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Dividend policy and earnings management across countries

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ABSTRACT

This paper examines whether dividend policy is associated with earnings management and whether the relationship varies across countries with wide-ranging degrees of institutional strength and transparency. Based on a sample of 23,429 corporations from 29 countries, we show that dividend payers manage earnings less than dividend non-payers, and that this evidence is stronger in countries with weak investor protection and high opacity. Further, we find that dividend payers manage earnings less when they issue equity following dividend payments, and that this result is more pronounced in countries with weak institutions and low transparency. Overall, our evidence suggests that firms may employ dividend policies associated with less earnings manipulation to mitigate agency concerns and to establish credible reputation, thereby facilitating access to external funds.

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1. Introduction

Paying dividends limits private control benefits available to insiders as cash paid out provides fewer opportunities to consume these benefits (Pinkowitz et al., 2006). Prior studies, however, show that paying dividends does not prevent firms from committing accounting fraud,¹ thereby suggesting that dividend paying firms may not necessarily act in line with shareholder interests. The goal of this study is to examine whether there is any association between dividend paying status and earnings manipulation across firms from a broad spectrum of markets with wide-ranging degrees of investor protection and transparency. Such a pursuit is particularly relevant as extant studies report that non-U.S. firms may experience less pressure to maintain their dividend policies than their U.S. counterparts.²

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E-mail addresses: wen.he@uq.edu.au (W. He), lng@schulich.yorku.ca (L. Ng), nzaiats@suffolk.edu (N. Zaiats), bohui.zhang@unsw.edu.au (B. Zhang).¹ For example, in their sample of 330 fraud-accused firms spanning between 1982 and 2005, Caskey and Hanlon (2013) find that 72 alleged fraud firms paid out \$20 billion in dividends while simultaneously committing accounting fraud.² See, for example, Brav et al. (2005), Dewenter and Warther (1998), Chemmanur et al. (2010), Hail et al. (2014), Lintner (1956), Skinner and Soltes (2011).

Prior literature finds that earnings management is less prevalent when private control benefits are limited (e.g., Leuz et al., 2003; Gopalan and Jayaraman, 2012). Thus, firm managers who decide to pay dividends may have fewer private control benefits to consume and conceal and hence, could be less likely to fabricate accounting information. Furthermore, both theory and empirical evidence indicate that the U.S. firms are unwilling to cut dividends, and that they engage in dividend smoothing to maintain a constant stream of dividends (e.g., Lintner, 1956; Brav et al., 2005; Skinner and Soltes, 2011). However, non-U.S. firms appear to be less concerned about dividend cuts and thus alter their dividend policies more frequently (e.g., Dewenter and Warther, 1998; Chemmanur et al., 2010; Hail et al., 2014). Such evidence implies that the relationship between dividend paying status and earnings management may not persist or may be weaker in an international setting. Alternatively, it is plausible that the link between dividend policy and earnings management is stronger in a cross-country examination. This may be due to a large variation in country-level investor protection measures (e.g., Jensen, 1986; La Porta et al., 2000). Specifically, such differences may result in a potentially stronger need of foreign firms to convey their governance quality via alternative credible signals, compared to their U.S. counterparts.³ We therefore conjecture that dividend paying firms manipulate earnings less than their non-paying counterparts and that the strength of the relationship may vary with country-level investor protection and transparency.

Our analyses focus on the following three closely related issues. First, we examine the relationship between dividend policy and earnings management. We gauge a firm's earnings management by the magnitude of its abnormal accruals with a larger magnitude of abnormal accruals indicating more aggressive earnings management. We test the relationship on a large cross-section of 23,429 firms, whose dividend policies vary substantially across 29 countries, over a 21-year period from 1990 to 2010. Second, our analyses exploit the richness of our data by examining whether and how the relationship between dividend policy and earnings management differs across countries with varying degrees of investor protection and transparency. Third, our study attempts to provide further insights regarding the observed variation of the dividends-earnings management relationship with investor protection. We do so by examining the established link in the context of subsequent access to external financing.

We find that dividend payers have smaller abnormal accruals than dividend non-payers, suggesting that the former are less likely to engage in aggressive accruals management to conceal firm performance. These results are economically significant, even after controlling for firm-specific variables that have previously been shown to affect earnings management. For example, our model estimates indicate that the size of abnormal accruals for dividend payers is 7% smaller than that for non-payers. Our findings are also robust to subsamples of U.S. and non-U.S. firms; subsample periods of 1990s and 2000s; subsamples partitioned by firm size, dividend volatility, and cash flow volatility; subsamples focusing on dividend changes - initiations and omissions as well as increases and decreases; subsamples of dividend payers and non-payers with at least 10 or 20 years of data; and to the various alternative measures of payouts and of earnings management. We also conduct several additional robustness tests that focus on the samples matched by selected firm characteristics, propensity score matching, and fixed effects regressions. All results persist as we employ these alternative estimation approaches. Overall, we offer strong evidence that paying dividends is associated with and leads to lower earnings management.

We next examine whether the relationship between dividend policy and earnings management differs across countries with varying degrees of institutional strength. Based on a global sample of firms, La Porta et al. (2000) find evidence that dividend payouts are strongly associated with minority shareholder rights.⁴ Such evidence supports their hypothesis that dividend payments are "an outcome of an effective system of legal protection of shareholders." Alternatively, firms could pay dividends to mitigate adverse selection and moral hazard issues (e.g., Hail et al., 2014). If firms paying dividends are associated with less earnings manipulation to alleviate country-level agency issues, we expect the negative relationship between dividend paying status and earnings management to be more pronounced in firms from countries that are susceptible to greater agency conflicts. The results are consistent with the prediction that dividend paying status is associated with lower earnings management, especially in countries with weak institutions and low transparency.

Lastly, we attempt to further explain why the negative link between dividend policy and earnings management is more pronounced in countries with weak investor protection and high opacity. One plausible explanation is that dividend policy associated with low earnings manipulation conveys the management's intention to forgo private control benefits and to build reputation that will facilitate future access to capital markets (La Porta et al., 2000). This is particularly important for firms that want to maintain their ability to raise funds in capital markets, particularly in less financially developed ones. Our evidence supports the above conjecture. The results indicate that the negative link between dividend policy and earnings management is more pronounced in firms that implement equity issuances in one to three years subsequent to the time of dividend payments, notably in those from countries with lower legal protection and higher opacity.

Our study contributes to the finance and accounting literature in several directions. First, to the best of our knowledge, our research is the first to offer robust international evidence on the link between dividend policy and earnings management. Extant literature establishes that firms from countries with weak institutions have lower dividend payouts (La Porta et al., 2000) and that earnings management is more prevalent in developing than in developed economies (e.g., Leuz et al., 2003; Gopalan and Jayaraman, 2012; Lang et al., 2006). We contribute to this literature by providing evidence that dividend payers exhibit lower levels of earnings management across both developed and emerging markets, especially so in the latter economies.

³ See Fan and Wong (2005); Choi and Wong (2007); Pinkowitz et al. (2006); Francis et al. (2005), among others.

⁴ Bartram et al. (2012) extend La Porta et al.'s sample and reach the same conclusion.

Second, our paper offers significant insights into the role of dividends-earnings management link in the context of agency concerns. La Porta et al. (2000) suggest that effective legal systems empower minority shareholders to force insiders to disgorge cash, but provide no explanation for why a large proportion of firms, even in countries with low investor protection, still pay dividends. Our results offer a plausible explanation for why firms from countries with weak investor protection and low transparency pay dividends that are strongly associated with less earnings manipulation. These firms may commit to dividend payments thereby consuming and concealing fewer private control benefits in line with less aggressive earnings management. They may do so to demonstrate commitment to shareholder interests and establish reputation in the marketplace.

Finally, our work contributes to the growing literature on the effect of institutional factors on firm behavior in international markets. Leuz et al. (2003) find that weak investor protection allows insiders to consume more private control benefits and to manage earnings more aggressively. La Porta et al. (2000) and Faccio et al. (2001) report that firms pay less dividends if country governance does not effectively constrain insiders from expropriating minority shareholders. Our study adds to this literature by showing that firms operating in countries with weak legal regimes might optimally choose to employ dividends to underscore their intention to forgo private control benefits, via the negative link to earnings manipulation, and do so to facilitate access to external funds.

The rest of the paper is organized as follows. Section 2 discusses the motivation of our study and develops a number of testable hypotheses. Section 3 describes the data and explains the construction of various earnings management measures and control variables. Section 4 tests the relationship between dividend policy and earnings management. Section 5 examines whether the dividends-earnings management relationship varies across countries with different degrees of investor protection and transparency. This section also explores the relationship between dividend paying status and earnings management in the context of subsequent equity issuance. The final section concludes.

