# Political Institutions, Stock Market Liquidity and Firm Dividend Policy

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#### Abstract

Motivated by recent research on the dividend irrelevance proposition and research on the importance of political institutions in international financial markets, this cross country study examines whether political institutions affect the substitution effect between stock market liquidity and firm's dividend policy. Using a sample of 52 countries, we show that the negative association between dividends and stock market liquidity is more pronounced in countries with stronger political rights and constraints. We also find that this relationship is weaker for countries with poor investor protection and low accounting transparency suggesting that both variables moderate the political institutions/substitution effect relationship, *ceteris paribus*.

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#### I. Introduction

Since the seminal work of Miller and Modigliani (1961) (MM hereafter), an important strand of the finance literature focuses on the dividend policies. MM advance the hypothesis that in perfect capital markets, the total value of the firm is independent of the financial structure. In other words, level of debt, dividend distributions and many other financial structure characteristics have no impact on firm value. The irrelevance proposition has spawned a large body of studies questioning the assumptions defined in the perfect capital market condition. One of the assumptions of dividend irrelevance proposition is that in markets without trading friction, investors who have liquidity needs can create homemade dividends. This can be done by selling appropriate amount of shares in the firm that they are holding at no cost. In other words, there is indifference between receiving a dollar of dividends and selling a dollar of their investment. However, trading friction commonly exists in financial markets. In a recent paper, Banerjee et al. (2007) draw on the dividend irrelevance proposition to examine whether there is a link between firm dividend policy and stock market liquidity. They find that in the US, firms with less liquid stocks (i.e. stocks with higher trading frictions, a high proportion of number of no trading days, and a high price impact of order flow) are more likely to pay dividends, relative to firms with more liquid shares, after controlling for firm size, profitability and growth opportunities. The reason for this is that investors in markets with fewer frictions can use the high trading activity of the firm's stock as a "backdoor" for dividends and thus are willing to accept low dividends.

We extend this line of research by examining the stock liquidity/dividend relationship in an international setting where some countries have very different institutional settings compared with the US leading to different levels of trading frictions and trading costs, thus, affecting both liquidity and dividends differently. Unlike the US, where there is evidence of a substitution between liquidity and dividends (Banerjee et al. 2007), there are many other countries, with poor institutional arrangements, in which this substitution relationship is less likely to exist. For example, anecdotal evidence and reports suggest that investors in countries with the lack of strong political institutions, poor investor protection laws and less developed financial markets face more trading frictions and are less likely to be able to freely trade on shares when dividends are low. A good case in point is Argentina which has been identified as a country with about one hundred years of ineptitude due to the lack of institutions to create a successful market environment for investor trading activity and stock market liquidity (The Economist, February 15th, 2014). The Economist article draws attention to the signs of political institutional weaknesses that include constant interruptions to democracy and the habit of tinkering from presidents to allow them to serve more terms<sup>1</sup>. Further, property rights and legal protections are also insecure, resulting in high market frictions. A survey of several countries, shows that these problems faced by Argentina are common to several other countries such as the Philippines and Columbia that are plagued by weak political institutions (see Table 10). In these countries, it is unlikely that investors can, for example, use liquidity as a substitute for dividends.

In this study we first examine whether political institutions affect the liquidity/dividend relationship across countries. We focus on political institutions as there is a growing literature and anecdotal evidence on the critical role that political institutions play in financial markets (e.g. Henisz, 2000; Lederman et al. 2005; Haber et al. 2008, Keefer 2008; and Roe and Siegel 2011). Recently, Qi et al. (2010: p204) indicate that "some scholars argue that our understanding of how legal institutions impact financial development and economic growth may be incomplete, and provide evidence supporting the primary importance of political institutions." In addition, Haber (2005)

<sup>&</sup>lt;sup>1</sup> Another country with similar political instability is Chile which transitioned from a constitutional government to the left under Allende, then to a right wing dictatorship under Pinochet and then back to a constitutional government. These changes were reflected in the country's corporate governance (see Gourevitch and Shinn, (2005, p. 228).

and Haber et al. (2008) suggest that financial development is an outcome of specific rules and regulations which is influenced by political institutions.

Thus, we posit that, in the first instance, political institutions can affect the substitutability between liquidity and dividends through information risk and risk-sharing. As suggested by Boubakri et al. (2014), governments are likely to implement friendlier investment policies that reduce information risk when political institutions in their country are stronger. In a similar vein, Eleswarapu and Venkataraman (2006) argue that strong political institutions affect information risk and investor participation which, in turn, affect equity trading costs. In countries with weak political institutions where information risks and trading costs are high, it is unlikely that investors can freely buy or sell shares (liquidity) when dividends are low.

Similarly, political institutions can affect trust and risk sharing amongst investors. For example, trust and risk sharing among investors are likely to be higher in countries with strong political institutions where investors are less concerned about government predation and as a result, they have more confidence to freely participate in the stock markets. Therefore, it is not surprising that prior studies (e.g. Guiso et al. 2008 and Georgarakos and Pasini 2011) argue that trust increases stock market participation, which improves risk-sharing among investors. In summary, we argue that trading frictions will be higher in countries with weak political institutions and thus, adversely affect the dividend/liquidity relationship, *ceteris paribus*.<sup>2</sup>

Political institutions may also affect this relationship through their impact on a country's corporate governance. Roe (2003) and Roe and Siegel (2011), for example, suggest that corporate governance practices such as ownership concentration reflect laws and regulation. Gourevitch and Shinn (2005) point out that "laws express the

<sup>&</sup>lt;sup>2</sup> These expectations are consistent with Roe and Siegel (2011) who suggest that unstable polities are less likely to protect investors; investors cannot depend on firms to pay dividends when liquidity is low or to freely and confidently trade on shares when dividends are low. These ideas are also consistent with the residual control rights framework of Grossman, Hart and Moore, summarized in Hart (1995) that investors are able to obtain cash only because they have power.

outcome of political processes" (p.8). In countries with poor political institutions and weak corporate governance ownership tends to be more concentrated and private benefits of control are larger. As a result, investors will expect greater expropriation from insiders and information asymmetry between managers and shareholders becomes more severe. Investors are either discouraged to participate in the stock markets or they are unlikely to be able to "force" firms to disgorge cash in terms of dividends to compensate for stock illiquidity. Accordingly, low participation by outsiders causes smaller float of equity and narrower markets which will lead to less depth, higher cost of liquidity and higher market friction (La Porta et al. 1997).

Since the extant literature has more or less established a linkage between political institutions and financial outcomes, a challenge that researchers face is to identify which political institutions really matter and the reasons for this. Following the spirit in Henisz (2012) we select a measure "that limits the discretion of political actors," the political constraints index (POLCON) as our first measure of political institutions, where higher scores indicate greater political constraints and the government's ability to give assurances and hence stronger political institutions. Based on the suggestion from prior studies (e.g. North (1981); Weingast (1993); Borner et al. (1995); and the World Bank (1997)) that "a government's ability to credibly commit not to interfere with private property rights" (Henisz 2000: p1) is the essential component of political institutions which affects long term economic impact, Henisz derives the political constraint index which demonstrates that the feasibility of change in policy can predict the cross-national variation in economic growth.<sup>3</sup> We also include another measure for the quality of political institutions as a robustness test. Following prior studies (e.g. La Porta et al. 1999; Acemoglu et al. 2008; and Qi et al. 2010), we use an index of political rights (POLRIGHT) index where higher scores indicate that individuals have higher

<sup>&</sup>lt;sup>3</sup> This is derived from a structural model of political interaction that incorporates the institutional constraints on the number of independent veto points in the political system and the distribution of political preferences across and within executive, legislative, judicial and sub-federal branches of government.

political rights including the existence of free and fair elections and the rulers are elected. These two measures provide a good proxy for the extent to which polities are able to provide an environment to protect investors in terms of dividend payments and/or to freely trade on shares (Boubakri et al. 2014).<sup>4</sup>

We are not the first to use these measures since Qi et al. (2010), for example, shows that countries with stronger political rights are associated with lower cost of debt. In another related earlier study, Henisz (2004) suggests that checks on governments impose constraints on the discretion of policy-makers thereby contributing to stable policies that moderate the impact of macroeconomic shocks on policy outcomes, hence encouraging investment and economic growth. In the same vein, North and Weingast (1989) argue that tighter political constraints prevent government from engaging in policy reversals, which helps to establish a credible investment climate/environment. In countries with less predatory governments and more investor-friendly environments, firms and investors do not need to shelter their cash for fear of expropriation (Caprio et al. 2013). Support for the idea that in countries with less predatory governments, investors are able to obtain cash through dividends also comes from several prior studies (Hart 1995; La Porta et al. 2000a; and Choy et al. 2011). These ideas, put together, and our earlier discussions have a bearing on our expectation that in countries with strong political constraints/rights, investors can rely on dividends when liquidity is low or trade freely in shares and create "home-made" dividends when dividends are low.

Based on a long line of prior research starting with La Porta et al. (1997), who suggest that laws related to investor protection are important for the development of financial markets, we also consider whether the quality of the country's legal institutions moderates the relationship between political institutions and the liquidity/dividend relationship. Along similar lines, Rajan and Zingales (2003: p18), for example, argue that "The essential ingredients of a developed financial system include

<sup>&</sup>lt;sup>4</sup> We use the terms political rights and political constraints interchangeably throughout the paper.

the following: (1) respect for property rights, (2) an accounting and disclosure system that promotes transparency, (3) a legal system that enforces arm's length contracts cheaply, and (4) a regulatory infrastructure that protects consumers, promotes competition, and controls egregious risk-taking." Moreover, prior studies have shown that investor protection laws and property rights enforcement affect dividend policies of firms. Under an effective system of legal protection, minority shareholders are able to use their legal powers to force companies to disgorge cash and are able to preclude insiders from using too high a fraction of company earnings to benefit themselves (La Porta et al. (2000a).<sup>5</sup> Further, minority shareholders can protect themselves by voting for directors who offer better dividend policies, by selling shares to potential hostile raiders who then gain control over non-dividend paying companies, or by suing companies that spend too lavishly on activities which only benefit the insiders. Further, as pointed out by Qi et al. (2010), prior studies such as Milhaupt and Pistor (2007) and Eleswarapu and Venkataraman (2006) suggest that legal institutions which impact financial development are affected by a country's political institutions. Given the strand of literature documenting the significance of legal institutions in financial development and the growing importance of political system, it is not surprising that the two types of institutions have been jointly studied in several prior studies (La Porta et al. 1998; Glaeser and Shleifer 2003; Bhattacharya et al. 2003; Roe 2006; and Boubakri et al. 2013). Thus, we also consider how these two types of institutions interact in the liquidity/dividend relationship.

