RELIGION AND CORPORATE DISCLOSURE QUALITY*

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Abstract

We examine whether religion influences the quality of corporate disclosure, focusing on the role of social trust. Using country-level data on religion and disclosure quality from 38 countries, we find that general religiosity is negatively related to both voluntary and mandatory corporate disclosure qualities. Moreover, by dividing religiosity into two groups according to the hierarchy of religions, we find that these negative relationships are more pronounced for non-hierarchical religions. Finally, we show that religious heterogeneity is positively associated with both disclosure qualities. Overall, our findings suggest a novel channel – social trust – through which national religious characteristics affect corporate disclosure quality.

I.   Introduction

In his seminal work, Weber (1905) suggests that religion is a crucial determinant of economic development by stressing that the Protestant ethic drove economic prosperity in capitalism. Since Weber (1905), many studies have investigated the influence of religion on a

wide range of economic choices and outcomes, including economic growth (Barro and McCleary, 2003), investor behavior (Kumar, 2009; Kumar, Page, and Spalt, 2011), and corporate decision-making (Hilary and Hui, 2009). Nonetheless, the role of religion in corporate disclosure quality has not been thoroughly explored (Dyreng, Mayew, and Williams, 2012). Existing studies on religion and corporate disclosure behavior focus on the religious impact on managers' attributes, including risk-aversion (Dyreng, Mayew, and Williams, 2012) and business ethics (Du, 2013; McGuire, Omer, and Sharp, 2012; Montenegro, 2017). Previous research suggests that firms located in areas with higher levels of religiosity are likely to be more risk-averse and ethical, and thus, exhibit more transparent disclosure behavior. While these studies offer valuable insights into the role of religion in corporate disclosure quality, they focus only on the supply-side (i.e., manager-side) and neglect possible demand-side influences (i.e., investor-side). Therefore, this study aims to present new and complementary research by exploring the demand-side role of religion in corporate disclosure quality.

We focus on social trust as one of the demand-side factors through which religion can affect corporate disclosure quality. Disclosure quality can be negatively related to social trust if trust lowers investor demand for firm information. Guiso, Sapienza, and Zingales (2008) define trust as "the subjective probability individuals attribute to the possibility of being cheated."[1] Accordingly, trusting investors would assume a low probability of being cheated by firm managers, and thus, are more likely to believe that firm disclosures are transparent and credible. As such a belief is directly linked to lower litigation and fewer reputation risks, managers in a high-trust society are less motivated to provide voluntary disclosures (Baginski, Hassell, and Kimbrough, 2002; Skinner, 1994; 1997). Furthermore, low demand for information disclosure is also likely associated with lower quality in mandatory disclosures. As distrust generates public demand for regulatory interventions (Aghion, Algan, Cahuc, and Shleifer, 2010), firms in countries with lower levels of trust are likely to have stricter mandatory disclosure regulations.

Prior research on religion and trust suggests that the level of social trust is affected by the following characteristics associated with religion: religiosity, religious hierarchy, and religious heterogeneity (Oh and Shin, 2019). First, religiosity has long been considered a key element of trust (Durkheim, 1915; Meuleman and Billiet, 2011; Whiteley, 1999); religious beliefs and practices encourage individuals to develop values, including morality, benevolence, and charity, which are conducive to social trust (Halman and Pettersson, 2002; Uslaner, 2002). Second, the positive impact of religiosity on social trust is likely to be less pronounced for hierarchical religions, because such religions restrain horizontal ties while allowing vertical bonds (Putnam, 1993). Numerous studies provide empirical evidence supporting the negative association between such examples of religious hierarchy and trust (Berggren and Jordahl, 2006; Knack and Keefer, 1997; La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1997; Zak and Knack, 2001). Finally, religious heterogeneity, or diversity, within a society can lower social trust due to dissimilarity (Wilkinson, 1996) or unfamiliarity (Coleman, 1990). Both theoretical (Zak and Knack, 2001) and empirical (Costa and Kahn, 2003; Knack and Keefer, 1997; Putnam, 2000) evidence is confirmed by prior studies.

In this paper, we empirically test the two competing explanations regarding the role of religion in disclosure quality (i.e., demand-side role versus supply-side role). We conjecture that religiosity encourages higher disclosure quality if the supply-side role significantly surpasses the

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[1] Many studies, including Coleman (1990) and Gambetta (2000), define trust similarly.

demand-side role. Conversely, if the demand-side influence is stronger than the supply-side one, the role of religiosity in disclosure quality should be negative. Using a country-level sample of religion and corporate disclosure quality, we find that national religiosity is negatively related to both voluntary and mandatory disclosure qualities, while religious hierarchy and heterogeneity are positively associated with both disclosure qualities. These findings are consistent with the argument that religiosity has a negative impact on corporate disclosure quality, by encouraging social trust. Inversely, religious hierarchy and heterogeneity have positive impacts on corporate disclosure quality by discouraging social trust. Taken together, our evidence suggests a significant correlation with social trust, and thus stresses the demand-side role of religion in disclosure quality rather than the supply-side role.

Our study contributes to the literature on religion and corporate disclosure quality in several ways. First, we suggest the existence of a novel demand-side channel, social trust, through which religion influences disclosure quality. Second, comprehensive analyses are conducted in which both voluntary and mandatory components of disclosure quality are examined. Third, our findings propose the negative role of religiosity in disclosure quality.

The rest of this paper is outlined as follows: Section II explains the empirical methodology and the associated data. Section III presents and discusses the results. Finally, Section IV offers concluding remarks.

II.   *Data and Empirical Methods*

1.   Data and Variables Description

The dependent variables consist of voluntary and mandatory disclosure quality measures. First, we regard voluntary disclosure as a non-mandated, or discretionary part of corporate disclosure behavior. Specifically, earnings management activities and the timely recognition of bad news are considered as our voluntary disclosure measures. Earnings management activities refer to managers' discretionary actions of manipulating earnings (e.g., inflating or smoothing earnings) for the purpose of showing overly positive views of their firms. Accordingly, higher disclosure quality is related to fewer earnings management activities. Leuz, Nanda, and Wysocki (2003) provide an empirical method to measure the degree of earnings management activities based on four key components: (1) smoothing reported income using accruals, (2) the correlation between changes in accounting accruals and operating cash flows, (3) the magnitude of accruals, and (4) the degree of small loss avoidance.

Next, timely bad news recognition, or earnings conservatism (Ball, Kothari, and Robin, 2000; Basu, 1997), indicates the extent to which current accounting earnings asymmetrically recognizes economic losses, compared to economic gains. Managers may voluntarily engage in conservative accounting, because conservatism can improve financing efficiency by reducing the costs of both debt (Ahmed, Billings, Morton, and Stanford-Harris, 2002; Beatty, Weber, and Yu, 2008; Nikolaev, 2010; Watts, 2003) and equity (Ahmed and Duellman, 2007; LaFond and Roychowdhury, 2008; LaFond and Watts, 2008; Ramalingegowda and Yu, 2012). Furthermore, they can reduce reputation and litigation costs by the timely recognition of bad news (Nikolaev, 2010; Skinner, 1994). Therefore, timely bad news recognition indicates the greater quality of voluntary disclosure. Bushman and Piotroski (2006) propose that the incremental speed of bad

news recognition in earnings relative to that of good news recognition is captured by the coefficient β_3 in the following equation: $NI_{it} = \beta_0 + \beta_1 NEG_{it} + \beta_2 RET_{it} + \beta_3 NEG_{it} \times RET_{it} + \epsilon_{it}$, where NI_{it} is net income for firm i in fiscal year t, RET_{it} is the holding period stock return, and NEG_{it} is a dummy variable equal to one if RET_{it} is negative and zero otherwise.

