5% level.

***Significance at the 1% level.

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