

# National Culture and Dividend Policy: International Evidence from Banking

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## **Abstract**

We examine the relations between three dimensions of national culture and dividend policies of banks using a sample of banks from 51 countries over the period 1998-2007. In our main analysis, we employ three dimensions of Hofstede *et al.* (2010) and find that banks in high uncertainty avoidance, high long-term orientation and low masculinity countries pay lower amount of dividends and, are less likely to pay dividends. To confirm our main results, we also employ comparable three dimensions of national culture of House *et al.* (2004) and find that banks in high uncertainty avoidance, high future orientation and low assertiveness countries pay lower amount of dividends and, are less likely to pay dividends, findings confirming our above results. In sum, we find significant influence of the three dimensions of national culture on bank dividend policies.

**Keywords:** banking, dividend policy, national culture, uncertainty avoidance, masculinity, long-term orientation.

**JEL Classification:** G2, G35

## 1. Introduction

We employ three dimensions of national culture from two culture measuring studies of Hofstede *et al.* (2010) and House *et al.* (2004), and an international sample of banks to study the effects of national culture on bank dividend policies. Cross-country differences in banks' propensity to pay dividends and level of dividend payments are likely to be affected by differences in corporate governance and legal institutions, as well by softer dimensions such as national culture that may influence excessive earnings retention or payment as dividends.

The extant literature has studied the relation between national culture and dividend policies, but has excluded banking firms (Khambata & Liu 2005; Shao *et al.* 2009; Fidrmuc & Jacob 2010; Bae *et al.* 2012). A large amount of literature has documented that financial systems promote economic growth by mobilizing savings, reducing information asymmetries, providing risk-sharing and facilitating exchange (Levine 1997, 2005; Hassan *et al.* 2011). Due to such an important role performed by this highly leveraged industry for national economies and quite different nature of banking firms as compared to industrial firms, it is important to examine the relation of cultural forces with bank dividend policies. Further, numerous studies have examined the bank dividend policies separately from the dividend policies of industrial firms (Casey & Dickens 2000; Dickens *et al.* 2002; Theis & Dutta 2009).

In addition, more cash holdings can encourage bank managers to take more risk by extending poor credit quality loans. In a global survey on factors that created the conditions for the banking crisis conducted in May 2008 by Economist Intelligence Unit and PricewaterhouseCoopers, 58% of survey participants put the blame on 'ineffective regulatory oversight,' 31% on 'monetary policy,' and an impressive 73% on 'culture and excessive risk-taking' (Kanagaretnam *et al.* 2011). Cross-country differences became more apparent in the recent financial crisis, which had a significantly larger adverse effect on banks in certain countries (e.g., the UK and the USA) than in others (e.g., Australia and Canada). Given these findings, an examination of the influence of national culture on bank dividend policies is clearly warranted.

Culture is generally defined as a set of norms, beliefs, expected behaviors and shared values that serves as guiding principles in people's lives (Schwartz 1994; Hofstede 2001). By guiding human behavior, cultural values reflect what a society/group considers to be legitimate or illegitimate, good or bad, acceptable or unacceptable, or ethical or unethical (Hofstede 2001). On the other hand, extant literature argues the important role of dividend policies in reducing agency costs and minimizing information asymmetries (Rozeff 1982; Easterbrook 1984; La Porta *et al.* 2000; Denis & Osobov 2008; Eije & Megginson 2008; Brockman & Unlu 2009). And, in a recent study, John *et al.* (2010) argue that agency costs are more severe in banks due to their higher leverage. Therefore, we base our theoretical framework on Fidrmuc and Jacob (2010) who offer an agency theory based explanation of dividends for national cultural dimensions. This approach considers the preferences and behaviors of economic agents inherent in the cultural values for determining dividend policies of firms. So, in this paper we argue that bank dividend policies are a special case of social norms reflecting the legitimacy or acceptability of certain dividend payout strategies in a society. Across countries, social norms governing dividend payout policies may vary because differing cultural value emphases breed different behaviors, aspirations, beliefs, and preferences, and therefore alter the severity and nature of agency conflicts.

An alternative view is that because banks operate in highly regulated environments, and are strictly monitored by central banks for capital levels, therefore, country-level national cultural factors may not be as important in influencing bank dividend policies. In this regard, banks may

face different levels of regulatory pressure both at bank- and country-levels. On bank-level, low capitalized banks can be under severe regulatory pressure for increasing capital by not paying dividends than the banks which either meet regulatory capital requirements or operate with the capital levels significantly above regulatory minimum requirements. Similarly, on country-level, banks in some countries may face more stringent capital requirements than the banks in other countries which have less stringent capital requirements. If we find significant cultural effects on bank dividend policies after controlling for bank- and country-level regulatory pressure, then we can argue that cultural forces are even more important for other less-regulated or un-regulated industries.

Bae *et al.* (2012) hypothesize and find that national culture influences dividend policies of nonfinancial firms. More specifically, they document that three dimensions of national culture—uncertainty avoidance, masculinity and long-term orientation— have negative relations with dividend payout amounts. Given their findings, we examine the relations between same three dimensions<sup>1</sup> of national culture, and bank dividend policies. We focus on the pre-financial crisis period (e.g., the period 1998–2007) in our analysis.

We derive three hypotheses based on three dimensions of national culture. First, we posit that bank insiders and outside shareholders in high uncertainty avoidance societies put heavy emphasis on the certainty that dividend payment expectations are met each period. Also, uncertainty-averse minority shareholders and bank insiders may prefer higher retained profits because they are cash resources to hedge against unforeseen financial distress. Therefore, we expect lower dividend payouts in high uncertainty avoidance societies. Second, we conjecture that in masculine cultures, agency conflicts are inherently more severe because their members are considered competitive and impatient, and are more prone to pursue opportunistic behavior rather than adhere to others' decisions and preferences. Therefore, outside shareholders are expected to demand higher level of dividends to discipline the opportunistic behavior of bank insiders. Finally, we hypothesize that in more long-term orientation countries, which tend to show greater perseverance, thrift and patience, the severity of agency conflicts is inherently lower. Consequently, investors have a lower preference for dividends as a disciplining mechanism and find lower dividend payouts culturally more acceptable.

We employ common dividends paid to total assets ratio and a dummy variable, equal to one for dividend paying banks and zero otherwise, to test the relations between three dimensions of national culture, and dividend payout amounts and the propensity to pay dividends, respectively. We use an international sample of banks from *Bankscope* database representing 51 countries over the period 1998-2007 to test our predictions about cultural dimensions and bank dividend policies. We begin by examining the impact of cultural dimensions on dividend payout amounts while controlling for bank- and country-level regulatory pressure, bank size, profitability, asset growth, minority shareholder rights, creditor rights and level of financial market development. At bank-level, we use equity to total assets ratio of each bank to control for regulatory pressure because well capitalized (weakly capitalized) banks may face lower regulatory pressure (higher regulatory pressure) while deciding about dividend payments. At country-level, bank regulators in some countries may impose more stringent capital requirements for banks and then force banks to meet capital requirements before paying any dividends. Therefore, we use regulatory capital index of Barth *et al.* (2013) to account for cross-country heterogeneity in capital requirements and regulatory pressure.

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<sup>1</sup> We use updated version of long-term orientation from Hofstede and Minkov (2010).

We estimate tobit panel regressions to examine the cultural effects on dividend payout amounts. We find negative and significant relations between uncertainty avoidance and long-term orientation cultural dimensions and dividend payout amounts, and a positive and significant relation between masculinity dimension and dividend payout amounts.

Next, we estimate logit panel regressions to examine the cultural effects on the probability to pay dividends. Similar to dividend amounts results, we find that uncertainty avoidance and long-term orientation have negative and significant relations with the probability of paying dividends, whereas, masculinity has significantly positive relation with the probability of paying dividends. To further confirm our results, we use three cultural dimensions—uncertainty avoidance, assertiveness and future orientation—from a more recent cultural framework of House *et al.* (2004). These three cultural dimensions measure almost same cultural values and, therefore, are comparable with three dimensions of Hofstede. We estimate all our models with these cultural dimensions and find similar results; uncertainty avoidance and future orientation show significantly negative and assertiveness shows significantly positive associations with both, dividend payments and the probability to pay dividends, variables.

Our paper is innovative in several aspects: First, we provide new evidence on relations between national cultural dimensions and dividend policies from banking after controlling for regulatory pressure, an area ignored by previous research. Second, in contrast to previous research in this area, we follow Brockman and Unlu (2009) and estimate tobit panel regressions to examine the cultural effects on dividend payout amounts. Tobit model is considered more appropriate when dependent variable has many same values in one tail. Third, we, first time, use cultural dimensions of House *et al.* (2004) in dividend policies research.

Our study contributes to the literature in several ways: First, to best of our knowledge, our study is the first to study the bank dividend policies in an international context. We confirm bank-level factors such as size, profitability, growth and capital; and country-level factors such as corporate governance, legal institutions, financial market development and national culture as significant determinants of bank dividend policies in an international setting. Second, we extend law and finance literature by confirming the importance of minority shareholder rights and creditor rights for bank dividend policies. Third, we contribute to national culture and finance literature (see Aggarwal and Goodell (2014) for a review), in general, and to national culture and banking literature (Kanagaretnam *et al.* 2011; Zheng *et al.* 2013), in particular, by identifying the national culture's significance for dividend policies even in a regulated industry such as banking. Fourth, we contribute to literature which argues that financial structures of higher uncertainty-avoidance cultures are more bank-based (Kwok & Tadesse 2006; Aggarwal & Goodell 2009). We examine micro-level dividend policy channel that banks in higher uncertainty-avoidance countries pay lower dividends, and one possible reason for these lower dividend payments may be to keep more funds for extending more bank loans. Finally, as Fidrmuc and Jacob (2010) relate three dimensions of national culture (uncertainty avoidance, individualism and power distance) to dividend policies based on agency problems explanation, we extend this explanation to two more cultural dimensions of masculinity and long-term orientation.

The rest of the paper is organized as follows. In section 2, we review literature and provide testable hypotheses. Section 3 introduces data. Section 4 presents empirical results. And, the final section concludes the study.

## 2. Literature review and hypotheses

### 2.1 Literature review

Since the publication of the Miller and Modigliani (1961) dividend irrelevance propositions, the extent research has been done to resolve the puzzle that “why do firms pay dividends”. Despite expansive literature<sup>2</sup>, dividend puzzle is still unresolved and one of the mainstream research topics in finance studies.

The banking studies on dividend policies to date have mainly focused on single-country contexts, and have largely tried to explain the role of bank-level characteristics in determining bank dividend policies after controlling for bank-level regulatory pressure (Dickens *et al.* 2002; Theis & Dutta 2009; Abreu & Gulamhussen 2013; Imran *et al.* 2013). Main focus of banking literature is to examine bank characteristics such as suggested by Fama and French (2001) for industrial firms<sup>3</sup>, regulatory hypothesis, and agency and signaling theory based explanations of bank dividend policies.