Leuz, Nanda, and Wysocki (2003) and Bushman and Piotroski (2006) provide the data on earnings management and timely bad news recognition measures, respectively. However, we re-estimate these measures using firm-year-level accounting and stock price information provided by the Compustat database. The re-estimated data enabled an increase in the number of countries sampled and allowed for the analysis of recent information.

We also focus on a mandatory part of corporate disclosure. Our first mandatory disclosure quality measure is based on the similarity between local GAAP (i.e., Generally Accepted Accounting Principles) and IFRS (i.e., International Financial Reporting Standards). Many studies have demonstrated that the use of IFRS enhances firm transparency, and thus, the quality of financial reporting (Barth, Landsman, and Lang, 2008; Daske, Hail, Leuz, and Verdi, 2008; DeFond, Hu, Hung, and Li, 2011; Li, 2010; Tan, Wang, and Welker, 2011).[2] In this regard, local GAAP represents high (low) mandatory disclosure quality when the GAAP conforms strongly (weakly) to IFRS. We measure the degree of conformity for each country based on 21 key accounting rules in IFRS. The conformity measure is defined as the number of IFRS rules to which a country's local GAAP conforms among the 21 IFRS rules. Conformity data is drawn from Bae, Tan, and Welker (2008).

We note that our conformity measure has a limitation, as it is based on rules that were effective in 2001. That is, this measure has errors to the extent that accounting rules have changed since then 2001.[3] To ensure that our results are not simply driven by the errors, we utilize an alternative measure of mandatory disclosure quality. The second mandatory disclosure quality measure considered is the frequency of financial reporting. In general, financial reporting frequency (i.e., quarterly, semi-annual or annual) is determined by each country's mandated disclosure requirements, thus representing mandatory disclosure quality. A higher disclosure frequency indicates greater disclosure quality, in that frequent disclosure lowers both information asymmetry and the cost of capital (Botosan, 1997; Eaton, Nofsinger, and Weaver, 2007; Sengupta, 1998).[4] To measure the frequency variable, for each firm, scores of 4, 2, and 1

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[2] Although many studies suggest the positive role of IFRS in financial reporting quality, there are also studies contradicting the suggestion by showing little difference in reporting quality between local GAAP and IFRS. In particular, most studies in this strand focus on the comparison between US GAAP and IFRS. For example, Leuz (2003) finds little evidence of differences in information asymmetry for US GAAP firms and IFRS firms. Accordingly, in order to deal with the ambiguity of whether the role of IFRS in reporting quality is better than that of US GAAP, we re-examine the religious impact on the conformity to IFRS after excluding the US from our sample. We find that the results indeed remain intact.

[3] For example, Japan has introduced accounting rules regarding lease capitalization and impairment (7th and 13th items among the 21 IFRS rules) since 2008 and 2005, respectively.

[4] On the contrary, it is also plausible that frequent disclosure encourages managers' short-termism (Bhojraj and Libby, 2005; Gigler, Kanodia, Sapra, and Venugopalan, 2014), and thus reduces disclosure quality. Especially, frequent disclosure may cause greater earnings management activities by encouraging managers to adopt a short-term perspective. However, as Jo and Kim (2007) suggest, disclosure frequency reduces, rather than increases, earnings management, because it lowers information asymmetry and exposes earnings management, and thereby reduces managers' incentive to manage earnings. Moreover, as many studies utilize disclosure frequency as a proxy for an informative disclosure environment (Clarkson, Kao, and Richardson, 1999; Francis, Philbrick, and Schipper, 1994; Lang

are applied for quarterly, semi-annual, and annual reports, respectively. Next, the average of these scores is calculated for each country, and the average score is used as the financial reporting frequency variable. Firm-level disclosure frequency data is extracted from the Compustat database.

Religion variables are constructed based on country-year-level data on proportions of the population and religious denomination, provided by the Association of Religion Data Archives (ARDA). While the initial data covers 100 religious denominations, 11 categories of religions were organized from the data for brevity and clarity. The categories include Catholicism, Protestantism (including Anglicanism), Orthodox Churches, Other Christianity, Judaism, Islam, Hinduism (including Jainism and Sikhism), Buddhism (including Shintoism), Other Eastern religions, Other religions, and No-religion (including atheism).[5] We measure general religiosity as the ratio of religious adherence to the total population, or one minus the no-religion proportion. Furthermore, we divide the general religiosity into two parts based on religious hierarchy. This includes the ratio of religious adherence belonging to hierarchical (non-hierarchical) religions to the total population as religiosity with high (low) religious hierarchy.[6] Finally, religious heterogeneity is measured by one over the Herfindahl-Hirschman index (HHI), where HHI is the sum of squared adherence proportions for each religious group.

Several control variables likely associated with disclosure quality are used in our analysis: ln(*GDP/Capita*) is the logarithm of GDP per capita provided by the World Bank; *Antidir*, *Eff_ jud*, and *Concentr* are shareholder rights index, national judicial efficiency, and the degree of ownership concentration, respectively, and all are taken from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998); *Open* is trade openness calculated as imports plus exports, all divided by the GDP and drawn from the World Bank; *MAS*, *PDI*, *IDV*, *UAI*, *LTO*, *IVR* refer to Geert Hofstede's six cultural dimensions – masculinity, power distance, individualism, uncertainty avoidance, long-term orientation, and indulgence – and taken from Hofstede, Hofstede, and Minkov (2010).[7] We briefly discuss the role of these controls in disclosure quality as follows: Leuz, Nanda, and Wisocky (2003) show that both investor protection law and judicial efficiency significantly reduce earnings management activities. McKinnon and Dalimunthe (1993) find a negative impact of ownership concentration on disclosure quality, while Eng and Mak (2003) contradict the finding by showing the insignificant association between blockholder ownership and disclosure. Kanna, Palepu, and Srinivasan (2004) propose that product market internationalization is related to higher corporate disclosure scores. Gray (1988) and Hope (2003) suggest that transparency is positively associated with individualism and masculinity, while related negatively to uncertainty avoidance and power distance.

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and Lundholm, 2000; Schrand and Verrecchia, 2004), we follow them and use it as well.

[5] This classification standard is based on McCleary and Barro (2006).

[6] Following La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997), Catholicism, Orthodox Churches and Islam are classified as hierarchical religions, and the other religious groups (except No-religion) are classified as non-hierarchical religions.

