Beyond Country-Level Governance: Does Firm-Level Corporate Governance Quality Matter in Dividend Policy?

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Abstract

We examine the impact of firm-level and the country-level corporate governance on corporate dividend policies. Based on a large sample of firms representing 29 different countries, we find that (i) firms with better corporate governance tend to pay higher dividends and (ii) country level shareholder rights is associated with higher dividend payouts. These findings are consistent with La Porta et al.'s (2000) 'outcome model'. Moreover we find that country-level and firm-level corporate governance environment complement each other. In countries with better shareholder rights, better firm-level corporate governance is associated with even higher dividend payouts.

Key Words: Dividend policy; International corporate governance; Firm value

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I. Introduction

Country-level governance is defined by the level of shareholder right protection, and the enforcement of those rights with a country's laws, culture and norms, and institutions. It is well documented that country-level governance affects cross-country differences in business practices and financial policies. For example, it affects international business relation (Abdi & Aulakh, 2012), the development of code of good governance (Haxhi & Hans, 2010), foreign direct investment (Luo, Chung, & Sobczak, 2009), IPO underpricing (Boulton, Smart, & Zutter, 2010), and dividend policy (Shao, Kwok, guedhami, 2013). On the other hand, firm-level governance, defined as the mechanism within a corporation to ensure minority shareholders receive an appropriate return on their investment, affects firm decisions within a country, as found by single-country studies. However, there is a lack of published research on whether firm-level governance has a role beyond country-level governance in determining firm policies internationally. In this research, we fill the gap by examining one of the most important financial policies: dividend policy.

Despite numerous theoretical and empirical studies, a lack of consensus persists among financial economists on why firms pay dividends (Brealey, Myers, and Allen 2008). This lack of consensus is not only for firms in the US, but also for firms worldwide. In order to explain firms' dividend policy, more recent studies have attempted to explain a corporate dividend policy in the context of agency theory (La Porta et al. 2000; Borokhovich et al., 2005). According to agency theory, a reduction in free cash flow, for instance, dividend payout, alleviates agency costs by reducing the possibility of private benefit extraction by opportunistic managers and compelling a firm to go to market for additional funding, which in turn subjects managers to more external scrutiny (Jensen, 1986; Easterbrook,1984). Regarding the relation between governance and dividend, La Porta et al. (2000) propose an outcome hypothesis suggesting a positive relation and a substitution hypothesis suggesting a negative relation. Although theories do not differentiate between country- and firm- governance, empirical studies are based on either (i) a cross-country sample using a country-level governance variable or (ii) a country-specific sample using a firm-specific governance variable. Studies based on a cross-country sample generally support a

positive relation between governance and dividend (La Porta et al. 2000)[1], whereas country-specific studies yield mixed results.

A joint investigation of country and firm governance on dividend becomes possible, owing to the recent availability of firm-level governance data across countries are constructed in a comparable manner. We use a sample of 28,686 firm-years observations from 6,151 unique firms across 29 countries from 2003 to 2009 with firm-level ISS governance index constructed from variables in ISS database. [2] Prior studies using country-level governance variables implicitly assume that all firms' corporate policies are impacted equally by country-level governance quality irrespective of a firm's own governance practices. Instead, our sample shows that there are considerable variations in firm-level governance scores within each country (Table 1d). Even among the well-studied US firms, ISS governance ranges between 8 and 38. This finding suggests we should consider firm governance in international studies.

The central idea in this paper is to investigate whether firm-level governance affects firms' dividend payouts even when country-level governance is controlled. First, our results show that after controlling for country-level variables, firms with better corporate governance pay higher dividends. This finding is in line with the outcome hypothesis. Second, we find that the interaction between firm-level governance quality and country-level governance quality is positive and significant in determining dividend policy. This implies that in countries with better corporate governance environment, stronger firm-level governance mechanisms lead to even more dividend payouts. This result reinforces the prediction of 'outcome hypothesis' in our sample of international firms. Third, we find that dividend payments are associated with higher firm value. This indirectly shows the benefits of having stronger internal governance mechanism, which promotes dividend payouts. Lastly, we study total payout, the sum of dividend and stock repurchase, and find that both country and firm governance play positive role in total payout although the interaction effect does not prevail. Our results are robust to the consideration of

[1] Brockman and Unlu (2009) carry out a detailed cross-country analysis by examining the relationship between creditor rights and dividend policy. They hypothesize that the relationship between creditor rights and dividend policy will be governed by the substitution hypothesis and they find support for it. However, in line with La Porta et al. (2000) they recognize that the outcome hypothesis "explains the empirical linkages between the agency costs of equity, minority shareholder rights and observed dividend payouts" (p. 277).

[2] As Aggarwal et al. (2009) state, ISS governance index provides a firm-level governance measure that is comparable across countries. A number of prior studies have shown that the ISS governance index reveals relevant information on a firm's corporate governance practices (Aggarwal et al. 2009; Aggarwal et al. 2011; Jiraporn et al. 2011).

endogeneity issues, alternative dividend payout measures, more control variables, and different econometric methods. Our study contributes to the corporate dividend payout literature in a number of ways. First, we show that in a cross-country empirical setup, a firm-specific governance mechanism plays a significant role in payout decisions beyond country-level variables. Second, this study helps to understand the great differences of dividend policies around the world.

The remainder of this paper is organized as follows. Section II presents relevant literature and conjectures. Section III describes our sample and variables. Section IV analyzes our empirical findings. Section V presents robustness tests, and Section VI concludes the study.

II. Relevant Literature and Conjectures

A. Corporate Governance and Dividend Policy

The dividend literature proposes various theories to explain the dividend puzzle. These include bird-in-the-hand, tax preference and dividend clientele, signaling, catering and agency theory. But as noted by Aivazian et al. (2003) signaling and agency theory are the main key theories in explaining the dividend puzzle. Ross (1977), Bhattacharya (1979), John and Williams (1985), and Miller and Rock (1985), among others, argue that dividends mitigate information asymmetry between management and shareholders. These models propose that dividend payments convey private information about a firm's future profitability under the condition that a firm pays dividends on a regular basis. In other words, only good quality firms with high cash flow expectations will pay dividends. Several studies support the signaling explanation, including Kalay and Lowenstein (1986), and Nissim and Ziv (2001). However, other recent studies, including Denis and Osobov (2008), cast doubt on signaling theory as being inconsistent with the "dividend disappearance" phenomenon observed by Fama and French (2001). Casting further doubt on the signaling explanation, Amihud and Li (2006) argue that the information content of dividends has fallen since the mid-1970s, which has discouraged firms from using dividends as a means of communicating with shareholders. The lack of success of conventional theories in explaining firms' dividend policy made academicians and practitioners interested in an agency explanation.

Although our inclusion of firm-specific variables will partially address the issues relevant to signaling theory, our research primarily focuses on agency theory in explaining dividend

policy. Agency theory focuses on the separation of principal (owner) and agents (manager) and its consequences on shareholder wealth. The potential agency costs associated with the separation of management and ownership induce a conflict-mitigation role for dividend payments. Two competing hypotheses explain the dynamics between agency problem and dividend policy: "outcome hypothesis" and "substitution hypothesis", as termed by La Porta et al. (2000)

1. Outcome hypothesis: As Jensen (1986) shows, the availability of free cash flow may lead to the extraction of private benefits by managers. Thus, firms with better corporate governance are likely to restrict this opportunistic behavior by distributing more cash to the shareholders. In other words, firms with *better* corporate governance practices that ensures stronger shareholders right will pay *more* dividends (La Porta et al. 2000). Under this view, dividend payouts are "an effective system of legal protection to shareholders" (p. 5). La Porta et al. (2000) examine 4,000 firms from 33 different countries and find support for the outcome hypothesis. Grullon and Michaely (2007) use product market competition as a corporate governance measure and also find support for outcome hypothesis.

2. Substitution hypothesis: According to the second view, firms with *poor* governance practices and weaker shareholder rights need to pay *higher* dividends to maintain good a reputation with shareholders. In the U.S. context, several recent papers find support for the substitution hypothesis. Officer (2006) uses firms with large boards, CEO/Chairman duality, and low ownership by insiders and institutional investors as a proxy for poor governance. Jiraporn and Ning (2006) and John and Knyazeva (2006) use the Gompers, Ishii, and Metrick (2003) index, and Grinstein and Michaely (2005) use institutional holding as a proxy for corporate governance. Results of these studies support the "substitution hypothesis." Hu and Kumar (2004) also find that both the likelihood and the level of payouts are significantly and positively (negatively) related to factors that increase (decrease) the executive entrenchment level. They use CEO characteristics, compensation structure and board characteristics to test the entrenchment hypothesis.[3]

B. Cross-Country Analysis

[3] For a detailed literature review, see Dutta and Saadi (2009).

Doidge, Karolyi, and Stulz (2007) show that country characteristics significantly influences a firm's costs and benefits in implementing measures to improve their own governance and transparency. La Porta et al. (2000) examine 4,000 firms from 33 different countries and report that firms operating in countries with stronger legal protection to minority shareholders pay higher dividends. Mitton (2004) uses firm-specific corporate governance ratings developed by Credit Lyonnais Securities Asia (CLSA) for 365 firms from 19 emerging markets to study the impact of firm-level corporate governance mechanisms on dividend payouts. His evidence is consistent with the outcome model of dividends in that firms with stronger corporate governance practices have higher dividend payouts. In another cross-country study, Faccio et al. (2001) extend support for the outcome model. They study the dividend policies of firms from East Asia and Western Europe. Unlike U.S. firms, a family or a large shareholder controls a large number of firms operating in these two regions. Their results show that firms pay more dividends in Western Europe compared to the firms in East Asia despite having a similar ownership structure. In Western Europe, minority shareholders have better legal protection, which helps them to extract more dividends. Brockman and Unlu (2009) examine the effect of country-level creditor rights on dividend policy. Using a large sample from 52 countries, they find that in countries with poor creditor rights, both the probability and amount of dividend payouts decrease significantly. Brockman and Unlu conclude that creditors persuade managers to adopt a more restrictive dividend payout policy as a substitute for weak creditor rights to mitigate a firm's agency cost of debt.

Other studies show that tax systems (Lasfer and Alzahrani, 2009) and national culture (Shao, Kwok, and Guedhami, 2009) also affect firms' dividend policy significantly. Licht, Goldschmidt and Schwartz (2005) argue that a country's legal and institutional environment should reflect its underlying cultural value. The Shao et al. (2009) study shows that legal protection's effects on dividends are weaker or even inconsistent when cultural variables are included. Therefore, it appears that the choice of financial markets is likely to play a role in the relation between dividend policy and corporate governance.

C. Interplay between Country-Level and Firm-Level Corporate Governance

As presented in the former sections, prior studies examining the relation between corporate governance and dividend policy have adopted one of the following two approaches: (i)

single-country analysis with firm-specific governance data (e.g. Officer, 2006; Jiraporn and Ning, 2006; Jiraporn et al. 2011; John and Knyazeva, 2006; Grinstein and Michaely 2005; Chang and Dutta 2012) or (ii) international study with country-level governance data (e.g., La Porta et al., 2000; Faccio et al., 2001; Brockman and Unlu, 2009; Ferris, Jayaraman, and Sabherwal, 2009). Country-level governance is defined by the level of shareholder rights protection and the enforcement of those rights with a country's laws, norms, and institutions. Firm-level governance is the mechanism within a corporation. The interaction between country-level and firm-level governance is investigated by Aggarwal et al. (2009). They find that the U.S. scores high on country-level governance environment and U.S. firms also score high on firm-level governance (second only to Canada). However, in countries with low country-level governance, most firms have lower firm-level governance than U.S. firms, but a small portion of them achieve the U.S. standards. Therefore, the mere consideration of the effect of the country-level governance environment may not present a holistic view of the governance impact on firm-level dividend policy. In fact, as country-specific studies have shown, firms with dissimilar corporate governance standards adopt different dividend policy, showing the importance of firm-specific governance environment. Accordingly, we expect that firm-level corporate governance will affect the dividend payout of a firm internationally.

Furthermore, we anticipate that the influence of firm-level corporate governance on dividend policy would depend on country-level governance setup. However, the nature of this interaction is not clear as there are two competing viewpoints. According to the first view, in countries with high country-level governance, firms with low corporate governance cannot always pay out too little or skip payout as it would draw attention from shareholder activists. This will lead to a negative interaction between country and firm-level governance quality in terms of their influence on dividend payout. According to the second view, in countries with poor country-level governance, managers can pay little or even no dividends as they can take advantage of weaker legal environment and do not need to cater to minority shareholder interests. This will be manifested as a positive interaction between country and firm-level governance quality.

III. Data and variable descriptions

A. Data

We begin our sample construction by matching the Compustat Global Industrial database to the Compustat Global Issues database. We require that each firm-year observation in the annual Global Industrial file has (1) consolidated accounting statements, (2) membership in a non-regulated industry (i.e., we also exclude regulated utilities (SIC codes 4900–4949) and financial institutions (SIC codes in the 6000 range)), and (3) all the data fields required for subsequent analyses. After applying these filters, we obtain a sample of 426,433 firm-year observations from 37,901 unique firms across 29 countries during the period 2003–2009. We then join this sample with the ISS International database. The total sample size drops to 28,686 with 6,151 unique firms. We also construct a subsample to test the valuation impact of creditor rights using the approach of Fama and French (1998). Because this method requires a five-year lagged firm-specific data, we lose another 11,141 firm-year observations due to missing data in the prior years. This subsample contains 17,545 firm-year observations from 4,022 unique firms across 29 countries during the period 2003–2009.