2. Motivation and hypotheses development

2.1. Dividend policy and earnings management

Information asymmetries between corporate insiders and outside investors give rise to agency concerns (Jensen and Meckling, 1976). Existing studies recognize that managers have incentives to keep excess cash, because this affords them the opportunity to misappropriate or waste corporate resources for personal benefits at the expense of outside investors.⁵ If profits are not paid out to shareholders, they may be diverted by insiders for personal use or directed into unprofitable investments (e.g., La Porta et al., 2000; DeAngelo et al., 2006; Denis and Osobov, 2008). Dividend non-paying firms may thus be prone to exploit corporate resources for personal interests.

In contrast, theory posits that in imperfect markets, firm managers use dividends as a means to resolve agency-based conflicts between insiders and the outside shareholders (Jensen, 1986). Dividends reduce the agency costs of free cash flow and minimize suboptimal managerial behavior (Easterbrook, 1984). Extant agency theories postulate that dividends may be important in an agency context in the following two manners. First, dividend policy may be the outcome of an efficient contracting under which minority shareholders force the company insiders to disgorge cash, thereby limiting any potentially suboptimal managerial behavior (e.g., La Porta et al., 2000; Shleifer and Wolfenzon, 2002; Pinkowitz et al., 2006). Second, dividends may be employed to convey a firm's commitment to act in the best interests of outside investors and thus attenuate the agency concerns (e.g., Rozeff, 1982; Easterbrook, 1984; Jensen, 1986; Lang and Litzenberger, 1989; Allen et al., 2000; La Porta et al., 2000; Myers, 2000). Thus, firms paying dividends limit private control benefits available to insiders, as cash paid out provides fewer opportunities for insiders to consume these benefits (Pinkowitz et al., 2006).

Notably, a strand of literature also documents that consumption of private control benefits by the company insiders is positively associated with earnings manipulation. Specifically, Leuz et al. (2003) argue that misrepresentation of accounting information could arise from the incentives of insiders and controlling shareholders to camouflage their private control benefits and document evidence that earnings management is less pervasive when these benefits are limited.⁶ Gopalan and Jayaraman (2012) compare earnings management practices of insider and non-insider controlled firms and conclude that earnings management is more prevalent in the former category of firms as consumption of private control benefits is higher in these firms. We therefore expect that dividend paying firms may choose to limit their private control benefits consumption and may subsequently have fewer incentives to conceal these benefits. Dividend payers may thus be less inclined to distort their true economic performance via earnings manipulation.

The discussions above give rise to our first hypothesis:

H 1. Dividend policy is negatively associated with earnings management.

⁵ See, for example, Jensen (1986), Stulz (1990), and La Porta et al. (2000).

⁶ Specifically, the authors show that insiders can use their discretion in financial reporting to overstate reported earnings to cover up a loss that might prompt outsiders to question and intervene. Alternatively, if earnings are unexpectedly high, insiders can divert more assets to themselves and report lower earnings by overstating expenses.

2.2. Dividends-earnings management link and institutional strength across countries

Prior literature suggests that non-U.S. firms alter their dividend policies more often than do their U.S. counterparts. For example, Dewenter and Warther (1998) show that Japanese firms are more inclined to omit or decrease dividends and that their dividends are more responsive to reported earnings. Chemmanur et al. (2010) compare dividend policies of U.S. versus Hong Kong firms and find that the latter employ more flexible dividend policies and engage less in dividend smoothing. Hail et al. (2014) report that in a sample of 38 countries from 1993 to 2008, the U.S. firms exhibit the lowest incidence of dividend decreases at 9.4%, relative to the sample average of 16.5%. It is therefore plausible that the relationship between dividend paying status and earnings management may not persist or may be weaker for non-U.S. firms.

Alternatively, it is plausible that the link between dividend policy and earnings management varies with country-level investor protection and transparency measures. Specifically, a growing strand of literature emphasizes that firms operating in countries with weak legal institutions attempt to employ alternative mechanisms to convey their commitment to shareholder interests and maintain credibility in the financial markets. For example, based on a sample of firms from eight East Asian economies, Fan and Wong (2005) demonstrate that firms with agency problems inherent in their ownership structures are more likely to hire a *BigN* auditor, and that this choice bears positive value implications. The authors further conclude that a *BigN* auditor undertakes a corporate governance role in emerging markets. Choi and Wong (2007) show that the appointment of a high quality auditor plays a more important governance role in firms from countries with weak legal institutions than in those from countries with strong legal protection. Pinkowitz et al. (2006) find that the relationship between dividends and firm value is stronger in countries with weak investor protection.

We thus predict that foreign firms may employ dividend policies with an intent to consume and conceal fewer private control benefits as demonstrated by a stronger negative link between dividend policy and earnings manipulation. Notably, Lang et al. (2006) and Gopalan and Jayaraman (2012) find that firms from countries with weak investor protection manage earnings more aggressively. In light of such evidence, it is interesting to evaluate whether dividends-earnings management relationship is amplified in environments that are more prone to manifest agency problems.

Combined, the existing findings documented above give rise to our second hypothesis:

H 2. The dividends-earnings management relationship is more pronounced in firms from countries with poor legal protection or low transparency.

To further understand why the link between dividend policy and earnings management is more pronounced in firms from countries with weak institutions and high opacity, we focus on a firm's access to capital markets for external funds. Specifically, we contend that if firms indeed employ dividend policies with a strong intent to consume fewer private control benefits as reflected in a decreased inclination to manipulate earnings, these firms may do so to establish reputation as they must be attempting to facilitate external financing (e.g., La Porta et al., 2000).

The increasing body of literature suggests that firms may employ alternative governance mechanisms to mitigate their agency concerns in order to subsequently gain access to external funds. For instance, Chang et al. (2009) find that firms hiring a *BigN* auditor are more likely to issue equity and to have larger equity issues. The authors further show that the difference between the firms employing *BigN* auditors versus those employing non-*BigN* auditors narrows when market conditions improve. In their 2006 study, the three authors show that firms with greater analyst coverage are more likely to issue equity and also do so more frequently than their counterparts with fewer analysts following. Fan and Wong (2005) demonstrate that firms with agency problems pertinent to their ownership structures are more likely to employ a *BigN* auditor, and that the relationship is more pronounced in firms that raise equity frequently. All these findings suggest that the role of alternative mechanisms to convey commitment to shareholder interests may strengthen in firms interested in accessing the external market, especially in those with fewer country-level means to do so.

The evidence in the preceding discussion leads to our third hypothesis:

H 3. The dividends-earnings management relationship is more pronounced in firms that subsequently issue equity, especially in those from countries with poor legal protection or low transparency.

3. Data and variable construction

3.1. Sample construction

This subsection briefly describes the construction of our sample and key variables. We obtain stock returns and financial data from Datastream and WorldScope. Our sample period spans from 1990 to 2010. To be included in the sample, we require that (i) a firm must have non-missing accounting data for calculating earnings management measures and control variables; and (ii) a country must have at least 50 firms with non-missing data in a given year. These requirements result in 174,340 firm-year observations for 23,429 non-financial firms across 29 countries. Specifically, our sample comprises 18 developed

(Australia, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Italy, Japan, the Netherlands, Norway, Singapore, Spain, Sweden, Switzerland, the U.K., and the U.S.) and 11 emerging markets (China, India, Indonesia, Malaysia, the Philippines, Poland, South Africa, South Korea, Taiwan, Thailand, and Turkey).

To capture dividend policy, our analysis employs an indicator variable that takes the value of one if the firm pays dividends, and zero if otherwise. This indicator allows us to exploit the distinct role of dividends between dividend payers and non-payers. We, however, verify the robustness of our findings to alternative continuous measures, such as dividend payout ratios and dividend-price ratios, and find consistent results.

Previous studies have shown that insiders and managers use accounting accruals opportunistically to distort the true economic performance and mislead outside investors in various occasions, including equity issuances (Teoh et al., 1998a,b), bond issuances (Caton et al., 2011), and stock option exercises (Bartov and Mohanram, 2004). As there exists no uniformly superior measure of earnings management, our analysis employs three key metrics that have been widely studied in the accounting and finance literature, the construction of which is described in detail in Appendix A. These measures are - (i) the absolute value of residuals from Jones' (1991) abnormal accruals model, $Accr(J)$; (ii) the standard deviation of residuals from Dechow and Dichev (2002) accruals model, $Accr(D)$; and (iii) the standard deviation of residuals from Francis et al. (2005) accruals model, $Accr(F)$. While each measure has its own strengths and weaknesses (Dechow et al., 2011), using three different measures will provide more robustness to our findings. In addition, in selected tests, we supplement these measures by exploiting subsamples of positive versus negative Jones' (1991) accruals, as well as employing probability of small profits and probability of small earnings per share increases, as alternative metrics of earnings management. We interpret that larger $Accr(J)$, as well as larger variation of $Accr(D)$ and $Accr(F)$, indicate more aggressive earnings management.