In addition, based on the suggestion in the Rajan and Zingales (2003) framework regarding the importance of a good system of disclosure and transparency for the development of capital markets, we also consider the moderating role of accounting transparency in the relationship between political institutions and the liquidity/dividend relationship. The importance of accounting transparency for a

<sup>&</sup>lt;sup>5</sup> For example, in countries with weak investor rights, firms pay lower dividends. See also Choy et al. (2011).

vibrant stock market has been extensively discussed in prior studies (Bushman and Smith, 2003). For example, Black (2001) and Ball (2001) emphasize the importance of a strong financial regime which focused on credibility and accountability for the successful development of the securities markets including the ability of investors to trade freely and confidently. Bushman and Smith (2003) argue that high accounting transparency reduces adverse selection costs and liquidity risks (see also Diamond and Verrecchia, 1991; Botosan, 2000). Further, La Porta et al. (1998) state that accounting standards are crucial for investors to know anything about the companies they invest in and the quality of a country's accounting standards plays a crucial role in corporate governance. Since corporate governance and the distribution of control rights and cash flow rights are affected by political institutions, we conjecture that accounting transparency is an important dimension that needs to be considered in evaluating the role of political rights in the liquidity/dividend relationship. In summary, we expect that the link between political constraints and the liquidity/dividend relationship is likely to be moderated by (1) investor protection and (2) accounting transparency.

Using a sample of 254,885 firm year observations in 52 countries between 1992 and 2012, we find that the negative relationship between dividend and liquidity is stronger for firms in countries with sound political institutions. Our results are robust to several tests including different measures of dividend policies and stock liquidity, alternative political institutions proxies, alternative controls and alternative samples. To address the potential endogeneity issue, we conduct an event study analysis around major changes in political constraints and find that the liquidity/dividend substitution increases (decreases) following a major improvement (deterioration) in the strength of political institutions. Further, we also find that the effect of political constraints on the relationship between liquidity and dividends is more pronounced in countries with better institutions governing investor protection and accounting disclosure standards. This study contributes to several strands of the literature. First, we extend prior studies conducted in the U.S. (e.g. Banerjee et al. 2007) by providing evidence regarding the relationship between liquidity and dividend policies in an international setting. This is important given the globalization in trade and investments and the need to better understand how different political and institutional arrangements in a cross section of countries can affect corporate finance practices. Further, we extend prior studies which show that differences in political institutions, investor protection, laws and legal enforcement in different countries affect dividend policies (La Porta et al. 2000b; Haber 2005; Haber et al. 2008; Keefer 2008; Qi et al. 2010; and Roe and Siegel 2011). In this study we bring together the idea that political institutions and legal institutions can jointly affect the liquidity/dividend relationship. In this way we contribute to the "political institutions view" versus the "legal origins view" by showing that both these institutions are important and facilitate the substitutability between liquidity and dividends.<sup>6</sup>

Second, we extend recent work on the role of political institutions in determining financial outcomes. For example, this study complements the study by Qi et al. (2010) who show that a major determinant of debt in a cross country setting is political rights, and Boubakri et al. (2013) who show that sound political institutions are related to high corporate risk-taking behavior. In an earlier study, Eleswarapu and Venkataraman (2006) suggest that politically unstable environments generate high equity trading costs. We extend this literature by presenting evidence that political constraints are associated with international differences in the dividend/liquidity substitutability. This evidence is not available in the extant literature.

Last but not least we add to the literature that emphasizes the interdependence between the political and legal institutions. For example, Qi et al. (2010) show that political and legal institutions are substitutes in explaining the cost of debt, and

<sup>&</sup>lt;sup>6</sup> See Haber et al. (2008) for a discussion of this debate.

Boubakri et al. (2013) show that the effects of political institutions on corporate risk-taking is more pronounced in countries where there is higher levels of corruption. Additionally, both Keefer (2008) and Roe (2006) provide evidence that political economy (including political institutions) play a more important role in financial sector development than legal institutions. The present study relates to this work on the relative importance of political institutions and legal institutions/accounting transparency in financial markets by identifying the underlying channels through which political institutions may impact the dividend/liquidity substitutability in stock markets. More specifically, this paper shows that sound political institutions, by itself, without appropriate legal remedies may not be sufficient in providing an investment environment with low information risk and high levels of trust.

The remainder of the paper is organized as follows. Section II provides the background of the study and the hypotheses. The third section discusses the research methodology. Section IV describes the sample and Section V reports the main results and the robustness tests. Section VI concludes.

#### II. Background and Hypotheses Development

#### 2.1 *Political Constraints*

In this section we survey the relevant political economy and finance literature and provide a brief summary on the role of country level political institutions that relate directly to financial markets, and, more specifically, to trading frictions.<sup>7</sup> For investors to be able to use home-made dividends when dividend payout is low, requires a vibrant market where stock liquidity is high. Political constraints can affect trading costs and trading frictions through many channels, which, in turn, can affect stock liquidity and dividends. For example, the operations of firms in countries with weak political

<sup>&</sup>lt;sup>7</sup> It should be noted that this nascent literature on the antecedents and consequences of political institutions is somewhat disparate but we have been able to draw on some of these ideas to develop our hypothesis (see, for example, Roe (2006) and Roe and Siegel (2011)).

constraints, such as authoritarian regimes, are more likely to be affected by political instability over-regulation, solicitation of bribes, confiscatory taxation and outright expropriation of assets (Stulz 2005). It is thus not surprising that countries with authoritarian government are typically associated with financial backwardness including less developed financial markets with higher trading frictions. Moreover, unstable polities fail or are unwilling to protect investors (Roe and Siegel 2011). Along the same argument, prior studies such as Boubakri et al. (2014) suggest that governments with weak political constraints are unwilling to implement reforms that are investor-friendly when information risk is high. These countries are typically characterized by high policy risk including policy reversals. In related work, Eleswarapu and Venkataraman (2006) document that liquidity suppliers are likely to incorporate information risk (important components include insider trading laws and their enforcement) into bid-ask spreads. They further suggest that when political institutions are strong, insider trading laws are more likely to exist and be enforced, thus leading to lower equity trading costs. Consequently, investors and managers are wary of government policies and they are likely to insulate themselves from these potential policy reversals by sheltering their cash for fear of expropriation (Caprio et al. 2013).

Another stream of research that also provides some insights into the role of political constraints and institutions comes from the perspective of trust; strong political institutions, especially ones with political constraints, provide an environment that can increase the trust that investors have in the financial system. Guiso et al. (2008), for example, using Dutch survey data and customer data of a major Italian bank with information on a self-reported measure of trust document a positive association between trust and stock investing. Georgarakos and Pasini (2011) also provide evidence that trust plays a vital role for stock market participation by investors. These two studies also posit that increase market participation can improve risk-sharing by investors and hence reduces equity financing costs. Investors who live in unstable political environments with low-trust have to take into account the probability of being cheated, which discourages them from investing in stock markets. Thus the lack of trust could also contribute to trading frictions in financial markets.

Agency theory also provides some basis to expect that countries with weak political rights are likely to have higher trading frictions. Agency costs (conflict between corporate insiders and shareholders) and related information asymmetries between managers and shareholders are likely to also lead to higher market frictions. However, in environments with weak political constraints, agency problems are exacerbated, thus making it less likely that investors can depend on dividend payment to compensate for stock illiquidity, or vice versa. Put together, all these studies suggest that in countries with weak political rights investors participation will be low as a result of high trading frictions, thus affecting the liquidity-dividend hypothesis.

H1: Ceteris paribus, the negative relationship between stock market liquidity and dividend payout is likely to be stronger for firms in countries with strong political constraints..

#### 2.2 Legal Institutions

While we have argued for the primary role of political institutions in affecting trading frictions in the market, in this section, we also argue that legal institutions should be considered as a moderating variable in the political institutions/liquidity hypothesis relationship. Recent studies have suggested that political institutions may complement or substitute for legal institutions even though the law and finance literature has recognized the important role played by legal institutions in determining economic outcomes at both country and firm level. Political rights may also affect the liquidity/dividend substitution effect through its impact on legal institutions and the constancy of the legal system (e.g. Rajan and Zingales 2003; Roe and Siegel 2011). The nature of the political system and the extent of corruption in the government affect the

laws in place and the enforcement of laws.<sup>8</sup> Millhaupt and Pistor (2007) emphasize that the political economy determines the extent of a country's stability and law enforcement. In countries with weak legal institutions, securities markets tend to expropriate outside investors. This law system tends to be more formalized and less adaptable, resulting in a poorer environment for contracting (Levine 2005). For instance, prior studies (Fisman 2001; Johnson and Mitton 2003; and Gul 2006) provide evidence that laws are not enforced fairly in developing countries like Malaysia and Indonesia due to cronyism and widespread corruption. If the enforcement of laws are arbitrary and managerial powers are concentrated in the hands of a few, then public trust in capital markets will be adversely affected (Eleswarapu and Venkataraman 2006). This argument is echoed in La Porta et al. (1997, 1998) who state that differences in legal origins and institutions affect stock liquidity through their impact on information risk and the level of investor participation. Following the aforementioned argument, the substitutability effect is less likely to hold for markets with low level of investor participation.

We expect that both political rights/institutions and legal institutions to interact and affect the substitution effect between stock market liquidity and firm dividend policy. We posit that the explanatory power of political rights to be significant if we also account for legal institutional variables including country-level legal protection variables. In addition, prior studies suggest that accounting transparency allows and encourages investors to participate in the market, which, in turn, reduces liquidity risk (Diamond and Verrecchia, 1991; Bushman and Smith, 2003). Thus, we also consider whether the quality of accounting information or accounting transparency variables interact with political constraints to affect the dividend/liquidity relationship. To the extent that a country's capacity to build and maintain investor protection institutions largely depend on its relative stable polities (Roe and Siegel 2011), we expect the negative association between political rights and the liquidity-dividend hypothesis to

<sup>&</sup>lt;sup>8</sup> Prior studies also show that political institutions are related to the degree of corruption (Lederman et al. 2005; Qi et al. 2010).

be more pronounced in the presence of strong legal institutions and high accounting transparency. The above reasoning leads to the following two hypotheses:

- H2a: Ceteris paribus, the negative relationship between the liquidity-dividend substitution effect and political institutions is likely to be more pronounced for firms in countries with better legal institutional enforcement.
- H2b: Ceteris paribus, the negative relationship between the liquidity-dividend substitution effect and political institutions is likely to be more pronounced for firms in countries with better accounting transparency.