[7] As *Antidir*, *Eff_jud*, *Concentr*, *MAS*, *PDI*, *IDV*, and *UAI* are measured based on information in the 1970s and 1980s, one might be concerned that they are not valid for accounting for the dependent variables containing contemporary information. However, 1) these legal or cultural characteristics are highly persistent over time (e.g., Table A3 in Pagano and Volpin, 2005; Voigtländer and Voth, 2012); 2) many cross-country studies consistently use these variables (Leuz, Nanda, Wisocky, 2003; Kwok and Tadesse, 2006; Shi, Magnan, and Kim, 2012). Accordingly, it is reasonable to assume that they still substantially capture the contemporary legal and cultural characteristics of countries, and therefore are valid control variables.

Radebaugh, Gray, and Black (2006) note that long-term orientation has a negative impact on transparency. Finally, Vitolla, Raimo, Rubino, and Garzoni (2019) suggest a negative relationship between indulgence and reporting quality.

After merging the aforementioned country-level variables, our final sample consists of 38 countries. The country-level information of our main dependent/explanatory variables and that of control variables are presented in Panels A and B of Table 1, respectively. We measure dependent variables (except *IFRS*) using the annual or quarterly financial and accounting data from 1987 to 2018. Also, our main religious explanatory variables (i.e., *Rel*, *Hrchy*, *No_hrchy*, and *Hetero*) are constructed based on the annual religion data from 1980 to 2010. We use the 7 to 8-year-lagged explanatory variables, and thus, can mitigate a reverse causality issue from disclosure quality to religion.[8]

In Panel A, while our sample consists of 38 countries, the number of observations for the dependent variables is 37 because there is no information for *EM*, *Timely*, and *Freq* in Venezuela, and for *IFRS* in Colombia. By the definitions of *Hrchy* and *No_hrchy*, their sum is equal to *Rel*. In both Panels A and B, all variables display substantial variations. Detailed variable descriptions are provided in Appendix A.

2. Methodology

The impact of national religious characteristics on corporate disclosure quality is examined using the following ordinary least squares regression models:

$$EM_c \text{ or } Timely_c = \beta_0 + \beta_1 Rel_c + \Theta' X_c + \epsilon_c; \tag{1}$$

$$EM_c \text{ or } Timely_c = \beta_0 + \beta_1 Hrchy_c + \beta_2 No\_hrchy_c + \Theta' X_c + \epsilon_c; \tag{2}$$

$$EM_c \text{ or } Timely_c = \beta_0 + \beta_1 Hetero_c + \Theta' X_c + \epsilon_c; \tag{3}$$

$$IFRS_c \text{ or } Freq_c = \beta_0 + \beta_1 Rel_c + \Theta' X_c + \epsilon_c; \tag{4}$$

$$IFRS_c \text{ or } Freq_c = \beta_0 + \beta_1 Hrchy_c + \beta_2 No\_hrchy_c + \Theta' X_c + \epsilon_c; \tag{5}$$

$$IFRS_c \text{ or } Freq_c = \beta_0 + \beta_1 Hetero_c + \Theta' X_c + \epsilon_c. \tag{6}$$

The dependent variables $Timely_c$, EM_c, $IFRS_c$, and $Freq_c$ are measures of timely bad news recognition, earnings management, similarity between local GAAP and IFRS, and financial reporting frequency, respectively, for country c. Rel_c is the proportion of religious adherents in country c. $Hrchy_c$ and No_hrchy_c are the proportion of religious adherents belonging to a hierarchical religion and that of religious adherents belonging to a non-hierarchical religion, respectively. X_c is a vector of the control variables mentioned, and ϵ_c is the error term.

Equations (1) through (3) test the impact on voluntary disclosure quality. Equation (1) indicates whether religiosity is negatively associated with voluntary disclosure quality (i.e., $\beta_1 > 0$ if the dependent variable is EM_c and $\beta_1 < 0$ if the dependent variable is $Timely_c$). Equation (2) shows whether such an association is more pronounced for non-hierarchical religions (i.e., $|\beta_1| < |\beta_2|$). Equation (3) shows whether religious heterogeneity is positively related to voluntary disclosure quality (i.e., $\beta_1 < 0$ if the dependent variable is EM_c and $\beta_1 > 0$ if the dependent variable is $Timely_c$).

The effect of religious characteristics on mandatory disclosure quality is examined in

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[8] Similarly, we measure the control variables ln (*GDP/Capita*) and *Open* based on the data from 1980 to 2010.

TABLE 1. DESCRIPTIVE STATISTICS

This table shows the descriptive statistics of our data sample and variables used. Panels A and B show the descriptive statistics for the main variables and control variables, respectively, and Panel C presents the pairwise correlation coefficients. All variables are defined in Appendix A.

Panel A: Descriptive Statistics of the Main Dependent/Explanatory Variables

Country	EM	Timely	IFRS	Freq	Rel	Hrchy	No_hrchy	Hetero
Argentina	13.500	0.368	7.000	3.685	0.951	0.812	0.138	1.553
Australia	2.500	0.466	9.000	3.651	0.741	0.304	0.437	3.360
Austria	26.000	0.535	17.000	3.271	0.877	0.813	0.064	1.666
Belgium	23.750	0.406	8.000	3.225	0.826	0.798	0.027	1.678
Brazil	12.000	0.266	10.000	3.466	0.946	0.758	0.188	1.686
Canada	2.500	0.790	16.000	3.995	0.833	0.473	0.361	3.258
Chile	20.750	0.095	8.000	3.569	0.911	0.616	0.295	2.369
Colombia	5.250	0.441	-	3.226	0.969	0.897	0.071	1.240
Denmark	15.000	0.432	10.000	3.304	0.927	0.032	0.895	1.266
Finland	14.000	0.499	6.000	3.535	0.880	0.015	0.865	1.346
France	22.250	0.435	9.000	3.316	0.792	0.738	0.054	2.040
Germany	20.000	0.456	10.000	3.121	0.798	0.413	0.385	3.251
Greece	31.250	0.550	4.000	3.631	0.960	0.949	0.012	1.164
Hong Kong	26.250	0.407	18.000	3.567	0.809	0.067	0.742	3.280
India	26.000	0.098	13.000	2.856	0.988	0.138	0.850	1.439
Indonesia	32.250	0.321	17.000	3.576	0.954	0.809	0.145	1.621
Ireland	9.500	0.457	20.000	3.435	0.948	0.906	0.042	1.229
Italy	29.250	0.667	9.000	3.552	0.846	0.825	0.021	1.478
Japan	30.000	0.158	12.000	1.946	0.864	0.003	0.861	1.354
Malaysia	24.000	0.205	13.000	3.537	0.996	0.583	0.413	2.709
Mexico	14.500	0.429	20.000	3.484	0.948	0.839	0.109	1.414
Netherlands	14.750	0.423	17.000	3.324	0.647	0.380	0.267	3.301
New Zealand	7.250	0.463	18.000	3.514	0.656	0.144	0.512	3.214
Norway	14.750	0.523	14.000	3.464	0.953	0.020	0.934	1.235
Pakistan	19.250	0.242	17.000	3.264	0.996	0.961	0.035	1.099
Peru	12.250	0.188	20.000	3.771	0.968	0.863	0.105	1.331
Philippines	22.750	0.239	11.000	3.738	0.993	0.885	0.108	1.405
Portugal	35.250	0.940	8.000	3.378	0.916	0.859	0.058	1.357
Singapore	25.750	0.299	21.000	3.573	0.853	0.205	0.649	5.032
South Korea	32.250	0.360	15.000	3.934	0.509	0.077	0.433	3.061
Spain	24.000	0.666	5.000	3.394	0.799	0.781	0.017	1.586
Sweden	5.500	0.596	11.000	3.436	0.716	0.050	0.665	1.998
Switzerland	22.500	0.437	9.000	3.410	0.899	0.484	0.415	2.771
Thailand	29.500	0.219	17.000	3.757	0.967	0.047	0.920	1.284
Turkey	26.000	0.164	7.000	3.688	0.992	0.987	0.004	1.032
United Kingdom	7.500	0.447	20.000	3.371	0.798	0.134	0.664	2.645
United States	3.250	0.872	17.000	3.990	0.753	0.255	0.498	4.140
Venezuela	-	-	16.000	-	0.955	0.843	0.111	1.406
Mean	19.000	0.420	12.946	3.458	0.872	0.520	0.352	2.060
Std. Dev.	9.438	0.199	4.916	0.347	0.113	0.353	0.316	0.981
25th Percentile	12.250	0.266	9.000	3.324	0.799	0.138	0.064	1.346
Median	20.750	0.432	13.000	3.484	0.905	0.599	0.281	1.604
75th Percentile	26.000	0.499	17.000	3.631	0.955	0.839	0.649	2.771