For the U.S. and Canadian firms we obtain financial accounting variables from Compustat North America database. For the non-U.S. and non-Canadian firms, we obtain annual financial accounting variables and stock price information from Compustat Global Industrial and Compustat Global Issues databases respectively. We collect country-level variables through various sources. We obtain creditor rights, shareholder rights, and legal origin from Djankov, McLiesh, and Shleifer (2007) and Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008) – two studies that update the La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998) database. We obtain rule-of-law measures from Kaufmann, Kraay, and Mastruzzi (2003). We construct stock market and financial intermediary development measures (Demirguc-Kunt and Levine, 1996) from the World Development Indicators (WDI) database developed by the World Bank. Foreign exchange information is also obtained from the WDI database.

B. Variables

In this section, we define all the variables used in our empirical tests. Since most variables are from accounting statements, data items shown in the parentheses apply to Compustat Global Industrial file, unless otherwise stated. We describe our dependent and independent variables in the following subsections.

1. Dependent variables

We primarily use two different empirical setups. First, we examine the impact of corporate governance on the dividend payouts using Tobit regression, as well as fixed- and random-effect model specifications. In line with earlier studies, we measure dividend payout – the primary dependent variable — by scaling total dividends paid by total assets (Aivazian et al., 2003; Brockman and Unlu, 2009). As robustness tests, we also use total revenue and net income as the scaling variable. The results are consistent with the main findings and are reported in the robustness test section.[4] Second, we examine how markets value the dividend payments in the context of a firm's corporate governance structure. Following previous studies (Pinkowitz, Stulz, and Williamson, 2003) we use market value of firm scaled by book value of total assets as the dependent variable.

2. Independent variables

Our independent variables are grouped into two categories: firm-specific variables and country-level variables. The main firm-specific governance variables are the ISS governance index (ISS41), as well as the four major components of this index. We follow Aggarwal et al. (2009) to construct these indices. The overall ISS governance index is computed by summing four major component variables: board (24 attributes), audit (3 attributes), anti-takeover (6 attributes) and compensation and ownership (8 attributes).

Our country-level measures include shareholder right index, common-law origin dummy, financial development of a country and per capita gross domestic product (GDP) indicators. We follow Brockman and Unlu (2009) and Djankov et al. (2008) to obtain shareholder right (AD) index. The AD measures the strength of minority shareholder rights protection. Common-law origin dummy is an indicator variable designating the legal system in a country. La Porta et al. (1998) show that common law countries have the strongest legal protection of investors. We follow Demirguc-Kunt and Levine (1996) to use market capitalization of publicly listed stocks to GDP to measure financial development. For the per capita GDP indicator variable, we use the logarithm transformed per capita GDP of each country based on the World Development Indicator database (Morck, Yeung and Yu, 2000). We also collect the tax penalty measure from

[4] Few studies use other variables to measure the levels of a firm's dividend payment – namely dividend payout ratio (dividends/net income), dividend yield (dividends/share price), and dividend to book value of equity. However, as suggested by Brockman and Unlu (2009) and Aivazian et al. (2003) among others, we will mainly focus on the dividends-to-assets ratio and dividends-to-sales ratio because of the following reasons: dividend payout ratios can be unstable and non-normal as earnings get close to zero; dividend yield incorporates market perceptions and pricing effects that are often beyond management control; and deflating dividend by the book value of equity could be more sensitive to accounting distortions (Aivazian et al., 2003).

Jacob and Jacob (2013) to control for the different tax rates between dividends and capital gains in various countries.

We follow Brockman and Unlu (2009) and use six variables to control for firm-specific characteristics. These widely used controls include firm life cycle (proxied by the retained earnings to total assets), book value of equity to assets ratio (book equity), return on assets, sales growth, firm size (log of total assets), and cash holdings to total assets. All of our firm-specific variables are computed at fiscal year-end.

IV. Empirical Results

A. Summary Statistics

We provide summary statistics and a correlation matrix for the main sample in Panel A of Table 1. The mean dividend-to-assets ratio is about 1%. The average firm-level governance index value is about 21.7; and the average shareholder's right index value is close to 3.23. The correlation table shows that the dividend-to-assets is positively correlated with both firm-level governance index (ISS41) and the country-level shareholder right protection index (i.e., The AD index). The results show preliminary evidence supporting the outcome hypothesis.

In Panel B we present the distribution of firms across countries. Our sample includes mainly developed countries. The top three are the USA (19,567), Japan (3,237), The United Kingdom (1,338). Our sample also includes a few developing countries, such as China, India, Brazil, and Turkey. We note that over 68% of our sample firm-years are from the United States. The large presence of U.S. firms in our data is mainly due to the ISS data availability. This said, in the robustness section, we show that our results remain qualitatively the same after excluding U.S. firms. In Panel C we present the distribution of firms across industries. Our sample spans across 44 different industries. The top three industries are business service (3,602), electronic equipment (2,002), and retail (1,876).

In Panel D we present the firm-level governance statistics for each country. We find that there is a considerable level of variation in firm-level governance scores in each country. Overall, the firm-level governance scores range from 7 to 38. This statistic reasserts our earlier view that a single country-level governance statistic might not be adequate to fully explain the relationship between governance and dividend policy. Panel D also shows the country's shareholder right index. The median is 3.50, and 12 countries have above median AD.

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Insert Table 1 here

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B. Corporate governance and dividend payouts

In this section, we examine the relationship between corporate governance and the dividend payment amount. In the following section, we present the results of Tobit regressions including control variables. We show additional estimation methods and more control variables in the robustness test section.

1. Multivariate analysis: corporate governance and dividend pay amounts

In line with the main objective of this study, we first examine the corporate governance impact on the dividend pay amount and the dynamics between country- and firm-level governance structures. To investigate whether the corporate governance mechanisms affect dividend payouts, we estimate several specifications of the following model. Further, as many of the firms in our sample do not pay dividends, we use Tobit regression models to carry out our analysis.

$$\text{Dividend\_to\_assets}_{i,t} = \alpha_1 + \alpha_2 \text{Retained\_Earnings}_{i,t} + \alpha_3 \text{ Book-to-Equity}_{i,t} + \alpha_4 \text{ ROA}_{i,t} + \alpha_5 \text{ Sales\_Growth}_{i,t} + \alpha_6 \text{ Firm\_Size}_{i,t} + \alpha_7 \text{ Cash}_{i,t} + \alpha_8 \text{ ISS41}_{i,t-1} + \alpha_9 \text{ AD}_{i,t} + \alpha_{10} \text{ ISS41}_{i,t-1} * \text{AD}_{i,t} + \alpha_{11} \text{ PCAPGDP}_{i,t} + \alpha_{12} \text{ Financial\_Market}_{i,t} + \alpha_{13} \text{ Div\_Tax\_Penalty}_{i,t}$$

$$\text{Dividend\_to\_assets}_{i,t} = \begin{cases} \text{Dividend\_to\_assets}_{i,t} \text{ if Dividend\_to\_assets}_{i,t} > 0 \\ 0 \text{ otherwise} \end{cases}$$

ISS41 denotes the firm level corporate governance (Aggarwal et al., 2009), whereas AD denotes the strength of shareholders' rights in a country that serves as a proxy for country-level governance quality (Djankov et al., 2008; Brockman and Unlu, 2009). One of the advantages of using the ISS index is that it captures the yearly variations of the governance measures. Unlike the country-level governance index, such as the shareholder right index, the ISS index varies year by year between 2003 and 2009. In order to control for the endogeneity bias of ISS index, in line with Booth, Chang and Zhou (2013), we use one year lag ISS index variable in the

regression model. We also carry out other tests to address endogeneity biases that are reported later in this study.

Table 2 shows the panel data regression (random effect) models to test the impact of country-level and firm-level governance impact on the dividend payment amount. The dependent variable is the cash dividend divided by the total assets ratio. We first present the model only with control variables (Model 1). Consistent with the literature, we find that more mature firms – denoted by firm life cycle variable (higher retained earnings to assets), better performing firms (higher ROA) and firms with higher cash holding tend to pay more dividends. Further, firms with better sales growth pay lower dividends. For the country-level variables, we find that firms in a country with a higher dividend tax penalty tend to pay lower dividends, which is consistent with the findings in Jacob and Jocob (2013). However, firms in higher per capita GDP countries in our sample tend to pay higher dividends, similar to the country level findings in Shao et al. (2010).

Model 2 in Table 2 tests the country corporate governance impact on the dividend payment. The shareholder right index (AD) is positive and significant at 1%. It supports the outcome hypothesis that stronger corporate governance is associated with higher dividend payments. In Model 3 we include the firm corporate governance index (ISS41), we find both the firm-level governance index and the country-level governance index are positive and significant at a 1% level. It further supports the outcome model and shows the importance for both firm-level governance and country-level governance impact on the corporate dividend policy. It implies that minority shareholders receive more dividends as the firm- and country-level governance quality improves. In all the models, we include the same firm-control variables and country-control variables. We also include the year dummies and industry dummies variables to control for the heterogeneity in the multiple-year and industry sample.

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Insert Table 2 here

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Next, we examine the interaction between firm-governance (ISS41) and the country governance index (shareholders' rights denoted by AD index). Model 4 presents the relevant results that include an interaction term 'ISS41 × Shareholders' rights' to examine the dynamics between country- and firm-level corporate governance. Our results show that the interaction term

is positive and significant at 1% level. It implies that stronger country-level governance quality helps minority shareholders to receive more dividends if the firm operates under stronger governance structure.

Overall, our results support the prediction of outcome hypothesis both for the firm and country-level governance quality. Further, we find that country-level governance quality do not overshadow the importance of firm-level governance mechanism at the international level. It justifies the investments by a number of international firms on improving their firm-level governance quality that is recognized by market participants. Finally, our results shed light on how country- and firm-level governance quality interacts in firms' payout decisions. We find that these two governance mechanisms complement each other, which reinforces the importance of investing and improving governance quality both at the macro (country) level and micro (firm) level.

2. Economic significance: corporate governance and dividend amounts

We examine the economic significance of these results in Figure 1. In the graph, we plot the predicted dividend payout ratios against ISS41 based on the Tobit model (Model 3) from Table 2. We evaluate all independent variables at their sample medians and evaluate the fixed effects for the year 2009 and the business service industry. All else being equal, as the ISS41 index increases from 7 to 38 (i.e., our sample range of the ISS index values), the predicted payout ratio increases from 0.99% to 1.58% of firm assets. In relative terms, a change from 0.99% to 1.58% implies a 60% increase in dividend payout ratios.

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Insert Figure 1 here

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C. Valuation impact of dividend payment and firm corporate governance

Results presented in the preceding sections show support for the outcome hypothesis that better corporate governance facilitates more dividend payouts. This is consistent with the main argument of agency theory which contends higher dividend payout reduces the agency problem between corporate insiders and outsiders. As La Porta et al. (2000) posit, "by paying dividends, insiders return corporate earnings to investors and hence no longer capable of using these earnings to benefit themselves" (p. 4). Therefore, in order to be consistent with the prediction of

outcome model, we should observe that market values dividend payments more favorably. We examine this important issue in this section as it will provide an important link between our empirical result supporting outcome hypothesis and the market expectations about dividend payouts.

Accordingly, we test the dividend payment impact on firm valuation by following the method in Pinkowitz, Stulz, and Williamson (2003) and Fama and French (1998). The market value of equity model is specified as follows:

$$V_{i,t} = \alpha + \beta_1 E_{i,t} + \beta_2 dE_{i,t} + \beta_3 dE_{i,t+1} + \beta_4 dNA_{i,t} + \beta_5 dNA_{i,t+1} + \beta_6 RD_{i,t} + \beta_7 dRD_{i,t} + \beta_8 dRD_{i,t+1} + \beta_9 I_{i,t} + \beta_{10} dI_{i,t} + \beta_{11} dI_{i,t+1} + \beta_{12} D_{i,t} + \beta_{13} dD_{i,t} + \beta_{14} dD_{i,t+1} + \beta_{15} dV_{i,t+1} + \beta_{16} dL_{i,t} + \beta_{17} dL_{i,t+1} + e_{i,t}$$

where $X_{i,t}$ is the level of variable X in year t divided by the level of assets in year t; dX_t is the change in the level of X from year t − 1 to year t, $X_t - X_{t-1}$, divided by assets in year t; dXt+1 is the change in the level of X from year t to year t+1, $X_{t+1} - X_t$, divided by assets in year t; V is the market value of the firm calculated at fiscal year-end as the sum of the market value of equity, the book value of short-term debt, and the book value of long-term debt; NA is net assets defined as total assets minus liquid assets and L corresponds to liquid asset holdings. E is earnings before extraordinary items plus interest, deferred tax credits, and investment tax credits; RD is research and development (R&D) expense. I is interest expense; and D is dividends defined as common dividends paid. When R&D is missing, we set it equal to zero.

Since our paper focuses on the level of dividend payment and its impact on firm valuation, we specifically test the coefficient of D_{it} in the model. Positive coefficient suggests a positive impact of dividend payment on firm value while negative value suggests the opposite.