#### **III.** Sample, Variable Measurements, and Descriptive Statistics

In this section, we first describe our sample of firms. We then present our measures of trading activities and political institutions along with the standard control variables used in the literature to explain the firm dividend policy. In a third subsection, we report sample descriptive statistics.

#### 3.1 Sample

We collect our trading activity data from *Compustat Global Security Daily* files covering the period between 1992 and 2012. We then match the firms with the required financial data in *Compustat Global Fundamentals Annual* files. We exclude (1) financial and utility firms;<sup>9</sup> (2) observations with missing country-level data;<sup>10</sup> and (3) firms without consolidated financial statements. The sample includes both active and non-active firms to mitigate concerns regarding the survivorship bias. Our final sample includes 254,885 observations with 34,820 unique firms covering 52 countries. To our knowledge, our sample covers the largest number of countries and the longest period to date in the cross country literature on dividend policy. Table 1 describes in details the sample selection.

<sup>&</sup>lt;sup>9</sup> We exclude financial firms with SIC codes between 6000 and 6999 because their profitability ratios, leverage ratios, and growth rates are calculated differently from those of non-financial firms. Utility firms are heavily regulated and hence highly sensitive to the design of a country's political institutions.

<sup>&</sup>lt;sup>10</sup> We also remove countries with less than 100 observations. In a sensitivity test, we add them back and find similar results.

#### [Insert Table 1 about here]

Table 2 provides the distribution of our sample across countries. Our sample is dominated by firms from the U.S. (25.14%), Japan (14.99%), UK (7.20%), Australia (5.50%), and China (5.47%). The other countries in our sample each have fewer than 5% of the sample number of observations.<sup>11</sup> Table 2 shows that the 34,820 firms are spread across different geographical regions which is important because it suggests that our sample has different development levels and legal, political and institutional environments.

#### [Insert Table 2 about here]

#### 3.2. Variables

The Appendix provides definitions and data sources for the variables used in our study. These variables can be classified into four categories: dividend policy variables, trading activity measures, political variables, and firm- and country-level controls.

#### 3.2.1 Dividend Policy Variables

Following Banerjee et al. (2007), we consider in our main analysis *DIV*, a dummy variable that equals one if the common stock of the firm has paid positive ordinary cash distributions for a given year, as our proxy for the firm dividend policy. This variable is derived from the merge of *Compustat Global* and *Compustat North America*. We also consider another proxy of the firm dividend policy. Following Choy et al. (2011), we employ *DP*, an industry-adjusted dividend payout ratio, where dividend payout ratio is computed as total cash dividend paid to common and preferred shareholders deflated by earnings and industry-adjusted dividend payout ratio is computed as the firm's dividend payout ratio minus the median of its country and industry.

<sup>&</sup>lt;sup>11</sup> Since the number of firms varies across countries, the individual observations are weighted with the inverse of the number of firms from the corresponding country in the regression analysis.

#### 3.2.2 Trading Activity Measures

Following prior studies (Datar et al. 1998; Chordia et al. 2001; and Banerjee et al. 2007), we use the percentage of the shares turnover, *TURN*, measured by the number of shares traded divided by the number of shares outstanding in a calendar year, as the measure of trading activity. To assess the robustness of our results, we also measure the trading activities in a stock by using, *DVOL*, the natural logarithm of annual traded dollar volume in the security adjusted by the Consumer Price Index (Brennan et al. 1998; Chordia et al. 2001).

#### 3.2.3 Political Variables

To examine the relation between political institutions and dividend/liquidity relationship, we select Henisz' (2012) political constraints index (POLCON) as a measure of political rights, where POLCON ranges from 0 to 1, with higher scores indicating greater political constraints and hence stronger political institutions. This measure has been widely used in the literature and presents numerous advantages.<sup>12</sup> First, Henisz (2000: p.1) concurs with prior studies (e.g. North 1990) that a major determinant of political institutions is the government's ability to credibly commit not to interfere with private property rights. As such, a good measure of political institutions should have the ability to distinguish countries that have varying levels of constraints on policy change. Henisz' index considers several characteristics of political rights, including the extent of constraints on veto players in the executive, legislative, judicial and sub-federal branches of government and the distribution of preferences across and within those branches. Second, it captures investors' ex-ante views of restrictions on government behavior rather than ex-post government performance (see e.g. Qi et al. 2010). Third, the index is available for a large set of countries (more than 200 countries) and a long period of time which covers all of our sample period. While

<sup>&</sup>lt;sup>12</sup> See for example, Stulz, (2005); Qi et al. (2010) and Boubakri et al. (2013) for the use of the political constraints index.

not showing the drawbacks that characterize other widely used political indices,<sup>13</sup> the index offers good comparison with other proxies that have relatively small country and/or year coverage.

For purposes of robustness, we consider another measure for the quality of political institutions that relates to political constraints. Following prior studies (e.g. La Porta et al. 1999, Acemoglu et al. 2008 and Qi et al. 2010), we use an index of political rights (*POLRIGHT*) obtained from Freedom House (2012). The index is constructed every year over the 1980 and 2012 period and varies between 1 and 7. It takes a value of 7 (strong political rights) if there are free and fair elections; the rulers are elected; there are competitive parties and other competitive political groupings; the opposition party plays significant role; and minority groups have moderate self-government powers or can participate in the government through informal consensus.

### 3.2.4. Control Variables

We control for firm and country characteristics that have been shown to impact firm dividend policy (Banerjee et al., 2007; Choy et al., 2011). At the firm level, we include four control variables. First, we control for firm size, measured by the natural logarithm of total assets denominated in US dollars for a given year (*SIZE*). Second, we control for firm profitability measured by the earnings-to-assets ratio (*ROA*). Third, we control for firm's growth opportunities proxied by the market-to-book ratio (*MB*). Finally, we control for firm leverage measured by the ratio of total debt to total assets (*LEV*) and stock return volatility (*VOLATILITY*) measured by the standard deviation of daily returns in previous year. In order to ensure that outliers do not drive our results, we winsorize all the financial variables.<sup>14</sup> Country-specific control variable includes the

<sup>&</sup>lt;sup>13</sup> Examples include the Economic Intelligence Unit; Alesina and Perotti (1996) socio-political instability measures; Kaufmann et al. (2010) political stability indicator; and International Institute for Management Development (IMD)'s risk of political instability indices.

<sup>&</sup>lt;sup>14</sup> In an untabulated sensitivity test, we delete the outliers and the results are qualitatively similar to our main results.

natural logarithm of real GDP per capita (*LNGDPC*) to capture the level of development of the country. This is to ensure that our political variables are not just capturing the effect of "rich" versus "poor" countries (Choy et al. 2011). Finally, we include country, year, and industry dummies to control for the different fixed effects of these variables. Country dummies should capture at least partially the endogeneity issue raised by the potential omitted country-level variables.

#### 3.3. Descriptive Statistics

Table 2 reports also the descriptive statistics of the key variables presented above by country. Consistent with previous studies, Belgium, France, Switzerland, Australia, Canada and the U.S. have strong political constraints and sound political institutions. Political constraints are weak or even inexistent in many countries like China. Our dependent variable *DIV* varies between 0.17 in Jordan and 0.92 in China<sup>15</sup>. The turnover ratio (*TURN*) seems to vary between the countries covered in our study.

Table 3 Panel A reports the descriptive statistics of the variables used in our main regression analysis. In terms of country-level variables, the mean (median) value of our main proxy for political institutions (*POLCON*) is 0.704 (0.764), with a standard deviation of 0.239. These statistics indicate that political institutions are not homogenous across our sample countries, and thus confirm that cross-country analysis is appropriate for our investigation. The results further show that our sample includes countries with varying degrees of economic development as measured by the logarithm of GDP per Capita.

In terms of the firm-specific variables, the dependent variable *DIV* has mean and standard deviation of 0.535 and 0.499, respectively. The liquidity variable *TURN* has mean, median and standard deviation of 0.493, 0.232 and 0.701, respectively. Our

<sup>&</sup>lt;sup>15</sup> Despite the virtually non-exist political constraints in China, high stock liquidity firms pay high dividend. This phenomenon is caused by the differential pricing for tradable and non-tradable shares during the IPO of some listed companies in order to divert proceeds from an IPO or rights issue to controlling shareholders' pockets. (Chen et al. 2009)

sample includes small and large firms, as well as high- and low-leverage firms. Firm size (*SIZE*) proxied by the natural logarithm of the mean (median) of total assets is 5.536 (5.405), equivalent to around \$253.66 million (\$222.52 million). Our results also show that firms have an average leverage ratio of 0.497. Sample companies appear to be relatively unprofitable, with a mean of return on assets (*ROA*) of -0.012 and exhibit a relatively high level of growth opportunities with a mean (*MB*) of 2.342.

## [Insert Table 3 about here]

Table 3 Panel B shows the Pearson correlations among the regression variables and p-values are estimated from two-tailed tests. Our dependent variable, the likelihood of a firm's paying dividend (*DIV*) is significantly and negatively correlated with our liquidity measure (*TURN*), which is consistent with Banerjee et al. (2007). We also find that *DIV* is significantly correlated with the political constraints measure (*POLCON*). In addition, the magnitudes of the Pearson correlations do not suggest serious multicollinearity issues in our analysis.