Panel B: Descriptive Statistics of the Control Variables

Country	ln (GDP/Capita)	Antidir	Eff_jud	Concentr	Open	MAS	PDI	IDV	UAI	LTO	IVR
Argentina	8.621	4.000	6.000	0.530	23.813	56.000	49.000	46.000	86.000	20.403	61.830
Australia	10.157	4.000	10.000	0.280	36.621	61.000	38.000	90.000	51.000	21.159	71.429
Austria	10.016	2.000	9.500	0.580	77.009	79.000	11.000	55.000	70.000	60.453	62.723
Belgium	10.107	0.000	9.500	0.540	126.089	54.000	65.000	75.000	94.000	81.864	56.696
Brazil	8.285	3.000	5.750	0.570	20.657	49.000	69.000	38.000	76.000	43.829	59.152
Canada	10.088	5.000	9.250	0.400	62.010	52.000	39.000	80.000	48.000	36.020	68.304
Chile	10.601	5.000	7.250	0.450	58.599	28.000	63.000	23.000	86.000	30.982	68.000
Colombia	8.484	3.000	7.250	0.629	33.243	64.000	67.000	13.000	80.000	13.098	83.036
Denmark	7.774	2.000	10.000	0.450	75.991	16.000	18.000	74.000	23.000	34.761	69.643
Finland	10.125	3.000	10.000	0.370	63.440	26.000	33.000	63.000	59.000	38.287	57.366
France	10.371	3.000	8.000	0.340	47.774	43.000	68.000	71.000	86.000	63.476	47.768
Germany	9.676	1.000	9.000	0.480	54.069	66.000	35.000	67.000	65.000	82.872	40.402
Greece	10.171	2.000	7.000	0.670	45.156	57.000	60.000	35.000	112.000	45.340	49.554
Hong Kong	10.083	5.000	10.000	0.540	254.498	57.000	68.000	25.000	29.000	60.957	16.964
India	10.104	5.000	8.000	0.400	25.355	56.000	77.000	48.000	40.000	50.882	26.116
Indonesia	9.520	2.000	2.500	0.580	55.454	46.000	78.000	14.000	48.000	61.965	37.723
Ireland	9.865	4.000	8.750	0.390	132.414	68.000	28.000	70.000	35.000	24.433	64.955
Italy	6.875	1.000	6.750	0.580	43.960	70.000	50.000	76.000	75.000	61.461	29.688
Japan	10.117	4.000	10.000	0.180	22.346	95.000	54.000	46.000	92.000	87.909	41.741
Malaysia	6.188	4.000	9.000	0.540	162.517	50.000	104.000	26.000	36.000	40.806	57.143
Mexico	9.959	1.000	6.000	0.640	42.064	69.000	81.000	30.000	82.000	24.181	97.321
Netherlands	10.282	2.000	10.000	0.390	112.548	14.000	38.000	80.000	53.000	67.003	68.304
New Zealand	9.229	4.000	10.000	0.480	58.084	58.000	22.000	79.000	49.000	32.746	74.554
Norway	8.550	4.000	10.000	0.360	71.444	8.000	31.000	69.000	50.000	34.509	55.134
Pakistan	8.270	5.000	5.000	0.370	34.383	50.000	55.000	14.000	70.000	49.874	0.000
Peru	10.203	3.000	6.750	0.560	37.959	42.000	64.000	16.000	87.000	25.189	46.205
Philippines	10.584	3.000	4.750	0.570	74.708	64.000	94.000	32.000	44.000	27.456	41.964
Portugal	9.719	3.000	5.500	0.520	61.712	31.000	63.000	27.000	104.000	28.212	33.259
Singapore	7.602	4.000	10.000	0.490	355.501	48.000	74.000	20.000	8.000	71.537	45.536
South Korea	6.909	2.000	6.000	0.230	63.846	39.000	60.000	18.000	85.000	100.000	29.464
Spain	6.268	4.000	6.250	0.510	45.496	42.000	57.000	51.000	86.000	47.607	43.527
Sweden	9.323	3.000	10.000	0.280	70.331	5.000	31.000	71.000	29.000	52.897	77.679
Switzerland	10.311	2.000	10.000	0.410	91.980	70.000	34.000	68.000	58.000	73.552	66.071
Thailand	9.904	2.000	3.250	0.470	90.241	34.000	64.000	20.000	64.000	31.738	45.089
Turkey	7.659	2.000	4.000	0.590	38.922	45.000	66.000	37.000	85.000	45.592	49.107

United Kingdom	8.298	5.000	10.000	0.190	50.369	66.000	35.000	89.000	35.000	51.134	69.420
United States	10.317	5.000	10.000	0.200	21.789	62.000	40.000	91.000	46.000	25.693	68.080
Venezuela	8.445	1.000	6.500	0.510	49.409	73.000	81.000	12.000	76.000	15.617	100.000
Mean	9.186	3.079	7.829	0.454	73.468	50.342	54.316	48.921	63.210	46.460	54.762
Std. Dev.	1.264	1.383	2.216	0.130	64.791	19.838	21.431	25.925	24.544	21.616	20.588
25th Percentile	8.298	2.000	6.000	0.370	38.922	42.000	35.000	25.000	46.000	28.212	41.964
Median	9.792	3.000	8.375	0.480	56.769	53.000	58.500	47.000	64.500	44.584	56.920
75th Percentile	10.125	4.000	10.000	0.560	75.991	64.000	68.000	71.000	85.000	61.461	68.304

Panel C: Correlations

	EM	Timely	IFRS	Freq	Rel	Hrchy	No_hrchy	Hetero
EM	1.000							
Timely	-0.230	1.000						
IFRS	-0.351	-0.128	1.000					
Freq	-0.221	0.266	0.156	1.000				
Rel	0.173	-0.343	-0.147	-0.108	1.000			
Hrchy	0.154	0.011	-0.255	0.147	0.472	1.000		
No_hrchy	-0.110	-0.135	0.231	-0.202	-0.169	-0.949	1.000	
Hetero	-0.235	0.187	0.307	0.223	-0.683	-0.425	0.230	1.000

Equations (4) through (6). Specifically, these equations show whether religiosity is negatively correlated to mandatory disclosure quality (i.e., $\beta_1 < 0$ in Equation (4)), whether religious hierarchy mitigate such a correlation (i.e., $|\beta_1| < |\beta_2|$ in Equation (5)), and whether religious diversity plays a positive role in mandatory disclosure quality (i.e., $\beta_1 > 0$ in Equation (6)).