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Insert Table 3 here

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Table 3 shows the results of the test for our third hypothesis. Model 1 tests the Fama and French (1998) model without the governance variables and country control variables. The model is estimated based on the firm fixed effect[5]. We find that dividend payment amount has a

[5] We choose not to use the Fama-Macbeth regression method here for several reasons (Peterson, 2009). First, our sample contains firm-year panel data structure. There exists both cross-sectional and time-series autocorrelations. Using Fama-Macbeth regression assumes that the yearly data are independent, which is not the case for our repeated

positive impact on firm value. The regression coefficient of D_{it} ($\beta = 2.224$, $p < 0.01$) is positive and significant at a 1% level. It suggests that in our sample firms, international investors generally valuate positively for high dividend payment. In model 2 we control for year, industry and country dummy and obtain qualitatively similar results.

In order to make sure that the results are not driven by the country-level characteristics, such as legal system and financial development, we control for the common law (vs. civil law) legal system, financial market development, per capita GDP of the country and dividend tax penalty in the subsequent regression model (Model 3). Our results are robust to the inclusion of these additional controls. We find that the regression coefficient of D_{it} ($\beta = 6.643$, $p < 0.01$) remains positive and significant at a 1% level. Further, our results show that common law country firms and countries with better financial market development tend to have higher firm values. However, firms with higher shareholder right index and per capita GDP tend to be associated with lower firm value.

The above results, which show positive valuation effect of payouts, justify why a firm with better corporate governance would pay higher dividends. These findings are in line with the prediction of agency theory. According to the agency theory, in a firm with poor corporate governance structure there is a higher risk that managers would extract private benefits and would not invest extra cash in profitable business. In this context, Easterbrook (1984) focuses on two forms of agency costs: (i) monitoring cost of managers, (ii) risk-aversion of managers, and shows that dividend payouts could reduce such agency costs. It is costly for a firm to implement an effective monitoring mechanism for its managers. Furthermore, as managers often have substantial wealth tied up in their firms, they are likely to be risk-averse. Both a lack of monitoring and a risk-averse attitude of managers would lead to lower returns for the investors. As Easterbrook (1984) argues, dividend payments alleviate these problems. Dividend payouts would compel a firm to go to market for external funding in subsequent periods, which subjects the firm's management to external scrutiny. Suppliers of additional funds would monitor managers' effectiveness and the risk-taking aptitude. If the managers are opportunistic and not taking adequate risk, the new security price will reflect this (Gompers et al., 2003).

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measures for the sample firms. Second, the time span of our sample is short. In our sample, we have seven years of data, which will allow us to get average estimation of a coefficient based on only seven data points. Thus, the average estimation of the yearly regression coefficients might not be accurate. Thus, Fama-Macbeth regression might be less useful in corporate finance research with a shorter time span. We test our models using both fixed-effect and random-effect models that are standard to analyze panel data structure.

D. ISS Corporate Governance Components

One of the criticisms for a broad based governance index is that the individual components are arbitrarily chosen without any sound theoretical justification (Chhaochharia and Laeven, 2009). Further, once the components of put together in the governance index, it is not possible to observe the role and relative importance of different aspects of governance quality. In order to address this issue, we follow Aggarwal et al. (2009) and examine the four major components of the ISS corporate governance and test their impact on the corporate dividend payment respectively.

In the ISS governance index used in this study there are 41 governance attributes that cover four broad subcategories: (1) *Board (24 attributes),* (2) *Audit (3 attributes),* (3) *Anti-takeover (6 attributes),* and (4) *Compensation and Ownership (8 attributes).* As Aggarwal et al. (2009) explain, each category refers to a specific set of governance attributes, "*Board* attributes attempts to capture the aspects of the functioning of the board of directors that relate to board independence, composition of committees, size, transparency, and how work is conducted; *Audit* includes questions regarding the independence of the audit committee and the role of auditors; *Anti-takeover* provisions are from the firm's charter and bylaws and refer to dual-class structure, role of shareholders, poison pill, and blank check preferred; and *Compensation and Ownership* deals with executive and director compensation issues related to options, stock ownership, and loans, and how they are determined and monitored" (pp. 3141–3142).

As it is evident from the description of different sub-indices, various governance components might affect the dividend payout differently. The board of directors is the most visible and influential control mechanism for corporate governance. The board members can directly influence a firm's dividend policy as the board has to approve the same. Hu and Kumar (2004) examine the relation between board independence and dividend payout; consistent with the outcome model, they find that an independent board is associated with higher dividend payments. Similarly, a better audit quality (*Audit*) in a firm imposes more control on the managers and may compel them to pay higher dividends.

The *Compensation* and *Ownership* governance component brings in some other interesting perspectives. According to one view, entrenched managers are likely to pay higher dividends in order to protect themselves from disciplinary actions (Core, Holthausen and

Larcker, 1999; Hu and Kumar, 2004). Therefore it is expected that a better compensation policy in a firm will be associated with lower dividend payments. Hu and Kumar (2004) find empirical support for this argument. Further, Lambert, Lanen and Larcker (1989) argue that managers holding a substantial level of stock options will be less likely to pay dividends as standard option models show that dividend payments reduce option value. Lambert et al. (1989) and Fenn and Liang (2001) find support for this argument. However, on the other hand, a higher score for *Compensation and Ownership sub-index*' refers that a firm's compensation and ownership structure is more aligned with shareholders' interests. In such firms, managers are likely to pay higher dividends to the shareholders which are more favorably valued by the market participants (as shown in the previous section).

For the *Anti-takeover* component, the expected relationship with dividend payment is less clear, as those components refer to the overall quality of a firm's governance practices and do not directly refer to any internal decision-making groups. The *Anti-takeover* component primarily includes the criteria that deal with shareholders' involvement in the decision-making process, their power to call special meetings or the extent of anti-takeover provision adoption by the firms. A higher score for the *Anti-takeover* component implies greater shareholder involvement and prevalence of less restrictive anti-takeover provisions in the firm. There are two views on how *Anti-takeover* component could affect dividend payments. According to the first view, higher shareholder involvement could force managers to pay more dividends. Alternatively, higher shareholder involvement and less restrictive anti-takeover provision would enforce more monitoring of managers and increase the possibility of takeover which in turn would act as a disciplining force for managers. Under such conditions, shareholders are likely to rely less on dividend payments to restrict the wasteful use of cash by managers.

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Table 4 (Panel A) shows the Tobit models for each sub-index and their impact on the dividend payment ratio. Model 1 shows the board impact on dividend payment. Consistent with the overall governance index and earlier studies (Hu and Kumar, 2004), we find board has a positive and significant impact on the dividend payment ($\beta = 0.014$, $p < 0.01$). Model 2 shows

the audit index has positive and significant impact on the dividend payment ($\beta = 0.023$, $p < 0.01$). It implies that better audit quality exerts more monitoring pressure on managers, which in turns result in more dividend payments. Model 3 shows a negative impact of anti-takeover index on the dividend payment ($\beta = -0.014$, $p < 0.01$). Perhaps, in the firms with more investor friendly anti-takeover provisions and greater shareholder involvement in firms' strategic decision making process, ned to reply less on dividend payments to discipline managers. Model 4 presents the result for compensation index. We find that the coefficient for compensation index is positive and significant at 1% level ($\beta = 0.026$, $p < 0.01$). It implies that in firms where the compensation and ownership structure are more aligned with investors' interests, managers are more willing to pay dividends. Finally, we combine all sub-indices in one model (Model 5). The regression coefficients of all sub-indices with the exception of audit index remain significant.

Overall, our results show that different governance components that are categorized under varied constructs or themes are also associated with dividend payouts. This analysis is useful in a number of ways. First, the effectiveness of various governance sub-indices in explaining dividend payouts increases the reliability of overall governance index and the inclusion of various seemingly arbitrary constituents. Second, it reveals that all governance attributes are not homogeneous and do not affect investors expectation and managerial actions in the same way.

Subsequently, we examine how country-level governance quality moderates the relation between firm-level governance structure and dividend payouts. In order to examine this aspect, we control for interaction terms (governance sub-index*country level governance quality) in the regression models. The results are presented in Table 4 (Panel B). We find that for two sub-indices (namely, board index and audit index), the interaction term is positive and significant. Like overall governance index, results for these sub-indices show complementary effect of country-level governance quality in terms of dividend payouts.

E. Robustness tests

Our main finding in the paper is the positive relation between international firm-level governance and dividend payment amount. We also test the interaction between firm-level governance and country-level governance and find a complementary effect between the two levels of governance on dividend payment. In order to make sure that our results are not driven

by certain data outliers and confounding variables, we perform several robustness tests in the following section.

1. More country-level control variables

For the brevity of the paper, we only report the main control variables in the previous sections. Now we add more control variables into the models, which include legal system and national culture measures. More specifically, we include the common law (vs. civil law) dummy variable and the Hofstede (1980) culture measures, such as power distance, individualism, masculinity, and uncertainty avoidance in the models. We also include the year dummies and industry dummies along with the same firm-level and country-level control variables as we have used in the main analysis.

Table 5 reports the analysis after including the legal system variable (Models 1 and 2) and the culture variables (Models 3 and 4). Model 1 and 3 show that, after controlling for these additional variables, both firm-level governance variable (ISS41) and country-level shareholder right protection variable (AD) remain positive and statistically significant. The results confirm that better corporate governance is associated with higher dividend payment. Model 2 and 4 test the interaction between firm-governance and country governance. The regression coefficients are positive and statistically significant.

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Insert Table 5 here

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2. Alternative measures of dividend payment amount

In the main analysis, we show the impact of international corporate governance on dividend payment scaled by total assets. In order to make sure that our results are not affected by the scaling variable of the dividend measure, we also choose net income and total sales as the denominator to scale the dividend payment. One drawback of using net income is that the dividend ratio is only meaningful for positive earning firms. We thus eliminate the negative earning firm-year observations from our sample to perform this test. The sample size varies for the different dividend payment measures due to the data availability in the Compustat Global database.

Table 6 shows the results using dividend to earnings ratio (in Models 1 and 2) as well as the dividend to sales ratio (in Models 3 and 4) as the dependent variables of the Tobit models. By controlling for the same firm-level and country-level characteristics, we confirm the main findings in the paper that both firm-level governance and country-level governance have a positive impact on the firm dividend payment amount. Models 1 and 3 show the regression coefficients for the main effect of ISS41 and shareholder right index are both positive and significant at a 1% level. Using different measures of dividend payment also confirms the positive interaction between the firm-level governance and country-level governance. Models 2 and 4 both show the positive and significant regression coefficients for the interaction terms.

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3. Additional analysis on creditor rights and impact on dividend payment

Although our paper focuses on shareholder rights protection and related corporate governance impact on dividend payment, it does fall into a larger topic of governance and dividend policy, such as the extension to creditors' rights in Brockman and Unlu (2007). In order to show that our results also confirm with this extension of the broader literature on governance, we test our firm-level governance measures with the credit rights impact on dividend payment.

First, we follow Brockman and Unlu (2007) and test the country-level creditor rights impact on the corporate dividend payment amount. Table 7 Model 1 shows the Tobit model results. Our results confirm their finding that the firms in the countries with stronger creditor rights tend to pay more dividends. We then test the interaction between the firm-governance and the country's creditor rights. The Tobit model in Model 2 shows a positive coefficient and significant at 1%. It does confirm a significant complementary effect between the firm-level and country-level governance structure in terms of corporate dividend payment.

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4. Various estimation methods

Our main analyses so far are primarily based on the panel data regression (random effect) model which is appropriate for our sample with both firm-level and time-level dimensions. However, we also note that the dividend payment measure has a truncated distribution feature. As a robustness check, we run the tobit models[6]. We could have used fixed-effect in Tobit regressions, but this is "not advisable econometrically as unconditional fixed-effects Tobit estimates are not unbiased" (Jiraporn et al. (2011) p. 267). Table 8 shows the results based on these methodologies. Model 1 presents the tobit model with the firm-level control variables only. We find cash holdings and book value of equity to assets lost statistical significance in the fixed-effect model. However, we still find the firm-level governance variable (ISS41) remains positive and significant ($\beta = 0.070$, $p < 0.01$). Model 2 adds the country-level governance variables (including the shareholder right index). Since these variables do not vary by year or firm, we present the random-effect model results. Both firm-level governance (ISS41) and country-level governance (AD) have positive and significant impact on the dividend payment amount. Model 3 shows the random effect for the interaction between the firm-level and country-level governance variables. The results confirm the positive interaction between the two governance measures. Our main findings are supported by using the panel data regression methods.

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As a further robustness check, we also use the multi-level models (considering firm-level variables as the level 1 variables and country-level variables as the level 2 variables). We use the xtmixed package in STATA (Rabe-Hesketh and Skrondal, 2008) to perform the multi-level analysis to examine the interaction between firm-level governance and the country-level governance variables. We find similar results as reported earlier in the paper.

In addition, we also employed the traditional pooled OLS regression with clustered standard errors by firm and country. The results are also similar to the main findings in the paper and are available upon request.

[6] To address the truncated distribution issue, we also tried the logistic transformation using ln [x/(1-x)] and run the pooled OLS regression and panel data regression. Our main hypotheses are still supported and statistical significance is similar. For the brevity of the paper, we do not report the results in tables. The results are available upon request.

5. Correction for the sample selection bias

As we mentioned above, our sample may not represent a general firm in the international countries due to the limitation of the sample firms covered by the ISS database. This leads to non-random sample selection problem (Reeb, Sakakibara, and Mahmood, 2012). In order to correct for the sample selection bias, we follow the Heckman (1979) two-steps method in these robustness tests.