For example, Abreu and Gulamhussen (2013) find that firm characteristics such as size, profitability and growth opportunities suggested by Fama and French (2001) as significant determinants of dividend policies are relevant for banks. They conclude that bank holding companies having big size and higher profitability pay more dividends, whereas, the bank holding companies having more growth opportunities pay lower dividends.

Several studies have examined regulatory hypothesis<sup>4</sup> that undercapitalized banks face higher regulatory pressure for increasing capital levels by not paying dividends (Casey & Dickens 2000; Dickens *et al.* 2002; Theis & Dutta 2009; Abreu & Gulamhussen 2013). These studies use equity to total assets ratio, tier-1 capital to total assets ratio, or regulatory capital to total assets ratio as proxies of regulatory pressure and find that well capitalized banks face less regulatory pressure and pay more dividends.

Some of the banking studies have examined agency and signaling theories based explanations of bank dividend policies. Agency theory based explanation argues that dividend payments can solve the agency problems between managers and dispersed shareholders by reducing the amount of available cash to managers. John *et al.* (2010) find that agency problems are more severe in banks because of highly levered capital structure of banks. Dickens *et al.* (2002) examine the agency hypothesis and find that banks with fewer agency problems pay fewer dividends. They argue that higher percentage of insider ownership reduces agency problems and their results support that banks with higher percentage of insider ownership pay lower amount of dividends. Similarly, Abreu and Gulamhussen (2013) finds that the banks which are difficult to monitor pay out higher amount of dividends to counterbalance the increased need for monitoring. For signaling theory based explanation, Baker *et al.* (2008) find that managers of financial firms put more preference on dividends as a signaling device than the managers of non-financial firms.

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<sup>2</sup>Major theories of dividend policy include signaling (Bhattacharya 1979; Caton *et al.* 2003; Booth & Chang 2011), tax (Miller & Scholes 1978, 1982; Foley *et al.* 2007), clientele (Pettit 1977; Allen *et al.* 2000), catering (Baker & Wurgler 2004a, b), firm life cycle (DeAngelo & DeAngelo 2006; DeAngelo *et al.* 2006) and agency (Rozeff 1982; Easterbrook 1984; La Porta *et al.* 2000; Denis & Osobov 2008; Eije & Megginson 2008; Brockman & Unlu 2009) theories.

<sup>3</sup> These findings are consistent with Fama and French (2001) strand of industrial firms dividend literature which finds that big and profitable firms pay more dividends and growing firms pay less dividends (Fama & French 2001; Denis & Osobov 2008; Eije & Megginson 2008)..

<sup>4</sup> Abreu and Gulamhussen (2013) explicitly examine regulatory hypothesis.

Several studies find empirical evidence that dividend payments increase external ratings of banks (Boldin & Leggett 1995), and, therefore, banks prefer to pay dividends for signaling their future growth opportunities (Abreu & Gulamhussen 2013).

## 2.2 Our framework

To best of our knowledge, our paper is the first one to examine the bank dividend policies in an international context. Our main hypotheses are that how different dimensions of national culture affect dividend policies of banks<sup>5</sup>. To check our hypotheses, we accomplish a cross-country analysis and use bank-level control variables motivated by above banking studies and country-level control variables that can affect bank dividend policies.

For bank-level controls, we use three bank characteristics of size, profitability and growth opportunities, first suggested by Fama and French (2001) for non-financial firms and then validated by Abreu and Gulamhussen (2013), among others, for banks.

In an international context, banks may face regulatory pressure both at bank- and country-levels. For bank-level regulatory pressure, we follow Dickens *et al.* (2002) and Theis and Dutta (2009), and use equity to total assets ratio of each bank to control for regulatory pressure, faced by each bank for paying or not paying dividends depending upon its current capital level.

For country-level regulatory pressure, bank regulators in different countries impose different levels of regulatory capital requirements depending upon the overall situation of banking industry and macro-economy of the country. Therefore, regulatory capital requirements for the banking industry may be more stringent in some countries while less stringent in other countries. After setting capital requirements, regulators force banks to meet these capital requirements first and then to pay dividends if any. Considering this mechanism, we expect that banks in more stringent (less stringent) capital requirement countries face higher (lower) regulatory pressure while deciding about dividend payments, and we use regulatory capital index of Barth *et al.* (2013) to account for cross-country heterogeneity in capital requirements. This index is based on World Bank surveys on bank regulations and is calculated by summing the two sub-indices, initial capital stringency and overall capital stringency. Initial capital stringency measures whether the sources of funds counted as regulatory capital can include assets other than cash or government securities and borrowed funds, as well as whether the regulatory authorities verify these sources. Overall capital stringency indicates whether risk elements and value losses are considered while calculating the regulatory capital. We expect that regulatory capital index by capturing the cross-country differences in banking sector capital requirements is a best proxy for cross-country regulatory pressure, faced by banks, for dividend payments.

Although, national culture is expected to influence bank dividend policies as it influences other bank practices, however, some studies argue that cultural variables may act as proxies for country-level corporate governance, creditor rights and stock market development effects in a country (Stulz & Williamson 2003; Licht *et al.* 2005; Antia *et al.* 2007; Bae *et al.* 2012). On the other hand, recent literature on industrial firms emphasizes the importance of country-level shareholder protection, creditor rights and level of financial development in addition to national culture for dividend policies. For instance, La Porta *et al.* (2000)<sup>6</sup> find that firms domiciled in

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<sup>5</sup> Recent studies find that national cultural dimensions matter for different practices of banks such as banks' earnings management (Kanagaretnam *et al.* 2011) and bank lending corruption (Zheng *et al.* 2013).

<sup>6</sup> La Porta *et al.* (2000) extend agency theory based explanation of dividends and their "outcome model" of dividends suggests that strong minority shareholder rights create the country-level balance of power between firm

countries having strong minority shareholders' legal protection are more likely to pay dividends. Similarly, Brockman and Unlu (2009)<sup>7</sup> find that firms domiciled in countries having strong creditor rights pay more dividends and are more likely to pay dividends. For level of financial market development, Bae *et al.* (2012) argue that firms can easily raise new needed funds in developed financial market environment and therefore pay higher dividends in developed financial market environments. Therefore, it is important to first controlling for legal protection of shareholders and creditors, and level of financial market development to examine cultural effects on bank dividend policies.

Further, legal protection of investors and creditors is even more important in banking due to higher leverage of banks, and banks' role as lenders. Because, severe agency problems do exist in banks due to high leverage (John *et al.* 2010), therefore, strong legal protection of minority shareholders will empower them to better monitor the banks by extracting higher amount of dividends from bank insiders and will help in reducing agency problems. For creditor rights, recent literature finds that banks take more risk and extend higher amount of loans in strong creditor rights countries (Djankov *et al.* 2007; Qian & Strahan 2007; Bae & Goyal 2009; Houston *et al.* 2010). We expect that strong creditor rights, by affecting the bank risk-taking and supply of loans, will have an effect on bank dividend policies. Moreover, financial market financing sometimes substitutes bank financing consequently leading to a shift in demand for bank financing, and, in turn, is expected to have an influence on bank dividend policies. With this framework, we are now better able to examine the influence of dimensions of national culture on bank dividend policies.

### 2.3 National culture

Following Khambata and Liu (2005) and Bae *et al.* (2012), we use national cultural framework of Hofstede (2001) and Hofstede *et al.* (2010). Hofstede (2001) defines national culture as the collective mental programming that distinguishes the individuals of a nation from the individuals of other nations. Hofstede (2001) measures national culture with five dimensions; uncertainty avoidance (UAI), individualism/collectivism (IND), masculinity/feminisim (MAS), power distance (PDI) and long-term orientation/short-term orientation (LTO). Hofstede *et al.* (2010) update fifth long-term orientation dimension and add a sixth dimension, indulgence/constraint (INDULG), by using the data from world value surveys. Like Bae *et al.* (2012), we use three cultural dimensions of UAI, MAS and LTO. However, because we use recent data values of long-term orientation dimension<sup>8</sup> from Hofstede *et al.* (2010), therefore we name it LTO\_WVS<sup>9</sup>. The country scores on these three cultural dimensions reflect the relative positions versus other countries, rather than being absolute values (Table 2). Higher scores indicate higher uncertainty avoidance, masculine behavior and more long-term orientation in dominant cultural values of individuals and vice versa. Because Hofstede's initial four dimensions (UAI, MAS, IND and PDI) are based on employees' surveys of IBM subsidiaries in different countries during 1967 to

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insiders (managers and majority shareholders) and outsiders (minority shareholders) by empowering minority shareholders to extract more dividends out of insiders.

<sup>7</sup>Brockman and Unlu (2009) also extend agency theory based explanation and their "substitute model" of dividends suggests that strong creditor rights create the country-level balance of power between firm insiders and creditors by relaxing creditors' restrictions on dividend payouts

<sup>8</sup> Hofstede and Minkov (2010) introduce updated long-term orientation dimension.

<sup>9</sup> Data for long-term orientation cultural dimension from Hofstede (2001) is available for 30 countries included in our sample, whereas data for long-term orientation based on world value surveys from Hofstede *et al.* (2010) is available for our full sample. We acknowledge one anonymous referee for this comment.

1973, therefore, one concern about these dimensions is data update. To account for this concern and further validate our results, we also use three variables that capture uncertainty avoidance, assertiveness and future orientation society values of House *et al.* (2004). Cultural framework of House *et al.* (2004) is more recent and compares different cultures with nine dimensions<sup>10</sup>. This framework has country scores representing society values (should be) and society practices (as is) for each dimension. For comparison purposes, we use society values-based scores for three dimensions of House *et al.* (2004) which measure almost same society values as measured by Hofstede.

## 2.4 Hypotheses

Uncertainty avoidance is the extent to which the members of a culture feel uncomfortable with unstructured, uncertain or unknown situations and try to avoid such situations. Countries exhibiting strong UAI maintain rigid codes of belief and behavior and are intolerant of unorthodox behavior and ideas. On the other hand, weak UAI societies maintain a more stress-free attitude in which practice counts more than principle (Hofstede 2001).

High uncertainty-averse investors prefer higher dividends as suggested by bird-in-hand and catering theories of dividends. Immediate response of uncertainty-averse controlling as well as outsider shareholders is expected to grab higher dividends from the banks. However, this argument does not consider that low level of dividends can be maintained for long time and is more predictable. Shareholders in uncertainty-avoiding cultures may prefer a lower level of dividend payouts that facilitate a perception of certainty because it is easier to pay this lower level of dividends every period. After all, uncertainty avoidance is often expressed through an arrangement for predictability (Hofstede 2001). Further, uncertainty-averse managers of banks are expected to keep more cash and pay lower dividends to handle possible financial difficulties in the future. As firms' dividend payout decisions rest primarily in their managers' (and board of directors') hands, managers in general prefer to pay lower dividends in the face of high UAI, suggesting a negative relation between a country's UAI score and dividend levels. This negative relation is further strengthened by Kwok and Tadesse (2006) and Aggarwal and Goodell (2009)'s findings that higher uncertainty-averse cultures are more bank-based. In bank-based financial system, only possible option for borrowers is to rely on bank financing, and managers of banks are expected to retain more profits for extending more bank loans. Hence, we expect a negative association between UAI and bank dividend policies.