#### **IV. Multivariate Analysis**

In this section, we report our results on the impact of political institutions (as well as firm and country characteristics) on the relationship between firm dividend policy and liquidity using a pooled multivariate regression framework. Panel observations help shed light on how firm dividend policy responds to political institutions over time. Following Banerjee et al. (2007), we perform annual logistic regressions, using robust standard errors corrected for clustering at the firm level (Petersen, 2009), to explain the dividend policies of firms in different countries.<sup>16</sup> Because the number of firms varies across countries, the individual observations are

<sup>&</sup>lt;sup>16</sup> Petersen (2009) shows that standard errors clustered over time produce unbiased estimates only when there are a sufficient number of clusters. Specifically, he finds that ten clusters are insufficient to produce unbiased standard errors. Therefore we do not cluster by year because in some countries we have less than ten clusters.

weighted with the inverse of the number of firms from the corresponding country. Specifically, we estimate the following model (subscripts are suppressed for notational convenience):

$$DIV = \beta_1 + \beta_2 TURN + \beta_3 POLCON + \beta_4 TURN * POLCON + \beta_5 FIRM CONTROLS + \beta_6 COUNTRY CONTROL + \sum_{Y=1}^{Y-1} YEAR + \sum_{K=1}^{K-1} IND + \sum_{C=1}^{C-1} CNT + \eta$$
(1)

where *DIV* is an indicator variable that equals one if the common stock of the firm has paid positive ordinary cash distributions for a given year. *POLCON* is Henisz' (2012) index of political constraints, and *TURN* is the number of shares traded divided by the number of shares outstanding in a calendar year. *COUNTRY CONTROL* includes the level of development (*LNGDPC*). *FIRM CONTROLS* refers to the set of firm-level control variables (*SIZE, LEV, MB, ROA,* and *VOLATILITY*), *YEAR, IND,* and *CNT* are dummies that control for year, industry, and country fixed effects, respectively, and  $\eta$  is an error term. The industry classification is based on two digit SIC code. Our focus in the analysis is the coefficient  $\beta_4$ , which measures the sensitivity of the dividend/liquidity relationship to the quality of the political institutions prevalent in the country. A negative value indicates that sound political institutions is likely to increase the distribution of dividends in firms with less liquid stocks.

#### 4.1. Main Regression Analysis

Table 4 presents the results for the multivariate analysis. Model (1) presents the results for the relationship between firm dividend policy and stock market liquidity in 52 different countries around the world. Similar to the findings in Banerjee et al. (2007), we observe a significantly negative coefficient on share turnover *TURN* (coefficient of *TURN* = -0.384 with z-statistic = -22.31), in line with the liquidity hypothesis. This finding generalizes the results of Banerjee et al. (2007), in the American market, to a more recent cross country evidence. Several control variables exhibit their expected signs. Consistent with prior research, we find that firm size (*SIZE*) and firm profitability

(*ROA*) are positive and significantly correlated with *DIV*, suggesting that large and profitable firms are more likely to pay dividends. Further, high-growth and high-leveraged firms are less likely to pay dividends than other firms consistent with ideas in contracting theory (Smith and Watts 1992; Jensen 1986). The logarithm of GDP per capita (*LNGDPC*) loads negative and significant at the 1% level suggesting that firms in developed markets are less likely to pay dividends compared to emerging markets. The association between *DIV* and *volatility* is also negative and significant. This is consistent with the view offered by Hoberg and Prabhala (2009) that risk decreases the propensity to pay dividends.

#### [Insert Table 4 about here]

In Model (2), we add our political institutions proxy (POLCON) and the relationship between dividend payment and stock market liquidity remains unchanged. In Model (3), when we add an interaction term between POLCON with stock turnover (TURN), we find that the negative relationship between dividend payment and stock market liquidity is more pronounced in countries with tighter political constraints (coefficient of  $TURN^*POLCON = -0.480$  with z-statistic= -7.60). This finding confirms our expectation that the substitution effect between dividend payment and stock liquidity is more pronounced in countries with higher political constraints. In other words, investors in firms with illiquid stock are more likely to receive higher dividend payment in countries with sound political institutions. In Models (4) and (5), when we split the sample into two groups, one for countries with weak political institutions (Model 4) and the other for countries with strong political institutions (Model 5) according the median of the variable (POLCON), we find that the coefficient of TURN is equal to -0.183 for the first group compared to -0.641 for the second group (difference that is statistically significant at the 1% level). This suggests that firms with illiquid stock are more likely to pay dividends in countries with strong political institutions. Both the split sample design or the interaction terms support our first hypothesis that a country's political institutions can affect the liquidity hypothesis of dividends. Indeed,

in countries where political rights are weak, quality of corporate governance will be impacted. Hence, investor protection institutions may not work well and investors are unable to demand for dividend payments even when stock liquidity is low. Further, investors are likely to have lower incentives to participate in the stock market in countries with weak political rights (e.g. Pagano and Volpin 2005; Rajan and Zingales 2003; Eleswarapu and Venkataraman 2006), resulting in poor liquidity. In these illiquid markets, while investors may demand for higher cash dividends, they are unable to use their legal powers to extract dividends from firms (La Porta et al. 2000a). The results imply that managers in these countries are less concerned about stock liquidity when deciding on a dividend payout policy.

#### 4.2. Endogeneity Issue

Following Boubakri et al. (2014) approach, we address the potential endogeneity issue by identifying events of major changes in political constraints and examine whether the association between liquidity and dividends changes around these events. We identify four episodes of major changes in political constraints, including Indonesia in 1999; Pakistan in 1999; Argentina in 2002; and Thailand in 2006. Specifically, *POLCON* increased dramatically in Indonesia in 1999 from 0.246 to 0.420 and significantly decreased in Argentina in 2002 from 0.719 to 0.336; in Pakistan in 1999 from 0.280 to 0; and in Thailand in 2006 from 0.440 to 0.260.<sup>17</sup> We consider these events as exogenous shocks to the political constraints, and estimate the Model 1 of Table 4 for each of the four countries in two years before and two years after the event. As shown in Table 5, We find that the coefficient of *TURN* decreases in Indonesia after of the

<sup>&</sup>lt;sup>17</sup> These countries experienced some political changes. For example, in Indonesia of 1999, the resignation of Suharto favored the election of a new parliament, the first to be elected since 1955. In Pakistan in 1999, the Army General Pervez Musharraf conducted a coup d'état, which removed Prime Minister Nawaz Sharif. In Argentina, the political constraints decrease sharply in 2002 as a result of the economic crisis and political turmoil. In Thailand in 2006, Royal Thai Army conducted the coup, which overthrew Prime Minister Thaksin Shinawatra and his caretaker government (see Boubakri et al. 2014, p:335-336).

improvement of the political rights from 0.126 (z-statistic of 0.19) to -0.879 (z-statistic of -2.08) suggesting a higher dividend for the illiquid stocks after the improvement of the political rights. The coefficients of *TURN*, however, increase in Argentina from -5.285 (z-statistic of -1.67) to 2.558 (z-statistic of 0.79), in Pakistan from -2.269 (z-statistic of -1.71) to -0.470 (z-statistic of -1.19), and in Thailand from -0.611 (z-statistic of -3.68) to -0.386 (z-statistic of -2.25) following the decrease in the political constraints. These findings suggest that the substitution between liquidity and dividends is reduced after the deterioration of the political rights in these three countries.

#### [Insert Table 5 about here]

#### 4.3. Alternative Variables

Table 6 provides additional support for our evidence using different proxies for the main tested variable and the dependent variable. First, we use an alternative measure of the quality of political institutions, namely, the Political Rights Index (POLRIGHT). Consistent with the notion that sound political institutions are expected to affect the substitution effect between dividend and liquidity, Model (1) of Table 6 shows a negative and significant relation (coefficient =-0.060 with z-statistic=-9.97) between DIV and TURN\*POLRIGHT. Second, in Models (2) and (3) we replicate Equations (1), using dividend payout ratio (DP) as the dependent variable, without and with the interaction term between liquidity and political institution, respectively. Our results remain unchanged when dividend payout ratio is used instead of the indicator variable DIV in the analysis.<sup>18</sup> Finally, in Models (4), (5), and (6) we test Equation (1) using trading volume (DVOL) instead of TURN as the liquidity measure. The results remain unchanged. Firms with lower trading volume (DVOL) are more likely to pay dividends (Model 4). The interaction term, *DVOL\*POLCON* in the regression of Model (5), loads negatively and is statistically significant at the 1% level, supporting our hypothesis that the substitution effect is more pronounced when political institutions are sound. Model

<sup>&</sup>lt;sup>18</sup> The number of observations is decreased because of the missing values of *DP*.

(6) shows that the negative relationship between dividend payment and trading volume (*DVOL*) is also stronger in countries with higher political rights index (*POLRIGHT*). Overall, the results presented in Table 6 reinforce our earlier evidence, using different proxies for our variables of interest, that the substitution between liquidity and dividend is more pronounced in firms headquartered in countries with sound political institutions.

## [Insert Table 6 about here]

#### 4.4. Additional Control Variables

Table 7 presents specifications that control for additional omitted variables to ensure that their omission is not driving our results. We include these variables separately in Models (1) through (5) and we include them together in Model (6). In Model (1), following Banerjee et al. (2007), we use the proportional change in assets for year t (GROWTH) apart from market to book ratio (MB) as a proxy for growth opportunities. We repeat the analysis using both *GROWTH* and *MB* and we still find a negative and significant coefficient for TURN\*POLCON as shown in Model (1) of Table 7.<sup>19</sup> Following Choy et al. (2011), we include in Model 2 a country level tax advantage variable (TAXADV) as the dividend policy of the firm is influenced by the relative tax advantage/disadvantage of dividend as opposed to capital gains in a country. This dividend tax advantage variable is computed as the ratio of the value of US \$1 distributed as dividend income (to an outside investor) to the value of US \$1 received in the form of capital gains when kept inside the firm as retained earnings (La Porta et al. 2000a). Our results remain qualitatively similar with previous results as shown in Model (2) of Table 7. Choy et al. (2011) provide evidence that a country's political economy, in particular the type of electoral system plays an important role in dividend policies. Thus, Table 7 also presents the results of adding the degree of proportionality

<sup>&</sup>lt;sup>19</sup> The correlation between *GROWTH* and *MB* is 0.11. In a sensitivity test, we remove *MB* from the model and results are qualitatively similar.

of a country's voting system (*PROP*) as constructed by Pagano and Volpin (2005) in the main regression analysis. The results presented in Table 7 Model (3) show that the coefficient of the interaction term between political constraints measure (POLCON) and stock market liquidity (TURN) remains negative and significant with the inclusion of *PROP*. Further, since prior studies (e.g. Beck et al. 2003; Choy et al. 2011) suggest that legal origins are important in explaining financial development and corporate finance policies, we also include the indicator variable for legal origins (COMMON) in models (4) and (5). Our results show that *POLCON* enters negatively and significantly in model (4) indicating that political constraints still have significant explanatory power. The coefficient of the interaction term (TURN) and (POLCON) continues to be negative and significant which corroborates our earlier findings. Finally, we re-run the analysis by including simultaneously GROWTH, PROP, TAXADV and COMMON in the regression and the result still holds.<sup>20</sup> Overall, the effect of the political institutions on the association between stock market liquidity and dividends is consistent with our expectation; higher political rights have a strong effect on the negative relationship between liquidity and dividends.