III.   *Results*

1.   **Basic Correlation**

Pair-wise Pearson correlation coefficients for the main variables are shown in Panel C of Table 1. *Rel* is correlated positively to *EM* and negatively to *Timely*, *IFRS*, and *Freq*, indicating the negative relationship hypothesized between religiosity and the quality of both voluntary and mandatory disclosure. However, there is no clear relationship between religious hierarchy and disclosure quality in this correlation table: 1) hierarchy is positively associated with timely bad news recognition and more frequent financial reporting; 2) it is also related to greater earnings management and less conformity to IFRS. Finally, consistent with our demand-side hypothesis, religious heterogeneity is positively associated with disclosure quality, in that the correlation between *Hetero* and *EM* (*Timely*, *IFRS*, or *Freq*, respectively) is negative (positive).

2.   **Effects of Religious Characteristics on Corporate Disclosure Quality**

Table 2 presents the regression results on the effect of religious characteristics on voluntary disclosure quality. Regarding the results for the control variables, we observe that voluntary disclosure quality is related positively to judicial efficiency (in Column (3)); negatively to uncertainty avoidance (in Column (4)), long-term orientation, and indulgence (in Columns (1), (3), and (5)); insignificantly to ownership concentration. These results are consistent with prior studies discussed, including Eng and Mak (2003), Gray (1988), Leuz, Nanda, and Wisocky (2003), Radebaugh, Gray, and Black (2006), Vitolla, Raimo, Rubino, and Garzoni (2019). However, the results of the negative correlations between *Timely* and *Open* and between *EM* and *IVR* contradict the prior literature.

Turning to the religious effects, Columns (1) and (2) present the impact of religiosity in voluntary disclosure quality. The results show that *Rel* is significantly positively associated with *EM* and negatively associated with *Timely*, indicating that greater national religiosity, on

TABLE 2.   RELIGIOUS CHARACTERISTICS AND VOLUNTARY DISCLOSURE QUALITY

The dependent variables are *EM* in Columns (1), (3) and (5), and *Timely* in Columns (2), (4), and (6). The main explanatory variables are *Rel* in Columns (1) and (2), *Hrchy* and *No_hrchy* in Columns (3) and (4), and *Hetero* in Columns (5) and (6). In Columns (3) and (4), the difference between the estimated coefficients β_2 and β_3 (in Equation (2)) and its statistical significance are presented. Detailed variable descriptions are reported in Appendix A. The t-statistics based on robust standard errors are in parentheses. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Variable	*EM*	*Timely*	*EM*	*Timely*	*EM*	*Timely*
Rel	18.356**	-0.609**				
	(2.18)	(-2.07)				
Hrchy			14.105**	-0.512*		
			(2.07)	(-2.01)		
No_hrchy			22.175***	-0.696**		
			(3.32)	(-2.74)		
Hetero					-2.132**	0.070*
					(-2.14)	(1.92)
ln(*GDP/Capita*)	2.892	0.169***	2.240	0.184***	2.743	0.174***
	(1.22)	(3.45)	(1.12)	(3.76)	(1.17)	(3.65)
Antidir	-0.801	-0.001	-0.437	-0.009	-0.433	-0.013
	(-0.64)	(-0.03)	(-0.34)	(-0.24)	(-0.36)	(-0.33)
Eff_jud	-1.121	-0.021	-1.691*	-0.008	-1.061	-0.023
	(-1.21)	(-0.94)	(-2.03)	(-0.34)	(-1.17)	(-0.99)
Concentr	3.727	0.447	12.451	0.248	6.810	0.344
	(0.29)	(1.33)	(0.99)	(0.70)	(0.56)	(1.11)
Open	0.008	-0.001	0.024	-0.001**	0.019	-0.001*
	(0.30)	(-1.62)	(0.95)	(-2.22)	(0.59)	(-1.90)
MAS	-0.008	0.000	0.015	-0.000	0.014	-0.000
	(-0.21)	(0.33)	(0.38)	(-0.07)	(0.32)	(-0.22)
PDI	0.070	0.001	0.060	0.001	0.089	0.001
	(0.83)	(0.71)	(0.72)	(0.92)	(1.09)	(0.37)
IDV	-0.076	0.000	-0.016	-0.001	-0.073	0.000
	(-1.04)	(0.08)	(-0.20)	(-0.56)	(-0.94)	(0.04)
UAI	0.034	-0.002	0.100	-0.003*	0.017	-0.001
	(0.52)	(-0.95)	(1.52)	(-1.77)	(0.24)	(-0.60)
LTO	0.164*	-0.005	0.169*	-0.005	0.153*	-0.005
	(1.83)	(-1.67)	(1.88)	(-1.71)	(1.73)	(-1.61)
IVR	-0.187**	-0.004*	-0.165*	-0.005*	-0.178**	-0.005*
	(-2.45)	(-1.74)	(-2.06)	(-1.95)	(-2.18)	(-1.77)
H0: $\beta_2 - \beta_3 = 0$			-8.070**	0.184*		
Adjusted R-squared	0.676	0.430	0.705	0.456	0.675	0.426
Observations	37	37	37	37	37	37

average, is related to increased earnings management activities and less timely bad news recognition of firms. The economic magnitudes are also substantial: a change from the 1st to the 3rd quartile in *Rel* (i.e., from 0.799 to 0.905) increases *EM* by 2.864 (decreases *Timely* by 0.095), or about 30% (48%) of the standard deviation of *EM* (*Timely*).

In Columns (3) and (4), the differential impacts of religiosity in accordance with the hierarchy of religions are reported. We note that the magnitude of the coefficient for *No_hrchy*

is greater than that for *Hrchy* in both columns. Moreover, such differences are statistically significant at 5% in Column (3) and 1% in Column (4). These findings indicate that the negative impact of religiosity on voluntary disclosure quality is more pronounced in less hierarchical religions.

The estimated results for the influence of religious heterogeneity on voluntary disclosure quality are shown in Columns (5) and (6). The coefficients for *Hetero* are significantly negative, suggesting the positive role of religious heterogeneity in voluntary disclosure quality. Regarding the economic significance, a shift from the 25th to the 75th percentile in *Hetero* is associated with a decrease of *EM* by 0.333 (an increase of *Timely* by 0.010), corresponding to about 32% (50%) of the standard deviation of *EM* (*Timely*).

Next, Table 3 summarizes the impact of national religious characteristics on mandatory disclosure quality. We first note that our results for control variables are in general in line with the prior literature. Specifically, our results indicate that mandatory disclosure quality is related positively to openness and masculinity, and negatively to ownership concentration and long-term orientation. Judicial efficiency, however, plays a negative role in mandatory disclosure quality in Columns (2), (4), and (6), contradicting the literature.