First we download all firms in the countries and industries that are covered in our study (see Panel B and C in Table 1) from the Compustat Global and North American database. There are 135,587 firm-year observations (and 29,040 unique firms) with the complete information of the key financial variables we examine in the study, such as dividend-to-assets ratio, retained earnings, returns on assets, equity to assets, sales growth, cash holdings and firm size. We then create a dummy variable which is 1 for the firm-year observations that were included in our main analysis (Compustat and ISS matched) and 0 for the rest of Compustat sample. We regress the dummy variable on the firm characteristics, year dummies, country dummies and industry dummies. We estimate the predicted value of the probit model and include this value (i.e., probability of the observation included in our sample) in the second stage of the models (i.e., the Tobit models that test the impact of firm and country governance on dividend payment amount). We found that the sample firms covered by the ISS dataset have substantially different firm characteristics than the general firms in the Compustat Global database. More specifically, we find that our samples tend to pay more dividends, have larger size, more retained earnings (i.e., more mature), slower growth, more equity, and more cash holdings than the general firms in those 29 countries.

Subsequently we run the second stage of the model by including the Inverse Mill's Ratio (IMR) as an additional control variable in the dividend payment models. We find the IMR variable is highly significant, which suggests the need to control for the sample selection bias in our sample. After controlling for the IMR, both governance variables remain positive and significant at a 1% level. It confirms our main finding in the paper that better corporate governance is associated with higher dividend payment in the international firms. We further tests the interaction term between the firm-governance and country governance variables. The interaction term is still positive and significant at a 1% level after controlling for the sample

selection bias. It again supports our main finding stated in previous sections. The results are not presented for brevity.

6. Other possible endogenous bias

In the analysis so far, we focus on the one-way impact of corporate governance on the dividend policy. One may argue that both dividend policy and corporate governance are endogenously determined and that there is another effect from dividend policy to corporate governance. However, the other effect is unlikely because dividends are more at managerial discretion than corporate governance. A significant change of corporate governance needs the approval of shareholders and takes much longer than dividend decisions. Therefore, the direction is more likely to be that corporate governance affects dividends rather than the other way around. This assumption is supported by the literature. John and Knyazeva (2006) report empirical evidence supporting that causality likely goes from governance to dividend payouts. Ciceksever, Kale, and Ryan (2006) report that managers take governance structure as predetermined.

Notwithstanding the above arguments, we attempt to address this potential endogeneity bias in two ways. First, in all analyses, we use a one-year lagged ISS41 index for each firm to test its impact on the dividend payment amount. Our results so far suggest that the lagged variable has significant impact on the dividend policy. Second, we follow Jiraporn et al. (2011) and use the two-stage least squares (2SLS) approach. We regress firm-level governance on an instrument in the first stage and then use the predicted value from the first stage as an independent variable in the second stage. The instrument must be correlated with corporate governance, but not correlated with dividends except through the channel of other independent variables. We follow John and Knyazeva (2006), John and Kadyrzhanova (2008), and Jiraporn et al. (2011) to employ country-industry-median ISS41 index as our instrument. The country-industry median is correlated with corporate governance due to peer effect as firms compare themselves to the median. But the country-industry-median ISS41 index is uncorrelated to the dividend policy because a firm's dividend decision may be related to its own corporate governance, but unlikely to be correlated with other firms' governance.

Table 9 (Panel A) reports the 2SLS results. Model 1 shows the first-stage regression results. The country-industry-median ISS41 index is highly positive and significant, implying that it significantly explains firm-level governance, consistent with the findings in John and

Kadyrzhanova (2008). Model 2 and Model 3 show the second-stage regression with the ratio of dividends to total assets to be the dependent variable. Model 2 shows the coefficient of predicted firm-level ISS41 index is positive and significant, confirming our earlier findings. In addition, the shareholder right index is also positive and significant. Both suggest that firm-level and country-level governance have a positive impact on the dividend payment amount. Model 3 adds the interaction between the predicted firm-level ISS41 index and the country's shareholder right index to the independent variables. The coefficient of the interaction term confirms the positive sign and statistical significance that we found in the analysis before. In other words, the 2SLS regression models confirm earlier findings.

Another type of endogeneity is simultaneity. Both dividend payouts and governance quality could be simultaneously determined by omitted variables, causing a spurious association between dividend payouts and governance quality. To control simultaneity, we apply two approaches. One is a fixed-effects regression, which assigns a dummy variable to each firm. In this way, firm-specific variables that are not included in the regression are controlled. This is already tested in Model 1 in Table 8 and similar results are reported. The second approach includes lagged dividend payouts as an independent variable in the regression models. The lagged dividend payouts should catch the unobservable firm-specific characteristics that may be omitted in the models. As shown in Model 1 in Table 9 (Panel B), the results again confirm earlier findings. To sum up, all the robustness tests obtain similar results – corporate governance affects dividend payout positively.

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7. Exclusion of U.S. firms

Since 68% of our sample is composed of U.S. firms (due to the over-representation of U.S. firms in the ISS database), we repeat our analysis excluding the U.S. firms from our international firm sample. We perform the same Tobit model as in the main analysis in the previous section. In the results, shown in Table 10 below, the regression coefficients of the firm-level governance and country-level governance remain positive and statistically significant. The interaction between the two governance variables is positive and significant. This suggests that our main results are not driven by a single-country data.

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8. Individual measures of corporate governance

So far in our analysis, we have considered the overall governance index (ISS41) and its sub components while examining the impact of corporate governance on dividend payouts. This approach allows us to compare and contrast the overall governance quality of the firms across different countries. However, some other studies have questioned the validity of an overarching governance index and recommended using important individual governance characteristics instead (e.g., Bebchuk, Cohen, and Ferrell, 2009; Daines, Gow, and Larcker, 2010). Accordingly, we follow Aggarwal et al. (2011) and examine the seven individual governance attributes that have been most studied in the literature and among policy makers. These items are highlighted in Appendix 1 and include: board independence (item 3), board size (item 4), CEO/chairman separation (item 7), and the absence of a staggered board (item 12); the independence of firm auditors (item 26), and ratification of auditors (item 27); and the existence of multiple share classes (item 28). Table 11 presents the relevant results.

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Out of these seven individual governance mechanisms, we find that four factors show significant association with dividend payout (board independence, board size, CEO/chairman separation, and the absence of a staggered board; and the existence of multiple share classes). However, we find that single class stock variable show negative association. These results again indicate that all governance factors are not homogeneous and affect dividend payouts different. Overall, we find that majority of the significant governance factors have a positive impact on dividend payout.

9. Consideration of share repurchases

Another way of distributing cash by firms is through share repurchases. While share repurchase has become more popular over the years, non-U.S. firms do not repurchase shares as much as U.S. firms do (Lee and Suh, 2009). Furthermore, it is still debated whether share repurchase is used as a substitution for cash dividend payments as a number of studies report that firms repurchasing shares also pay dividends (Denis and Osobov, 2008). Notwithstanding this debate, in order to ensure the robustness of our results, we repeat our main analysis by considering total dividend payment (cash dividend plus share repurchase) as the dependent variable. We follow Bliss, Cheng and Denis (2013) in order to create the stock repurchase and total dividend payout variable. Table 12 presents the relevant results.

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Model 1 presents the basic regression model with the control variables; Model 2 includes the impact of country-level governance variable (shareholders' rights); Model 3 adds the effect of firm-level governance variable (ISS41), while Model 4 includes the interaction effect between country- and firm-level governance variable. Based on Model 2 and Model 3 results we find that both country- and firm-level governance quality affect the dividend payout significantly and positively. These results confirm our earlier findings that stronger governance structure is associated with higher dividend payout. However we find that the interaction effect is not significant once we consider the total divided as a dependent variable. There could be a number of reasons for observing this insignificant interaction effect. First, stock repurchase is less prevalent among international firms (other than U.S. firm) hence there is less power in the test. Second, stock repurchase is discretionary and hence there might not be any systematic interplay between country- and firm-level governance structure in terms of influencing the payout decisions.

V. Conclusions

We examine the effect of firm-level corporate governance on dividend policies of a large sample of firms representing 29 different countries. Consistent with Aggarwal et al. (2009), we use ISS governance index (with 41 attributes) as a measure of firm-specific governance quality. We find that, after controlling for country-level governance quality, firms with better corporate

governance tend to pay higher dividends. This finding is consistent with the outcome hypothesis as presented by La Porta et al. (2000). Earlier international studies on the same subject matter used country-level governance variables and found that country-level governance quality (such as legal system, creditor rights) affect a firm's dividend policy. However, our results show that country-level variables alone do not explain the overall governance effect on a firm's dividend policy. Instead, our sample shows a significant variation in firm-level governance quality within each country. It is expected that these firms would have different approaches with regard to their dividend policies. Our results confirm this prediction.

While country-level governance quality and firm-specific governance structure both affect a firm's dividend policy independently, we argue that there will be interdependence between these two levels of governance environment. In fact, our results show that in a country with a better legal environment (i.e., better governance quality), firm-specific governance structure has a higher influence on dividend payouts. This is an interesting result, as it shows that in countries with better governance quality, minority shareholders extract more cash dividends from firms with better internal governance structure.

Finally, we also examine how markets value dividend payouts in the context of a firm's governance structure. Our results show that investors value dividends at premium in the firms with weaker firm-level corporate governance. Overall our findings suggest the following: (i) internationally, firms with better governance pay higher dividends; (ii) country-level and firm-level governance quality complement each other in dividend payouts; (iii) consistent with the agency theory, shareholders value dividends more favorably. Our results are robust to a set of country-level and firm-level control variables. While this study presents some useful and interesting evidences, the results should be viewed with caution. Given that ISS database covers primarily large firms, the sample used in this study is biased towards large firms.

References

Abdi, M., & Aulakh, P. 2012. Do country-level institutional frameworks and interfirm governance arrangements substitute or complement in international business relationships. Journal of International Business Studies, 43(5): 477–497.

Aggarwal, R., I. Erel; R. Stulz; and R. Williamson. "Differences in Governance Practices between U.S. and Foreign Firms: Measurement, Causes, and Consequences." *Review of Financial Studies,* 22 (2009), 3131–3169.

Aggarwal, R.; I. Erel; M. Ferreira; and P. Matos. "Does Governance Travel Around the World? Evidence from Institutional Investors." *Journal of Financial Economics,* 100 (2011), 154–181.

Aivazian, V.; L. Booth; and S. Cleary. "Do Emerging Market Firms Follow Different Dividend Policies from U.S. Firms." *Journal of Financial Research,* 26 (2003), 371–387.

Amihud, Y., and K. Li. "The Declining Information Content of Dividend Announcements and the Effect of Institutional Holdings." *Journal of Financial and Quantitative Analysis,* 41 (2006), 637–660.

Booth, L.; B. Chang; and J. Zhou. "Import Competition and Disappearing Dividend." *Journal of International Business Studies,* 44 (2013), 138–154.

TJ Boulton, SB Smart, CJ Zutter. 2010. IPO underpricing and international corporate governance. Journal of International Business Studies 41 (2), 206-222.

Bhattacharya, S. "Imperfect Information, Dividend Policy and the Bird in the Hand Fallacy." *Bell Journal of Economics*, 10 (1979), 259–270.

Bliss, B.; Y. Cheng; and D.J. Denis. "Corporate payout, cash retention, and the supply of credit: evidence from the 2008-09 credit crisis." University of Pittsburgh working paper (2013).

Borokhovich, K. A.; K. R. Brunarski; Y., Harman; and J. B. Kehr. "Dividends, Corporate Monitors and Agency Costs." *Financial Review,* 40 (2005), 37–65.

Brealey, R. A.; S. C. Myers,; and F. Allen. *Principles of Corporate Finance.* McGraw-Hill/Irwin (2008).

Brockman, P., and E. Unlu. "Dividend Policy, Creditor Rights, and the Agency Costs of Debt." Journal of Financial Economics, 92 (2009), 276–299.

Chang, B., and S. Dutta. "Dividends and Corporate Governance." *The IUP Journal of Applied Finance,* 18(2012), 5–30.

Core, J. E.; R. W. Holthausen; and D. F. Larcker. "Corporate Governance, Chief Executive Officer Compensation, and Firm Performance." *Journal of Financial Economics*, 51 (1999), 371–406.

Demirguc-Kunt, A., and R. Levine. "Stock Market Development and Financial Intermediaries: Stylized Facts." *World Bank Economic Review*, 10 (1996), 291–321.

Denis, D. J., and I. Osobv. "Why Do Firms Pay Dividends? International Evidence on the Determinants of Dividend Policy." *Journal of Financial Economics*, 89 (2008), 62–82.

Djankov, S.; C. McLiesh; and A. Shleifer. "Private Credit in 129 Countries." *Journal of Financial Economics*, 84 (2007), 299–329.

Djankov, S.; R. La Porta; F. Lopez-de-Silanes; and A. Shleifer. "The Law and Economics of Self-dealing." *Journal of Financial Economics*, 88 (2008), 430–465.

Doidge, C., G. A. Karolyi; and R. M. Stulz. "Why do Countries Matter So Much for Corporate Governance?" *Journal of Financial Economics*, 86 (2007), 1–39.

Dutta, S., and S. Saadi. "Dividend Policy and Corporate Governance." In H.K. Baker (Ed.), *The Blackwell Companion to Dividends and Dividend Policy*. Blackwell Publishing, Boston, (2009), 447–462.

Easterbrook, F. H. "Two Agency-cost Explanations of Dividends." *American Economic Review* 74 (1984), 650–659.

Faccio, M.; L. H. P. Lang; and L. Young. "Dividends and Expropriation." *American Economic Review*, 91(2001), 54–78.

Fama, E. F.; and K. R. French. "Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay?" *Journal of Financial Economics*, 60 (2001), 3–43.