#### [Insert Table 7 about here]

#### 4.5. Additional Tests

In order to ensure that our results are not driven by the U.S. firms as they dominate our sample (25.14% of our sample), we repeat our analyses by excluding U.S. observations. The results presented in Models (1) and (2) of Table 8 are qualitatively similar to our main results. Additionally, to mitigate concerns that our results are driven by one particular country, in unreported regressions, we rerun our analyses by excluding one country at a time from the basic regression (Model 3 of Table 4). Our

<sup>&</sup>lt;sup>20</sup> As *PROP*, *COMMON*, and *TAXADV* are time-invariant in our sample period for each country, the country fixed effects are removed in the regression models with *PROP*, *COMMON*, and *TAXADV*.

results hold even for the reduced subsample of firms. This evidence suggests that the results are not driven by any particular country that is overrepresented in the sample.

#### [Insert Table 8 about here]

#### 4.6. The Impact of the Legal Institutions and Transparency

In this section, we consider the role of the cross-country differences in legal institutions and securities regulations, and whether they influence the association between political institutions and the dividend-liquidity relationship. Roe (2006) and Roe and Siegel (2011) argue that political institutions have an impact on legal institutions and the constancy of the legal system. To examine whether firm corporate finance policy will depend on both the political and the legal institutions in place, we identify how these two interact in determining the substitution effect between stock market liquidity and dividend policy of a firm. Motivated by Guedhami and Pittman (2006), Hail and Leuz (2006), and Boubakri et al. (2014), among others, we consider two sets of country level legal protection variables; the quality of investor protection institution and the accounting information transparency.

The first set of variables covers the quality of investor protection institutions and includes the anti-self-dealing index (*ANTISELF*), a measure driven from Djankov et al. (2008) that captures the regulation of corporate self-dealing transactions by using three dimensions including disclosure, approval procedures of transactions and facilitation of private litigation when self-dealing is suspected. The index ranges from a minimum of 0 to a maximum of 1, with the higher the index indicating better protection against self-dealing the country offers to its investors. We also consider the likelihood of contract repudiation by the government (*REPUD*) driven from La Porta et al. (1998); higher scores represent lower risk of repudiation. Finally, we include the level of corruption control in the country (*CORRUPT*). The scores are taken from Kaufmann et

al. (2010), the *World Bank*. This proxy measures the extent to which public power is exercised for private gain, including both petty and grand forms of corruption. The higher the score, the stricter the control of corruption is in a country.

The second set of variables covers the quality of accounting information transparency across countries. Following La Porta et al. (2006), we measure the strength of stock exchange mandated disclosure requirements (*DISREQ*). The index ranges from 0 to 1, with higher scores indicating more extensive disclosure requirements relating to prospectus, compensation of directors and key officers, ownership structure, inside ownerships, contracts outside the ordinary course of business and transactions between the issuer and its directors, officers, and or large shareholders. We also examine other disclosure variables including the index from the Center for International Financial Analysis and Research (*CIFAR*) created by examining and rating companies annual reports of a sample of domestic firms on their inclusion and omission of 90 items, with higher scores indicating higher quality of accounting information. Finally, we use the auditor liability index (*SUE*) which captures the procedural difficulty in recovering losses from auditors in a civil liability case due to misleading statements in the audited financial information accompanying the prospectus, with higher scores indicating investors are easier to cover loss from misleading financial statements.

In Table 9, Panel A, we present the split sample results using the set of investor protection variables. Political constraints may have an indirect effect on the association between dividend and liquidity through its impact on legal institutions, stock market development and corporate governance. Across all the institutional variables, the interaction term *TURN\*POLCON* is only negative and statistically significant in Models (2), (4) and (6).<sup>21</sup> More specifically, we obtain negative and significant results in strong investor protection environments; i.e. in countries with higher control of self-dealing (proxied by high *ANTISELF*), countries with lower risk of contract repudiation by

<sup>&</sup>lt;sup>21</sup> The exceptions are the interaction terms that are also significantly negative in Model (3) and Model (5), but lower in magnitude and statistical significance compared to that in Models (4) and (6).

government (proxied by high *REPUD*), and countries with stricter control over corruption (proxied by high *CORRUPT*). These results are generally consistent with our second hypothesis that the impact of political institutions on the relationship between stock market liquidity and dividend is even stronger (weaker) for firms in countries with better (lower) investor protection.

#### [Insert Table 9 about here]

We also examine the extent of the significance of the political institutions, through the quality of accounting information, on the substitution effect. As presented in Table 9 Panel B, we include the second set of variables which covers the quality of accounting information transparency across countries. An examination of the interaction term between shares turnover and political constraints (*TURN\*POLCON*) indicates that the negative relationship is significant at the 1% level (Models (2), (4) and (6)) only in countries with higher disclosure requirements (proxied by high *DISREQ*), countries with better quality of accounting information (proxied by high *CIFAR*) and countries with easiest procedure for investors to cover loss from misleading financial statements (proxied by high *SUE*). The results suggest that the political institutions' role in the association between stock market liquidity and dividend is more pronounced in countries with strong accounting transparency, consistent with our hypothesis H2b.

#### 4.7. Country Level Analysis

In this section we conduct tests at the country level to buttress our main findings. If political institutions and corporate governance are weak in a country, we expect that investors are unable to demand high dividend payout even with low stock liquidity. Thus we conjecture that the association between dividends and stock market liquidity in countries with poor political institutions and weak corporate governance will not hold. However, the relationship is expected to be negative and significant in countries with sound political institutions and strong corporate governance. To test this conjecture, we split our sample countries into two categories: 6 countries (Australia, Canada, France, Spain, Switzerland, and the United States) with strong political institutions *POLCON* and strong corporate governance (*CG*); <sup>22</sup> and 6 countries (Argentina, Columbia, Mexico, Nigeria, Philippines, and Sri Lanka) with weak *POLCON* and weak *CG*. To determine whether the country has high or low corporate governance, we use a CG factor score based on factor analysis of the six corporate governance measures, *ANTISELF, REPUD, CORRUPT, DISREQ, CIFAR* and *SUE*. Higher CG factor score represents stronger corporate governance. The results are consistent with our expectations. As shown in Table 10, countries with strong *CG* and strong *POLCON* are more likely to have a negative and significant association between the liquidity and dividends (5 out of 6 countries have negative and significant association) while countries with weak *CG* and weak *POLCON* are more likely to have insignificant results. These results are broadly consistent with our earlier findings.

#### [Insert Table 10 about here]

### **VI.** Conclusion

This paper examines whether there is an association between the liquidity hypothesis of dividends and political rights in a cross-country setting. Using a sample of 254,885 firm year observations in 52 countries between 1992 and 2012, we find that the negative relationship between dividend and liquidity is stronger for firms in countries with high political constraints (sound political institutions). The results support our conjecture that political institutions affect the liquidity hypothesis of dividends through information risk and risk sharing dimensions. Following North and Weingast (1989), Henisz (2004), we argue that political uncertainty and policy reversals undermine political credibility. As investors and firm managers are wary of an unstable

<sup>&</sup>lt;sup>22</sup> To better differentiate countries with strong and weak political institutions, a country is classified as strong political institutions if on average *POLCON* is larger than 0.80, and classified as weak political institutions if on average *POLCON* is lower than 0.50.

environment, stock market liquidity will be affected and shareholders are not able to extract dividend payments from corporate insiders. Recent studies (e.g. Qi et al. 2010) show that political institutions and legal institutions are interdependent and might complement or substitute for one another. Thus we also examine the interdependence between political and legal institutions and find that the effect of political constraints on the relationship between liquidity and dividends is more pronounced in countries with better institutions governing investor protection and accounting disclosure standards. The results support previous studies (e.g. Milhaupt and Pistor 2007) that legal system does not work independently of the political system. Our results are robust to a battery of tests including alternative measures of liquidity, political rights proxies, legal protection, accounting transparency and controlling for outliers and additional controls.

Our paper extends the literature on the liquidity hypothesis of dividends by examining the effect of the prevailing country's political institutions. We also contribute by providing a better understanding of the channels by which political rights impact stock market liquidity and firm dividend policy. We join recent literature (e.g. Eleswarapu and Venkataraman 2006; Boubakri et al. 2013; Roe and Siegel 2011) in providing more evidence that political institutions are vital to the development of liquid capital markets.

Our findings have important policy implications as any insights into what constraints financial market development will be useful for regulators and governments in their attempts to design appropriate policies to create friendlier investment and business environments.

Our study is subject to a number of limitations. First, there are studies (Jagannathan et al. 2000; Grullon and Michaely 2002) that show that share repurchases consume cash that can be distributed as dividends. However, the increase popularity of open market repurchases is seen only in developed markets, thus we are unable to test whether the results are driven by the increased repurchase activity of firms. Second,

Banerjee et al. (2007) suggest that managerial stock options may provide incentives for managers not to pay cash dividends. However, due to data availability, we are unable to examine the effect of shares reserved for conversion on the association between stock market liquidity and firm dividend policy.

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# APPENDIX

Variable Definitions

Variable	Definition	Source				
DIV	An indicator variable that equals 1 if the common stock of the firm has paid positive cash	Compustat Global &				
	distributions for a given year, and 0 otherwise.	North America				
DP	Industry-adjusted dividend payout ratio, where dividend payout ratio is computed as total cash	As above				
	dividend paid to common and preferred shareholders deflated by earnings and industry-adjusted	d				
	dividend payout ratio is computed as the firm's dividend payout ratio minus the median of is country					
ידו וסאו	and industry.	A1				
IUKN	The percentage of the share turnover measured by the number of shares traded divided by the number of shares outstanding for a given year	As above				
DVOL	The natural logarithm of annual traded dollar volume in the security adjusted by the Consumer Price	As above				
	Index.					
SIZE	The natural logarithm of total assets for a given year.	As above				
ROA	Net income divided by total assets for a given year.	As above				
MB	Market value of equity divided by the book value of common equity for a given year.	As above				
LEV	Total liabilities divided by total assets for a given year.	As above				
VOLATILITY	The measure of volatility for a given year, calculated as the standard deviation of daily returns in the one-year period.	As above				
GROWTH	One year growth rate of total assets for a given year.	As above				
POLCON	The measure of the degree of political constraints of a country. Derived from a model of political	Henisz (2012)				
	interaction that incorporates information on the number of independent branches of government with					
	branches considered include chief executives lower house of legislature higher house of legislature					
	iudiciary and sub-federal branches. Higher scores indicate stronger political constraints and sound					
	political institutions.					
LNGDPC	The natural logarithm of GDP per capita for a given year.	The World Bank				
POLRIGHT	An index of political rights from 1980 to 2010, which relies upon the following criteria: free and fair	Freedom House				
	elections take place; the rulers are elected; there are competitive parties or other competitive political	(2012)				
	groupings; the opposition has real power and plays a significant role; and minority groups have	. ,				
	moderate self-government powers or can participate in the government through informal consensus.					