**H1.** *Banks in high uncertainty avoidance countries tend to have low dividend payouts.*

Masculinity indicates the extent of tough values such as assertiveness, success and competitiveness in dominant values of a society. On opposite end, femininity stands for tender values such as a preference for cooperation, caring for the weak, modesty, and quality of life. Feminist societies at large are more consensus-oriented (Hofstede 2001).

Doney *et al.* (1998) argue that cultural masculinity/femininity influence the likelihood that the targets will act opportunistically, as well as the costs/ rewards associated with such behavior. They further argue that achievement in masculine societies is associated with individual wealth and position, and the likelihood that a target will act opportunistically is higher in these cultures.

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<sup>10</sup> House *et al.* (2004) establish nine cultural dimensions to capture the similarities and/or differences in values and practices among societies. These are power distance, uncertainty avoidance, humane orientation, collectivism I (institutional), collectivism II (in-group), assertiveness, gender egalitarianism, future orientation, and performance orientation.

In a similar way, Hofstede (1984) argue that evidence from psychology, anthropology, and political science confirms a pattern of assertiveness and aggressiveness in masculine cultures, which is fully consistent with a tendency toward opportunism. In masculine countries, stress on tough values, such as visible achievement and making money, suggest that the potential rewards to involve in opportunistic behavior may well exceed the costs. For example, Newman and Nollen (1996) find that masculine cultures have asymmetric nature of performance rewards and penalties; managers are paid much higher compensation for good performance as compared to the penalty which is imposed when the performance is poor. Thus, in masculine cultures, individuals may give more weight to rewards that might accrue from opportunistic behavior. Consequently, investors in these cultures will not trust bank insiders and, as a result, may not accept low dividend payouts and invest only in those banks with high dividend payouts. Banks, in turn, have a motivation to pay the expected level of dividends to reduce greater expropriation concerns because failing to do so can cause huge economic costs due to depositor runs. Contrary, opportunistic behavior is unlikely in feminine countries, because it is inconsistent with the value system that encourages nurturing, and a tendency toward less aggressive, more cooperative behavior. Further, as opportunistic behavior is not an acceptable norm in such societies, the costs associated with involving in such a behavior would be quite high. Thus, feminine managers of banks are expected to less involve in opportunistic behavior and we posit that where feminine values prevail, agency conflicts are inherently less severe and shareholders accept lower dividend payouts.

***H2. Banks in masculine countries tend to have high dividend payouts.***

Long-term orientation indicates the extent of preference for future rewards such as perseverance and thrift. Its opposite limit, short-term orientation indicates the extent of fostering the virtues related to the past and present, particularly, respect for tradition, fulfilling social obligations and preservation of 'face' (Hofstede 2001).

Long-term orientation represents values such as patience and preference for long-term results. Doney *et al.* (1998) argue that in long-term relationships, participants will focus on long-term performance and results, and are less likely to involve in opportunistic behavior. Thus, we posit that agency conflicts are less severe in long-term orientation cultures and, consequently, investors have less preference for dividends as a disciplining mechanism. Further, expectation that long-term oriented investors will easily forego today's consumption of dividends for more cash in the future, and that long-term oriented managers of banks will prefer long-term loans and investments, reinforces our argument of lower dividend payouts in long-term orientation countries.

On the other hand, individuals belonging to short-term orientation cultures stress more on short-term results such as this year's or this quarter's profits (Hofstede & Minkov 2010). As Doney *et al.* (1998) argue that tendency to involve in opportunistic behavior is higher when short-term results are emphasized. Thus, we posit that agency conflicts are more severe in short-term orientation cultures and, consequently, investors have more preference for dividends as a disciplining mechanism.

***H3. Banks in long-term orientation countries tend to have low dividend payouts.***

### 3. Data

We download annual financial accounting information for bank holding companies, and commercial, cooperative and savings banks from *Bankscope* database. Cultural variables are obtained from two culture measuring studies of Hofstede *et al.* (2010) and House *et al.* (2004). Regulatory capital index is taken from Barth *et al.* (2013). We obtain shareholder rights and creditor rights information from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively—two studies that update the La Porta *et al.* (1998) database. Financial market development measure is obtained from the World Development Indicators of the World Bank.

We begin our sample construction by deleting all bank observations not having necessary accounting information or having negative equity to total assets ratios. After applying all filters, we obtain a sample of 41,343 bank observations from 7,918 unique banks across 51 countries during the period 1998-2007. We winsorize all bank-level variables at one and ninety-nine percent levels to eliminate the outlier effects.

We examine the impact of national cultural dimensions on dividend payout amounts and the probability of paying dividends using tobit and logit specifications. For the tobit specifications, we measure dividend amounts, Dividends, by scaling common dividends paid by total assets. For the logit models, we create a dividend payer dummy, Payer\_Dummy, which equals one if dividends paid are positive, and zero otherwise.

Our independent variables are grouped into two categories: country-specific variables and bank-specific variables. The main country-specific variables are three dimensions of national culture from two cultural frameworks as explained in sub-sections 2.3, 2.4 and 4.3.

Other country-specific control variables include regulatory capital index, shareholder rights, creditor rights and financial market development. Regulatory capital index, Reg\_Cap, is taken from Barth *et al.* (2013) and is calculated by summing the two sub-indices, initial capital stringency and overall capital stringency as explained in sub-section 2.2. Regulatory capital index ranges from zero to ten, where higher values indicate more stringent capital requirements and lower values indicate less stringent capital requirements. Since this index is based on World Bank surveys on bank regulations conducted in 1999, 2003, 2007 and 2011, therefore, we follow Agoraki *et al.* (2011) and use information from survey conducted in 1999 for bank observations over the period 1998–2000, from 2003 survey for bank observations over the period 2001–2003, and from 2007 survey for bank observations over the period 2004–2007. The shareholder rights index, Shareholder\_Protection, proxy by revised anti-director index of Djankov *et al.* (2008) measures the strength of control rights granted by the law to the minority shareholders. The index ranges from one (weak shareholder rights) to five (strong shareholder rights). Similarly, creditor rights index, Creditor\_Rights, from Djankov *et al.* (2007) measures the legal rights of creditors against debtor in case of reorganization or liquidation. The index ranges from zero (weak creditor rights) to four (strong creditor rights). We use annual market capitalization of listed companies to GDP ratio for each country to proxy the level of financial market development.

We use four variables to control for bank-specific characteristics. These widely used controls include size (Log\_TA), assets growth (Growth\_TA), profitability (ROE) and equity ratio (Equity\_TA). Log\_TA is the logarithm of annual total assets measured in thousand \$US, Growth\_TA is year-on-year growth rate of total assets, ROE is net income scaled by total average equity and Equity\_TA is shareholders' equity scaled by book value of total assets. Equity\_TA act as a proxy of bank-level regulatory pressure also. All of our bank-specific variables are computed at fiscal year-end. The predicted signs between our bank-specific

variables and dividend policy variables are as follows: Log\_TA (+), Growth\_TA (-), ROE (+) and Equity\_TA (+/-)<sup>11</sup>.

## 4. Empirical results

### 4.1 Summary statistics

Table 1 reports summary statistics for the main variables. The mean value for our dividends paid to total assets ratio, Dividends, is 0.11%. The mean of payer dummy variable is 38%, suggesting that the sample has a majority of dividend non-paying banks. Other bank-level variables also show considerable variation. In Table 2, we report the distribution of banks across countries. Germany has highest bank observations (14,948) and New Zealand has lowest (22). We note that like most of the international studies' samples, bank observations are high from some countries and lower from others. Table 3 reports pair-wise correlations between variables.

[Insert Table 1 here]

[Insert Table 2 here]

[Insert Table 3 here]

### 4.2 Cultural dimensions and dividend payouts

In this section, we examine the relations between Hofstede's three dimensions of national culture and two dividend policy variables: (1) the amount of dividend payouts and (2) the probability of paying dividends. We estimate tobit and logit regressions including control variables suggested by previous research.

#### 4.2.1 Multivariate tobit analysis: national cultural dimensions and dividend amounts

In Table 4, we report the results of tobit<sup>12</sup> regressions. Our tobit model is specified as follows (with bank subscripts suppressed):

$$\begin{aligned} Dividends_t = & \beta_0 + \beta_1 Cultural\ Dimensions + \beta_2 Log\_TA_t + \beta_3 Equity\_TA_t \\ & + \beta_4 Growth\_TA_t + \beta_5 ROE_t + \beta_6 Reg\_Cap_t + \beta_7 Shareholder\_Protection \\ & + \beta_8 Creditor\_Rights + \beta_9 Market\_GDP_t + \beta_{10-18} Year\_Dummies_t \\ & + \varepsilon_t \quad Eq. (1) \end{aligned}$$

where *Dividends* is equal to common dividends paid to total assets ratio if this ratio is positive in year *t* for bank (index suppressed), and zero otherwise. Other variables are defined above.

We estimate five variations of regression Eq. (1) and report the results in columns 1–5 of Table 4. In model 1 we estimate a baseline model by including bank- and country-level control variables only. Most of the variables show significant results in expected directions. Positive and significant coefficients of Log\_TA and ROE indicate that banks having big size and more

<sup>11</sup> DeAngelo *et al.* (2006) argue that predicted sign for equity to total assets ratio is ambiguous. A firm with a low equity to total assets ratio might be in financial trouble and therefore not pay dividends, whereas, a firm with a high equity ratio might not pay dividends because it is a start-up firm.

<sup>12</sup> We use panel random effects tobit models. As our model includes time-constant cultural and legal variables, therefore, we cannot use fixed-effects tobit regressions (Woolridge 2002). We use likelihood-ratio test to compare the results of random effects tobit model with the results of pooled tobit model for each of our estimated tobit model. Likelihood ratio test check the null hypothesis that variance component in random effects model is equal to zero. We observe that the results of the likelihood ratio test reject the null hypothesis with high chibar2 (e.g., chibar2= 16,448 for model 5 in Table 4) and *p*-value=0.00 favoring random effects model over pooled model.

profitability pay more dividends, whereas, negative and significant coefficient of Growth\_TA indicate that banks having higher growth opportunities pay lower dividends.

For regulatory pressure variables, positive and significant coefficient of Equity\_TA shows that well-capitalized banks face lower regulatory pressure and pay higher amount of dividends.