3.2. Univariate statistics

This subsection presents some basic statistics pertinent to our key variables. Table 1 shows the cross-country distribution for the starting year of the sample period, number of unique firms, number of firm-year observations, average proportion of firms that pay dividends,⁷ average dividend-price ratio, and average of each earnings management measure. The starting year reflects the data availability for computing earnings management measures for each country. Many of the developed countries have data available starting from 1990, whereas among the emerging markets, Malaysia has the longest data available from 1993. Correspondingly, the numbers of unique firms and firm-year observations are larger for the former than for the latter. The number of unique firms ranges from 91 in Turkey with 471 firm-year observations to 7989 unique firms in the U.S. with 60,969 firm-year observations. Japan, the U.K., and the U.S. contribute about 63% of the total number of observations, with the U.S. alone accounting for 35%. In our robustness tests, we exclude the U.S. or all these three countries from our analysis, and the results remain unaltered.

The proportion of dividend payers is between 36.5% (U.S.) and 88.6% (Japan), with a cross-country average of 59.6%. The small proportion of dividend payers in the U.S. may reflect the findings of Grullon and Michaely (2002) and Skinner (2008), who report the increasing use of stock repurchases by U.S. corporations as an alternative payout mechanism, especially in recent years. In other words, their results imply that U.S. firms are distributing less dividends to their shareholders.

To determine the time trend in dividend payers, we also report the proportions of dividend payers for two almost equal subperiods: 1990–1999 and 2000–2010. We find evidence of a significant 16.1% decline in the proportion of the U.S. firms that pay dividends, from 46.1% in the first subperiod to 30.0% in the second. The overall drop in the fraction of dividend payers across the two subperiods is 12.1%; the drop is more pronounced among developed markets (14.4%), compared with only 7.7% fall in emerging markets. Similarly, the average dividend-price ratio for developed markets is 1.5% while it is 2.4% for emerging economies, with a cross-country average of 1.6%, which ranges from 0.8% (U.S.) to 4.1% (Thailand). Interestingly, such results are consistent with those of Fama and French (2001), who focus on U.S. markets and subsequent studies such as Fatemi and Bildik (2012) who examine the world markets. Fama and French find that the percentage of dividend payers declines over time due to the increasing number of new listings of small firms with low profitability and strong growth opportunities. Fatemi and Bildik provide corroborating evidence from a sample of more than 17,000 companies from 33 different countries; they show a significant worldwide decline in the propensity to pay dividends due to the payout policies of smaller and less profitable firms with relatively more investment opportunities.

The cross-country averages of earnings management measures are 0.057, 0.045, and 0.042 for $Accr(J)$, $Accr(D)$, and $Accr(F)$, respectively. While Japan displays the lowest level of earnings management across all three metrics, Poland exhibits the highest based on $Accr(J)$ and Australia also shows the highest based on $Accr(D)$ and $Accr(F)$. While $Accr(J)$ average is lower for developed countries at 0.055 compared to 0.064 for emerging markets, $Accr(D)$ and $Accr(F)$ averages are somewhat higher for developed markets at 0.046 and 0.042 than for emerging markets at 0.043 and 0.038, respectively.

Table 2 presents the mean, median, and standard deviation of each earnings management measure for dividend payers and non-payers. It also reports p-values associated with the *t*-test for mean difference and the Wilcoxon test for median difference between the two groups of firms. Drawn from the extant literature, our subsequent multivariate analyses also control for variables that have shown to affect earnings management: firm size (*MV*); total assets (*TA*); free cash flow (*FCF*); book-to-market equity ratio (*BM*); leverage (*DE*); sales growth (*Sales_g*); firm age (*Age*); long-term tangible assets (*PPE*); profitability (*ROA*); an *IAS*

⁷ The average proportion of firms that pay dividends is computed based on firm-year observations in each country.

Table 1

Summary statistics by country. This table presents the starting year of each country's data availability (SYear), the mean values of firm-level variables for the number of unique firms (NFirms), the number of firm-year observations (NFirm-Yrs), the proportion of dividend-paying firm-years for the full sample period (Full) and for two subperiods (1990–1999 and 2000–2010), dividend-price ratio (*Div/P*), and three different earnings management measures following Jones (1991) *Accr(J)*, Dechow and Dichev (2002) *Accr(D)*, and Francis et al. (2005) *Accr(F)*. All variables are defined in Appendix B. The sample period is from 1990 to 2010.

Country	SYear	NFirms	NFirm-Yrs	Proportion of dividend payers			Earnings management measures				
				Full (Firm-Yrs)	'90-'99	'00-'10	<i>Div/P</i>	<i>Accr(J)</i>	<i>Accr(D)</i>	<i>Accr(F)</i>	
Developed markets											
Australia	1990	937	5199	0.568	0.848	0.504	0.027	0.072	0.064	0.061	
Belgium	2000	96	547	0.693		0.693	0.022	0.054	0.039	0.035	
Canada	1990	782	3366	0.504	0.701	0.445	0.021	0.057	0.052	0.048	
Denmark	1996	131	915	0.737	0.871	0.680	0.020	0.053	0.040	0.036	
Finland	1997	123	981	0.838	0.950	0.816	0.037	0.052	0.038	0.035	
France	1990	701	5940	0.710	0.794	0.662	0.019	0.055	0.034	0.032	
Germany	1990	620	5094	0.625	0.771	0.535	0.020	0.068	0.050	0.047	
Hong Kong	1995	861	6013	0.554	0.736	0.533	0.026	0.073	0.057	0.053	
Italy	1997	242	1607	0.685	0.745	0.678	0.019	0.053	0.035	0.034	
Japan	1990	2582	29,353	0.886	0.885	0.886	0.013	0.035	0.019	0.018	
Netherlands	2001	111	655	0.441		0.441	0.020	0.064	0.039	0.037	
Norway	1992	167	1435	0.779	0.851	0.725	0.028	0.055	0.037	0.035	
Singapore	1997	181	1234	0.814	0.913	0.799	0.032	0.061	0.042	0.039	
Spain	1994	144	1116	0.739	0.735	0.741	0.022	0.052	0.032	0.030	
Sweden	1996	236	1560	0.692	0.850	0.645	0.023	0.051	0.043	0.040	
Switzerland	1993	216	1966	0.735	0.803	0.709	0.017	0.047	0.032	0.030	
United Kingdom	1990	2107	15,968	0.723	0.899	0.602	0.026	0.062	0.048	0.044	
United States	1990	7989	60,969	0.365	0.461	0.300	0.008	0.060	0.058	0.050	
Emerging markets											
China	1997	337	1994	0.483	0.559	0.475	0.016	0.074	0.040	0.037	
India	2002	1224	4202	0.777		0.777	0.019	0.071	0.057	0.044	
Indonesia	1997	242	1753	0.480	0.581	0.467	0.021	0.069	0.046	0.042	
Malaysia	1993	708	5836	0.684	0.868	0.647	0.021	0.063	0.041	0.036	
Philippines	2001	111	655	0.441		0.441	0.020	0.064	0.039	0.037	
Poland	2004	124	480	0.490		0.490	0.017	0.076	0.044	0.042	
South Africa	1997	181	1234	0.814	0.913	0.799	0.032	0.061	0.042	0.039	
South Korea	1995	810	4417	0.696	0.730	0.691	0.021	0.059	0.038	0.035	
Taiwan	2001	611	3844	0.658		0.658	0.031	0.057	0.037	0.032	
Thailand	1997	334	2513	0.644	0.436	0.677	0.041	0.063	0.044	0.042	
Turkey	2003	91	471	0.552		0.552	0.030	0.075	0.052	0.046	
By market type											
Developed		18,656	146,941	0.584		0.675	0.531	0.015	0.055	0.046	0.042
Emerging		4773	27,399	0.660		0.730	0.653	0.024	0.064	0.043	0.038
Aggregate measures		23,429	174,340	0.596		0.678	0.557	0.016	0.057	0.045	0.042

dummy (*IAS*); a *BigN* dummy (*BigN*); closely-held ownership (*Chold*); and an *ADR* dummy (*ADR*). Means and medians of these control variables, as well as their differences between dividend payers and non-payers, are depicted in Table 2, with the details of their construction in Appendix B.

Based on the *t*- and *Wilcoxon* tests, all the variables are statistically and significantly different across dividend payers and non-payers at the 1% level, except for the mean difference in leverage at the 5% level. The univariate statistics show that all earnings management metrics are higher for dividend non-payers than for dividend payers, suggesting that the former engage in more aggressive earnings manipulation than the latter. The differences in the magnitude of these metrics provide preliminary univariate evidence that dividend policy relates negatively to earnings management in an international setting.