Focusing on the religious impact, we obtain results comparable to the results in Table 2. First, in Columns (1) and (2), *Rel* is significantly negatively related to both *IFRS* and *Freq*. This suggests that religiosity has negative impacts on both the conformity of local GAAP to IFRS, and financial reporting frequency. Second, these negative relationships are more pronounced in non-hierarchical religions, in that the magnitudes of the estimated coefficients for *No_hrchy* are greater than those for *Hrchy* in Columns (3) and (4). The magnitude differences, however, are not statistically significant. Finally, the results in Columns (5) and (6) indicate that firms in countries with more religious diversity exhibit a higher quality local GAAP and more frequent financial reporting.

IV.   *Conclusion*

This study examines the relationship between religion and corporate disclosure quality. Our analysis shows that (1) national religiosity is negatively related to both voluntary and mandatory disclosure qualities; (2) such negative relationships are less pronounced for hierarchical religions; and (3) religious heterogeneity is positively associated with both disclosure qualities. In summary, our findings provide suggestive evidence supporting the existence of the novel channel – social trust – through which national religious characteristics have a crucial impact on corporate disclosure quality.

TABLE 3.   RELIGIOUS CHARACTERISTICS AND MANDATORY DISCLOSURE QUALITY

The dependent variables are *IFRS* in Columns (1), (3) and (5), and *Freq* in Columns (2), (4), and (6). The main explanatory variables are *Rel* in Columns (1) and (2), *Hrchy* and *No_hrchy* in Columns (3) and (4), and *Hetero* in Columns (5) and (6). In Columns (3) and (4), the difference between the estimated coefficients β_2 and β_3 (in Equation (5)) and its statistical significance are presented. Detailed variable descriptions are reported in Appendix A. The t-statistics based on robust standard errors are in parentheses. Symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)	(4)	(5)	(6)
Variable	*IFRS*	*Freq*	*IFRS*	*Freq*	*IFRS*	*Freq*
Rel	-15.872**	-1.608*				
	(-2.40)	(-1.94)				
Hrchy			-15.692**	-1.508*		
			(-2.48)	(-1.93)		
No_hrchy			-16.040**	-1.697*		
			(-2.16)	(-2.03)		
Hetero					1.442*	0.251***
					(1.91)	(3.05)
ln(*GDP*/*Capita*)	-2.344*	0.053	-2.319**	0.068	-2.167*	0.064
	(-2.04)	(0.53)	(-2.12)	(0.73)	(-1.92)	(0.74)
Antidir	-0.672	0.005	-0.681	-0.003	-0.915	-0.044
	(-0.89)	(0.08)	(-0.87)	(-0.05)	(-1.21)	(-0.74)
Eff_jud	-0.137	-0.107**	-0.112	-0.093**	-0.244	-0.108***
	(-0.19)	(-2.58)	(-0.14)	(-2.30)	(-0.35)	(-3.10)
Concentr	-18.688***	0.489	-19.003***	0.285	-22.186***	0.269
	(-3.53)	(0.64)	(-3.34)	(0.37)	(-4.27)	(0.40)
Open	0.042***	0.002	0.042**	0.001	0.037**	0.000
	(2.89)	(1.21)	(2.76)	(1.00)	(2.35)	(0.15)
MAS	0.082**	-0.002	0.080*	-0.003	0.064*	-0.004
	(2.16)	(-0.69)	(2.06)	(-0.79)	(1.81)	(-1.54)
PDI	-0.050	0.001	-0.050	0.001	-0.063	-0.001
	(-1.18)	(0.22)	(-1.15)	(0.32)	(-1.40)	(-0.52)
IDV	-0.024	0.003	-0.027	0.001	-0.021	0.002
	(-0.56)	(0.54)	(-0.54)	(0.27)	(-0.46)	(0.37)
UAI	-0.046	-0.002	-0.048	-0.004	-0.032	-0.001
	(-1.03)	(-0.90)	(-1.01)	(-1.31)	(-0.69)	(-0.18)
LTO	-0.094*	-0.009*	-0.094*	-0.009*	-0.079	-0.010**
	(-1.77)	(-1.97)	(-1.73)	(-1.95)	(-1.56)	(-2.39)
IVR	0.029	-0.001	0.028	-0.001	0.027	-0.002
	(0.53)	(-0.19)	(0.49)	(-0.33)	(0.45)	(-0.70)
H0: $\beta_2-\beta_3=0$			0.348	0.189		
Adjusted R-squared	0.410	0.317	0.384	0.305	0.373	0.461
Observations	37	37	37	37	37	37

APPENDIX

A: Variable Definitions

Variable	Definition
Dependent variables	
EM	The average value of the following four country-level ranked variables: (1) smoothing reported operating earnings using accruals, (2) the correlation between changes in accounting accruals and operating cash flows, (3) the magnitude of accruals, and (4) the degree of small loss avoidance. The detailed variable generation method is presented in Leuz et al. (2003). The sample we use to measure *EM* consists of 436,592 non-financial firm–fiscal year observations from 1987 to 2018 across 37 countries, and each country has at least 300 firm–year observations (source: Compustat).
Timely	The coefficient β_3 in the following regression model: $NI_{it} = \beta_0 + \beta_1 NEG_{it} + \beta_2 RET_{it} + \beta_3 NEG_{it} \times RET_{it} + \epsilon_{it}$. The sample we use to measure *Timely* consists of 400,167 non-financial firm–fiscal year observations from 1987 to 2018 across 37 countries, and each country has at least 300 firm–year observations (source: Compustat).
IFRS	The extent to which local GAAP conforms to IFRS, based on key 21 accounting rules in IFRS. Specifically, *IFRS* is defined as the number of IFRS rules to which a country's local GAAP conforms among the 21 rules. The key 21 IFRS items are presented in Bae et al. (2008; source: Bae et al., 2008).
Freq	The average frequency of corporate financial reporting. *Freq* is calculated by the following procedure: First, we calculate each firm's reporting frequency as the number of reports divided by the number of quarters, and multiply by 4. Next, we assign scores of 4, 2, and 1 for firms with quarterly, semi-annual, and annual reports, respectively. Then, these firm-level frequencies are averaged at country level. We define *Freq* as the country-level average frequency of financial reporting. The sample we use to measure *Freq* consists of 1,832,336 financial reports from 37,452 firms between 1987 Q3 and 2018 Q4 across 37 countries, and each country has at least 30 firms in our sample (source: Compustat).
Explanatory variables	
Rel	The average value of the proportion of religious adherence to the total population of country *c*. Annual religious proportions data from 1980 to 2010 are used to calculate the average value for each country (source: ARDA).
Hrchy	The average value of the annual proportions of the number of religious adherents belonging to the hierarchical religions to the total population of country *c*. Annual religious proportions data from 1980 to 2010 are used to calculate the average value for each country (source: ARDA).
No_hrchy	The average value of the annual proportions of religious adherence belonging to the non-hierarchical religions to the total population of country *c*. Annual religious proportions data from 1980 to 2010 are used to calculate the average value for each country (source: ARDA).
Hetero	One over the HHI for religious proportions. Specifically, $Hetero_c = 1/(\sum_{k=1}^{11} P_{k,c}^2)$, where $P_{k,c}$ is the average proportion of religious adherents belonging to *k*-th religion (including no-religion) to the total population of country *c*. Annual religious proportions data from 1980 to 2010 are used to calculate the average proportion (source: ARDA).
Control variables	
ln(*GDP/Capita*)	The logarithm of average GDP per capita in US dollars. Data from 1980-2010 are used to calculate the average GDP per capita (source: World Bank).
Antidir	An index assessing the degree of shareholder rights (source: La Porta et al., 1998).
Eff_jud	An index assessing the efficiency of judicial system (source: La Porta et al., 1998).
Concentr	The average proportion of common shares owned by the three largest shareholders in the 10 largest non-financial, privately owned domestic firms in country *c* (source: La Porta et al., 1998).
Open	Imports plus exports divided by GDP as a percentage of GDP. Data from 1980-2010 are used to calculate the openness (source: World Bank).
MAS	One of the Geert Hofstede's six cultural dimensions, measuring the degree of masculinity (source: Hofstede et al., 2010).