Similarly, negative and significant coefficient of Reg\_Cap shows that banks in countries where regulators impose more stringent capital requirements for banks pay lower dividends. These results of Equity\_TA and Reg\_Cap variables support regulatory hypothesis for bank dividend policies.

Positive and significant coefficient of shareholder protection variable confirms the findings of La Porta *et al.* (2000) related to the outcome hypothesis; that is, the banks pay more dividends in countries having strong legal protection of minority shareholders. Opposite to Brockman and Unlu (2009)'s substitute hypothesis that managers of industrial firms pay lower amount of dividends in weak creditor rights countries to reduce agency costs of debt, we find a negative and significant relation between creditor rights index and dividend payouts.

Two facts, banks' role as lenders and a major portion of bank liabilities from a large number of small depositors, justify negative relation of creditor rights index with the dividend payout amounts. Firstly, strong creditor rights ensure loan recoveries by providing lenders more rights in case of financial difficulties/bankruptcy of borrowers. Based on this notion, numerous studies have found that banks take more risk and extend more loans in strong creditor rights countries (Qian & Strahan 2007; Bae & Goyal 2009; Houston *et al.* 2010). This suggests that managers pay lower amount of dividends and retain more profits for extending higher amount of loans in strong creditor rights environments. And secondly, the creditors of industrial firms restrict dividend payouts in weak creditor rights countries by including more formal covenants in loan agreements. But, major source of funds for banks is large number of small depositors who lend to banks on standard terms. This fact, further, reinforces our negative relation between creditor rights and dividend payouts. Previous research has acknowledged this opposite relation of creditor rights in banking as compared to industrial firms with respect to risk-taking behaviors; Houston *et al.* (2010) find a positive and significant relation between creditor rights index and bank risk-taking and Acharya *et al.* (2011) report a negative and significant relation between creditor rights index and industrial firms risk-taking.

Positive and significant relation between stock market capitalization to GDP ratio, Market\_GDP, and dividend amounts is in line with the substitution effect of bank lending and market financing. Boot and Thakor (2000)'s model suggests that bank lending is substituted by market financing as capital markets develop. Financial market development enhances welfare for borrowers by increasing market prices-based capital market financing, and by reducing high cost transaction or relationship bank lending. In addition, developed capital markets help the borrowers to easily raise needed funds. Due to enhanced welfare and easy access, market financing substitutes the bank credit, thereby, lowering demand for new bank loans. Therefore, managers of banks have lower incentives to retain profits than to distribute as dividends.

Results of our baseline model are consistent with the previous research and the nature of banking industry, and validate our model for further estimation of cultural effects.

In models 2, 3 and 4 we include UAI, MAS and LTO\_WVS cultural dimensions one-by-one, respectively. The estimated coefficients for the UAI (-0.005) and LTO\_WVS (-0.002) are negative and highly significant, consistent with our hypotheses H1 and H3, respectively. The amount of dividends decreases with UAI and LTO\_WVS, suggesting that higher uncertainty-averse and long-term orientation investors demand lower (and smooth) dividends. The estimated

coefficient for the MAS (0.006) is positive and highly significant, consistent with our hypothesis H2. The amount of dividends increases with MAS, suggesting that investors demand and managers pay the higher dividends to reduce agency costs and signal better performance of the bank to shareholders and depositors.

In model 5 we include three cultural dimensions simultaneously. Results remain same. That is, UAI and LTO enter significantly negative and MAS enters significantly positive.

Overall, our Table 4 results are consistent with our three hypotheses and confirm significant cultural effects on bank dividend payout amounts. We can compare these results with previous literature. Negative relations of UAI and LTO dimensions with dividend amounts are consistent with Khambata and Liu (2005) and Bae *et al.* (2012) findings. Our positive relation of MAS dimension is not consistent with Bae *et al.* (2012) who find a negative relation of same variable with industrial firms dividend payout amounts. There can be several reasons for this conflicting result. For example, John *et al.* (2010) argue that, due to higher leverage, agency problems are more severe in banks, and outside monitoring helps in reducing these agency problems. Given that dividend policies are considered an important tool in resolving agency problems and given that agency problems are more severe in high masculine cultures due to individuals' higher tendency to involve in opportunistic behaviors, higher dividend payments in high masculine cultures can be considered a strategy by investors and banks to reduce agency conflicts.

Further, Baker *et al.* (2008) argue that banks have higher incentives to signal their performance because if banks fail to do so, they can lose depositors' confidence which can lead to widespread bank-runs. They find that managers of financial firms perceive dividends more important as a signal of performance than their counterparts in non-financial firms. Their findings further suggest that managers of financial firms attach different level of importance to some underlying factors which play important role while deciding about a dividend payment. Specifically, they find that managers of financial firms give less weight to financial leverage, cost of raising new funds and contractual constraints such as dividend restrictions in debt contracts, than the managers of non-financial firms while deciding about dividend payments. This difference in perception and giving importance to underlying factors let the managers of financial firms to pay dividends for signaling their performance, on one hand, and restrict the managers of non-financial firms to not pay dividends for decreasing cost of financing, on the other hand.

An alternate explanation of different result of MAS with bank dividend policies can be extended based on social trust theory. Aggarwal and Goodell (2014) argue that social trust is an important component of transaction costs and, therefore, it is important to consider social trust as a factor in assessing firms' financing choices. Social trust can be considered more important for banks than the nonfinancial firms because banks attract dispersed depositors as their main source of financing. Depositors are more likely to keep their money in those banks which are trustworthy for repayment. Aggarwal and Goodell (2014) argue that national culture may affect the financing choices through the channel of social trust. While relating national culture to trust building process, Doney *et al.* (1998) argue that in environments of high masculinity, creditor trust is more likely formed through a process of calculation and capability. Trust building by means of a capability process involves a creditor's willingness to trust based on an assessment of the borrower's ability to repay the liabilities. Establishing trust through a calculative process involves an analysis of the extent that the benefits of cheating do not exceed the costs of being caught. The creditor infers that it would be contrary to the borrower's best interest to cheat; therefore the borrower can be trusted. As, dividends are considered a signal of performance, the

higher level of dividend payments in high masculinity countries signals that banks are capable enough to not cheat in repaying their liabilities.

In addition, our results also confirm relations between previously identified bank-level variables and dividend amounts, in an international context. Our results also confirm validity of outcome hypothesis of La Porta *et al.* (2000) in banking.

[Insert Table 4 here]

#### 4.2.2 Multivariate logit analysis: national cultural dimensions and the propensity to pay dividends

In Table 5, we report the results of logit regressions. Our logit model is specified as follows (with bank subscripts suppressed):

$$\begin{aligned} \text{Prob}(\text{Payer\_Dummy}_t = 1) & \\ &= F(\beta_0 + \beta_1 \text{Cultural Dimensions} + \beta_2 \text{Log\_TA}_t + \beta_3 \text{Equity\_TA}_t \\ &+ \beta_4 \text{Growth\_TA}_t + \beta_5 \text{ROE}_t + \beta_6 \text{Reg\_Cap}_t + \beta_7 \text{Shareholder\_Protection} \\ &+ \beta_8 \text{Creditor\_Rights} + \beta_9 \text{Market\_GDP}_t) \quad \text{Eq. (2)} \end{aligned}$$

where *Payer\_Dummy* takes the value of one if the bank (index suppressed) paid a dividend in year *t*, and zero otherwise. Other variables are defined above.

Like Eq. (1), we estimate five variations of regression Eq. (2) and report the results in columns 1–5 of Table 5. The logit results for the probability to pay dividends in Table 5 are quite similar to the tobit results for dividend payments presented in Table 4 except equity to total assets ratio. This finding is also not beyond expectation for banking and suggests that due to regulatory pressure, banks are more likely to increase equity ratio by not paying dividends. Another reason for this finding is that our sample includes many start-up banks due to financial deregulation in many countries over the sample period. These start-up banks have high equity ratios and do not pay dividends, thus, causing significantly negative association of equity ratio with the probability of paying dividends; a finding consistent with DeAngelo *et al.* (2006) arguments. Other control variables, also, enter significantly in expected directions. For bank-level controls, the results show that the big-in-size and more profitable banks are more likely to pay dividends and rapidly growing banks are less likely to pay dividends.

For country-level controls, negative and significant coefficient of *Reg\_Cap* confirms the regulatory hypothesis that banks are less likely to pay dividends in stringent capital requiring countries. Again, positive and significant coefficient of shareholder protection variable confirms the findings of La Porta *et al.* (2000) related to the outcome hypothesis. For creditor rights, similar to dividend amounts results, banks are less likely to pay dividends in strong creditor rights countries. And we expect that banks are less likely to pay dividends to supply higher amount of loans in strong creditor rights countries. In addition, positive and significant *Market\_GDP* suggests that demand for bank loans is lower in developed financial market countries due to substitution effect, and the banks are more likely to pay dividends than to retain excess profits.

In models 2, 3 and 4 we include *UAI*, *MAS* and *LTO\_WVS* cultural dimensions one-by-one, respectively. The estimated coefficients for the *UAI* (-0.019) and *LTO\_WVS* (-0.030) are negative and highly significant, consistent with our hypotheses H1 and H3, respectively. The likelihood of paying dividends decreases with *UAI* and *LTO\_WVS*, suggesting that managers having higher uncertainty-aversion or long-term orientation are less likely to pay dividends. The estimated coefficient for the *MAS* (0.058) is positive and highly significant, consistent with our hypothesis H2. The likelihood of dividend payouts increases with *MAS*, suggesting that

investors/managers are more likely to demand/pay dividends to reduce agency problems and signal better performance to shareholders.

In model 5 we include three cultural dimensions simultaneously. Results remain same. That is, UAI and LTO enter significantly negative and MAS enters significantly positive.

Overall, the results in Table 5 are consistent with the dividend amount results in Table 4. Both sets of results support that investors/managers having higher uncertainty-aversion and long-term orientation are less likely to demand/pay dividends and demand/pay lower amount of dividends. And, investors/managers having more masculine cultural values are more likely to demand/pay dividends and demand/pay higher amount of dividends.