Fama, E. F., and M. C. Jensen. "Separation of Ownership and Control." *Journal of Law and Economics*, October (1983), 301–326.

Fama, E. F., and K. R. French. "Taxes, Financing Decisions, and Firm Value." *Journal of Finance*, 53 (1998), 819–843.

Fenn, G.W., and N. Liang. "Corporate Payout Policy and Managerial Stock Incentives." *Journal of Financial Economics*, 60 (2001), 45–72.

Ferris, S.; N. Jayaraman; and S. Sabherwal. "Catering Effects in Corporate Dividend Policy: The International Evidence." *Journal of Banking and Finance*, 33 (2009), 1730–1738.

Gompers, P., J., Ishii, and A. Metrick. "Corporate Governance and Equity Prices." *Quarterly Journal of Economics,* 118 (2003), 107–155.

Grinstein, Y., and A. Palvia. "Executive Loans, Corporate Governance, and Firm Performance: Evidence from Banks." Working Paper, Cornell University (2006).

Grullon, G., and Michaely, R. "Corporate Payout Policy and Product Market Competition." Working Paper, Cornell University (2007).

Ilir Haxhi and Hans van Ees. 2010. Explaining diversity in the worldwide diffusion of codes of good governance. Journal of international business studies, 41(4), 710-726.

Heckman, J. "Sample Selection Bias as a Specification Error." Econometrica 47 (1979), 153–61.

Hofstede, G. *Culture's Consequences: International Differences in Work-Related Values.* Beverly Hills, CA: Sage (1980).

Hu, A., and P. Kumar. "Managerial entrenchment and payout policy." *Journal of Financial and Quantitative Analysis,* 39 (2004), 759–790.

Jacob, M., and Jacob, M. "Taxation, dividends, and share repurchases: Taking evidence global." Journal of Financial and Quantitative Analysis, 48 (2013), 1241-1269.

Jensen, M. C. "Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers." *American Economic Review,* 76 (1986), 323–329.

Jiraporn, P., and Y. Ning. "Dividend Policy, Shareholder Rights, and Corporate Governance." *Journal of Applied Finance,* 16 (2006), 24–36.

Jiraporn, P.; J. Kim; and Y. S. Kim. "Dividend Payouts and Corporate Governance Quality: An Empirical Investigation." *The Financial Review,* 46 (2011), 251–279.

John, K.; and A. Knyazeva. "Payout Policy, Agency Conflicts and Corporate Governance." Working Paper, New York University (2006).

John, K.; and D. Kadyrzhanova. "Peer Effects in Corporate Governance." Working Paper, New York University (2006).

John, K., and J. Williams. "Dividends, Dilution, and Taxes: A Signaling Equilibrium." *Journal of Finance,* 40 (1985), 1053–1070.

Kalay, A., and U. Lowenstein. "The Informational Content of the Timing of Dividend Announcements." *Journal of Financial Economics,* 16 (1986), 373–388.

Kaufmann, D.; A. Kraay; and M. Mastruzzi. "Governance Matters III: Governance Indicators for 1996–2002." Working Paper, World Bank Policy Research (2003).

Khanna, T.; Kogan, J; and K. Palepu. “Globalization and Similarities in Corporate Governance: A Cross Country Analysis.” *The Review of Economics and Statistics,* 88 (2006), 69-90.

La Porta, R.; Lopez-De-Salinas; F., Shleifer, A.; and R. Vishny. Law and Finance.” *Journal of Political Economy,* 106 (1998), 1113–1155.

La Porta, R.; F. Lopez-De-Salinas; A. Shleifer; and R. Vishny. “Agency Problems and Dividend Policy around the World.” *Journal of Finance,* 55 (2000), 1–33.

Lambert, R.A.; N. L. William; and D. F. Larcker. “Executive Stock Option Plan and Corporate Dividend Policy.” *Journal of Financial and Quantitative Analysis,* 24 (1989), 409–425.

Lasfer, M.; and M. Alzahrani. “The Impact of Taxation on Dividends: A Cross-country Analysis.” Financial Management Association Meeting, Dallas, Texas (2008).

Lee, B.S.; and J. Suh. “Cash Holdings and Share Repurchase: International Evidence**.”** *Journal of Corporate Finance* 17:5 (2011), 1306-1329.

Licht, A. N.; C. Goldschmidt; and S. H. Schwartz. “Culture, Law, and Corporate Governance.” *International Review of Law and Economics,* 25 (2005), 229–255.

Luo, Xiaowei Rose, Chi-Nien Chung, and Mike Sobczak. 2009. How Do Corporate Governance Model Differences Affect Foreign Direct Investment in Emerging Economies? Journal of International Business Studies 40: 444-467.

Mitton, T. “Corporate Governance and Dividend Policy in Emerging Markets.” *Emerging Market Reviews,* 5 (2004), 409–426.

Morck R.; B. Yeung; and W. Yu. “The Information Content of Stock Markets: Why do Emerging Markets have Synchronous Stock Price Movements?” *Journal of Financial Economics,* 58 (2000), 215–260.

Nissim, D., and A. Ziv, “Dividend Changes and Future Profitability.” *Journal of Finance,* 56 (2001), 2111–2133.

Officer, M. “Dividend Policy, Dividend Initiations, and Governance.” Working Paper, University of Southern California (2006).

Peterson, M. A. “Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches.” *Review of Financial Studies,* 22 (2009), 435–480.

Pinkowitz, L.; R. Stulz; and R. Williamson. “Does the Contribution of Corporate Cash Holdings and Dividends to Firm Value Depend on Governance? A Cross-country Analysis.” *Journal of Finance,* 61(2006), 2725–2751.

Rabe-Hesketh, S and A. Skrondal, (2008). *Multilevel and Longitudinal Modeling Using Stata.* Second Edition, Stata Press (2008).

Reeb, D.; M. Sakakibara; and I. P. Mahmood. 2012. "From the editors: Endogeneity in international business research." *Journal of International Business Studies*, 43(2012), 211–218.

Ross, S. "The Determination of Financial Structure: The Incentive-signaling Approach." *Bell Journal of Economics,* 8 (1977), 23–40.

Shao, L.; C.C.Y. Kwok; and O. Guedhami. "National Culture and Dividend Policy?" *Journal of International Business Studies,* 41 (2010), 1391-1414.

Zheng, X.; S. E. Ghoul; O. Guedhami and C.C.Y. Kwok. "Collectivism and Corruption in Bank Lending" *Journal of International Business Studies,* 44 (2013), 363–390.

Table 1: Sample Description

Panel A. Descriptive statistics and correlations

Table 1 Panel A shows the descriptive statistics of the main variables in the study. Dividend to assets is the ratio of the cash dividend divided by the total assets for each sample firm in each fiscal year-end between 2003 and 2009; ISS41 is based on the 41 corporate governance measures of each sample firms in each year during the sample period; AD is the shareholders' right index for each sample country collected from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008). Firm life cycle is the ratio of retained earnings divided by the total assets; book equity is the ratio of book value of equity divided by total assets; ROA is the return on total assets; sales growth measures the yearly percentage change in the revenue for each sample firm; cash holding is the percentage of cash assets divided by total assets; country per capita GDP is collected for each sample from the World Development Indicator database for each sample year between 2003 and 2009; Financial market development is the ratio of stock market capitalization divided by the GDP of the country in each sample year; dividend tax penalty is collected from Jacob and Jacob (2013) to capture the tax rate difference between dividend and capital gain in various countries; common law is a dummy variable which equals 1 if the country has a common law system, otherwise the variable equals 0 (such as civil law system); the four culture measures are taken from the Hofstede website (http://geert-hofstede.com/), including power distance, individualism, masculinity and uncertainty avoidance. We show the mean and standard deviation statistics for each variable in the following table. We also report the Pearson correlation coefficient between each pair of variables in the table.

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Dividend to assets	1.000												
2	ISS41	0.062	1.000											
		(0.000)												
3	Shareholder's right	0.311	0.210	1.000										
		(0.000)	(0.000)											
4	Firm life cycle	0.347	0.039	0.102	1.000									
		(0.000)	(0.000)	(0.000)										
5	Book equity	-0.029	-0.006	-0.094	0.020	1.000								
		(0.000)	(0.325)	(0.000)	(0.001)									
6	ROA	0.315	-0.023	0.134	0.434	0.047	1.000							
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)								
7	Sales growth	-0.077	-0.014	-0.006	-0.068	0.051	0.176	1.000						
		(0.000)	(0.019)	(0.307)	(0.000)	(0.000)	(0.000)							
8	Firm size	0.247	0.033	0.230	0.366	-0.356	0.377	-0.020	1.000					
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)						
9	Cash holding	-0.119	0.022	-0.135	-0.218	0.440	-0.242	0.030	-0.359	1.000				
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)					
10	Country per capita GDP	-0.285	0.202	-0.308	0.026	0.140	-0.117	0.025	-0.215	0.142	1.000			
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)				
11	Financial market development	-0.004	0.047	0.173	-0.019	0.096	0.027	0.097	-0.093	0.053	0.164	1.000		
		(0.476)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)			
12	Dividend tax penalty	-0.058	-0.104	-0.262	-0.033	-0.051	0.008	-0.031	0.125	-0.026	-0.202	-0.246	1.000	
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.151)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)		
13	Common law	-0.195	0.548	-0.167	-0.150	0.129	-0.133	0.115	-0.412	0.135	0.300	0.181	-0.299	1.000
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	
14	Culture - power distance	0.030	-0.329	0.104	0.048	-0.026	0.051	-0.064	0.228	-0.043	-0.157	0.040	0.119	-0.591
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
15	Culture - individualism	-0.168	0.523	-0.341	-0.157	0.083	-0.128	0.101	-0.395	0.118	0.257	0.063	-0.243	0.899
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
16	Culture - masculinity	-0.099	-0.221	0.048	0.108	0.034	-0.000	-0.056	0.109	0.011	0.340	-0.112	-0.021	-0.237
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.977)	(0.000)	(0.000)	(0.071)	(0.000)	(0.000)	(0.000)	(0.000)
17	Culture - uncertainty avoidance	0.014	-0.449	-0.075	0.104	-0.078	0.063	-0.110	0.315	-0.090	-0.098	-0.374	0.278	-0.744
		(0.021)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	Mean	0.01	21.731	3.232	0.392	0.517	0.006	0.084	6.48	0.181	10.462	119.495	0.009	0.777
	S.D.	0.015	5.626	0.558	0.369	0.205	0.126	0.207	2.042	0.179	0.211	50.536	0.074	0.416

Panel B. Sample descriptions by country

Panel B shows the count of sample observations by the 29 sample countries and the seven sample years. The full sample of the study contains 28,686 firm-year observations.

Country / Year	2003	2004	2005	2006	2007	2008	2009	Grand Total
Australia	50	50	73	75	68	54	54	424
Austria	13	11	10	11	11	14	13	83
Belgium	16	12	17	17	18	19	17	116
Canada	128	124	105	102	95	115	118	787
China						6	5	11
Denmark	20	19	16	16	14	20	14	119
Finland	25	25	24	26	26	27	31	184
France	72	64	61	62	61	60	55	435
Germany	72	63	55	55	52	61	59	417
Hong Kong	9	10	28	29	27	23	23	149
India	1	2	1	1				5
Ireland	10	8	15	17	16	17	15	98
Israel	1		2	3	1	2	2	11
Italy	37	25	31	32	30	36	26	217
Japan	396	407	462	465	459	532	516	3,237
Korea					10	9	29	48
Netherlands	42	39	33	36	34	33	31	248
New Zealand	11	11	12	12	8	10	13	77
Norway	18	20	13	12	11	14	14	102
Philippines	1	1						2
Portugal	11	9	9	8	8	10	11	66
Singapore	32	32	33	31	32	38	33	231
Spain	22	14	32	32	30	30	22	182
Sweden	32	33	27	27	27	32	29	207
Switzerland	42	43	40	43	41	43	39	291
Thailand						1	1	2
Turkey							32	32
United Kingdom	28	30	199	285	273	287	236	1,338
United States	3,093	2,953	2,877	2,819	2,586	2,666	2,573	19,567
Grand Total	4,182	4,005	4,175	4,216	3,938	4,159	4,011	28,686

Panel C. Sample description by industry

Panel C shows the count of sample observations by the 44 sample industries and the seven sample years. The full sample contains 28,686 firm-year observations. The industry classification is based on Fama and French (1993).