Dividend payers also tend to be larger, older, more profitable, exhibit lower sales growth, larger free cash flow, have higher long-term tangible assets, book-to-market equity ratios, and larger closely-held ownership, compared with their dividend non-paying counterparts. Furthermore, there are larger proportions of *IAS* adopters and of *ADR* issuers, while a smaller proportion of *BigN* adopters, among dividend payers than non-payers. These observations are broadly in line with evidence in the existing literature pertinent to dividend determinants.⁸

Table 3 reports Pearson cross-correlation coefficients of the variables employed in our study. All earnings management measures - *Accr(J)*, *Accr(D)*, and *Accr(F)*, are significantly correlated with *Div*, a dummy variable that takes a value of 1 if a firm pays dividends in year *t*, and 0 if otherwise. The correlation coefficients of earnings management variables with *Div* are consistent with our expectation that dividend paying firms exhibit lower levels of earnings manipulation. Dividend paying status, *Div*, is significantly positively correlated with firm size, total assets, free cash flow, book-to-market equity ratio, leverage, firm age,

⁸ For instance, Fama and French (2001), Grullon and Michaely (2002), La Porta et al. (2000), Denis and Osobov (2008), among others.

Table 2

Comparison between dividend payers and dividend non-payers. This table presents univariate tests of the difference of each firm-level variable between dividend payers and dividend non-payers across 29 countries. The variables are three different measurements of accruals - *Accr(J)*, *Accr(D)* and *Accr(F)*; market capitalization (*MV*); free cash flow (*FCF*); book-to-market equity ratio (*BM*); sales growth (*Sales_g*); firm age (*Age*); debt-equity ratio (*DE*); property, plant, and equipment (*PPE*); return on assets (*ROA*); international accounting standards (*IAS*); Big 4, 5, or 8 auditors (*BigN*); closely-held ownership (*Chold*); and American Depositary Receipts (*ADR*). All variables are defined in Appendix B. NObs is the number of firm-year observations. For each variable, the table shows the p-values associated with the *t*-test for the difference in mean values of the dividend payers and dividend non-payers and with the Wilcoxon test for the difference in median values. The sample period is from 1990 to 2010.

Variable	Dividend payers				Dividend non-payers				Tests for differences	
	NObs	Mean	Median	Std	NObs	Mean	Median	Std	Mean	Median
<i>Accr(J)</i>	103,931	0.049	0.034	0.050	70,409	0.075	0.051	0.073	<0.01	<0.01
<i>Accr(D)</i>	97,506	0.033	0.024	0.030	62,924	0.066	0.051	0.054	<0.01	<0.01
<i>Accr(F)</i>	97,210	0.030	0.023	0.027	62,464	0.061	0.047	0.050	<0.01	<0.01
<i>MV</i>	103,931	12.697	12.579	1.895	70,409	11.333	11.289	1.960	<0.01	<0.01
<i>FCF</i>	103,931	0.090	0.084	0.072	54,886	0.009	0.052	0.197	<0.01	<0.01
<i>BM</i>	103,931	0.830	0.631	0.767	54,886	0.748	0.521	1.127	<0.01	<0.01
<i>Sales_g</i>	103,931	0.103	0.076	0.293	70,409	0.231	0.084	0.849	<0.01	<0.01
<i>Age</i>	103,931	16.183	15.000	9.989	70,409	11.385	9.000	8.178	<0.01	<0.01
<i>DE</i>	103,931	0.761	0.445	1.360	70,409	0.738	0.263	2.284	0.02	<0.01
<i>PPE</i>	103,931	0.336	0.304	0.208	70,409	0.264	0.195	0.226	<0.01	<0.01
<i>ROA</i>	103,931	0.055	0.053	0.081	70,409	-0.063	0.016	0.255	<0.01	<0.01
<i>IAS</i>	103,931	0.102	0.000	0.303	70,409	0.089	0.000	0.285	<0.01	<0.01
<i>BigN</i>	103,931	0.599	1.000	0.490	70,409	0.636	1.000	0.481	<0.01	<0.01
<i>Chold</i>	103,931	0.399	0.400	0.241	70,409	0.377	0.350	0.246	<0.01	<0.01
<i>ADR</i>	103,931	0.025	0.000	0.155	70,409	0.013	0.000	0.113	<0.01	<0.01

long-term assets, profitability, *IAS* dummy, *ADR* issuance, and closely held ownership, while significantly negatively correlated with sales growth and *BigN* adopters. In general, the correlation coefficients between the variables in our sample are moderately low, suggesting no evidence of multicollinearity. One exception is the correlation coefficient of 0.87 between total assets (*TA*) and market value (*MV*). To capture firm size, we thus only include *MV* in regressions. However, the unreported regression results, which employ both *TA* and *MV* as control characteristics, remain unchanged.

4. Dividend policy and earnings management

4.1. Assessing the relationship

In this subsection, we examine the relationship between dividend policy and earnings management in a multivariate setting. Specifically, we conduct cross-sectional analyses by regressing a proxy for earnings management, *Accr(J)*, on a dividend

Table 3

Correlation matrix of firm-specific variables. The table reports the correlation matrix of *Div*, *Div/P*, *Div/E*, *Accr(J)*, *Accr(D)*, *Accr(F)*, market capitalization (*MV*), free cash flow (*FCF*), book-to-market equity ratio (*BM*), sales growth (*Sales_g*), firm age (*Age*), debt-equity ratio (*DE*), property, plant, and equipment (*PPE*), return on assets (*ROA*), international accounting standards (*IAS*), Big 4, 5, or 8 auditors (*BigN*), closely-held ownership (*Chold*), and American Depositary Receipts (*ADR*). The coefficients are all statistically significant at the 1% level. All variables are defined in Appendix B.

Variables	<i>Div</i>	<i>Div/P</i>	<i>Div/E</i>	<i>Accr(J)</i>	<i>Accr(D)</i>	<i>Accr(F)</i>	<i>MV</i>	<i>FCF</i>	<i>BM</i>	<i>DE</i>	<i>Sales_g</i>	<i>Age</i>	<i>PPE</i>	<i>ROA</i>	<i>IAS</i>	<i>BigN</i>	<i>Chold</i>
<i>Div/P</i>	0.52																
<i>Div/E</i>	0.31	0.29															
<i>Accr(J)</i>	-0.21	-0.10	-0.08														
<i>Accr(D)</i>	-0.37	-0.19	-0.13	0.47													
<i>Accr(F)</i>	-0.37	-0.19	-0.13	0.47	0.93												
<i>MV</i>	0.33	0.08	0.10	-0.24	-0.32	-0.31											
<i>FCF</i>	0.29	0.23	0.10	-0.20	-0.30	-0.31	0.31										
<i>BM</i>	0.05	0.14	0.02	-0.07	-0.10	-0.11	-0.26	0.03									
<i>DE</i>	0.01	-0.03	0.00	-0.04	-0.08	-0.08	0.04	0.01	0.08								
<i>Sales_g</i>	-0.11	-0.06	-0.05	0.08	0.09	0.09	0.02	-0.07	-0.08	-0.03							
<i>Age</i>	0.25	0.12	0.08	-0.15	-0.17	-0.17	0.26	0.10	0.04	0.06	-0.13						
<i>PPE</i>	0.16	0.15	0.08	-0.16	-0.26	-0.27	0.08	0.17	0.09	0.11	-0.06	0.09					
<i>ROA</i>	0.32	0.24	0.11	-0.22	-0.31	-0.33	0.29	0.85	0.06	0.04	-0.09	0.12	0.12				
<i>IAS</i>	0.02	0.07	0.03	0.03	0.03	0.04	0.05	0.01	-0.01	-0.01	0.03	0.00	-0.05	0.03			
<i>BigN</i>	-0.04	0.07	0.00	-0.04	-0.02	-0.02	0.25	0.11	-0.09	-0.07	0.01	0.04	0.03	0.07	0.05		
<i>Chold</i>	0.05	0.04	0.02	0.05	-0.01	-0.01	-0.25	0.02	0.09	0.02	-0.02	-0.21	0.02	0.05	0.07	-0.21	
<i>ADR</i>	0.04	0.02	0.01	-0.03	-0.05	-0.05	0.19	0.03	-0.03	0.01	0.00	0.05	0.05	0.02	0.04	0.05	-0.06

indicator, Div , while controlling for firm-specific variables, X_i ($i = 1, \dots, N$), that have previously been found to affect earnings management, inclusive of prior year's $Accr(J)$, as well as for country, industry, and year fixed effects,

$$Accr(J)_{t+1} = a + bDiv_t + \sum_i^N c_{it}X_{it} + \text{Fixed Effects} + \epsilon_{t+1}. \quad (1)$$

Eq. (1) forms our baseline regression throughout this study, where the key explanatory variable Div is a dummy variable that takes the value of 1 if the firm pays dividends in year t , and 0 if otherwise. We employ Jones' (1991) absolute value of residuals ($Accr(J)$) as a proxy for earnings management in Eq. (1), computed in year $t + 1$. $Accr(J)$ gauges the extent to which a firm manages its earnings with the larger accruals metric indicative of more aggressive earnings management. Therefore, if our hypothesis H 1 is true, then the b coefficient should be negative, implying that dividend payers are less inclined to manipulate their earnings.