**[Insert Table 5 here]**

### **4.3 House et al.'s national cultural dimensions and dividend payouts**

To, further, confirm our above results, we also examine national cultural effects on bank dividend policies by using comparable three dimensions of national culture from House et al.'s cultural framework. We use uncertainty avoidance (UA\_Globe), assertiveness (Assertiveness\_Globe) and future orientation (FO\_Globe) dimensions. Higher values of uncertainty avoidance dimension indicate more stress on orderliness, consistency and more use of detailed instructions to tell people what they are expected to do. Higher values of assertiveness indicate more competitiveness and assertiveness in society values. And, higher values of future orientation indicate higher planning and living for the future society values. These three dimensions of House *et al.* capture almost same values as captured by UAI, MAS and LTO\_WVS dimensions of Hofstede, respectively. As reported in Table 3, correlation between UAI and UA\_Globe is 0.45, between MAS and Assertiveness\_Globe is 0.58 and between LTO\_WVS and FO\_Globe is -0.17. Based on our above results and based on value constructs which House et al.'s these three dimensions measure we expect negative (positive) associations of uncertainty avoidance and future orientation (assertiveness) dimensions with dividend amounts, Dividends, and the probability of paying dividends, Payer\_Dummy, variables. We estimate five variations of regression Eq. (1) by including House *et al.*'s dimensions and report the tobit results in Table 6. The estimated coefficients of all control variables are consistent across all five regressions, as well as being consistent with the results in Table 4. In regressions 2 and 4, we find negative and significant relations between the dividend payout amounts and UA\_Globe (-0.185) and FO\_Globe (-0.304) dimensions, respectively. In regression 3, we find positive and significant relation between dividend payouts and Assertiveness\_Globe (0.067).

We estimate five variations of regression Eq. (2) by including House et al.'s dimensions and report the logit results in Table 7. The estimated coefficients for our all control variables are consistent across all five regressions, as well as being consistent with the results in Table 5. Similar to our Table 6 results, we find negative and significant relations between the probability of paying dividends and UA\_Globe (-2.122) and FO\_Globe (-2.831) dimensions, respectively, and a positive and significant relation between the probability of paying dividends and Assertiveness\_Globe (0.740).

Overall, our results in Tables 6 and 7 are consistent with our hypotheses H1, H2 and H3 and strongly support our results in Tables 4 and 5; that is, investors/managers having higher uncertainty aversion or future orientation are less likely to demand/pay dividends and

demand/pay lower amount of dividends, and investors/managers having higher assertive values are more likely to demand/pay dividends and demand/pay higher amount of dividends.

**[Insert Table 6 here]**

**[Insert Table 7 here]**

#### 4.4 Robustness tests

We apply several robustness tests to further validate our main results. First, we include several additional control variables in our main tobit specifications, Eq. (1), and report the results in Table 8. In model 1, we include alternate proxy of shareholder protection, anti-self-dealing index, from Djankov *et al.* (2008). Higher values of this index indicate strong legal protection for minority shareholders and similar to Shareholder\_Protection, this variable also enters positive and significant. In model 2, we follow Kwok and Tadesse (2006) and Aggarwal and Goodell (2009), and proxy financial structure of a country with Market\_Bank variable which is calculated by dividing 'stock market capitalization to GDP ratio' to 'bank credit to GDP ratio'. This variable measures that whether financial structure of a country is bank-based or market-based, and enters negatively significant. We also include proxies of legal origin, and law and order situation of a country. Civil\_Legal\_Origin equals one if a country belongs to civil legal origin, and zero otherwise. Rule\_of\_Law variable is obtained from Kaufmann *et al.* (2010) and measures the extent to which agents have confidence in and abide by the rules of society, the police, and the courts, and the likelihood of crime and violence. Finally, cultural dimensions used in our main analyses can proxy for the cultural dimensions which we have not considered in our analyses. To eliminate this concern, we include remaining two, individualism/collectivism (IND) and power distance (PDI), of the five dimensions of Hofstede (2001) and a sixth dimension, indulgence/restraint (INDULG), recently added by Hofstede *et al.* (2010) in our tobit regressions. In high IND countries, the ties between individuals are loose and everyone is expected to look after himself or herself or his or her immediate family. PD index measures the degree of inequality and dependence in a society. Indulgence stands for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun, and restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms. As shown, in Table 8, the results of our focused three dimensions remain same and consistent. Only the result of LTO\_WVS weakens in model 5, but still coefficient remains negative. Positive and significant association of IND, and negative and significant association of PDI with dividend payout amounts variable are consistent with the results of Fidrmuc and Jacob (2010).

**[Insert Table 8 here]**

Second, although we control our regressions for shareholder protection, creditor rights and financial development to determine cultural effects, however, some studies find that national cultural dimensions are correlated with legal protection of shareholders and creditors, and level of financial development (Stulz & Williamson 2003; Licht *et al.* 2005). As shown in Table 3, UAI has 0.16, -0.34 and -0.21, MAS has -0.03, 0.16 and 0.01, and LTO\_WVS has 0.21, 0.29 and 0.08 correlations with Shareholder\_Protection, Creditor\_Rights and Market\_GDP, respectively, in our sample. Therefore, to eliminate the concern that our cultural dimensions are not representing other factors, we follow Bae *et al.* (2012), and use orthogonal variables procedure. For this purpose, we first estimate a regression model of each of UAI, MAS, and LTO\_WVS as a dependent variable against Shareholder\_Protection, Creditor\_Rights and Market\_GDP, and

name predicted residuals as UAI\_Orthog, MAS\_Orthog and LTO\_WVS\_Orthog, respectively. Then we use these residuals based orthogonal cultural variables in place of original three cultural dimensions in Eq. (1) and re-estimate tobit models. As these orthogonal cultural variables have zero correlations with Shareholder\_Protection, Creditor\_Rights and Market\_GDP, therefore, the estimated regression coefficients of orthogonal cultural variables are expected to not contain wrong proxy effects or any symptoms of multicollinearity. Tobit regression results reported in models 1 to 4 of Table 9, show that the orthogonal cultural variables enter qualitatively in same way as the main dimensions of culture enter in Table 4. These results suggest that national cultural effects on bank dividend policies, found in our above analyses, are not suffered by the multicollinearity problem, or are not due to wrong proxy effects between cultural and other variables.

Further, we follow Bae *et al.* (2012) and estimate Eq. (1) with Fama and MacBeth two step regressions. Fama and MacBeth (1973) regression approach, by taking into account cross- and serial-correlations in the error term, is an alternate regression analysis method when errors are not independent. Models 5 to 8 in Table 9 report Fama-MacBeth regression results with each of the three dimensions individually and simultaneously. Coefficients are comparatively a little small; however, these results qualitatively are consistent with tobit regression results.

**[Insert Table 9 here]**

Third, majority of the bank observations (sixty-two percent) included in our sample represent dividend non-payer banks, and have zero values for dependent variable ‘Dividends’. A large number of zero values of dependent variable (i.e., limited dependent variable) can bias results. Tobit regression model, used in our above analyses, takes into account this limited dependent variable bias by censoring observations having zero values for dependent variable (Long 1997). However, to further confirm the effect of this bias if any, we delete all bank observations with zero values for Dividends variable and re-estimate Eq. (1). Results of models 1-4 shown in Table 10 indicate that the coefficients of cultural dimensions qualitatively remain same.

Finally, we confirm that our results are not biased due to large number of bank observations from single country. We exclude all bank observations of Germany (14,948 bank observations) and re-estimate Eq. (1). Results reported in models 5-8 of Table 10 appear same and consistent. Results of these robustness checks provide confirmatory evidence on the significant cultural effects on bank dividend policies.

**[Insert Table 10 here]**

## 5. Conclusion

We address the primary research question that how various dimensions of national culture influence the dividend policies of banks. Given the important role of national culture for the cross-country differences in managerial behavior and the important role of banking for national as well as global economies, absence of prior evidence on the implications of national culture for bank dividend policies is surprising.

Our empirical analyses are based on an international sample of 41,343 bank-year observations from 7,918 unique banks across 51 countries during the period 1998–2007. We examine the relations between the three dimensions of national culture of Hofstede and dividend payout amounts, and the likelihood of paying dividends, while controlling for bank- and country-level regulatory pressure, bank size, profitability, assets growth, shareholder rights, creditor rights and

level of financial market development. We find that banks in high uncertainty avoidance and more long-term orientation countries pay lower amount of dividends and, are less likely to pay dividends. And banks in high masculinity countries pay higher amount of dividends and, are more likely to pay dividends.

We confirm our results by employing comparable three cultural dimensions of House *et al.* (2004). Consistent with expectation, we find that uncertainty avoidance and future orientation (assertiveness) show significant and negative (positive) relations with dividend payout amounts and the propensity to pay dividends variables.

Similar to Bae *et al.* (2012) findings for non-financial firms, our results suggest that cultural values of higher uncertainty avoidance and long-term orientation restrict banks in paying more dividends. However, opposite to Bae *et al.* (2012)'s findings that managers of non-financial firms having MAS society values pay less dividends, we find that investors demand and managers of banks pay higher amount of dividends to reduce agency problems and signal performance of banks in MAS societies. In this way, we support the extent literature which argues that dividend policies of financial and nonfinancial firms are different (Baker *et al.* 2001; Baker *et al.* 2008), and suggests to keep banking and non-financial firms separate to better understand the dividend puzzle.

In sum, our study confirms strong influence of the three dimensions of national culture on bank dividend policies.

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**Table 1: Full sample statistics**

<b>Variables</b>	<b>Countries</b>	<b>Observations</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min</b>	<b>Max</b>
Dividends	51	41,343	0.11	0.37	0.00	2.74
Payer_Dummy	51	41,343	0.38	0.49	0.00	1.00
Log_TA	51	41,343	13.43	1.83	9.24	18.96
Equity_TA	51	41,343	9.97	9.14	1.35	74.75
Growth_TA	51	41,343	11.03	25.31	-37.73	149.57
ROE	51	41,343	6.32	12.10	-55.33	47.10
UAI	51	41,343	70.38	17.20	8.00	100.00
MAS	51	41,343	63.69	19.29	5.00	95.00
LTO_WVS	51	41,343	70.45	19.58	4.00	100.00
UA_Globe	42	39,556	4.15	0.58	3.34	5.77
Assertiveness_Globe	42	39,556	3.75	0.95	2.68	5.84
FO_Globe	42	39,556	5.32	0.28	4.49	6.33
Reg_Cap	51	41,343	6.15	1.42	2.00	10.00
Shareholder_Protection	51	41,343	3.62	0.88	1.00	5.00
Creditor_Rights	51	41,343	2.26	0.93	0.00	4.00
Market_GDP	51	41,343	0.78	0.61	0.02	5.49

Dividends is the common dividends paid to total assets ratio. Payer\_Dummy equals one if the bank pays dividend and zero otherwise. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UAI, MAS and LTO\_WVS are Hofstede *et al.* (2010)'s three cultural dimensions representing uncertainty avoidance, masculinity and long-term orientation, respectively. UA\_Globe, Assertiveness\_Globe and FO\_Globe are House *et al.* (2004)'s three cultural dimensions representing uncertainty avoidance, assertiveness and future orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio.