PDI	One of the Geert Hofstede's six cultural dimensions, measuring the degree of power distance (source: Hofstede et al., 2010).
IDV	One of the Geert Hofstede's six cultural dimensions, measuring the degree of individualism (source: Hofstede et al., 2010).
UAI	One of the Geert Hofstede's six cultural dimensions, measuring the degree of uncertainty avoidance (source: Hofstede et al., 2010).
LTO	One of the Geert Hofstede's six cultural dimensions, measuring the degree of long-term orientation (source: Hofstede et al., 2010).
IVR	One of the Geert Hofstede's six cultural dimensions, measuring the degree of indulgence (source: Hofstede et al., 2010).

REFERENCES

Aghion, P., Y. Algan, P. Cahuc and A. Shleifer (2010), "Regulation and Distrust," *Quarterly Journal of Economics* 125, pp.1015–1049.

Ahmed, A.S., B.K. Billings, R.M. Morton and M. Stanford-Harris (2002), "The Role of Accounting Conservatism in Mitigating Bondholder-Shareholder Conflicts over Dividend Policy and in Reducing Debt Costs," *The Accounting Review* 77, pp.867–890.

Ahmed, A.S. and S. Duellman (2007), "Accounting Conservatism and Board of Director Characteristics: An Empirical Analysis," *Journal of Accounting and Economics* 43, pp.411–437.

Bae, K.H., H. Tan and M. Welker (2008), "International GAAP Differences: The Impact on Foreign Analysts," *The Accounting Review* 83, pp.593–628.

Barth, M.E., W.R. Landsman and M.H. Lang (2008), "International Accounting Standards and Accounting Quality," *Journal of Accounting Research* 46, pp.467–498.

Basu, S. (1997), "The Conservatism Principle and the Asymmetric Timeliness of Earnings," *Journal of Accounting and Economics* 24, pp.3–37.

Baginski, S.P., J.M. Hassell and M.D. Kimbrough (2002), "The Effect of Legal Environment on Voluntary Disclosure: Evidence from Management Earnings Forecasts Issued in US and Canadian Markets," *The Accounting Review* 77, pp.25–50.

Ball, R., S.P. Kothari and A. Robin (2000), "The Effect of International Institutional Factors on Properties of Accounting Earnings," *Journal of Accounting and Economics* 29, pp.1–51.

Barro, R.J. and R.M. McCleary (2003), "Religion and Economic Growth across Countries," *American Sociological Review* 68, pp.760–781.

Beatty, A., J. Weber and J.J. Yu (2008), "Conservatism and Debt," *Journal of Accounting and Economics* 45, pp.154–174.

Berggren, N. and H. Jordahl (2006), "Free to Trust: Economic Freedom and Social Capital," *Kyklos* 59, pp.141–169.

Bhojraj, S. and R. Libby (2005), "Capital Market Pressure, Disclosure Frequency-Induced Earnings/Cash Flow Conflict, and Managerial Myopia," *The Accounting Review* 80, pp.1–20.

Botosan, C.A. (1997), "Disclosure Level and the Cost of Equity Capital," *The Accounting Review* 72, pp.323–349.

Bushman, R.M. and J.D. Piotroski (2006), "Financial Reporting Incentives for Conservative

Accounting: The Influence of Legal and Political Institutions," *Journal of Accounting and Economics* 42, pp.107–148.

Clarkson, P.M., J.L. Kao and G.D. Richardson (1999), "Evidence that Management Discussion and Analysis (MD&A) Is a Part of a Firm's Overall Disclosure Package," *Contemporary Accounting Research* 16, pp.111–134.

Coleman, J.S. (1990), *Foundations of Social Theory*, Cambridge, MA, Harvard University Press.

Costa, D.L. and M.E. Kahn (2003), "Civic Engagement and Community Heterogeneity: An Economist's Perspective," *Perspectives on Politics* 1, pp.103–111.

Daske, H., L. Hail, C. Leuz and R. Verdi (2008), "Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences," *Journal of Accounting Research* 46, pp.1085–1142.

DeFond, M., X. Hu, M. Hung and S. Li (2011), "The Impact of Mandatory IFRS Adoption on Foreign Mutual Fund Ownership: The Role of Comparability," *Journal of Accounting and Economics* 51, pp.240–258.

Du, X. (2013), "Does Religion Matter to Owner-Manager Agency Costs? Evidence from China," *Journal of Business Ethics* 118, pp.319–347.

Durkheim, E. (1915), *The Elementary Forms of the Religious Life*, London, G. Allen and Unwin.

Dyreng, S.D., W.J. Mayew and C.D. Williams (2012), "Religious Social Norms and Corporate Financial Reporting," *Journal of Business Finance and Accounting* 39, pp.845–875.

Eaton, T.V., J.R. Nofsinger and D.G. Weaver (2007), "Disclosure and the Cost of Equity in International Cross-Listing," *Review of Quantitative Finance and Accounting* 29, pp.1–24.

Eng, L.L. and Y.T. Mak (2003), "Corporate Governance and Voluntary Disclosure," *Journal of Accounting and Public Policy* 22, pp.325–345.

Francis, J., D. Philbrick and K. Schipper (1994), "Shareholder Litigation and Corporate Disclosures," *Journal of Accounting Research* 32, pp.137–164.

Gambetta, D. (2000), "Can We Trust Trust?" in: D. Gambetta, ed., *Trust: Making and Breaking Cooperative Relations*, Oxford, University of Oxford, pp.213–227.

Gigler, F., C. Kanodia, H. Sapra and R. Venugopalan (2009), "Accounting Conservatism and the Efficiency of Debt Contracts," *Journal of Accounting Research* 47, pp.767–797.

Gray, S.J. (1988), "Towards a Theory of Cultural Influence on the Development of Accounting Systems Internationally," *Abacus* 24, pp.1–15.

Guiso, L., P. Sapienza and L. Zingales (2008), "Trusting the Stock Market," *Journal of Finance* 63, pp.2557–2600.