The index ranges from 1 (weak political rights) to 7 (strong political rights).

Variable	Variable Definition S							
ANTISELF	Average of ex-ante and ex-post private control of self-dealing.	Djankov et al. (2008)						
REPUD	An assessment of the likelihood of contract repudiation by the government. Lower score represents higher risk of repudiation.	s La Porta et al. (1998)						
CORRUPT	An assessment of one country's control of corruption. Higher scores indicate stricter control of corruption.	Kaufmann et al. (2010), The World Bank						
DISREQ	The measure of disclosure requirements relating to prospectus, compensation of directors and key officers, ownership structure, inside ownership, contracts outside the ordinary course of business, and transactions between the issuer and its directors, officers, and/or large shareholders. The index ranges from 0 to 1, with higher scores indicating more extensive disclosure requirement.	La Porta et al. (2006)						
CIFAR	An index created by examining and rating companies' 1995 annual reports on their inclusion or omission of 90 items. These items fall into seven categories: general information, income statements, balance sheets, funds flow statement, accounting standards, stock data, and special items. A minimum of 3 companies in each country were studied. Higher score represents higher quality of accounting information.	Bushman et al. (2004)						
SUE	Index of the procedural difficulty in recovering losses from the auditor in a civil liability case for losses due to misleading statements in the audited financial information accompanying the prospectus. SUE equals one when investors are only required to prove that the audited financial information accompanying the prospectus contains a misleading statement. Equals two-thirds when investors must also prove that they relied on the prospectus and / or that their loss was caused by the misleading statement. Equals one-third when investors must also prove that the auditor acted with negligence. Equals zero if restitution from the auditor is either unavailable or the liability standard is intent or gross pegligence	La Porta et al. (2006)						
TAXADV	Relative tax advantage of dividend versus capital gain in a country, computed as the ratio of the value of US\$1 distributed as dividend income (to an outside investor) to the value of US\$1 received in the form of capital gains when kept by the firm as retained earnings.	La Porta et al. (2000a)						
PROP	Degree of proportionality of a country's voting system as constructed by Pagano and Volpin (2005). It is computed as Proportional Representation – Plurality – Housesys + 2.	The World Bank						
COMMON	An indicator variable that equals 1 if the country has common law tradition, and 0 otherwise.	La Porta et al. (1998)						

# Table 1

Sample Selection

	Observations	Number of distinct
		firms
Non-financial firms from Compustat Global		
Security Daily merged with Compustat Global		
Fundamentals Annual file		
for the period between 1992 and 2012	401,918	45,218
Less:		
Observations with missing country-level	<u>-12,115</u>	<u>-1,332</u>
data <sup>23</sup>		
Observations with missing firm-level data	<u>-134,918</u>	<u>9,066</u>
Primary sample	254,885	34,820

 $<sup>^{23}\,</sup>$  Countries with less than 100 observations are also excluded from our sample.  $$37\,$ 

Country	Ν	%	DIV	TURN	SIZE	ROA	MB	LEV	VOLATILITY	POLCON	LNGDPC
Argentina	707	0.28%	0.47	0.07	6.04	0.03	2.13	0.50	0.03	0.48	8.98
Australia	14029	5.50%	0.33	0.26	3.58	-0.16	2.75	0.32	0.04	0.86	10.49
Austria	625	0.25%	0.61	0.15	6.03	0.01	1.80	0.54	0.03	0.75	10.55
Belgium	890	0.35%	0.56	0.13	6.00	0.02	1.93	0.55	0.03	0.89	10.52
Brazil	2390	0.94%	0.64	0.24	6.97	0.05	4.41	0.55	0.04	0.74	8.68
Canada	6468	2.54%	0.33	0.33	5.70	-0.08	2.44	0.43	0.03	0.85	10.28
Chile	1025	0.40%	0.89	0.09	6.59	0.05	5.09	0.46	0.02	0.75	9.00
China	13942	5.47%	0.92	1.34	5.82	0.04	3.52	0.46	0.03	0.00	7.95
Colombia	150	0.06%	0.77	0.23	7.36	0.04	2.56	0.39	0.02	0.28	8.46
Croatia	151	0.06%	0.62	0.08	5.98	0.03	1.38	0.46	0.03	0.72	9.41
Denmark	1121	0.44%	0.58	0.26	5.48	-0.01	2.85	0.50	0.03	0.72	10.75
Egypt	159	0.06%	0.77	0.30	6.64	0.10	2.57	0.50	0.03	0.19	7.57
Finland	1288	0.51%	0.79	0.21	5.85	0.04	2.45	0.54	0.03	0.77	10.51
France	6069	2.38%	0.63	0.19	6.02	0.02	2.33	0.59	0.03	0.86	10.41
Germany	5332	2.09%	0.48	0.25	5.55	-0.02	2.21	0.53	0.03	0.85	10.46
Greece	1518	0.60%	0.65	0.17	5.34	0.01	1.47	0.57	0.03	0.60	10.10
Hungary	221	0.09%	0.50	0.31	6.02	0.05	1.44	0.38	0.03	0.75	9.07
India	9523	3 74%	0.69	0.39	4.82	0.04	2.04	0.54	0.03	0.72	7.02
Indonesia	2402	0.94%	0.53	0.26	4 90	0.04	2.37	0.52	0.04	0.26	7.30
Ireland	723	0.28%	0.28	0.20	6.02	-0.01	2.61	0.50	0.04	0.26	10 59
Israel	1667	0.65%	0.20	0.19	5.27	-0.01	4 37	0.00	0.03	0.78	10.09
Italy	1601	0.00%	0.60	0.10	6.77	-0.01	1.99	0.42	0.02	0.70	10.12
Ianan	38196	14 99%	0.00	0.34	6.11	0.01	1.55	0.55	0.02	0.72	10.41
Japan Jordan	527	0.21%	$0.7 \pm$ 0.17	0.43	3 71	0.01	1.55	0.34	0.03	0.15	8.01
Konva	165	0.21%	0.17	0.45	1 08	0.04	2.07	0.34	0.03	0.15	6.01
Koroa	7098	0.00 % 2 78%	0.62	1.00	4.90 5.96	0.07	1.22	0.40	0.03	0.44	0.40
Lithuania	242	0.00%	0.00	0.10	J.70 4.61	0.01	1.20	0.34	0.03	0.75	9.15
Luvombourg	242	0.09%	0.00	0.10	717	0.04	3.84	0.44	0.03	0.77	9.15 11 <b>2</b> 8
Malausia	274	2 72 %	0.43	0.19	1.17	0.02	1 27	0.34	0.03	0.77	11.20 8.67
Maxico	1125	0.44%	0.62	0.25	7.24	0.02	2.02	0.42	0.03	0.08	8.07 8.01
Netherlanda	1125	0.44 /0	0.57	0.14	6.72	0.04	3.02 2.70	0.40	0.03	0.42	0.91 10.47
Neurerianus Neur Zeelend	1902	0.75%	0.59	0.55	0.72	0.02	2.70	0.57	0.03	0.77	10.47
New Zealallu	200	0.33%	0.07	0.10	4.09	-0.02	2.00	0.44	0.03	0.73	10.17
Nigeria	299 1760	0.12 /0	0.80	0.07	4.60	0.00	4.40	0.62	0.03	0.39	7.00
Delvieten	1/09	0.09%	0.43	0.39	4.27	-0.02	3.49 1.76	0.54	0.03	0.77	6 70
Pakistan	1402 E02	0.35%	0.76	0.54	4.37	0.07	1.70	0.56	0.03	0.21	8.70
Peru Dhilinginga	303 1219	0.20%	0.65	0.14	5.01 4.79	0.07	1.01	0.45	0.04	0.23	8.09 7.00
Philippines	1310	0.52 /0	0.45	0.16	4.70	0.01	2.09	0.40	0.04	0.46	7.20
Polaliu Dertueel	2061	0.02 /0	0.50	0.20	4.54	0.02	2.10	0.40	0.03	0.74	9.20
Portugal	395	0.15%	0.62	0.18	7.03	0.02	2.20	0.72	0.02	0.74	9.84
Kussia Cimenana	440 5702	0.17%	0.51	0.08	1.39	0.06	1./1	0.44	0.03	0.56	9.15
Singapore	5723	2.25%	0.61	0.30	4.64	0.02	1.57	0.43	0.04	0.07	10.40
South Africa	2897	1.14%	0.46	0.16	5.25	0.05	2.50	0.48	0.03	0.45	8.43
Spain	879	0.34%	0.67	0.36	7.71	0.03	3.06	0.63	0.02	0.86	10.19
Sri Lanka	806	0.32%	0.66	0.18	3.34	0.05	2.07	0.46	0.04	0.26	7.70
Sweden	3390	1.33%	0.53	0.30	4.87	-0.04	2.95	0.50	0.03	0.76	10.60
Switzerland	2188	0.86%	0.64	0.24	6.66	0.02	2.79	0.50	0.03	0.87	10.89
I aiwan	11287	4.43%	0.60	0.88	5.03	0.03	1.84	0.43	0.03	0.72	9.71
Thailand	4031	1.58%	0.69	0.47	4.43	0.04	1.55	0.45	0.03	0.56	8.05
Turkey	1032	0.40%	0.47	1.08	6.42	0.05	2.14	0.46	0.03	0.64	9.02
UK	18350	7.20%	0.24	0.31	5.11	-0.04	2.77	0.49	0.03	0.74	10.37
USA	64090	25.14%	0.38	0.68	5.98	-0.04	2.63	0.53	0.03	0.85	10.63
Venezuela	118	0.05%	0.73	0.34	9.07	0.02	3.10	0.36	0.04	0.47	8.57
Total	254,885	100%	0.58	0.31	5.71	0.02	2.45	0.49	0.03	0.61	9.33

 Table 2

 Descriptive Statistics by Country

## Table 3

Descriptive Statistics, Correlation Matrix, and Univariate Analysis

Variable	Ν	Mean	Std. Dev	25%	Median	75%
DIV	254,885	0.535	0.499	0.000	1	1
TURN	254,885	0.493	0.701	0.088	0.232	0.574
POLCON	254,885	0.704	0.239	0.733	0.764	0.852
SIZE	254,885	5.536	2.077	4.119	5.405	6.818
ROA	254,885	-0.012	0.196	-0.009	0.024	0.064
MB	254,885	2.342	2.358	0.826	1.502	2.801
LEV	254,885	0.497	0.234	0.321	0.507	0.668
VOLATILITY	254,885	0.032	0.015	0.021	0.029	0.040
LNGDPC	254,885	9.907	1.122	9.687	10.437	10.617

**Panel A: Descriptive Statistics** 

**Panel B: Pearson Correlations** 

	DIV	TURN	POLCON	SIZE	ROA	МВ	LEV	VOLATILITY
DIV	1							
TURN	-0.036	1						
POLCON	-0.201	-0.154	1					
SIZE	0.333	0.072	0.052	1				
ROA	0.298	-0.027	-0.123	0.318	1			
MB	-0.070	0.138	-0.035	-0.029	-0.089	1		
LEV	0.083	-0.046	0.056	0.388	0.041	0.047	1	
VOLATILITY	-0.363	0.150	-0.004	-0.430	-0.382	0.016	-0.108	1
LNGDPC	-0.161	-0.057	0.601	0.113	-0.140	-0.010	0.025	-0.048

Bold text indicates two-tail significance at the .10 level or less. See Appendix for variable definitions.