**Table 2: Country-wise distribution of sample and mean values**

Sr. #	Country	Observations	Dividends	Payer_Dummy	Log_TA	Equity_TA	Growth_TA	ROE	UAI	MAS	LTO_WVS	Reg_Cap	Shareholder_Protection	Creditor_Rights	Market_GDP
1	ARGENTINA	562	.023	.027	12.5	23.4	15.2	-.093	86	56	20	6.71	2	1	.447
2	AUSTRALIA	86	.255	.337	14.9	12.6	7.85	9.56	51	61	21	6.52	4	3	1.22
3	AUSTRIA	1743	.021	.064	13	9.17	8.47	7.28	70	79	60	6.83	2.5	3	.34
4	BELGIUM	419	.15	.248	13.9	15.2	9.92	7.11	94	54	82	6.15	3	2	.765
5	BRAZIL	917	.659	.546	13.4	21.3	24.1	13.7	76	49	44	5.66	5	1	.456
6	BULGARIA	128	.084	.094	12.4	14.3	31.6	13.1	85	40	69	7.37	3	2	.166
7	CANADA	183	.03	.148	13.2	15.6	9.67	5.6	48	52	36	4	4	1	1.15
8	CHINA	342	.076	.278	15	9.93	24.5	11.9	30	66	87	3.58	1	2	.805
9	COLOMBIA	124	.043	.081	13.5	13.3	14.6	7.78	80	64	13	5.44	3	0	.201
10	CROATIA	269	.073	.13	12.4	16.1	17.6	5.93	80	40	58	4.71	2.5	3	.319
11	CZECH REPUBLIC	148	.179	.27	14.5	8.2	19.7	8.31	74	57	70	4.62	4	3	.247
12	DENMARK	605	.222	.466	12.6	14.2	13.5	10.1	23	16	35	5.68	4	3	.661
13	EGYPT	237	.401	.54	14.2	9.48	15.1	10.5	80	45	7	5	3	2	.485
14	EL SALVADOR	80	.181	.362	13.1	16	15.3	10.2	94	40	20	3.51	2	3	.197
15	FINLAND	41	.274	.366	15.8	15.2	22.8	13.6	59	26	38	4.54	3.5	1	1.43
16	FRANCE	1708	.236	.354	14.3	11.2	7.21	7.59	86	43	63	5.91	3.5	0	.893
17	GERMANY	14,948	.046	.468	13.2	5.97	4.91	4.63	65	66	83	6.39	3.5	3	.535
18	GHANA	27	1.04	.444	11.5	11.5	37.3	29.9	65	40	4	7.26	5	1	.147
19	GREECE	67	.139	.358	15.5	10.8	36.6	7.81	100	57	45	4.31	2	1	.74
20	HONG KONG	162	.472	.506	14.6	17	9.65	11	29	57	61	5.09	5	4	4.04
21	HUNGARY	192	.355	.37	13.7	11.8	18.7	11.6	82	88	58	7.47	2	1	.281
22	INDIA	523	.157	.711	14.6	7.37	20	13.9	40	56	51	6.74	5	2	.571
23	INDONESIA	476	.25	.277	13.1	12.4	23.8	12.6	48	46	62	6.63	4	2	.289
24	IRELAND	75	.319	.52	15.9	8.94	28.1	11.4	35	68	24	4.59	5	1	.665
25	ISRAEL	123	.089	.35	15.3	7.41	5.96	6.28	81	47	38	5.96	4	3	.687
26	ITALY	1757	.058	.152	13.1	12.6	10.5	6.97	75	70	61	4.39	2	2	.525
27	JAPAN	5691	.022	.529	14.6	5.62	2.36	-.575	92	95	88	5.25	4.5	2	.817
28	MALAYSIA	106	.27	.443	14.3	22.7	6.41	8.5	36	50	41	3.77	5	3	1.47
29	MEXICO	323	.133	.189	14.3	18.6	26.7	6.71	82	69	24	6.93	3	0	.261
30	MOROCCO	62	.118	.226	15.4	8.49	15.7	7.24	68	53	14	5.55	2	1	.45
31	NETHERLANDS	218	.1	.174	15.2	15.7	14	10.6	53	14	67	6.25	2.5	3	1.19
32	NEW ZEALAND	22	.415	.5	16.1	5.86	11.9	19.5	49	58	33	2.59	4	4	.388
33	NIGERIA	201	.702	.577	12	15.5	45.6	22.3	55	60	13	6.85	4	4	1.27
34	NORWAY	375	.114	.181	13.3	10.5	15.9	10	50	8	35	8.34	3.5	2	.706
35	PAKISTAN	145	.169	.262	13.3	11	28.1	10.1	70	50	50	8.34	4	1	.284
36	PERU	123	.098	.13	13.3	14.5	14.3	8.1	87	42	25	3.88	3.5	0	.362
37	PHILIPPINES	108	.182	.343	13.4	18.5	15.3	4.57	44	64	27	6.56	4	1	.528
38	POLAND	170	.225	.188	13.9	12.3	25.9	11.4	93	64	38	4.48	2	1	.298
39	PORTUGAL	112	.132	.339	15	10.6	16	9.08	99	31	28	7.79	2.5	1	.488
40	KOREA REP.	39	.077	.179	15.2	5.67	18.2	7.01	85	39	100	4.51	4.5	3	.649
41	ROMANIA	153	.209	.203	13.2	17.1	41.7	9.43	90	42	52	5.03	5	1	.148
42	RUSSIA	2204	.029	.07	11.4	20	42.1	12.2	95	36	81	7.81	5	2	.928
43	SINGAPORE	64	.521	.531	14.9	21.5	16.4	11.6	8	48	72	7.14	5	3	1.93
44	SOUTH AFRICA	129	.56	.512	14.2	23.7	24.9	16.4	49	63	34	7.84	5	3	2.12
45	SPAIN	462	.053	.238	14.5	11	14.2	8.93	86	42	48	9	5	2	1.04
46	SWEDEN	517	.047	.044	12.1	14.1	11.3	9.52	29	5	53	3.56	3.5	1	1.09
47	SWITZERLAND	2777	.27	.509	12.6	11.4	9.06	8.08	58	70	74	6.85	3	1	2.51
48	THAILAND	155	.083	.142	15.5	11.3	12	-.439	64	34	32	4.9	4	2	.571
49	TURKEY	136	.185	.265	14.5	14.9	34.6	13.5	85	45	46	5.81	3	2	.301
50	UK	800	.371	.369	14	18.2	13.9	10	35	66	51	7.26	5	4	1.48
51	VENEZUELA	309	.316	.188	12.8	19.9	50	23.5	76	73	16	3.37	1	3	.053
	Total/mean	41,343	.113	.383	13.4	9.97	11	6.32	70.4	63.7	70.4	6.15	3.62	2.26	.781

Dividends is the common dividends paid to total assets ratio. Payer\_Dummy equals one if the bank pays dividend and zero otherwise. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UAI, MAS and LTO\_WVS are Hofstede *et al.* (2010)'s three cultural dimensions representing uncertainty avoidance, masculinity and long-term orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio.

**Table 3: Pair-wise correlations**

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) Dividends	1.00															
(2) Payer_Dummy	0.38	1.00														
(3) Log_TA	0.02	0.17	1.00													
(4) Equity_TA	0.19	-0.15	-0.33	1.00												
(5) Growth_TA	0.03	-0.08	-0.06	0.09	1.00											
(6) ROE	0.27	0.09	0.05	0.06	0.20	1.00										
(7) UAI	-0.10	-0.05	0.06	<b>0.00</b>	0.05	-0.12	1.00									
(8) MAS	-0.10	0.15	0.19	-0.25	-0.22	-0.23	0.32	1.00								
(9) LTO_WVS	-0.20	0.14	<b>0.01</b>	-0.29	-0.19	-0.20	0.21	0.46	1.00							
(10) UA_Globe	0.10	-0.11	0.06	0.27	0.29	0.13	0.45	-0.20	-0.41	1.00						
(11) Assertiveness_Globe	-0.05	0.12	0.32	-0.12	-0.12	-0.18	0.30	0.58	0.22	0.27	1.00					
(12) FO_Globe	<b>-0.00</b>	-0.12	0.06	0.15	0.14	0.02	0.54	0.04	-0.17	0.68	0.15	1.00				
(13) Reg_Cap	<b>-0.01</b>	-0.02	-0.13	0.04	0.05	0.05	-0.03	-0.16	0.05	-0.08	-0.34	-0.12	1.00			
(14) Shareholder_Protection	0.04	0.11	0.07	0.02	0.05	-0.03	0.16	-0.03	0.21	0.27	0.33	0.07	0.19	1.00		
(15) Creditor_Rights	-0.11	0.06	-0.04	-0.17	-0.09	-0.04	-0.34	0.16	0.29	-0.40	-0.21	-0.19	0.10	0.04	1.00	
(16) Market_GDP	0.12	0.09	-0.02	0.08	<b>-0.00</b>	0.06	-0.21	<b>0.01</b>	0.08	-0.14	0.12	-0.31	0.11	0.11	-0.28	1.00

Dividends is the common dividends paid to total assets ratio. Payer\_Dummy equals one if the bank pays dividend and zero otherwise. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UAI, MAS and LTO\_WVS are Hofstede *et al.* (2010)'s three cultural dimensions representing uncertainty avoidance, masculinity and long-term orientation, respectively. UA\_Globe, Assertiveness\_Globe and FO\_Globe are House *et al.* (2004)'s three cultural dimensions representing uncertainty avoidance, assertiveness and future orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio. All correlations are significant at one percent level except bold-faced.

**Table 4: Hofstede's cultural dimensions and dividend payout amounts**

Variables	Dividends				
	(1)	(2)	(3)	(4)	(5)
UAI		<b>-0.005***</b> (0.000)			<b>-0.009***</b> (0.000)
MAS			<b>0.006***</b> (0.000)		<b>0.010***</b> (0.000)
LTO_WVS				<b>-0.002**</b> (0.037)	<b>-0.003***</b> (0.005)
Log_TA	0.067*** (0.000)	0.065*** (0.000)	0.061*** (0.000)	0.066*** (0.000)	0.051*** (0.000)
Equity_TA	0.002*** (0.000)	0.002*** (0.002)	0.003*** (0.000)	0.002*** (0.001)	0.003*** (0.000)
Growth_TA	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)
ROE	0.012*** (0.000)	0.011*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)
Reg_Cap	-0.012*** (0.000)	-0.013*** (0.000)	-0.008*** (0.010)	-0.012*** (0.000)	-0.007** (0.025)
Shareholder_Protection	0.079*** (0.000)	0.101*** (0.000)	0.092*** (0.000)	0.080*** (0.000)	0.136*** (0.000)
Creditor_Rights	-0.043*** (0.000)	-0.019* (0.079)	-0.023** (0.022)	-0.045*** (0.000)	-0.061*** (0.000)
Market_GDP	0.130*** (0.000)	0.088*** (0.000)	0.122*** (0.000)	0.131*** (0.000)	0.048*** (0.000)
Constant	-1.785*** (0.000)	-1.307*** (0.000)	-2.114*** (0.000)	-1.744*** (0.000)	-1.380*** (0.000)
<i>Year_dummies</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Wald chi2	1743.2	1844.3	1869.1	1837.7	2114.8
Left-censored	25,482	25,482	25,482	25,482	25,482
Observations	41,343	41,343	41,343	41,343	41,343
Banks	7,918	7,918	7,918	7,918	7,918

This table presents the panel random-effects tobit regression results. All regressions include year fixed-effects dummies. Sample period is 1998–2007. The dependent variable, Dividends, is the common dividends paid to total assets ratio. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UAI, MAS and LTO\_WVS are Hofstede *et al.* (2010)'s three cultural dimensions representing uncertainty avoidance, masculinity and long-term orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio. \*\*\*, \*\* and \* show significance at one, five and ten percent levels, respectively.