Firm-level regression results of Eq. (1) and its variants are presented in Table 4. All these regression models incorporate a multitude of firm-level control variables, including the lagged $Accr(J)$; firm size (MV); free cash flow (FCF); book-to-market equity ratio (BM); sales growth ($Sales_g$); firm age (Age); leverage (DE); long-term tangible assets (PPE); profitability (ROA); a dummy variable that takes the value of 1 if the firm prepares its financial statements in accordance with International Accounting Standards (IAS); a dummy indicator that takes the value of 1 if the firm employs a BigN auditor ($BigN$); a dummy variable that equals 1 if the firm has issued American Depository Receipts (ADR); and closely-held ownership ($Chold$).⁹ Throughout the study, all multivariate regressions also include country, industry, and year fixed effects (as applicable), and all associated p-values are computed based on standard errors adjusted for heteroskedasticity and firm-level clustering. Also, all accruals measures have been multiplied by 100 and deflated by total assets, and are thus reflected as a percentage of total assets.

Models M1–M3 focus on the entire sample of firms from 29 countries. Model M1 shows the relationship between earnings management and Div alone, while model M2 presents the relationship with the lagged $Accr(J)$ alone. Model M3 expands model M1 by adding controls for the various firm characteristics. We control for the lagged $Accr(J)$, separately in model M2, and together with Div and the other controls in model M3, to assure that the link between Div and $Accr(J)$ is not driven by an omitted time-invariant determinant of earnings management. Models M4 and M5 examine the potential differential effects of the relationship between dividend policy and earnings management for the U.S. versus non-U.S. firms. Models M6 and M7 separate out the possible differences in the relationship during the 1990s versus the 2000s.

Consistent with our expectations, the results highlight a negative, statistically significant relationship between dividend policy, as measured by dividend paying status, and earnings management across all models. For instance, the coefficient of Div in model M4 is -0.487 and highly significant at the 1% level, reflecting close to 0.5% decrease in abnormal accruals for firms paying dividends. Based on the $Accr(J)$ mean for dividend non-payers of 0.075, this coefficient is also economically significant as it implies that accruals are about 7% smaller for dividend payers, compared to those of non-payers. It is also noteworthy that the adjusted R-squared increases from 7.2% in model M1, where Div is the only explanatory variable, to 17.3% in model M3, which also accounts for all the firm characteristics. The adjusted R-squared of 13.1% in model M2, where $Accr(J)_L$ is the only regressor, underscores that the lagged $Accr(J)$ contributes substantially to such an increase.

While both negative and highly significant, the estimate of Div in model M3 is lower than its counterpart in M5, suggesting that paying dividends in non-U.S. firms decreases earnings management to a larger degree than it does in the U.S. firms. In two unreported tests, we further find that the difference between the coefficients of Div in these two models, and that the interaction term of dividend policy and non-U.S. firms when focusing on the full sample of firms, are both strongly significant. Such findings imply that earnings management is more sensitive to dividend policy in non-U.S. firms than in the U.S. firms. This result also verifies that our key finding is not driven by the large proportion of the U.S. firms in the sample. The magnitudes of the coefficients of Div in models M6 and M7 (-0.621 and -0.427 , respectively) suggest that dividend payers exhibit lower earnings management during the 1990s than during 2000s. Both estimates are strongly significant at conventional levels, confirming that our key finding is insensitive to the subsample periods.

The results on the control characteristics are broadly consistent with those of other studies.¹⁰ Specifically, larger, older, more profitable firms, firms with higher book-to-market equity ratios, leverage, and higher long-term tangible assets, and those hiring a BigN auditor are likely to exhibit lower earnings management. In contrast, firms with higher sales growth, with larger proportion of closely-held shares, and those that issued ADRs are more prone to be associated with stronger earnings manipulation. The signs of estimates of IAS and of FCF are mixed or insignificant.

In summary, we have established a strong negatively significant association between dividend paying status and earnings management, while controlling for factors that have shown to be related to earnings management as well as for country, year, and industry fixed effects. The negative association is also robust across the various subsamples. Such a relationship is consistent with our conjecture that firms may employ dividend policies as they have a desire to consume and conceal fewer private control benefits, thereby exhibiting fewer incentives to manipulate their earnings. The results therefore render support for the

⁹ For example, see Becker et al. (1998), Lang et al. (2006), Francis and Wong (2008), Barth et al. (2008), among others.

¹⁰ See, for example, Becker et al. (1998), Lang et al. (2006), Francis and Wong (2008), Barth et al. (2008).

Table 4

The relationship between dividend policy and earnings management. This table presents firm-level OLS regressions, where the dependent variable is the earnings management measure following Jones (1991), $Accr(J)$ in year $t + 1$, and the key explanatory variable is the dummy variable Div measured in year t , as are the remainder of explanatory variables. The control variables include the lag of dependent variable ($Accr(J)_L$); firm size (MV); free cash flow (FCF); book-to-market equity ratio (BM); sales growth ($Sales_g$); firm age (Age); leverage (DE); long-term tangible assets (PPE); profitability (ROA); the IAS dummy (IAS); a BigN dummy ($BigN$); an ADR dummy (ADR); and closely-held ownership ($Chold$). All variables are defined in Appendix B. Models M1–M3 employ the entire sample of 29 countries; models M4–M5 focus on the U.S. and non-U.S. subsamples; and models M6–M7 examine the subsamples of the 1990s versus the 2000s. All regressions include country, industry, and year fixed effects, and all associated p-values reported below parameter estimates are computed based on standard errors adjusted for heteroskedasticity and firm-level clustering. NObs is the number of observations, and \bar{R}^2 is the adjusted R-squared. The sample period is between 1990 and 2010.

	Full sample			U.S.	Non-U.S.	1990–1999	2000–2010
	M1	M2	M3	M4	M5	M6	M7
<i>Div</i>	−1.928 (0.00)		−0.487 (0.00)	−0.437 (0.00)	−0.572 (0.00)	−0.621 (0.00)	−0.427 (0.00)
<i>Accr(J)_L</i>		0.286 (0.00)	0.224 (0.00)	0.226 (0.00)	0.217 (0.00)	0.204 (0.00)	0.230 (0.00)
<i>MV</i>			−0.375 (0.00)	−0.413 (0.00)	−0.293 (0.00)	−0.302 (0.00)	−0.388 (0.00)
<i>FCF</i>			−0.009 (0.98)	−0.082 (0.85)	0.266 (0.57)	2.221 (0.00)	−0.743 (0.05)
<i>BM</i>			−0.376 (0.00)	−0.389 (0.00)	−0.348 (0.00)	−0.253 (0.00)	−0.431 (0.00)
<i>Sales_g</i>			0.038 (0.31)	0.166 (0.01)	−0.062 (0.18)	0.057 (0.51)	−0.006 (0.89)
<i>Age</i>			−0.009 (0.00)	−0.007 (0.03)	−0.014 (0.00)	−0.019 (0.00)	−0.006 (0.01)
<i>DE</i>			−0.017 (0.07)	−0.026 (0.12)	−0.003 (0.80)	0.002 (0.89)	−0.024 (0.08)
<i>PPE</i>			−2.620 (0.00)	−2.511 (0.00)	−2.698 (0.00)	−3.323 (0.00)	−2.276 (0.00)
<i>ROA</i>			−3.044 (0.00)	−2.861 (0.00)	−3.430 (0.00)	−4.681 (0.00)	−2.705 (0.00)
<i>IAS</i>			−0.001 (0.99)	3.332 (0.00)	−0.274 (0.00)	−0.001 (1.00)	−0.169 (0.04)
<i>BigN</i>			−0.298 (0.00)	−0.909 (0.00)	−0.176 (0.00)	−0.292 (0.00)	−0.401 (0.00)
<i>ADR</i>			0.357 (0.00)		0.080 (0.51)	0.277 (0.12)	0.379 (0.01)
<i>Chold</i>			0.146 (0.09)	−0.101 (0.48)	0.277 (0.01)	0.094 (0.50)	0.264 (0.01)
\bar{R}^2	7.20%	13.1%	17.3%	18.0%	17.1%	16.6%	17.7%
NObs	143,390	143,390	143,390	50,184	93,206	50,042	93,348
Country FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

dividends-earnings management relationship across a wide range of firms from 29 developed and emerging markets that differ vastly in the degrees of strength of legal institutions and investor protection.

4.2. Robustness tests

We recognize that dividend policy may be endogenously determined as firms self-select based on the various characteristics such as earned/contributed capital mix, agency conflicts, profitability, or investment opportunities, among others (e.g., DeAngelo et al., 2004; DeAngelo et al., 2006; Denis and Osobov, 2008; Chay and Suh, 2009). In our baseline regressions in Table 4, we attempt to mitigate the endogeneity concerns by regressing the earnings management measures on the lagged dividend policy, while also controlling for the lagged earnings management and earnings variables, and obtain robust results. Importantly, however, it is also plausible that dividend payments are an outcome of the past earnings which in turn may be related to accruals metrics, and we do not aim to rule out such reverse causality possibilities.