	(1)	(2)	(3)	(4)	(5)
	DIV	DIV	DIV	DIV	DIV
				Low POLCON	High POLCON
?	13.259***	13.268***	4.334***	5.098***	26.010***
	(17.28)	(17.37)	(7.67)	(4.67)	(14.37)
-	-0.384***	-0.384***	-0.034	-0.183***	-0.641***
	(-22.31)	(-23.44)	(-0.89)	(-10.05)	(-16.65)
?		-0.038	0.059		
		(-0.28)	(0.52)		
			-0.480***		
			(-7.60)		
÷	0.320***	0.320***	0.346***	0.365***	0.359***
	(34.75)	(35.39)	(49.32)	(29.34)	(23.92)
F	4.136***	4.136***	4.254***	6.406***	2.760***
	(25.66)	(27.91)	(24.82)	(10.39)	(14.68)
-	-0.036***	-0.036***	-0.047***	-0.021***	-0.033***
	(-6.11)	(-6.08)	(-7.48)	(-2.88)	(-3.79)
-	-0.169***	-0.169***	-0.241***	-1.075***	0.232**
	(-2.94)	(-2.89)	(-3.86)	(-13.44)	(2.39)
?	-37.765****	-37.752***	-30.010***	-41.680***	-32.681***
	(-36.83)	(-36.44)	(-38.72)	(-28.31)	(-22.46)
?	-1.869***	-1.868***	-0.632***	-2.350***	-2.858***

 Table 4

 Stock Market Liquidity, Firm's Dividend Policy and Political Constrain

	(-27.66)	(-25.84)	(-28.72)	(-27.58)	(-22.50)
Industry Dummies	Included	Included	Included	Included	Included
Year Dummies	Included	Included	Included	Included	Included
Country Dummies	Included	Included	Included	Included	Included
Ν	254,885	254,885	254,885	127,225	127,660
Pseudo R-squares	0.457	0.458	0.463	0.479	0.461

\*, \*\* and \*\*\* represent two-tailed significance at level of 10%, 5% and 1% respectively. N denotes the number of observations. See Appendix for variable definitions. Z-statistic are shown in parentheses for country weighted *PROBIT* regressions, calculated based on robust standard errors clustered at the firm level.

Model		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Legal Factors		INDOI	NESIA	ARGEI	NTINA	PAKI	STAN	THAI	LAND
		Low	High	High	Low	High	Low	High	Low
		POLCON	POLCON	POLCON	POLCON	POLCON	POLCON	POLCON	POLCON
Dependent Variab	le=	DIV	DIV	DIV	DIV	DIV	DIV	DIV	DIV
Intercept	?	2.308*	2.653***	-1.361	4.960**	0.079	1.036	12.386	2.296***
		(1.80)	(3.09)	(-0.59)	(1.88)	(0.12)	(0.54)	(0.07)	(3.69)
TURN	-	0.126	-0.879**	-5.285*	2.558	-2.269*	-0.470	-0.611***	-0.386**
		(0.19)	(-2.08)	(-1.67)	(0.79)	(-1.71)	(-1.19)	(-3.68)	(-2.25)
SIZE	+	0.339**	0.046	1.135**	0.242	0.302	0.226	0.321**	0.200**
		(2.12)	(0.47)	(2.30)	(0.99)	(0.64)	(0.73)	(2.24)	(2.20)
ROA	+	3.990**	2.646**	5.844**	3.810	16.768	10.068**	7.349***	8.681***
		(2.29)	(1.98)	(2.05)	(0.84)	(1.55)	(2.12)	(3.65)	(4.18)
MB	-	-0.044	-0.043	-0.954	0.305*	-0.074	0.541*	0.122	0.012
		(-0.27)	(-0.69)	(-1.13)	(1.78)	(-0.19)	(1.69)	(1.37)	(0.22)
LEV	-	-1.658	-1.836**	-12.465***	-7.258***	-2.359	-4.358**	-2.151***	-1.181*
		(-1.25)	(-2.18)	(-2.31)	(-2.76)	(-0.58)	(-1.98)	(-2.88)	(-1.75)
VOLATILITY	?	-33.067**	-27.793***	22.733	-22.11***	14.984	14.106	-48.829***	-52.554***
		(-2.19)	(-2.88)	(0.61)	(-3.05)	(0.41)	(0.63)	(-4.16)	(-5.31)
Industry		Included	Included	Included	Included	Included	Included	Included	Included
Year Dummies		Included	Included	Included	Included	Included	Included	Included	Included
Ν		183	229	56	98	41	99	582	705
Pseudo R-squares		0.222	0.156	0.548	0.317	0.302	0.240	0.343	0.239

Stock Market Liquidity, Firm's Dividend Policy and Political Constraint: Event Study Analysis

Table 5

\*, \*\* and \*\*\* represent two-tailed significance at level of 10%, 5% and 1% respectively. N denotes the number of observations. See Appendix for variable definitions. Z-statistic are shown in parentheses for *PROBIT* regressions, calculated based on robust standard errors clustered at the firm level.

Model		(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable=		DIV	DP	DP	DIV	DIV	DIV
Intercept	?	14.278***	-0.324***	-0.354***	14.576***	13.796***	13.601***
		(26.55)	(-5.05)	(-5.71)	(20.17)	(29.55)	(28.16)
TURN	-	-0.019	-0.033***	-0.022***			
		(-0.51)	(-24.97)	(-5.15)			
POLRIGHT	?	-0.122***					0.159***
		(-7.36)					(4.67)
TURN*POLRIGHT	-	-0.060***					
		(-9.97)					
POLCON	?			-0.097***		1.229***	
				(-5.87)		(5.33)	
TURN*POLCON	-			-0.016***			
				(-2.85)			
DVOL	-				-0.114***	-0.057***	-0.001
					(-16.69)	(-5.91)	(-0.16)
DVOL*POLCON	-					-0.083***	
						(-6.69)	
DVOL*POLRIGHT	-						-0.019***
			0.010444	0.010444			(-9.94)
SIZE	+	0.326***	0.010***	0.010***	0.42/***	0.436***	$0.444^{***}$
		(47.20)	(17.42)	(17.41)	(52.97)	(43.69)	(45.91)
KUA	+	4.157***	0.033***	0.033***	4.098***	4.106***	4.116***
		(31.79)	(6.72)	(6.62)	(26.67)	(32.16)	(30.43)
MB	-	-0.036***	-0.003***	-0.003***	-0.014**	-0.013***	-0.011***
		(-9.56)	(-8.23)	(-8.15)	(-2.23)	(-3.88)	(-3.48)
LEV	-	-0.185***	-0.005	-0.006	-0.376***	-0.393***	-0.413***
		(-5.38)	(-1.06)	(-1.25)	(-5.49)	(-10.57)	(-11.19)

# Table 6

Alternative Regression Models

VOLATILITY		-37.290***	-4.859***	-41.841***	-41.950***	-41.507***	-41.327***
		(-15.22)	(-62.33)	(-61.50)	(-75.55)	(-74.31)	(-75.90)
LNGDPC	?	-1.900***	0.060***	0.059***	-1.914***	-1.931***	-1.918***
		(-12.37)	(8.82)	(8.56)	(-26.74)	(-27.06)	(-28.61)
Industry Dummies		Included	Included	Included	Included	Included	Included
Year Dummies		Included	Included	Included	Included	Included	Included
Country Dummies		Included	Included	Included	Included	Included	Included
Ν		254,885	177,245	177,245	254,577	254,577	254,577
Pseudo R-squares /		0.461	0.133	0.133	0.448	0.450	0.360

\*, \*\* and \*\*\* represent two-tailed significance at level of 10%, 5% and 1% respectively. N denotes the number of observations. See Appendix for variable definitions. Z-statistics / T-statistics are shown in parentheses for country weighted *PROBIT* / *OLS* regressions, calculated based on robust standard errors clustered at the firm level.