Industry / Year	2003	2004	2005	2006	2007	2008	2009	Grand Total
Agriculture	16	16	10	10	10	14	12	88
Aircraft	26	26	29	28	28	31	32	200
Alcoholic Beverages	13	13	13	14	14	15	13	95
Apparel	67	66	67	66	67	67	63	463
Automobiles and Trucks	93	89	91	98	95	100	97	663
Business Services	569	519	529	528	469	508	480	3,602
Business Supplies	61	58	60	58	56	55	57	405
Candy and Soda	15	18	21	24	23	21	20	142
Chemicals	132	128	135	133	135	140	137	940
Coal	7	6	7	9	9	10	10	58
Computers	228	201	196	187	160	175	164	1,311
Construction	75	72	89	97	94	95	101	623
Construction Materials	97	92	107	108	100	95	99	698
Consumer Goods	87	80	91	89	86	81	75	589
Defense	8	9	9	9	9	8	7	59
Electrical Equipment	57	56	60	61	57	63	58	412
Electronic Equipment	293	295	296	294	270	281	273	2,002
Entertainment	62	56	61	58	53	59	57	406
Fabricated Products	9	11	9	9	9	9	8	64
Food Products	78	73	81	87	87	88	83	577
Healthcare	64	66	68	69	66	77	67	477
Machinery	189	176	180	177	162	181	173	1,238
Measuring and Control Equip	107	111	103	104	103	105	96	729
Medical Equipment	158	153	148	154	134	140	136	1,023
Miscellaneous	48	47	55	55	48	45	49	347
Nonmetallic Mining	25	26	27	33	35	43	44	233
Personal Services	40	37	40	40	38	41	42	278
Petroleum and Natural Gas	158	152	168	174	172	206	199	1,229
Pharmaceutical Products	264	259	266	271	241	234	244	1,779
Precious Metals	15	13	11	13	13	21	26	112
Printing and Publishing	39	42	43	52	50	50	39	315
Recreational Products	46	45	43	43	37	39	36	289
Restaurants, Hotel, Motel	89	87	94	87	79	90	75	601
Retail	268	262	278	281	266	264	257	1,876
Rubber and Plastic Products	39	35	35	32	31	33	28	233
Shipbuilding, Railroad Equip	11	10	11	13	11	14	16	86
Shipping Containers	16	15	17	18	18	17	18	119
Steel Works, Etc.	85	80	80	75	76	86	89	571
Telecommunications	156	150	154	157	145	149	150	1,061
Textiles	19	17	20	19	17	16	13	121
Tobacco Products	31	26	27	29	27	28	24	192
Transportation	138	140	154	162	156	174	166	1,090
Utilities	25	26	29	28	24	28	26	186
Wholesale	159	146	163	163	158	163	152	1,104
Grand Total	**4,182**	**4,005**	**4,175**	**4,216**	**3,938**	**4,159**	**4,011**	**28,686**

Panel D. Firm-level governance statistics by country

Panel D shows the dispersion of the firm-level governance measure (ISS41) by 29 sample countries and the corresponding country-level governance measure (shareholder's right index "AD") for each country. The first column shows the number of firm-year observations; column 2 shows the mean value of the firm-level governance measure by country; the third and fourth columns show the minimum and maximum values of the firm-level governance measures in each country; the fifth column shows the standard deviation of the ISS41 governance measure in each country; the last column shows the shareholder's right index measure for each sample country.

Country	Number of Observations	ISS41 - Mean	ISS41 - Min	ISS41 - Max	ISS41 - Std Dev	Shareholders' rights index
Australia	424	18.46	10	26	2.16	4.00
Austria	83	17.24	11	29	3.38	2.50
Belgium	116	14.98	10	21	2.54	2.00
Canada	787	23.99	15	32	3.08	4.00
China	11	20.27	17	24	1.95	1.00
Denmark	119	15.83	10	23	3.10	4.00
Finland	184	19.52	11	28	4.39	3.50
France	435	17.63	8	25	2.94	3.00
Germany	417	17.48	11	27	3.24	2.50
Hong Kong	149	17.09	7	29	3.06	5.00
India	5	23.20	19	27	3.90	5.00
Ireland	98	21.90	9	32	5.63	4.00
Israel	11	19.82	16	25	3.28	4.00
Italy	217	15.97	9	24	3.05	2.50
Japan	3,237	14.66	11	23	1.62	3.50
Korea	48	19.10	13	24	2.99	3.50
Netherlands	248	17.83	10	26	3.91	3.00
New Zealand	77	17.29	13	23	2.00	4.00
Norway	102	15.29	10	26	3.46	3.50
Philippines	2	23.50	21	26	3.54	3.00
Portugal	66	13.30	9	18	1.93	2.50
Singapore	231	17.17	9	23	2.93	5.00
Spain	182	16.68	9	22	3.40	5.00
Sweden	207	16.83	10	24	3.79	3.50
Switzerland	291	19.63	11	32	4.51	3.00
Thailand	2	15.00	15	15	0.00	4.00
Turkey	32	15.63	8	19	2.30	2.00
United Kingdom	1,338	20.47	11	27	2.77	5.00
United States	19,567	23.70	8	38	5.17	3.00
Grand Total	28,686	21.73	7	38	5.63	3.23

Table 2. International Corporate Governance and Dividend Payment

Table 2 shows the panel data regression (random effect) models to test the impact of country-level and firm-level governance impact on the dividend payment amount. The dependent variable is the cash dividend divided by the total assets ratio. Model (1) shows the regression with only control variables. Model (2) tests the country-level governance (proxied by the shareholders' right index "AD") impact on the corporate dividend payment. Finally, Model (3) includes the firm-level governance measure ("ISS41") and tests its impact on the corporate dividend payment after controlling for the country-level governance as well as the other control variables in the model. All models include year and industry fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance
at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**	**(3)** **Model**	**(4)** **Model**
ISS41 X Shareholders' rights				0.011***
				(0.004)
ISS41			0.009***	-0.024**
			(0.002)	(0.011)
Shareholders' rights		4.621***	4.745***	4.512***
		(0.185)	(0.188)	(0.203)
Firm life cycle	0.734***	0.734***	0.734***	0.734***
	(0.029)	(0.029)	(0.029)	(0.029)
Book equity	0.166***	0.166***	0.169***	0.166***
	(0.047)	(0.047)	(0.047)	(0.047)
ROA	0.822***	0.822***	0.824***	0.826***
	(0.060)	(0.060)	(0.060)	(0.060)
Sales growth	-0.256***	-0.256***	-0.254***	-0.255***
	(0.026)	(0.026)	(0.026)	(0.026)
Firm size	-0.016**	-0.016**	-0.024***	-0.023***
	(0.008)	(0.008)	(0.008)	(0.008)
Cash holding	0.022	0.022	0.020	0.022
	(0.054)	(0.054)	(0.054)	(0.054)
Country per capita GDP	4.356***	4.356***	4.501***	4.424***
	(0.322)	(0.322)	(0.324)	(0.325)
Financial market development	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Dividend tax penalty	-0.567***	-0.567***	-0.645***	-0.772***
	(0.101)	(0.101)	(0.102)	(0.111)
Constant	-40.830***	-59.314***	-61.357***	-59.826***
	(3.234)	(3.824)	(3.859)	(3.894)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes
Observations	28,686	28,686	28,686	28,686
Number of firms	6,151	6,151	6,151	6,151
Chi-square statistics	5,127.69	5,127.69	5,163.20	5,177.71

Table 3. Dividend and Governance Impact on Firm Value

Table 3 tests the impact of dividend payment on firm value. X_t is the variable X in year t divided by the total assets in year t. dX_t is the change in the variable X from year $t-1$ to year t divided by total assets in year t. It is calculated as $((X_t - X_{t-1})/A_t)$. dX_{t+1} is the change in the variable X from year $t+1$ to year t divided by assets in year t. It can be calculated as $((X_{t+1} - X_t)/A_t)$. A is the book value of total assets. V is the market value of the equity plus the book value of debt. E is earnings defined as earnings before extraordinary items plus interest plus deferred tax credits plus investment tax credits. NA is net assets, which is defined as total assets minus cash. RD is research and development expense. We replace any missing value of the R&D with zero. I is interest expense. D is cash dividends. L is liquid assets, defined as cash and cash equivalent assets. Standard errors are in parentheses. Model 1 tests the impact of cash dividend payment ($D_{i,t}$) on the firm value. Model 2 interact the cash dividend payment with the firm-level corporate governance measure (ISS41). Model 3 includes the country-level control variables, such as the shareholders' right index (AD), per capita GDP, financial market development and legal system and dividend tax penalty. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Dependent variable **Firm value**	**(1)** **Model**	**(2)** **Model**	**(3)** **Model**
$E_{i,t}$	1.167***	1.018***	0.933***
	(0.066)	(0.062)	(0.062)
$dE_{i,t}$	0.342***	0.298***	0.256***
	(0.058)	(0.055)	(0.055)
$dE_{i,t+1}$	1.277***	1.116***	1.049***
	(0.054)	(0.051)	(0.051)
$dNA_{i,t}$	0.462***	0.276***	0.283***
	(0.034)	(0.032)	(0.032)
$dNA_{i,t+1}$	0.147***	0.065***	0.073***
	(0.026)	(0.024)	(0.024)
$dL_{i,t}$	0.975***	0.876***	0.851***
	(0.053)	(0.050)	(0.050)
$dL_{i,t+1}$	0.685***	0.772***	0.774***
	(0.050)	(0.047)	(0.047)
$RD_{i,t}$	5.372***	4.393***	4.286***
	(0.137)	(0.147)	(0.146)
$dRD_{i,t}$	2.718***	2.039***	1.875***
	(0.350)	(0.332)	(0.329)
$dRD_{i,t+1}$	11.285***	9.450***	8.841***
	(0.321)	(0.308)	(0.306)
$I_{i,t}$	-2.549***	-4.298***	-4.732***
	(0.596)	(0.586)	(0.586)
$dI_{i,t+1}$	3.133***	-0.035	-1.902**
	(0.894)	(0.853)	(0.857)
$D_{i,t}$	2.224***	6.839***	6.643***
	(0.498)	(0.511)	(0.525)
$dD_{i,t}$	8.903***	2.242**	1.567
	(1.157)	(1.125)	(1.153)
$dV_{i,t+1}$	-0.370***	-0.377***	-0.349***
	(0.007)	(0.007)	(0.007)
Country per capita GDP			0.279
			(0.214)
Financial market development			0.004***
			(0.000)
Common law			0.731***
			(0.142)
Dividend tax penalty			-0.052
			(0.066)
Constant	1.081***	1.413***	-2.647
	(0.016)	(0.143)	(2.229)
Year dummy	No	Yes	Yes
Industry dummy	No	Yes	Yes
Country dummy	No	Yes	Yes
Observations	17,545	17,545	17,545
Number of firms	4,022	4,022	4,022
Chi-square	7,088.11	10,322.52	10,808.05

Table 4. Sub-governance Index Impact on Dividend Payment

Table 4 Panel A shows the panel data (random effect) regression models and tests the impact of the sub-categories of firm-level governance index on the corporate dividend payment. The dependent variable is the cash dividend to total assets ratio. We split the 41 items of the ISS governance measures into four sub-categories, including board index, audit index, anti-takeover index and compensation index. Model (1) to (4) tests these sub-category governance indices individually and control for the same firm-level and country-level variables in each model. Model 5 include all sub-categories of the firm-level governance index to test their impact on the corporate dividend payment. All models include year and industry fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**	**(3)** **Model**	**(4)** **Model**	**(5)** **Model**
Board index	0.014***				0.011***
	(0.002)				(0.003)
Audit index		0.023***			0.006
		(0.008)			(0.008)
Anti-takeover index			-0.014**		-0.028***
			(0.007)		(0.007)
Compensation index				0.026***	0.019***
				(0.005)	(0.005)
Shareholders' rights	4.334***	4.410***	4.463***	4.369***	4.295***
	(0.150)	(0.149)	(0.148)	(0.149)	(0.150)
Firm life cycle	0.749***	0.750***	0.751***	0.744***	0.742***
	(0.029)	(0.029)	(0.029)	(0.029)	(0.029)
Book equity	0.173***	0.168***	0.167***	0.170***	0.176***
	(0.047)	(0.047)	(0.047)	(0.047)	(0.047)
ROA	0.823***	0.824***	0.819***	0.827***	0.829***
	(0.060)	(0.060)	(0.060)	(0.060)	(0.060)
Sales growth	-0.264***	-0.278***	-0.286***	-0.267***	-0.257***
	(0.025)	(0.025)	(0.025)	(0.025)	(0.025)
Firm size	-0.024***	-0.015*	-0.013*	-0.021***	-0.029***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Cash holding	0.028	0.030	0.033	0.033	0.029
	(0.054)	(0.054)	(0.054)	(0.054)	(0.054)
Country per capita GDP	3.604***	3.820***	3.991***	3.682***	3.376***
	(0.217)	(0.214)	(0.205)	(0.213)	(0.224)
Financial market development	-0.002***	-0.002***	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dividend tax penalty	-0.592***	-0.582***	-0.582***	-0.635***	-0.671***
	(0.096)	(0.096)	(0.096)	(0.097)	(0.097)
Constant	-50.588***	-52.993***	-54.827***	-51.474***	-47.996***
	(2.588)	(2.550)	(2.464)	(2.541)	(2.653)
Year dummy	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes	Yes
Observations	28,686	28,686	28,686	28,686	28,686
Number of firms	6,151	6,151	6,151	6,151	6,151
Chi-square statistics	5,134.36	5,088.68	5,083.29	5,123.05	5,167.85