To further address the endogeneity concerns, we employ six different tests and present the results in Table 5. We employ $Accr(D)$ as the dependent variable in model M1, $Accr(J)$ in all other models, except models M20–M24, where we use the remaining alternative earnings management proxies, as elaborated below. In unreported models, we also employ all three earnings management measures - $Accr(J)$, $Accr(D)$, and $Accr(F)$ for all tests, as applicable, and obtain consistent results.

First, we replicate the baseline regression (1), shown in model M3 of Table 4, while controlling for firm fixed effects. Such an approach allows us to verify whether our findings are driven by unobserved time-invariant attributes that cause firms to self-select into dividend payers. The result in model M1 underscores a negative Div coefficient that is significant at the 1%

level, suggesting that the relationship between dividend paying status and earnings management persists and is insensitive to controlling for firm fixed effects.

Second, we investigate whether dividend paying status indeed represents the link between dividend payments and earnings management rather than captures other effects on earnings manipulation. For example, one could argue that dividend payers are normally large firms, exhibit strong dividend stability, and low cash flow volatility. A plausible expectation thus arises that firms with the above characteristics are associated with lower accruals-based earnings manipulation. It is thus also possible that the role of dividend paying status in earnings manipulation is subsumed once the effects of these characteristics are examined in greater detail. Although we carefully control for earnings management determinants in all regressions, certain non-linearities may affect the reported relationships.

To address this concern, we partition dividend payers as well as dividend non-payers into large and small by the median firm size (*MV*), dividend payers into those with high and low dividend volatility as well as payers and non-payers into those with high and low cash flow volatility by their respective medians for each country and year. We calculate dividend and cash flow volatilities as standard deviations of dividends or of free cash flows, respectively, in the previous eight years and require a minimum of five years of data. We replicate the baseline regression (1), while estimate the tests separately for each partition. To conserve space, we report the results of the estimations which include the differential effects of *Div* with *LargeSize*, *HighDiv Vol*, or with *HighCF Vol* in models M2–M4, respectively. The coefficients of *Div* are negative and strongly significant, and those of the differential effects indicate that small dividend payers or those with high cash flow volatility exhibit less earnings manipulation than do their counterparts of larger size or with lower cash flow volatility. The differential effect pertinent to dividend volatility is insignificant. Also, the results of unreported models which separately focus on large and small firms, those with high and low dividend and cash flow volatilities underscore negatively significant coefficients of *Div* at the 1% level across all models. Combined, the above results offer a strong evidence that the effect of dividend paying status on earnings management is distinct and persists when conditioned on measures which could be closely associated with dividend paying status.

Third, we examine the effects of various changes in dividend policy on earnings management. In models M5 and M6, we assess the effects of dividend initiation and omission, respectively, on a change in earnings manipulation. We designate *Initiation* in model M5, a dummy variable that takes the value of 1 if the firm does not pay dividends in year $t - 1$, while initiates dividend payments in year t , and continues to pay dividends in year $t + 1$. In model M6, we incorporate *Omission* - a dummy indicator that takes the value of 1 if the firm distributes dividends in year $t - 1$, but eliminates dividends in year t , and continues to not pay dividends in year $t + 1$. We estimate a panel OLS regression that is similar to that of Table 4, except that the dependent variable now represents the change in earnings management metrics from year t to year $t + 1$, and the key explanatory variables are *Initiation* (M5) or *Omission* (M6). The control variables incorporate changes in the firm characteristics, calculated in the same manner as is the change in the dependent variable. Our sample contains 3284 firm-year observations associated with dividend initiations and 2770 firm-year observations pertinent to dividend omissions. To be included in the sample, we require that firms have a total of eight years of non-missing information centered on dividend initiation/omission event (i.e., from year $t - 4$ to year $t + 4$).

If dividend paying status is predictive of lower earnings management, we expect a negative (positive) change in earnings management following a dividend initiation (omission). The result in model M5 is consistent with our prediction. The estimate of *Initiation* coefficient is negative and statistically significant. Model M6, however, underscores statistically insignificant coefficient of *Omission*. It is thus evident that employing a dividend policy results in lower earnings management, whereas there is no evidence to suggest that dividend omissions lead to more aggressive earnings management. Such finding is in line with prior literature that establishes that the role of dividend cuts in firm performance is ambiguous. For instance, Grullon et al. (2005) document that dividend cuts do not relate to future firm performance. Instead, Benartzi et al. (1997), Grullon et al. (2002), and Healy and Palepu (1988) report increased earnings subsequent to a dividend cut, while DeAngelo et al. (1992) find that firms cut dividends after a period of underperformance.

We are further interested to examine whether the dividend decreases and increases relate to or exhibit varied impacts on earnings manipulation. In model M7, we construct an indicator variable, *Decrease*, which takes the value of 1 if a firm decreases its dividend payments from year $t - 1$ to year t , and 0 if otherwise. In model M8, we incorporate *Increase* - a dummy variable that takes the value of 1 if a firm increases its dividend payments from year $t - 1$ to year t , and 0 if otherwise. We estimate a panel OLS regression that is similar to that of Table 4, while also includes the interaction terms of *Decrease* and *Increase* with *Div* in models M7 and M8, respectively. The results underscore negative significant coefficients of *Div* in both models M7 and M8 while those of the differential effects are insignificant. Such findings indicate that the effect of dividend policy on earnings manipulation persists and is insensitive to dividend decreases or increases. Such results corroborate those of Skinner and Soltes (2011). The authors find that the relationship between dividends and earnings persistence is unrelated to the magnitude of dividends thereby underscoring the effect of the dividend paying status rather than of the dividend payment amount.

We next focus on the subsamples of dividend payers and non-payers which persist in their respective dividend paying status for at least 10 years in model M9, and for at least 20 years in model M10. In all other tests throughout the study, we assure that the survivorship bias is minimized and thus do not restrict our samples based on time periods or availability of measures. We, however, recognize that firms may change from dividend payers to dividend non-payers and vice versa. We are thus interested to assess whether the relationship between dividend paying status and earnings management persists in subsamples that restrict firms to a dividend paying status for a certain period of time. We estimate regressions similar to those

of Table 4, while focus on the subsamples with at least 10 years of data in a dividend paying status in model M9, and with at least 20 years of data in a dividend paying status in model M10. We obtain 73,053 and 4980 firm-year observations in models M9 and M10, respectively. Our results of the negative significant coefficients of *Div* remain unaltered in both models M9 and M10. Our key finding of the negative link between dividend paying status and earnings management is thus insensitive to firms changing between dividend payers and non-payers.

Fourth, we undertake the propensity score matching approach to mitigate the concern that the observable firm characteristics associated with the dividend paying status cause differences in the relationship between dividend paying status and earnings management. In the first stage, we model the likelihood of dividend paying status for each country-year, to obtain propensity scores; the logistic regression includes *MV*, *FCF*, *Sales_g*, *ROA*, and industry fixed effects. We next employ the propensity score-matched sample to estimate the OLS regression of the effect of dividend paying status on earnings manipulation, and report the results in model M11. The finding is consistent with our expectation that divided payers exhibit less earnings management than do their dividend non-paying counterparts. To complement this finding, we also match dividend payers with non-payers based on country, industry, and year fixed effects as well as on one of the following firm characteristics - *MV*, *FCF*, *Sales_g*, *Age*, or *ROA*,¹¹ and report the regression results in models M12–M16, respectively. The coefficients of *Div* are negative and strongly significant at the 1% level across all models, thus reinforcing the negative link between dividend paying status and earnings manipulation.

Fifth, we employ alternative measures of dividend policy to verify whether the relationship between dividend paying status and earnings management persists. Models M17 and M18 employ the dividend-price ratio (*Div/P*) and dividend payout ratio (*Div/E*), respectively. With the increased popularity of repurchases as a means to distribute cash flows to outside investors (e.g., Grullon et al., 2002; Skinner, 2008), we also exploit share repurchases (*Repur*) as an alternative proxy for payout to shareholders and report the results in model M19. The results in models M17–M19 further indicate that employing dividend-price ratio, dividend payout ratio, and share repurchases as alternative dividend policy/payout constructs, renders no effect on our key finding of a negative relationship between the dividend paying status and earnings management. In an unreported test, we exclude firms with negative dividend payout ratios and obtain qualitatively similar results.

Finally, we re-examine the relationship between dividend policy and earnings management while exploiting the alternative metrics of earnings manipulation. It is plausible that managers may prefer either earnings-increasing or earnings-decreasing manipulation. To disentangle the potential differential effects of these two types of earnings management behavior, we partition the sample by the sign of Jones' (1991) abnormal accruals. Model M20 focuses on the subsample of income-increasing/positive accruals (*PAccr*), while model M21 examines the partition of income-decreasing/negative accruals (*NAccr*). Model M22 focuses on *Accr(F)*, while models M23 and M24 exploit the probabilities of small profits - *Prob(S)*, and of small earnings per share increases - *Prob(SEPS)*, respectively. The latter two measures focus on management's incentives to manipulate earnings to beat target earnings (e.g., Leuz et al., 2003; Dechow et al., 2011). Specifically, Burgstahler and Dichev (1997) argue that managers have strong incentives to avoid reporting a loss or a decrease in earnings. Further, studies document that reporting a small profit to avoid losses is associated with earnings management using discretionary loss reserves in insurance companies (e.g., Beaver et al., 2003) or deferred tax expenses (e.g., Philips et al., 2003).