Model		(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	=	DIV	DIV	DIV	DIV	DIV	DIV
Intercept	?	4.582***	-7.794***	5.223***	2.765***	-6.959***	-4.843***
1		(4.92)	(-8.64)	(4.31)	(4.16)	(-8.33)	(-5.31)
TURN	-	0.062	0.095	-0.200***	-0.348***	0.139***	-0.231***
		(1.33)	(1.38)	(-3.92)	(-20.32)	(3.23)	(-3.68)
POLCON	?	0.155	-0.604***	0.058	-1.163***	-0.795***	-1.080***
		(1.02)	(-6.80)	(0.40)	(-15.54)	(-7.37)	(-8.27)
TURN*POLCON	-	-0.636***	-0.707***	-0.294***		-0.714***	-0.278***
		(-8.66)	(-7.59)	(-3.81)		(-10.55)	(-2.82)
SIZE	+	0.333***	0.305***	0.328***	0.303***	0.312***	0.316***
		(31.13)	(36.39)	(35.93)	(35.23)	(38.91)	(32.97)
ROA	+	4.265***	3.938***	4.180***	3.986***	4.052***	4.225***
		(26.08)	(22.46)	(26.97)	(25.18)	(21.46)	(21.19)
MB	-	-0.033***	-0.087***	-0.039***	-0.065***	-0.068***	-0.063***
		(-5.91)	(-12.70)	(-6.94)	(-10.08)	(-10.67)	(-8.43)
LEV	-	-0.205***	0.120*	-0.194***	-0.037	-0.055	-0.070
		(-3.37)	(1.73)	(-2.68)	(-0.61)	(-0.91)	(-1.08)
VOLATILITY	?	-37.454***	-35.257***	-37.057***	-33.445***	-32.383***	-32.929***
		(-34.45)	(-35.11)	(-36.06)	(-37.66)	(-30.49)	(-31.66)
LNGDPC	?	-1.917***	-0.235***	-2.069***	-0.236***	-0.228***	-0.315***
		(-23.16)	(-18.09)	(-23.84)	(-19.96)	(-18.06)	(-17.71)
GROWTH	-	-0.247***					-0.329***
		(-8.30)					(-10.23)
TAXADV	+		0.440***				-0.093
			(3.56)				(-0.79)
PROP	-		. /	-2.069*			-0.311***
				(-1.70)			(-9.45)
COMMON	?			· · ·	-0.689***	-0.653***	-1.092***

 Table 7

 Stock Market Liquidity, Firm's Dividend Policy and Political Constraint: Additional Control Variables

				(-27.73)	(-21.92)	(-24.88)
Industry Dummies	Included	Included	Included	Included	Included	Included
Year Dummies	Included	Included	Included	Included	Included	Included
Country Dummies	Included	Not Included				
Ν	250,238	226,805	239,007	254,885	254,885	221,091
Pseudo R-squares	0.466	0.379	0.461	0.296	0.303	0.304

\*, \*\* and \*\*\* represent two-tailed significance at level of 10%, 5% and 1% respectively. N denotes the number of observations. See Appendix for variable definitions. Z-statistic are shown in parentheses for country weighted *PROBIT* regressions, calculated based on robust standard errors clustered at the firm level.

		Additional Tes	sts	
Model		(1)	(2)	
Dependent Variable=		DIV	DIV	
Intercept	?	0.766	-8.414***	
		(1.50)	(-10.03)	
TURN	-	-0.151***	0.219***	
		(-9.88)	(6.55)	
POLCON	?		-0.368***	
			(-5.19)	
TURN*POLCON	-		-0.640***	
			(-10.18)	
SIZE	+	0.358***	0.361***	
		(39.35)	(35.28)	
ROA	+	5.783***	5.843***	
		(36.35)	(35.76)	
MB	-	-0.062***	-0.072***	
		(-9.09)	(-10.72)	
LEV	-	-0.840***	-0.773***	
		(-11.41)	(-10.73)	
VOLATILITY	?	-31.006***	-31.877***	
		(-28.74)	(-30.35)	
LNGDPC	?	-0.183***	-0.135***	
		(-14.86)	(-9.71)	
Industry Dummies		Included	Included	
Year Dummies		Included	Included	
Country Dummies		Included	Included	
N		190,795	190,795	
Pseudo R-squares		0.384	0.399	

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\*, \*\* and \*\*\* represent two-tailed significance at level of 10%, 5% and 1% respectively. N denotes the number of observations. See Appendix for variable definitions. Z-statistic are shown in parentheses for country weighted *PROBIT* regressions, calculated based on robust standard errors clustered at the firm level. In Model (1) and (2), observations of U.S. are excluded from the sample.

## Table 9

# Stock Market Liquidity, Firm's Dividend Policy and Political Constraint: Partition Analysis

## **Panel A: Legal Protection Variables**

Model		(1)	(2)	(3)	(4)	(5)	(6)
Legal Factors		Al	ANTISELF REPUD		CORRUPT		
		Low	High	Low	High	Low	High
Dependent Variable=		DIV	DIV	DIV	DIV	DIV	DIV
Intercept	?	14.435***	0.392	-12.725***	23.700***	-3.422***	1.729
		(16.57)	(0.65)	(-2.84)	(12.63)	(-4.16)	(1.18)
TURN	-	-0.365***	-0.121***	-0.193***	3.341***	-0.083	-0.412***
		(-5.59)	(-3.88)	(-5.39)	(11.72)	(-1.23)	(-5.90)
POLCON	?	-0.214	-0.697***	-0.532***	4.300***	-0.461***	-1.186***
		(-1.07)	(-4.59)	(-6.90)	(5.12)	(-2.88)	(-10.08)
TURN*POLCON	-	0.234**	-0.614***	-0.141***	-4.761***	-0.135*	-0.370***
		(2.06)	(-10.71)	(-3.64)	(-13.40)	(-1.73)	(-3.28)
SIZE	+	0.380***	0.334***	0.332***	0.349***	0.276***	0.379***
		(36.68)	(34.71)	(28.01)	(39.72)	(31.71)	(37.40)
ROA	+	7.514***	2.771***	5.907***	3.505***	6.457***	3.839***
		(38.50)	(19.68)	(28.82)	(22.97)	(24.36)	(19.95)
MB	-	-0.035***	-0.029***	-0.011**	-0.033***	-0.031***	-0.040***
		(-4.92)	(-6.83)	(-1.99)	(-3.80)	(-3.74)	(-2.93)
LEV	-	-1.170***	0.353***	-0.951***	0.037	-1.359***	0.604***
		(-16.94)	(7.12)	(-12.61)	(0.91)	(-19.45)	(10.08)
VOLATILITY	?	-48.957***	-32.118***	-38.866***	-36.874***	-49.908***	-36.268***
		(-40.18)	(-30.82)	(-31.27)	(-41.29)	(-39.97)	(-28.14)
LNGDPC	?	-3.058***	-0.499***	-0.034	-3.929***	0.457***	-1.404***
		(-31.10)	(-4.50)	(-0.36)	(-34.50)	(7.50)	(-20.58)
Industry Dummies		Included	Included	Included	Included	Included	Included
Year Dummies		Included	Included	Included	Included	Included	Included
Country Dummies		Included	Included	Included	Included	Included	Included
Ν		119,076	135,809	94,840	159,212	106,785	143,297
Pseudo R-squares		0.420	0.492	0.482	0.478	0.394	0.468

Model		(1)	(2)	(3)	(4)	(5)	(6)
Legal Factors		DI	SREQ	_ CIF	AR	- St	JE 4
		Low	High	Low	High	Low	High
Dependent Variable=		DIV	DIV	DIV	DIV	DIV	DIV
Intercept	?	14.536***	-7.183***	-8.079***	0.064	2.153***	-0.225
		(18.27)	(-8.70)	(-12.33)	(0.51)	(23.19)	(-0.67)
TURN	-	-0.417***	-0.448***	-0.426***	-0.401***	-0.423***	0.961*
		(-5.20)	(-7.50)	(-5.06)	(-5.79)	(-8.81)	(1.77)
POLCON	?	-0.051	-0.633***	1.728***	-1.222***	-0.412***	-2.381***
		(-0.28)	(-4.58)	(10.11)	(-12.73)	(-8.08)	(-10.09)
TURN*POLCON	-	0.314***	-0.188**	0.277***	-0.334***	0.234***	-1.777***
		(2.96)	(-2.37)	(3.31)	(-3.89)	(3.83)	(-2.90)
SIZE	+	0.366***	0.343***	0.314***	0.328***	0.457***	0.389***
		(32.81)	(36.10)	(31.28)	(36.58)	(42.63)	(28.60)
ROA	+	7.719***	2.868***	7.822***	2.780***	5.355***	1.781***
		(37.18)	(19.82)	(36.09)	(19.99)	(41.97)	(13.50)
MB	-	-0.043***	-0.028***	-0.046***	-0.035***	-0.088***	-0.050***
		(-5.68)	(-6.94)	(-5.69)	(-7.12)	(-4.30)	(-9.11)
LEV	-	-1.223***	0.254***	-1.064***	0.448***	-1.227***	0.568***
		(-16.36)	(5.27)	(-16.96)	(10.04)	(-18.98)	(4.01)
VOLATILITY	?	-51.007***	-31.819***	-48.542***	-30.386***	-23.289***	-24.862***
		(-37.77)	(-39.91)	(-38.10)	(-37.40)	(-40.09)	(-24.98)
LNGDPC	?	-3.431***	-0.458***	-0.676***	-0.270***	-0.059***	0.028**
		(-30.30)	(-6.49)	(-25.41)	(-6.03)	(-9.46)	(2.02)
Industry Dummies		Included	Included	Included	Included	Included	Included
Year Dummies		Included	Included	Included	Included	Included	Included
Country Dummies		Included	Included	Included	Included	Included	Included
N		115,617	121,917	103,531	130,129	162,635	74,899
Pseudo K-squares		0.483	0.417	0.431	0.447	0.477	0.417

# Panel B: Accounting Information Variables

\*, \*\* and \*\*\* represent two-tailed significance at level of 10%, 5% and 1% respectively. N denotes the number of observations. See Appendix for variable definitions. Z-statistic are shown in parentheses for country weighted *PROBIT* regressions, calculated based on robust standard errors clustered at the firm level.

#### Table 10

			Z-statistic
5 1		Coefficient of	clustered at
Dependent Variable= DIV		TURN	the firm level
Strong POLCON and Strong CG countries			
Australia	14029	-1.217***	-3.09
Canada	6468	-0.804***	-2.81
France	6069	-3.214***	-7.79
Spain	879	-0.371	-1.16
Switzerland	2188	-1.974***	-3.22
USA	64090	-0.793***	-19.31
Weak POLCON and Weak CG countries			
Argentina	707	-1.091	-0.86
Columbia	150	-2.155	-1.08
Mexico	1125	-1.154	-1.01
Nigeria	299	-2.125	-1.36
Philippines	1318	-0.144	-0.39
Sri Lanka	806	-0.725	-1.58

Country level analysis on the relationship between liquidity and dividend for countries with strong POLCON and strong CG versus countries with weak POLCON and weak CG

Note: 1. Countries presented here only include those countries with available data for all legal protection and accounting quality measures; 2. low and high CG are determined based on the ranking of all legal protection and accounting quality measures used in our paper, i.e. CG is a factor score based on factor analysis of the six corporate governance measures, including *ANTISELF*, *REPUD*, *CORRUPT*, *DISREQ*, *CIFAR*, and *SUE*. Higher CG represents stronger corporate governance.