Table 4 Panel B shows the panel data regression (random effect) models and tests the interaction between each of the four sub-categories of firm-level governance index and the country-level shareholders' right index. The dependent variable is the cash dividend to total assets ratio. Model (1) to (4) tests the interaction effect of each sub-category governance index. All models include year and industry fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**	**(3)** **Model**	**(4)** **Model**
Shareholders' rights	4.118***	4.366***	4.692***	4.348***
	(0.165)	(0.152)	(0.204)	(0.154)
Firm life cycle	0.771***	0.772***	0.774***	0.765***
	(0.030)	(0.030)	(0.030)	(0.030)
Book equity	0.166***	0.162***	0.163***	0.165***
	(0.048)	(0.048)	(0.048)	(0.048)
ROA	0.837***	0.835***	0.832***	0.840***
	(0.062)	(0.062)	(0.062)	(0.062)
Sales growth	-0.260***	-0.276***	-0.283***	-0.265***
	(0.026)	(0.026)	(0.026)	(0.026)
Firm size	-0.024***	-0.015*	-0.013*	-0.022***
	(0.008)	(0.008)	(0.008)	(0.008)
Cash holding	0.034	0.035	0.038	0.038
	(0.056)	(0.056)	(0.056)	(0.056)
Country per capita GDP	3.582***	3.833***	4.021***	3.708***
	(0.223)	(0.219)	(0.211)	(0.218)
Financial market development	-0.002***	-0.002***	-0.002***	-0.002***
	(0.000)	(0.000)	(0.000)	(0.000)
Dividend tax penalty	-0.734***	-0.634***	-0.586***	-0.694***
	(0.105)	(0.100)	(0.100)	(0.107)
Board index X Shareholders' rights	0.021***			
	(0.006)			
Board index	-0.050***			
	(0.019)			
Audit index X Shareholders' rights		0.042***		
		(0.015)		
Audit index		-0.109**		
		(0.048)		
Anti-takeover index X Shareholders' rights			-0.052	
			(0.034)	
Anti-takeover index			0.146	
			(0.102)	
Compensation index X Shareholders' rights				0.009
				(0.009)
Compensation index				-0.001
				(0.028)
Constant	-49.655***	-52.956***	-55.809***	-51.645***
	(2.671)	(2.615)	(2.556)	(2.604)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes
Observations	28,686	28,686	28,686	28,686
Number of firms	6,151	6,151	6,151	6,151
Chi-square statistics	5,070.25	5,020.59	5,013.77	5,047.81

Table 5. Robustness Test: More Country-Level Control Variables

Table 5 includes more country-level control variables and tests the robustness of the main effect and interaction effect of the firm-level governance and the country-level governance impact on the corporate dividend payment. The dependent variables are cash dividend divided by total assets. Panel data regression (random effect) model is used to estimate the results. Model (1) and (2) control for legal system of each sample country (i.e., common law vs. civil law). Model (3) and (4) also add the national culture measures (i.e., power distance, individualism, masculinity, and uncertainty avoidance) as additional control variables. All models include year and industry fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**	**(3)** **Model**	**(4)** **Model**
ISS41 X Shareholders' rights		0.011***		0.011***
		(0.004)		(0.004)
ISS41	0.009***	-0.024**	0.006***	-0.024**
	(0.002)	(0.011)	(0.002)	(0.011)
Shareholders' rights	4.745***	4.512***	3.483***	1.615***
	(0.188)	(0.203)	(0.394)	(0.109)
Firm life cycle	0.734***	0.734***	0.752***	0.734***
	(0.029)	(0.029)	(0.029)	(0.029)
Book equity	0.169***	0.166***	0.190***	0.166***
	(0.047)	(0.047)	(0.047)	(0.047)
ROA	0.824***	0.826***	0.845***	0.826***
	(0.060)	(0.060)	(0.061)	(0.060)
Sales growth	-0.254***	-0.255***	-0.233***	-0.255***
	(0.026)	(0.026)	(0.026)	(0.026)
Firm size	-0.024***	-0.023***	-0.025***	-0.023***
	(0.008)	(0.008)	(0.008)	(0.008)
Cash holding	0.020	0.022	-0.006	0.022
	(0.054)	(0.054)	(0.055)	(0.054)
Country per capita GDP	4.501***	4.424***	3.834***	4.424***
	(0.324)	(0.325)	(0.278)	(0.325)
Financial market development	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)
Dividend tax penalty	-0.645***	-0.772***	-0.627***	-0.772***
	(0.102)	(0.111)	(0.102)	(0.111)
Common law	-1.382***	-1.382***	-0.912	-0.785
	(0.149)	(0.149)	(2.466)	(0.362)
Culture - power distance			0.113	-0.411***
			(0.089)	(0.020)
Culture - individualism			0.049	-0.093***
			(0.089)	(0.009)
Culture - massiculinism			-0.108***	-0.086***
			(0.006)	(0.005)
Culture - uncertainty avoidance			0.260***	0.215***
			(0.016)	(0.011)
Constant	-59.975***	-58.444***	-63.766***	-35.922***
	(3.840)	(3.874)	(11.158)	(3.352)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes
Observations	28,686	28,686	28,686	28,686
Number of firms	6,151	6,151	6,151	6,151
Chi-square statistics	5,163.20	5,177.71	5,400.74	5,177.71

Table 6. Robustness test: Alternative Measures of Dividend Payment

Table 6 tests the alternative measures of dividend payment by using dividend to earnings ratios and dividend to sales ratio respectively. Panel data regression (random effect) is again used to handle the truncated distribution of the dividend measures. Model (1) tests the main effect of firm-level governance and country-level governance and their impact on the dividend to earnings ratio. Model (2) tests the interaction effect of the firm-level governance and country-level governance impact on the dividend to earnings ratio. Model (3) and (4) retest the same main effect and interaction effect on the dividend to sales ratio. The same firm-level and country-level control variables are included in each model. All models include year and industry fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models	**(1)** **model** **Dividend to Earnings**	**(2)** **model** **Dividend to Earnings**	**(3)** **model** **Dividend to Sales**	**(4)** **model** **Dividend to Sales**
ISS41 X Shareholders' rights		0.004***		0.018***
		(0.001)		(0.004)
ISS41	0.002***	-0.011***	0.006**	-0.048***
	(0.001)	(0.003)	(0.003)	(0.014)
Shareholders' rights	1.029***	0.938***	4.912***	4.523***
	(0.054)	(0.059)	(0.229)	(0.249)
Firm life cycle	0.082***	0.083***	0.650***	0.652***
	(0.008)	(0.008)	(0.036)	(0.036)
Book equity	-0.070***	-0.070***	0.256***	0.251***
	(0.015)	(0.015)	(0.057)	(0.057)
ROA	-0.291***	-0.292***	0.237***	0.241***
	(0.027)	(0.027)	(0.073)	(0.073)
Sales growth	-0.070***	-0.070***	-0.090***	-0.092***
	(0.010)	(0.010)	(0.031)	(0.031)
Firm size	0.002	0.002	0.059***	0.059***
	(0.002)	(0.002)	(0.010)	(0.010)
Cash holding	-0.072***	-0.071***	-0.073	-0.070
	(0.017)	(0.017)	(0.066)	(0.066)
Country per capita GDP	1.222***	1.194***	3.507***	3.377***
	(0.108)	(0.108)	(0.394)	(0.396)
Financial market development	-0.000***	-0.000***	-0.000	-0.000
	(0.000)	(0.000)	(0.000)	(0.000)
Dividend tax penalty	-0.182***	-0.231***	-0.428***	-0.638***
	(0.031)	(0.034)	(0.125)	(0.135)
Constant	-15.847***	-15.267***	-51.332***	-48.762***
	(1.277)	(1.285)	(4.696)	(4.737)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes
Observations	20,636	20,636	28,550	28,550
Number of firms	5,087	5,087	6,123	6,123
Chi-square statistics	4,591.49	4,607.97	4,783.20	4,804.39

Table 7. Firm Corporate Governance and Country's creditor Right Impact on Dividend Payment

Table 7 tests the impact of creditor right on dividend payment. Model 1 and Model 2 present the panel data regression (random effect) model and test the main effect and interaction effect of firm-level governance measure (ISS41) and the country-level creditor right index. Firm-level and country-level control variables are included in all models. All models include year, industry and country fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**
ISS41 X Creditor's rights		0.012***
		(0.002)
ISS41	0.009***	-0.012***
	(0.002)	(0.003)
Creditor's rights	2.372***	0.171***
	(0.094)	(0.049)
Firm life cycle	0.734***	0.770***
	(0.029)	(0.030)
Book equity	0.169***	0.150***
	(0.047)	(0.047)
ROA	0.824***	0.820***
	(0.060)	(0.061)
Sales growth	-0.254***	-0.199***
	(0.026)	(0.026)
Firm size	-0.024***	-0.006
	(0.008)	(0.008)
Cash holding	0.020	-0.014
	(0.054)	(0.055)
Country per capita GDP	4.501***	-1.423***
	(0.324)	(0.090)
Financial market development	-0.001***	0.000
	(0.000)	(0.000)
Dividend tax penalty	-0.645***	-0.835***
	(0.102)	(0.102)
Constant	-49.496***	15.054***
	(3.477)	(0.956)
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
Country dummy	Yes	Yes
Observations	28,686	28,686
Number of firms	6,151	6,151
Chi-square statistics	5,163.20	4,094.84

Table 8. Robustness Test: Tobit Regression Methods

Table 8 shows the Tobit regression results for the main effect and interaction effect of the firm-level governance and country-level governance impact on corporate dividend payment. The dependent variables in the models are cash dividend to total assets ratio. Model 1 tests the control variables and impact on the dividend to assets measure. Model 2 adds the country level shareholders' right index in the model; and Model 3 tests the main effect of both the firm-level governance, ISS41, and country level shareholders' right index. Model 4 tests the interaction between the firm-level governance and the country level shareholders' right index. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Tobit Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**	**(3)** **Model**	**(4)** **Model**
ISS41 X Shareholders' rights				0.020***
				(0.005)
ISS41			0.025***	-0.036**
			(0.002)	(0.015)
Shareholders' rights		4.585***	4.944***	4.510***
		(0.249)	(0.251)	(0.274)
Firm life cycle	1.077***	1.077***	1.068***	1.069***
	(0.024)	(0.024)	(0.024)	(0.024)
Book equity	0.139***	0.139***	0.136***	0.137***
	(0.045)	(0.045)	(0.045)	(0.045)
ROA	1.989***	1.989***	2.016***	2.016***
	(0.071)	(0.071)	(0.071)	(0.071)
Sales growth	-0.565***	-0.565***	-0.555***	-0.556***
	(0.038)	(0.038)	(0.038)	(0.038)
Firm size	-0.003	-0.003	-0.028***	-0.027***
	(0.005)	(0.005)	(0.006)	(0.006)
Cash holding	0.406***	0.406***	0.398***	0.399***
	(0.051)	(0.051)	(0.050)	(0.050)
Country per capita GDP	4.423***	4.423***	4.831***	4.689***
	(0.541)	(0.541)	(0.541)	(0.542)
Financial market development	-0.001**	-0.001**	-0.001	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Dividend tax penalty	-0.624***	-0.624***	-0.827***	-1.061***
	(0.167)	(0.167)	(0.168)	(0.178)
Constant	-41.584***	-59.926***	-65.676***	-62.843***
	(5.428)	(6.395)	(6.404)	(6.442)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes
Observations	28,686	28,686	28,686	28,686
Chi-square statistics	12,832.71	12,832.71	12,949.23	12,964.97

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.10

Table 9. Robustness Test: Possible Endogenous Bias Corrections

Panel 9 A. Two-stage-least-square regression with instrumental variable

Table 9 presents the two-stage least squares (2SLS) models. Model (1) shows the first stage regress by using the country-industry-median ISS41 index as the instrument variable and the firm-level ISS41 measure as the dependent variable. The model also includes the firm-level and country-level control variables. Model (2) is the second-stage regression. The ratio of dividends to total assets is the dependent variable. The firm-level ISS41 measure is predicted from the first-stage regression. Model 3 is the second-stage regression for the interaction between the predicted firm-level ISS41 index and the country's shareholders' right index. All models include year and industry fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

2SLS Regression Models Cash Dividend / Assets	Stage 1 (1) Model	Stage 2 Main Effect (2) Model	Stage 2 Interaction Effect (3) Model
Industry Median ISS41	0.893***		
	(0.012)		
ISS41 X Shareholders' rights			0.017**
			(0.008)
ISS41		0.066***	-0.072***
		(0.025)	(0.026)
Shareholders' rights	-2.444***	5.527***	-0.004
	(0.493)	(0.452)	(0.161)
Firm life cycle	0.245***	1.053***	1.112***
	(0.062)	(0.030)	(0.025)
Book equity	0.210*	0.132***	0.051
	(0.116)	(0.044)	(0.046)
ROA	-1.060***	2.060***	2.012***
	(0.190)	(0.080)	(0.074)
Sales growth	-0.490***	-0.540***	-0.601***
	(0.097)	(0.037)	(0.038)
Firm size	0.986***	-0.068***	0.015***
	(0.013)	(0.026)	(0.005)
Cash holding	0.355***	0.384***	0.371***
	(0.134)	(0.052)	(0.052)
Country per capita GDP	-1.011	5.494***	-2.162***
	(1.039)	(0.709)	(0.059)
Financial market development	-0.001	-0.000	-0.001*
	(0.001)	(0.001)	(0.000)
Dividend tax penalty	0.836***	-1.157***	-2.031***
	(0.255)	(0.273)	(0.136)
Constant	13.917	-75.014***	23.566***
	(12.384)	(8.960)	(0.625)
Year dummy	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes
Observations	28,686	28,686	28,686
R-squared	0.711	0.356	0.309
Chi-square statistics	.	17,095.34	13,185.81