The results in models M20–M24 provide further support to our key findings. While the dividend-earnings management relationship is stronger for negative than for positive accruals, models M20 and M21 indicate that dividend payers are less likely to manage earnings, either upward or downward. Using three alternative measures of earnings management as dependent variables in models M22–M24 also provides qualitatively similar results.

Overall, the multitude of tests documented above yield robust evidence that dividend payments are negatively associated with and lead to an decrease in earnings management.

5. Dividend policy, earnings management, and country-level agency concerns

5.1. Dividends-earnings management relationship, investor protection, and transparency

Thus far, we have established corroborating evidence that dividends relate to earnings management across a broad spectrum of developed and emerging markets. We now proceed to ascertain whether the above relationship persists when the sample is partitioned by the degree of country-level investor protection and transparency measures, and whether and how it varies in these measures. If firms pay dividends to consume and conceal fewer private control benefits, and thus exhibit fewer incentives to manage earnings, we expect the negative relationship between dividend paying status and earnings management to be more pronounced in firms from countries with weak institutions and low transparency. These firms may be attempting to mitigate country-level agency concerns to establish reputation or credibility in the market. Employing a large sample of firms from 29 developed and developing economies with a wide variation of legal protection measures and of differing degrees of transparency offers an opportune setting to determine such plausible effects.

Our study employs four legal protection metrics and three transparency measures. The former are (i) a firm's legal origin (*Legal Origin*), (ii) the rule of law (*Rule of Law*), (iii) law and order (*Law & Order*), and (iv) the government effectiveness

¹¹ We restrict firms to those with positive return on assets.

(*Gov Effectiveness*), and the latter include (i) financial reporting extensiveness (*Report Extensiveness*), (ii) financial reporting quality (*Interim Report Quality*), and (iii) the governance transparency (*Gov Transparency*). We follow La Porta et al. (2000) to employ *Legal Origin* as a proxy for agency costs at the country level. We include *Rule of Law* to measure the extent to which a country enforces its law and order protecting minority shareholders from La Porta et al. (1998). *Law & Order* comprises “law” sub-component which assesses the strength and impartiality of the legal system, and the “order” sub-component which assesses popular observance of the law from International Country Risk Guide (ICRG). *Gov Effectiveness* reflects perceptions of the quality of public and of civil services, their independence from political pressures, the quality of and government’s commitment to policies formation and implementation from Kaufmann et al. (2009). *Report Extensiveness* captures the extensiveness of financial reporting by examining the inclusion or omission of 90 accounting items in annual financial statements in 1995 from the Center for Financial Analysis and Research (CIFAR). *Interim Report Quality* measures the frequency and breadth of interim financial disclosure from CIFAR. *Gov Transparency* represents the intensity of governance disclosures used by outside investors to hold officers and directors accountable from Bushman et al. (2004). The higher these seven metrics are, the stronger is a country’s investor protection and transparency.

To implement the tests, we replicate our baseline regression (1), while partitioning the sample into two groups by the median or by a dummy indicator to reflect the strength of each metric - *Strong* and *Weak*. For example, in the case of *Legal Origin*, our sample of firms is divided into those from common versus civil law countries, with common law classified as *Strong* and civil law as *Weak* investor protection. Table 6 reports the results, and to conserve space, it only highlights the coefficients of *Div* and the associated p-values for the two groups of firms, together with the *t*-test for the difference in the *Div* coefficients between the two groups. This approach allows us to evaluate whether the relationship between dividend paying status and earnings management varies for firms operating in countries with strong versus those operating in weak investor protection or low transparency environments. Panel A reports the results for all countries, while Panel B highlights the results without the U.S. in the sample.

The results are strongly consistent with our prediction. The coefficients of *Div* are negative and highly significant at the 1% level across all measures of investor protection and transparency in both Panels A and B. Importantly, the absolute values of the *Div* coefficient are much higher for the *Weak* than for the *Strong* category, and the differences in the estimates for these two groups are highly significant at the 1% or 5% level across most proxies of investor protection and transparency, with the exception of *Gov Transparency*¹² in both Panels A and B, and *Legal Origin*, *Rule of Law*, and *Report Extensiveness* in Panel B. The results suggest that dividend payers from countries with the least investor protection or the lowest transparency display significantly lower earnings management than do their counterparts from countries with the most investor protection or the highest transparency. It is plausible that firms from countries with weak investor protection or low transparency may employ dividend policies associated with lower earnings manipulation to convey their commitment to shareholder interests.

5.2. Dividends-earnings management relationship and equity issuance

To further verify whether the relationship between dividend policy and earnings management serves to mitigate country-level agency concerns, we investigate the above link in the context of subsequent access to external financing. We postulate that if the dividend policy is employed as a means to build reputation in the capital markets, we should observe dividend payers to exhibit lower earnings management especially if they plan to subsequently issue equity. Also, we ought to find such evidence to be more pronounced in firms from countries with weak institutions or low transparency. This is because firms in these countries may have fewer alternative country-level means to display their commitment to act in the interests of their investors.

To perform the tests, we replicate the baseline regression (1), shown in model M3 of Table 4, while controlling for *Issue*, a dummy indicator that takes the value of 1 if the firm issues equity in years $t + 1$ to $t + 3$ subsequent to dividend payments, as well as its interactions with *Div*, and with each of the control characteristics. We report the results in Table 7 across five different models as we employ the alternative metrics of earnings management. Specifically, models M1–M5 focus on *Accr(J)*, *Accr(D)*, *Accr(F)*, *Prob(S)*, and *Prob(SEPS)*, respectively. Panel A reports the results for all countries, while Panel B presents the results without the U.S. in the sample. To conserve space, we highlight the coefficients of *Div*, *Issue* dummy, and their interaction *Div*Issue*, along with the associated p-values.

The results in Table 7 are fully supportive of our conjecture. The coefficients of dividend paying status are negative and significant across all models in both Panels A and B, with the exception of model M4 in Panel B, reinforcing the earlier findings that dividend payers are less likely to display aggressive earnings management. The coefficients of interaction terms (i.e., *Div*Issue*) are also negative and strongly significant in all models, with the exception of model M5 in Panel B. Therefore, dividend paying firms that issue equity following dividend payments, exhibit lower earnings management than their non-issuing counterparts.

We further assess how the dividends-earnings management relationship varies with subsequent equity issuance and with differing degrees of investor protection and transparency. We employ the investor protection and transparency metrics as those in Table 6 - *Legal Origin*, *Rule of Law*, *Law & Order*, *Gov Effectiveness*, *Report Extensiveness*, *Interim Report Quality*, and *Gov*

¹² Please note that the U.S. is classified as *Weak* for *Gov Transparency* measure.

Table 6

Dividends-earnings management relation, investor protection, and transparency. This table presents firm-level OLS regressions focusing on country-level investor protection and transparency measures based on the following empirical model,

$$Accr(J)_{it+1} = a + bDiv_t + \sum_i^N c_{it}X_{it} + \text{Fixed Effects} + \epsilon_{t+1}.$$

The dependent variable is the earnings management measure following Jones (1991), $Accr(J)$, and the key explanatory variable is the dummy variable Div . The control characteristics are the same as those in Table 4, and all variables are defined in Appendix B. The table presents only the coefficients of Div , i.e., the estimates of b from the model above, for seven investor protection and transparency measures (i.e., legal origin, rule of law, law & order, government effectiveness, report extensiveness, interim report quality, and governance transparency), partitioned by the strength of each measure into *Strong* and *Weak*. For each variable, the table also reports the t -test of difference in mean values between *Strong* and *Weak* categories, and the respective p-values. Panel A reports results based on all countries, whereas Panel B presents those employing all countries except the U.S. All regressions include industry and year fixed effects, and all associated p-values reported below parameter estimates are computed based on standard errors adjusted for heteroskedasticity and firm-level clustering. The sample period is between 1990 and 2010.