**Table 5: Hofstede's cultural dimensions and the propensity to pay dividends**

Variables	Payer_Dummy				
	(1)	(2)	(3)	(4)	(5)
<b>UAI</b>		<b>-0.019***</b> (0.000)			<b>-0.058***</b> (0.000)
<b>MAS</b>			<b>0.058***</b> (0.000)		<b>0.066***</b> (0.000)
<b>LTO_WVS</b>				<b>-0.030***</b> (0.000)	<b>-0.022***</b> (0.000)
Log_TA	0.522*** (0.000)	0.511*** (0.000)	0.454*** (0.000)	0.559*** (0.000)	0.436*** (0.000)
Equity_TA	-0.052*** (0.000)	-0.053*** (0.000)	-0.041*** (0.000)	-0.043*** (0.000)	-0.037*** (0.000)
Growth_TA	-0.014*** (0.000)	-0.014*** (0.000)	-0.012*** (0.000)	-0.013*** (0.000)	-0.011*** (0.000)
ROE	0.041*** (0.000)	0.041*** (0.000)	0.045*** (0.000)	0.043*** (0.000)	0.045*** (0.000)
Reg_Cap	-0.104*** (0.000)	-0.106*** (0.000)	-0.066*** (0.001)	-0.106*** (0.000)	-0.067*** (0.001)
Shareholder_Protection	0.567*** (0.000)	0.650*** (0.000)	0.705*** (0.000)	0.491*** (0.000)	0.922*** (0.000)
Creditor_Rights	-0.606*** (0.000)	-0.448*** (0.000)	-0.385*** (0.000)	-0.467*** (0.000)	-0.243*** (0.001)
Market_GDP	0.958*** (0.000)	0.810*** (0.000)	0.861*** (0.000)	0.877*** (0.000)	0.322*** (0.000)
Constant	-12.177*** (0.000)	-10.529*** (0.000)	-15.152*** (0.000)	-14.186*** (0.000)	-11.928*** (0.000)
<i>Year_dummies</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Wald chi2	1810.9	1827.5	2057.2	1873.9	2175.6
Observations	41,343	41,343	41,343	41,343	41,343
Banks	7,918	7,918	7,918	7,918	7,918

This table presents the panel random-effects logit regression results. All regressions include year fixed-effects dummies. Sample period is 1998–2007. The dependent variable, Payer\_Dummy, equals one if the bank pays dividend and zero otherwise. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UAI, MAS and LTO\_WVS are Hofstede *et al.* (2010)'s three cultural dimensions representing uncertainty avoidance, masculinity and long-term orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio. \*\*\*, \*\* and \* show significance at one, five and ten percent levels, respectively.

**Table 6: House et al.'s cultural dimensions and dividend payout amounts**

Variables	Dividends				
	(1)	(2)	(3)	(4)	(5)
<b>UA_Globe</b>		<b>-0.185***</b> (0.000)			<b>-0.144***</b> (0.000)
<b>Assertiveness_Globe</b>			<b>0.067***</b> (0.000)		<b>0.087***</b> (0.000)
<b>FO_Globe</b>				<b>-0.304***</b> (0.000)	<b>-0.181***</b> (0.000)
Log_TA	0.067*** (0.000)	0.066*** (0.000)	0.055*** (0.000)	0.065*** (0.000)	0.056*** (0.000)
Equity_TA	0.002*** (0.000)	0.003*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.004*** (0.000)
Growth_TA	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)
ROE	0.012*** (0.000)	0.012*** (0.000)	0.011*** (0.000)	0.011*** (0.000)	0.012*** (0.000)
Reg_Cap	-0.012*** (0.000)	-0.017*** (0.000)	-0.010*** (0.002)	-0.017*** (0.000)	-0.013*** (0.000)
Shareholder_Protection	0.079*** (0.000)	0.116*** (0.000)	0.062*** (0.000)	0.088*** (0.000)	0.091*** (0.000)
Creditor_Rights	-0.043*** (0.000)	-0.021** (0.024)	-0.051*** (0.000)	-0.021** (0.034)	-0.018* (0.061)
Market_GDP	0.130*** (0.000)	0.088*** (0.000)	0.120*** (0.000)	0.084*** (0.000)	0.068*** (0.000)
Constant	-1.785*** (0.000)	-0.957*** (0.000)	-1.821*** (0.000)	-0.045 (0.811)	-0.321* (0.094)
<i>Year_dummies</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Wald chi2	1743.2	1719.2	1679.7	1719.7	1780.3
Left-censored	25,482	24,051	24,051	24,051	24,051
Observations	41,343	39,556	39,556	39,556	39,556
Banks	7,918	7,548	7,548	7,548	7,548

This table presents the panel random-effects tobit regression results. All regressions include year fixed-effects dummies. Sample period is 1998–2007. The dependent variable, Dividends, is the common dividends paid to total assets ratio. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UA\_Globe, Assertiveness\_Globe and FO\_Globe are House *et al.* (2004)'s three cultural dimensions representing uncertainty avoidance, assertiveness and future orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio. \*\*\*, \*\* and \* show significance at one, five and ten percent levels, respectively.

**Table 7: House et al.'s cultural dimensions and the propensity to pay dividends**

Variables	Payer_Dummy				
	(1)	(2)	(3)	(4)	(5)
<b>UA_Globe</b>		<b>-2.122***</b> (0.000)			<b>-1.964***</b> (0.000)
<b>Assertiveness_Globe</b>			<b>0.740***</b> (0.000)		<b>0.919***</b> (0.000)
<b>FO_Globe</b>				<b>-2.831***</b> (0.000)	<b>-1.058***</b> (0.000)
Log_TA	0.522*** (0.000)	0.534*** (0.000)	0.435*** (0.000)	0.529*** (0.000)	0.427*** (0.000)
Equity_TA	-0.052*** (0.000)	-0.038*** (0.000)	-0.051*** (0.000)	-0.046*** (0.000)	-0.033*** (0.000)
Growth_TA	-0.014*** (0.000)	-0.012*** (0.000)	-0.013*** (0.000)	-0.013*** (0.000)	-0.010*** (0.000)
ROE	0.041*** (0.000)	0.043*** (0.000)	0.042*** (0.000)	0.041*** (0.000)	0.045*** (0.000)
Reg_Cap	-0.104*** (0.000)	-0.169*** (0.000)	-0.094*** (0.000)	-0.166*** (0.000)	-0.122*** (0.000)
Shareholder_Protection	0.567*** (0.000)	1.026*** (0.000)	0.430*** (0.000)	0.666*** (0.000)	0.797*** (0.000)
Creditor_Rights	-0.606*** (0.000)	-0.168** (0.024)	-0.720*** (0.000)	-0.394*** (0.000)	-0.160** (0.026)
Market_GDP	0.958*** (0.000)	0.471*** (0.000)	0.900*** (0.000)	0.510*** (0.000)	0.300*** (0.001)
Constant	-12.177*** (0.000)	-3.202*** (0.000)	-13.615*** (0.000)	3.643*** (0.003)	0.093 (0.939)
<i>Year_dummies</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Wald chi2	1810.9	1960.2	1822.2	1879.9	2064.4
Observations	41,343	39,556	39,556	39,556	39,556
Banks	7,918	7,548	7,548	7,548	7,548

This table presents the panel random-effects logit regression results. All regressions include year fixed-effects dummies. Sample period is 1998–2007. The dependent variable, Payer\_Dummy, equals one if the bank pays dividend and zero otherwise. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UA\_Globe, Assertiveness\_Globe and FO\_Globe are House *et al.* (2004)'s three cultural dimensions representing uncertainty avoidance, assertiveness and future orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio. \*\*\*, \*\* and \* show significance at one, five and ten percent levels, respectively.

**Table 8: Additional control variables, Hofstede cultural dimensions and dividend payout amounts**

Variables	Dividends								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
UAI	<b>-0.007***</b> (0.000)	<b>-0.010***</b> (0.000)	<b>-0.009***</b> (0.000)	<b>-0.009***</b> (0.000)	<b>-0.009***</b> (0.000)	<b>-0.010***</b> (0.000)	<b>-0.008***</b> (0.000)	<b>-0.009***</b> (0.000)	<b>-0.009***</b> (0.000)
MAS	<b>0.008***</b> (0.000)	<b>0.008***</b> (0.000)	<b>0.010***</b> (0.000)	<b>0.009***</b> (0.000)	<b>0.009***</b> (0.000)	<b>0.010***</b> (0.000)	<b>0.009***</b> (0.000)	<b>0.010***</b> (0.000)	<b>0.010***</b> (0.000)
LTO_WVS	<b>-0.001*</b> (0.051)	<b>-0.001*</b> (0.057)	<b>-0.002***</b> (0.001)	<b>-0.002***</b> (0.003)	<b>-0.001</b> (0.123)	<b>-0.001*</b> (0.075)	<b>-0.003***</b> (0.000)	<b>-0.001**</b> (0.030)	<b>-0.002**</b> (0.016)
IND			0.002*** (0.001)					0.002*** (0.006)	0.001 (0.479)
PDI				-0.001** (0.026)				0.000 (0.601)	-0.005*** (0.000)
INDULG					0.002** (0.025)			0.001 (0.125)	0.000 (0.575)
Civil_Legal_Origin						-0.169*** (0.000)			-0.186*** (0.000)
Rule_of_Law							0.078*** (0.000)		0.167*** (0.000)
Log_TA	0.061*** (0.000)	0.046*** (0.000)	0.050*** (0.000)	0.051*** (0.000)	0.051*** (0.000)	0.047*** (0.000)	0.047*** (0.000)	0.050*** (0.000)	0.038*** (0.000)
Equity_TA	0.004*** (0.000)	0.003*** (0.000)	0.003*** (0.000)	0.003*** (0.000)	0.003*** (0.000)	0.002*** (0.000)	0.003*** (0.000)	0.003*** (0.000)	0.003*** (0.000)
Growth_TA	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)
ROE	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)
Reg_Cap	-0.002* (0.094)	-0.007** (0.032)	-0.008** (0.015)	-0.008** (0.015)	-0.007** (0.022)	-0.006* (0.056)	-0.009*** (0.004)	-0.008** (0.017)	-0.008** (0.017)
Shareholder_Protection		0.173*** (0.000)	0.146*** (0.000)	0.144*** (0.000)	0.136*** (0.000)	0.157*** (0.000)	0.143*** (0.000)	0.143*** (0.000)	0.142*** (0.000)
Anti_Self_Dealing	0.098* (0.085)								
Creditor_Rights	-0.023* (0.051)	-0.093*** (0.000)	-0.065*** (0.000)	-0.068*** (0.000)	-0.058*** (0.000)	-0.043*** (0.000)	-0.063*** (0.000)	-0.061*** (0.000)	-0.021 (0.109)
Market_GDP	0.092*** (0.000)		0.045*** (0.000)	0.047*** (0.000)	0.044*** (0.001)	0.057*** (0.000)	0.040*** (0.002)	0.043*** (0.001)	0.044*** (0.001)
Market_Bank		-0.110*** (0.000)							
Constant	-1.217*** (0.000)	-1.207*** (0.000)	-1.528*** (0.000)	-1.341*** (0.000)	-1.500*** (0.000)	-1.538*** (0.000)	-1.422*** (0.000)	-1.632*** (0.000)	-1.764*** (0.000)
<i>Year_dummies</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Wald chi2	1918.2	2196.2	2121.0	2113.1	2110.5	2142.0	2132.9	2116.7	2180.2
Left-censored	25,482	25,482	25,482	25,482	25,402	25,482	25,482	25,402	25,402
Observations	41,343	41,343	41,343	41,343	41,220	41,343	41,343	41,220	41,220
Banks	7,918	7,918	7,918	7,918	7,901	7,918	7,918	7,901	7,901