Panel 9 B. Panel data regression with lagged dependent variable

Panel 9B shows the Panel data regression (random effect) by controlling the lagged variable of the cash dividend to assets ratio. The dependent variable is the cash dividend to total assets in year *t.* We control the cash dividend to total asset in year *t-1* in the models. Model (1) tests the main effect of firm-governance and country governance impact on the corporate dividend payment; Model (2) tests the interaction effect of firm-governance and country governance impact on the corporate dividend payment. All models include year and industry fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**
Cash dividend / assets $_{t-1}$	0.242***	0.242***
	(0.004)	(0.004)
ISS41 X Shareholders' rights		0.009**
		(0.004)
ISS41	0.011***	-0.016
	(0.002)	(0.011)
Shareholders' rights	4.028***	3.835***
	(0.176)	(0.193)
Firm life cycle	0.696***	0.697***
	(0.027)	(0.027)
Book equity	0.186***	0.184***
	(0.044)	(0.044)
ROA	0.911***	0.913***
	(0.059)	(0.059)
Sales growth	-0.265***	-0.266***
	(0.026)	(0.026)
Firm size	-0.012*	-0.012*
	(0.007)	(0.007)
Cash holding	0.120**	0.121**
	(0.050)	(0.050)
Country per capita GDP	4.164***	4.099***
	(0.338)	(0.339)
Financial market development	-0.001***	-0.001***
	(0.000)	(0.000)
Dividend tax penalty	-0.978***	-1.083***
	(0.106)	(0.115)
Constant	-55.923***	-54.646***
	(4.009)	(4.044)
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
Country dummy	Yes	Yes
Observations	28,389	28,389
Number of firms	6,118	6,118
Chi-square statistics	11,746.77	11,777.10

Table 10. Robustness Test: Subsample of Excluding US Firms

Table 10 shows the panel data regression (random effect) results after excluding the US firm observations from the sample. The sample size drops to 8,708. The dependent variable is cash dividend to assets ratio. Model (1) tests the main effect of firm-level governance and country-level governance impact on the dividend payment. Model (2) tests the interaction effect between the firm-level governance and country-level governance impact on the dividend payment. All models include year and industry fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**
ISS41 X Shareholders' rights		0.012**
		(0.005)
ISS41	0.021***	-0.015
	(0.005)	(0.020)
Shareholders' rights	0.250***	-0.128
	(0.039)	(0.102)
Firm life cycle	0.463***	0.433***
	(0.050)	(0.049)
Book equity	0.463***	0.268***
	(0.118)	(0.093)
ROA	3.443***	9.186***
	(0.200)	(0.238)
Sales growth	-0.478***	-0.951***
	(0.061)	(0.088)
Firm size	-0.230***	-0.152***
	(0.020)	(0.012)
Cash holding	-0.030	0.256*
	(0.152)	(0.137)
Country per capita GDP	-1.286***	-1.705***
	(0.112)	(0.063)
Financial market development	0.000	0.002***
	(0.000)	(0.000)
Dividend tax penalty	-0.720***	-1.815***
	(0.113)	(0.133)
Constant	14.071***	18.945***
	(1.162)	(0.746)
Year dummy	Yes	Yes
Industry dummy	Yes	Yes
Country dummy	Yes	Yes
Observations	8,708	8,708
Number of firms	1,853	1,853

Table 11. Impact of Individual Governance Attribute on the Dividend Payment

Table 11 shows the panel data regression (random effect model) and test the impact of seven individual governance attributes on the corporate dividend payment. We follow Aggarwal et al. (2011) and examine these individual items including: board independence (in model 1), board size (model 2), CEO/chairman separation (model 3), and the absence of a staggered board (model 4); the independence of firm auditors (model 5), and ratification of auditors (model 6); and the existence of multiple share classes (model 7). All models include year, industry and country fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Cash Dividend / Assets**	**(1)** **Model**	**(2)** **Model**	**(3)** **Model**	**(4)** **Model**	**(5)** **Model**	**(6)** **Model**	**(7)** **Model**
Board Independence	0.055***						
	(0.014)						
Board Size		0.065***					
		(0.020)					
Chairman/CEO separation			-0.010				
			(0.015)				
Board Structure				0.049**			
				(0.020)			
Audit Committee Independence					-0.014		
					(0.017)		
Auditor Ratification						0.012	
						(0.014)	
Single Class Stock							-0.073**
							(0.035)
Shareholders' rights	4.606***	4.632***	4.638***	4.646***	4.608***	4.646***	4.639***
	(0.188)	(0.188)	(0.189)	(0.188)	(0.191)	(0.189)	(0.188)
Firm life cycle	0.752***	0.757***	0.756***	0.757***	0.756***	0.757***	0.756***
	(0.030)	(0.030)	(0.030)	(0.030)	(0.030)	(0.030)	(0.030)
Book equity	0.161***	0.161***	0.161***	0.162***	0.161***	0.162***	0.163***
	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)
ROA	0.837***	0.838***	0.835***	0.833***	0.835***	0.835***	0.834***
	(0.062)	(0.062)	(0.062)	(0.062)	(0.062)	(0.062)	(0.062)
Sales growth	-0.254***	-0.254***	-0.255***	-0.255***	-0.255***	-0.255***	-0.254***
	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)	(0.026)
Firm size	-0.018**	-0.021**	-0.017**	-0.015*	-0.017**	-0.017**	-0.017**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Cash holding	0.023	0.025	0.027	0.028	0.027	0.025	0.027
	(0.056)	(0.056)	(0.056)	(0.056)	(0.056)	(0.056)	(0.056)
Country per capita GDP	4.299***	4.374***	4.387***	4.365***	4.353***	4.404***	4.389***
	(0.330)	(0.330)	(0.330)	(0.330)	(0.332)	(0.330)	(0.330)
Financial market development	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Dividend tax penalty	-0.586***	-0.581***	-0.590***	-0.548***	-0.587***	-0.604***	-0.585***
	(0.103)	(0.103)	(0.103)	(0.105)	(0.103)	(0.105)	(0.103)
Constant	-58.641***	-59.517***	-59.641***	-59.475***	-59.179***	-59.857***	-59.595***
	(3.920)	(3.913)	(3.914)	(3.914)	(3.946)	(3.926)	(3.913)
Year dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	28,686	28,686	28,686	28,686	28,686	28,686	28,686
Number of firms	6,151	6,151	6,151	6,151	6,151	6,151	6,151

Chi-square statistics	5,067.94	5,059.21	5,046.77	5,056.93	5,046.91	5,047.44	5,051.67

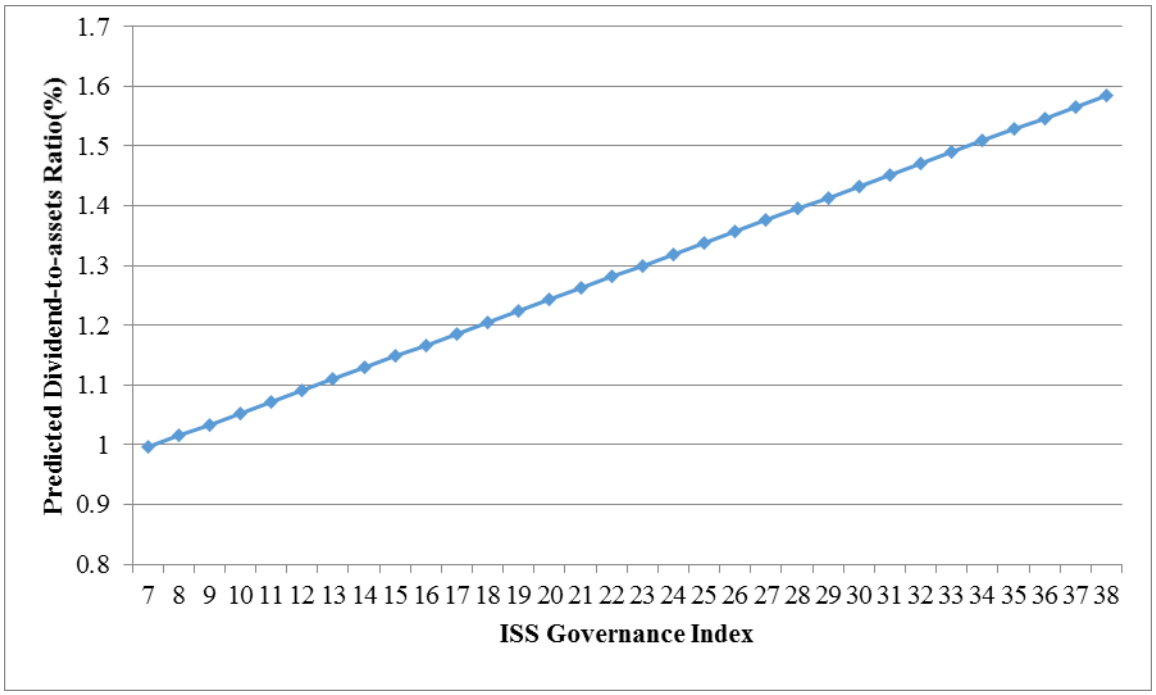
Table 12. Impact of International Corporate Governance on Total Dividend Payment (Cash dividend and Stock repurchase)

Table 12 shows the panel data regression (random effect model) using the total dividend payment as the dependent variable. We follow Bliss, Cheng and Denis (2013) and create the total dividend payout variable (which include both the cash dividend payment and the stock repurchase in each year divided by the total assets). Model 1 includes only the control variables, model 2 tests the main effect of the country level shareholders' rights on the dividend payment; model 3 includes both the firm-level and country-level governance indices; and model 4 tests the interaction between the firm-level and country level governance indices. All models include year, industry and country fixed effects. Robust standard errors are reported in the parentheses. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel Data Regression Models **Total Dividend / Assets**	(1) Model	(2) Model	(3) Model	(4) Model
ISS41 X Shareholders' rights				0.000
				(0.000)
ISS41			0.001***	0.000
			(0.000)	(0.000)
Shareholders' rights		0.061***	0.069***	0.066***
		(0.006)	(0.006)	(0.006)
Firm life cycle	0.024***	0.024***	0.024***	0.024***
	(0.001)	(0.001)	(0.001)	(0.001)
Book equity	0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
ROA	0.042***	0.042***	0.043***	0.043***
	(0.002)	(0.002)	(0.002)	(0.002)
Sales growth	-0.013***	-0.013***	-0.012***	-0.013***
	(0.001)	(0.001)	(0.001)	(0.001)
Firm size	0.002***	0.002***	0.002***	0.002***
	(0.000)	(0.000)	(0.000)	(0.000)
Cash holding	0.014***	0.014***	0.014***	0.014***
	(0.002)	(0.002)	(0.002)	(0.002)
Country per capita GDP	0.095***	0.095***	0.105***	0.103***
	(0.011)	(0.011)	(0.011)	(0.011)
Financial market development	-0.000***	-0.000***	-0.000***	-0.000***
	(0.000)	(0.000)	(0.000)	(0.000)
Dividend tax penalty	-0.001	-0.001	-0.006	-0.007*
	(0.004)	(0.004)	(0.004)	(0.004)
Constant	-0.935***	-1.180***	-1.308***	-1.285***
	(0.112)	(0.132)	(0.133)	(0.135)
Year dummy	Yes	Yes	Yes	Yes
Industry dummy	Yes	Yes	Yes	Yes
Country dummy	Yes	Yes	Yes	Yes
Observations	28,686	28,686	28,686	28,686
Number of firms	6,151	6,151	6,151	6,151
Chi-square statistics	4,676.93	4,676.93	4,805.78	4,809.14

Figure 1. Economic Significance of the Corporate Governance Impact on Dividend Payment

Figure 1 shows the economic significance of predictions for dividend payment for the value range of firm-governance index within the sample (from value of 7 to 38). The figure is based on the Tobit model estimated as Model 3 in Table 8. All other independent variables are evaluated at the sample median. Year and industry dummies are evaluated for 2009 and for the largest industry in the sample (business service industry).



Appendix 1. 41 Items to Construct the ISS Governance Index

Sub-category A: Board items	
1	All directors attended 75% of board meetings or had a valid excuse
2	CEO serves on the boards of two or fewer public companies
3	Board is controlled by more than 50% independent outside directors
4	Board size is at greater than five but less than 16
5	CEO is not listed as having a related-party transaction
6	Compensation committee composed solely of independent outsiders
7	Chairman and CEO positions are separated, or there is a lead director
8	Nominating committee composed solely of independent outsiders
9	Governance committee exists and met in the past year
10	Shareholders vote on directors selected to fill vacancies
11	Governance guidelines are publicly disclosed
12	Annually elected board (no staggered board)
13	Policy exists on outside directorships (four or fewer boards is the limit)
14	Shareholders have cumulative voting rights
15	Shareholder approval is required to increase/decrease board size
16	Majority vote requirement to amend charter/bylaws (not supermajority)
17	Board has the express authority to hire its own advisers
18	Performance of the board is reviewed regularly
19	Board-approved succession plan in place for the CEO
20	Outside directors meet without CEO and disclose number of times met
21	Directors are required to submit resignation upon a change in job
22	Board cannot amend bylaws without shareholder approval or can do soonly under limited circumstances
23	Does not ignore shareholder proposal
24	Qualifies for proxy contest defenses combination points
Sub-category B: Audit	
25	Consulting fees paid to auditors are less than audit fees paid to auditors
26	Audit committee composed solely of independent outsiders
27	Auditors ratified at most recent annual meeting
Sub-category C: Anti-takeover provisions	
28	Single class, common shares
29	Majority vote requirement to approve mergers (not supermajority)
30	Shareholders may call special meetings
31	Shareholders may act by written consent
32	Company either has no poison pill or a pill that is shareholder approved
33	Company is not authorized to issue blank check preferred
Sub-category D: Compensation and ownership	
34	Directors are subject to stock ownership requirements
35	Executives are subject to stock ownership guidelines
36	No interlocks among compensation committee members
37	Directors receive all or a portion of their fees in stock
38	All stock-incentive plans adopted with shareholder approval
39	Options grants align with company performance and reasonable burn rate
40	Officers' and directors' stock ownership is at least 1% but not over 30% of total shares outstanding
41	Repricing prohibited