Halman, L. and T. Pettersson (2002), "Religion and Social Capital in Contemporary Europe: Results from the 1999/2000 European Values Study," in: D.O. Moberg and R. L. Piedmont, eds., *Research in the Social Scientific Study of Religion* 12, Leiden, Brill, pp.65–94.

Hilary, G. and K.W. Hui (2009), "Does Religion Matter in Corporate Decision Making in America?" *Journal of Financial Economics* 93, pp.455–473.

Hofstede, G., G.J. Hofstede and M. Minkov (2010), *Cultures and Organizations: Software of the Mind* (Rev. 3rd ed.), New York, McGraw-Hill.

Hope, O.K. (2003), "Firm-Level Disclosures and the Relative Roles of Culture and Legal Origin," *Journal of International Financial Management and Accounting* 14, pp.218–248.

Jo, H. and Y. Kim (2007), "Disclosure Frequency and Earnings Management," *Journal of Financial Economics* 84, pp.561–590.

Khanna, T., K.G. Palepu and S. Srinivasan (2004), "Disclosure Practices of Foreign Companies Interacting with US Markets," *Journal of Accounting Research* 42, pp.475–508.

Knack, S. and P. Keefer (1997), "Does Social Capital Have an Economic Payoff? A Cross-Country Investigation," *Quarterly Journal of Economics* 112, pp.1251–1288.

Kumar, A. (2009), "Who Gambles in the Stock Market?" *Journal of Finance* 64, pp.1889–1933.

Kumar, A., J.K. Page and O.G. Spalt (2011), "Religious Beliefs, Gambling Attitudes, and Financial Market Outcomes," *Journal of Financial Economics* 102, pp.671–708.

Kwok, C.C. and S. Tadesse (2006), "National Culture and Financial Systems," *Journal of International Business Studies* 37, pp.227–247.

LaFond, R. and S. Roychowdhury (2008), "Managerial Ownership and Accounting Conservatism," *Journal of Accounting Research* 46, pp.101–135.

LaFond, R. and R.L. Watts (2008), "The Information Role of Conservatism," *The Accounting Review* 83, pp.447–478.

Lang, M.H. and R.J. Lundholm (2000), "Voluntary Disclosure and Equity Offerings: Reducing Information Asymmetry or Hyping the Stock?" *Contemporary Accounting Research* 17, pp.623–662.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and Vishny, R.W. (1997), "Trust in Large Organizations," *American Economic Review* 87, pp.333–338.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R.W. Vishny (1998), "Law and Finance," *Journal of Political Economy* 106, pp.1113–1155.

Leuz, C. (2003), "IAS versus US GAAP: Information Asymmetry-Based Evidence from Germany's New Market," *Journal of Accounting Research* 41, pp.445–472.

Leuz, C., D. Nanda and P.D. Wysocki (2003), "Earnings Management and Investor Protection: An International Comparison," *Journal of Financial Economics* 69, pp.505–527.

Li, S. (2010), "Does Mandatory Adoption of International Financial Reporting Standards in the European Union Reduce the Cost of Equity Capital?" *The Accounting Review* 85, pp.607–636.

McCleary, R.M. and R.J. Barro (2006), "Religion and Economy," *Journal of Economic Perspectives* 20(2), pp.49–72.

McGuire, S.T., T.C. Omer and N.Y. Sharp (2012), "The Impact of Religion on Financial Reporting Irregularities," *The Accounting Review* 87, pp.645–673.

McKinnon, J.L. and L. Dalimunthe (1993), "Voluntary Disclosure of Segment Information by Australian Diversified Companies," *Accounting and Finance* 33, pp.33–50.

Meuleman, B. and J. Billiet (2011), "Religious Involvement: Its Relation to Values and Social Attitudes," in: E. Davidov, P. Schmidt and J. Billiet, eds., *Cross-Cultural Analysis: Methods and Applications*, New York, Routledge, pp.173–206.

Montenegro, T.M. (2017), "Religiosity and Corporate Financial Reporting: Evidence from a European Country," *Journal of Management, Spirituality and Religion* 14, pp.48–80.

Nikolaev, V.V. (2010), "Debt Covenants and Accounting Conservatism," *Journal of Accounting Research* 48, pp.137–176.

Oh, F.D. and D. Shin (2019), "Religion and Financial Development and Structure," Working Paper, Korea Advanced Institute of Science and Technology.

Pagano, M. and P.F. Volpin (2005), "The Political Economy of Corporate Governance," *American Economic Review* 95, pp.1005–1030.

Putnam, R.D. (1993), *Making Democracy Work: Civic Traditions in Modern Italy*, Princeton, NJ, Princeton University Press.

Putnam, R.D. (2000), *Bowling Alone: The Collapse and Revival of American Community*, New York, Simon and Schuster.

Radebaugh, L.H., S.J. Gray and E.L. Black (2006), *International Accounting and Multinational Enterprises*, New York, John Wiley and Sons, Inc.

Ramalingegowda, S. and Y. Yu (2012), "Institutional Ownership and Conservatism," *Journal of Accounting and Economics* 53, pp.98–114.

Schrand, C. and R.E. Verrecchia (2004), "Disclosure Choice and Cost of Capital: Evidence from Underpricing in Initial Public Offerings," Working Paper, University of Pennsylvania.

Sengupta, P. (1998), "Corporate Disclosure Quality and the Cost of Debt," *The Accounting Review* 73, pp.459–474.

Shi, Y., M. Magnan and J.B. Kim (2012), "Do Countries Matter for Voluntary Disclosure? Evidence from Cross-Listed Firms in the US," *Journal of International Business Studies* 43, pp.143–165.

Skinner, D.J. (1994), "Why Firms Voluntarily Disclose Bad News," *Journal of Accounting Research* 32, pp.38–60.

Skinner, D.J. (1997), "Earnings Disclosures and Stockholder Lawsuits," *Journal of Accounting and Economics* 23, pp.249–282.

Tan, H., S. Wang and M. Welker (2011), "Analyst Following and Forecast Accuracy after Mandated IFRS Adoptions," *Journal of Accounting Research* 49, pp.1307–1357.

Uslaner, E.M. (2002), *The Moral Foundations of Trust*, New York, Cambridge University Press.

Vitolla, F., N. Raimo, M. Rubino and A. Garzoni (2019), "The Impact of National Culture on Integrated Reporting Quality. A Stakeholder Theory Approach," *Business Strategy and the Environment*, Forthcoming.

Voigtländer, N. and H.J. Voth (2012), "Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany," *Quarterly Journal of Economics* 127, pp.1339–1392.

Watts, R.L. (2003), "Conservatism in Accounting Part I: Explanations and Implications," *Accounting Horizons* 17, pp.207–221.

Weber, M. (1905), *The Protestant Ethic and the Spirit of Capitalism*, London, G. Allen and Unwin.

Whiteley, P. (1999), "The Origins of Social Capital," in: J.W. Van Deth, M. Maraffi, K. Newton, and P. Whiteley, eds., *Social Capital and European Democracy*, London, Routledge, pp.25–44.

Wilkinson, R.G. (1996), *Unhealthy Societies: The Afflictions of Inequality*, New York, Routledge.

Zak, P.J. and S. Knack (2001), "Trust and Growth," *Economic Journal* 111, pp.295–321.