This table presents the panel random-effects tobit regression results. All regressions include year fixed-effects dummies. Sample period is 1998–2007. The dependent variable, Dividends, is the common dividends paid to total assets ratio. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UAI, MAS, LTO\_WVS, IND, PDI and INDULG are Hofstede *et al.* (2010)'s six cultural dimensions representing uncertainty avoidance, masculinity, long-term orientation, individualism, power distance and indulgence, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Anti\_Self\_Dealing are revised anti-director and anti-self-dealing indices, respectively, from Djankov *et al.* (2008). Creditor\_Rights is creditor rights index from Djankov *et al.* (2007). Market\_GDP is annual stock market capitalization to GDP ratio. Market\_Bank equals 'stock market capitalization to GDP ratio' divided by 'bank credit to GDP ratio.' Civil\_Legal\_Origin is a dummy variable for civil legal origin countries. Rule\_of\_Law is rule of law index from Kaufmann *et al.* (2010). \*\*\*, \*\* and \* show significance at one, five and ten percent levels, respectively.

**Table 9: Alternate estimation methods, Hofstede cultural dimensions and dividend payout amounts**

Variables	Dividends							
	Orthogonal variables regressions (tobit)				Fama & MacBeth two step regressions			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>UAI_Orthog</b>	<b>-0.005***</b> (0.000)			<b>-0.009***</b> (0.000)				
<b>MAS_Orthog</b>		<b>0.006***</b> (0.000)		<b>0.010***</b> (0.000)				
<b>LTO_WVS_Orthog</b>			<b>-0.002*</b> (0.071)	<b>-0.003***</b> (0.005)				
<b>UAI</b>					<b>-0.002***</b> (0.000)			<b>-0.001*</b> (0.069)
<b>MAS</b>						<b>0.001**</b> (0.029)		<b>0.001**</b> (0.023)
<b>LTO_WVS</b>							<b>-0.003***</b> (0.000)	<b>-0.003***</b> (0.000)
Log_TA	0.065*** (0.000)	0.061*** (0.000)	0.066*** (0.000)	0.051*** (0.000)	0.009** (0.031)	0.010** (0.031)	0.008* (0.083)	0.006* (0.099)
Equity_TA	0.002*** (0.002)	0.003*** (0.000)	0.002*** (0.001)	0.003*** (0.000)	0.006*** (0.000)	0.006*** (0.000)	0.005*** (0.000)	0.005*** (0.000)
Growth_TA	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.002*** (0.000)	-0.000** (0.034)	-0.000** (0.020)	-0.001*** (0.003)	-0.001*** (0.006)
ROE	0.011*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.012*** (0.000)	0.008*** (0.000)	0.008*** (0.000)	0.008*** (0.000)	0.008*** (0.000)
Reg_Cap	-0.013*** (0.000)	-0.008*** (0.010)	-0.012*** (0.000)	-0.007** (0.025)	0.003 (0.598)	0.004 (0.474)	-0.001 (0.899)	0.001 (0.858)
Shareholder_Protection	0.078*** (0.000)	0.086*** (0.000)	0.078*** (0.000)	0.082*** (0.000)	0.038*** (0.000)	0.034*** (0.002)	0.041*** (0.000)	0.048*** (0.000)
Creditor_Rights	-0.041*** (0.000)	-0.046*** (0.000)	-0.042*** (0.000)	-0.040*** (0.000)	-0.040*** (0.000)	-0.023*** (0.001)	-0.007* (0.098)	-0.015*** (0.006)
Market_GDP	0.143*** (0.000)	0.134*** (0.000)	0.129*** (0.000)	0.155*** (0.000)	0.043*** (0.000)	0.066*** (0.000)	0.079*** (0.000)	0.069*** (0.000)
Constant	-1.749*** (0.000)	-1.768*** (0.000)	-1.764*** (0.000)	-1.634*** (0.000)	-0.082 (0.170)	-0.212*** (0.005)	-0.082 (0.204)	-0.062 (0.282)
<i>Year_dummies</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>				
Wald chi2	1844.3	1869.1	1747.7	2114.2				
Left-censored	25,482	25,482	25,482	25,482				
R-squared					0.149	0.147	0.157	0.161
Number of groups					10	10	10	10
Observations	41,343	41,343	41,343	41,343	41,343	41,343	41,343	41,343
Banks	7,918	7,918	7,918	7,918				

Models 1-4 present the panel random-effects tobit regression results including year fixed-effects dummies. Models 5-8 present Fama-MacBeth regressions. Sample period is 1998–2007. The dependent variable, Dividends, is the common dividends paid to total assets ratio. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UAI\_Orthog, MAS\_Orthog and LTO\_WVS\_Orthog are orthogonal cultural variables. UAI, MAS and LTO\_WVS are Hofstede *et al.* (2010)'s three cultural dimensions representing uncertainty avoidance, masculinity and long-term orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio. \*\*\*, \*\* and \* show significance at one, five and ten percent levels, respectively.

**Table 10: Alternate sample compositions, Hofstede cultural dimensions and dividend payout amounts**

Variables	Dividends							
	Dividend payers only				Exclude banks of Germany			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>UAI</b>	<b>-0.005***</b> (0.000)			<b>-0.001*</b> (0.050)	<b>-0.005***</b> (0.000)			<b>-0.009***</b> (0.000)
<b>MAS</b>		<b>0.005***</b> (0.000)		<b>0.002**</b> (0.034)		<b>0.007***</b> (0.000)		<b>0.013***</b> (0.000)
<b>LTO_WVS</b>			<b>-0.008***</b> (0.000)	<b>-0.008***</b> (0.000)			<b>-0.003***</b> (0.000)	<b>-0.006***</b> (0.000)
Log_TA	-0.012*** (0.001)	-0.014*** (0.000)	-0.029*** (0.000)	-0.028*** (0.000)	0.147*** (0.000)	0.142*** (0.000)	0.147*** (0.000)	0.127*** (0.000)
Equity_TA	0.032*** (0.000)	0.031*** (0.000)	0.029*** (0.000)	0.029*** (0.000)	0.007*** (0.000)	0.009*** (0.000)	0.006*** (0.000)	0.008*** (0.000)
Growth_TA	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.003*** (0.000)	-0.003*** (0.000)	-0.003*** (0.000)	-0.003*** (0.000)
ROE	0.009*** (0.000)	0.008*** (0.000)	0.008*** (0.000)	0.008*** (0.000)	0.014*** (0.000)	0.016*** (0.000)	0.014*** (0.000)	0.015*** (0.000)
Reg_Cap	-0.011*** (0.000)	-0.012*** (0.000)	-0.011*** (0.000)	-0.011*** (0.000)	-0.020*** (0.000)	-0.014*** (0.002)	-0.022*** (0.000)	-0.011*** (0.009)
Shareholder_Protection	0.037*** (0.000)	0.038*** (0.000)	0.025*** (0.002)	0.028*** (0.001)	0.144*** (0.000)	0.133*** (0.000)	0.133*** (0.000)	0.191*** (0.000)
Creditor_Rights	-0.091*** (0.000)	-0.038*** (0.000)	-0.019*** (0.010)	-0.029*** (0.001)	-0.091*** (0.000)	-0.070*** (0.000)	-0.051*** (0.000)	-0.167*** (0.000)
Market_GDP	0.002 (0.785)	0.048*** (0.000)	0.052*** (0.000)	0.044*** (0.000)	0.147*** (0.000)	0.179*** (0.000)	0.209*** (0.000)	0.114*** (0.000)
Constant	0.695*** (0.000)	0.559*** (0.000)	1.023*** (0.000)	1.076*** (0.000)	-2.670*** (0.000)	-3.524*** (0.000)	-2.921*** (0.000)	-2.660*** (0.000)
<i>Year_dummies</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>	<i>Yes</i>
Wald chi2	4771.0	4857.3	5633.4	5643.9	1798.0	1840.4	1781.0	2034.4
Left-censored	0	0	0	0	17,549	17,549	17,549	17,549
Observations	15,861	15,861	15,861	15,861	26,395	26,395	26,395	26,395
Banks	3,566	3,566	3,566	3,566	5,801	5,801	5,801	5,801

This table presents the panel random-effects tobit regression results. All regressions include year fixed-effects dummies. Sample period is 1998–2007. Models 1-4 exclude dividend non-payer bank observations. Models 5-8 exclude German banks observations. The dependent variable, Dividends, is the common dividends paid to total assets ratio. Log\_TA, Equity\_TA, Growth\_TA and ROE are natural log of total assets, equity to total assets ratio, year-on-year growth in total assets and return on average equity, respectively. UAI, MAS and LTO\_WVS are Hofstede *et al.* (2010)'s three cultural dimensions representing uncertainty avoidance, masculinity and long-term orientation, respectively. Reg\_Cap is regulatory capital index from Barth *et al.* (2013). Shareholder\_Protection and Creditor\_Rights are revised anti-director and creditor rights indices from Djankov *et al.* (2008) and Djankov *et al.* (2007), respectively. Market\_GDP is annual stock market capitalization to GDP ratio. \*\*\*, \*\* and \* show significance at one, five and ten percent levels, respectively.