Country Institution	Strong	Weak	Difference (Weak – Strong)
<i>Panel A: all countries</i>			
Legal origin	–0.489 (<0.01)	–0.563 (<0.01)	–0.074 (0.03)
Rule of law	–0.422 (<0.01)	–0.628 (<0.01)	–0.206 (<0.01)
Law & order	–0.493 (<0.01)	–0.627 (<0.01)	–0.134 (<0.01)
Gov effectiveness	–0.452 (<0.01)	–0.679 (<0.01)	–0.227 (<0.01)
Report extensiveness	–0.466 (<0.01)	–0.596 (<0.01)	–0.130 (<0.01)
Interim report quality	–0.428 (<0.01)	–0.683 (<0.01)	–0.256 (<0.01)
Gov transparency	–0.558 (<0.01)	–0.469 (<0.01)	0.090 (0.15)
<i>Panel B: all countries excluding the U.S.</i>			
Legal origin	–0.598 (<0.01)	–0.563 (<0.01)	0.035 (0.63)
Rule of law	–0.565 (<0.01)	–0.627 (<0.01)	–0.063 (0.40)
Law & order	–0.467 (<0.01)	–0.752 (<0.01)	–0.285 (0.04)
Gov effectiveness	–0.485 (<0.01)	–0.679 (<0.01)	–0.194 (0.02)
Report extensiveness	–0.512 (<0.01)	–0.618 (<0.01)	–0.105 (0.21)
Interim report quality	–0.474 (<0.01)	–0.683 (<0.01)	–0.209 (0.08)
Gov transparency	–0.555 (<0.01)	–0.601 (<0.01)	–0.046 (0.85)

Transparency. We perform the regression analyses as those in Table 7, but the sample is partitioned into two groups by the median or by the dummy indicator to convey the strength of each investor protection or transparency metric - *Strong* and *Weak*.

Table 8 reports the results and emphasizes the coefficients of Div , $Issue$, and of their interaction $Div*Issue$, and the associated p-values. Results are fully consistent with our expectations. The coefficients of Div are negative and strongly significant across all investor protection and transparency metrics. The coefficients of differential effects, $Div*Issue$, are lower for firms in *Weak* category than for those in *Strong* category across all country-level agency-related variables, except for *Legal Origin* in both Panels A and B, and *Gov Transparency* in Panel B. Interestingly, the coefficients of the differential effects are significant across all investor protection and transparency measures, except *Legal Origin* in both Panels A and B, only in *Weak*, while are insignificant in most *Strong* partitions. Such results underscore that dividend payers that subsequently issue equity, exhibit lower levels of earnings management than their non-issuing counterparts only in firms from countries with weak investor protection and high opacity, while not in those from countries with strong legal institutions and high transparency.

Taken together, the evidence in Tables 7 and 8 suggests that the dividends-earnings management link is stronger in firms that plan to issue equity following dividend payments, especially in those with stronger country-level agency concerns. Such evidence renders a valuable support to our conjecture that the role of dividends associated with a strong commitment to shareholder interests as manifested by lower levels of earnings manipulation is particularly underscored when firms wish to establish their credibility in the capital markets.

Table 7

Dividends-earnings management relation and subsequent share issuance. This table tests the link between dividend policy and earnings management in the context of subsequent equity issuance. The dependent variables are $Accr(I)$, $Accr(D)$, $Accr(F)$, the probability of the small profit ($Prob(S)$), and probability of the small increases in EPS ($Prob(SEPS)$), measured in year $t + 1$ in models M1–M5, respectively. The key independent variables are a dividend dummy, Div ; a subsequent equity issuance dummy, $Issue$; and their interaction, $Div \times Issue$. The unreported control characteristics are the same as those in Table 4, and all variables are defined in Appendix B. Panel A reports results based on all countries, whereas Panel B presents those using all countries except the U.S. All regressions also include country, industry, and year fixed effects, and all associated p-values reported below parameter estimates are computed based on standard errors adjusted for heteroskedasticity and firm-level clustering. The sample period is between 1990 and 2010.

	$Accr(I)$	$Accr(D)$	$Accr(F)$	$Prob(S)$	$Prob(SEPS)$
	M1	M2	M3	M4	M5
<i>Panel A: all countries</i>					
<i>Div</i>	−0.373 (<0.01)	−0.062 (<0.01)	−0.063 (<0.01)	−0.009 (0.09)	−0.348 (0.09)
<i>Issue</i>	2.057 (<0.01)	0.562 (<0.01)	0.508 (<0.01)	−1.118 (<0.01)	0.556 (0.67)
<i>Div × Issue</i>	−0.184 (0.02)	−0.085 (<0.01)	−0.070 (0.01)	−0.235 (<0.01)	−0.338 (0.03)
\bar{R}^2	17.0%	81.1%	81.2%	15.5%	14.9%
NObs	118,536	118,536	118,536	118,536	118,536
Controls	Yes	Yes	Yes	Yes	Yes
Controls × <i>Issue</i>	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
<i>Panel B: all countries excluding the U.S.</i>					
<i>Div</i>	−0.401 (<0.01)	−0.105 (<0.01)	−0.094 (<0.01)	0.086 (0.18)	−0.575 (0.09)
<i>Issue</i>	2.372 (<0.01)	0.565 (<0.01)	0.524 (<0.01)	−0.995 (0.01)	2.118 (0.28)
<i>Div × Issue</i>	−0.251 (0.05)	−0.040 (0.09)	−0.064 (0.06)	−0.255 (0.02)	0.595 (0.30)
\bar{R}^2	16.9%	81.1%	80.8%	7.1%	5.9%
NObs	63,396	63,396	63,396	63,396	63,396
Controls	Yes	Yes	Yes	Yes	Yes
Controls × <i>Issue</i>	Yes	Yes	Yes	Yes	Yes
Country FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes

6. Conclusion

This paper aims (i) to assess whether dividend policy affects earnings management; (ii) to evaluate whether and how the relationship between dividend paying status and earnings manipulation varies with country-level investor protection and transparency; and (iii) to entertain a plausible explanation for the variation in the dividends-earnings management link with country-level agency concerns by exploiting firms' future access to external financing. Employing a large sample of 23,429 firms from 29 developed and emerging markets, with wide variation in country-level governance and the strength of legal institutions, offers an opportune platform to ascertain whether and how dividend policies exert such effects.

We find a robust negative relationship between the dividend paying status and earnings management, even after conditioning on a number of variables that have been previously shown to affect earnings management. The dividends-earnings management relationship is also robust to the partitions into various subsamples, endogeneity tests, as well as to alternative measures of dividend policy and of earnings management. Conducting a number of additional tests, we further verify robustness of our key findings. Subsequent analyses show that the negative relationship between dividend policy and earnings manipulation is more pronounced in firms operating in countries with weak investor protection and high opacity. Finally, the dividends-earnings management link of firms that issue equity following dividend payments is stronger than that of their counterparts that do not seek subsequent access to external financing, and only in those with greater country-level agency problems.

Overall, our findings suggest that firms may employ dividend policies as they have a desire to consume fewer private control benefits, thereby decreasing the necessity to conceal consumption of these benefits via aggressive earnings manipulation. Importantly, the negative relationship between dividend paying status and earnings management is more pronounced in firms from countries with stronger agency problems. Such evidence implies that dividend policies associated with lower levels of earnings manipulation may serve to mitigate agency concerns particularly of firms that may have fewer country-level alternative means to convey their commitment to shareholder interests. This inference is primarily supported by the findings that the dividends-earnings management relationship is stronger in firms that subsequently access the equity markets, especially

in countries with weak legal protection and high opacity. It appears that if the benefits of acting in line with shareholder interests outweigh the costs of reduced expropriation by controlling shareholders, firms may self-impose the constraint of paying dividends associated with lower earnings manipulation to capture reputation effects.

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Appendix A. Measures of earnings management

1. Jones' (1991) abnormal accruals model ($Accr(J)$)

We employ the absolute value of residuals from Jones' abnormal accruals model as an earnings management measure. In this model, total accruals include changes in working capital and depreciation expenses. Assuming that changes in working capital are a function of revenue growth, and that depreciation accruals are proportional to long-term tangible assets, one can estimate abnormal accruals that cannot be explained by revenue growth and fixed assets. Empirically, accruals from Jones (1991) model are residuals from the following regression model,

$$TAccr_{i,t} = \beta_0 + \beta_1 \Delta REV_{i,t} + \beta_2 PPE_{i,t} + \epsilon_{i,t}, \quad (2)$$

where $TAccr$ is firm i 's total accruals in year t , ΔREV is its change in revenue, and PPE is its property, plant and equipment. We estimate Jones' model using each firm's cross-sectional data in a given year to extract its residual, $\epsilon_{i,t}$. Generally, U.S. studies estimate Jones' model by industry and year. We, however, run the regressions in a given year for each country, while controlling for industry fixed effects. We do so because in an international setting, due to a limited number of observations across numerous industries, industry-level regressions may produce unreliable estimates. Positive residuals indicate income-increasing manipulations, while negative residuals suggest deflated reported earnings. We employ the absolute value of the residuals, $|\epsilon|$, as the measure of earnings management.

2. Dechow and Dichev's (2002) accruals model ($Accr(D)$)

In Dechow and Dichev's accruals model, the standard deviation of residuals from the model is employed as a proxy for earnings management. Dechow and Dichev examine the quality of accruals, or the extent to which accruals are related to cash flows. They argue that one of the functions of accruals is to shift or adjust the recognition of cash flows over time, because accruals anticipate future cash collections/payments and reverse when cash previously recognized in accruals is received or paid. Therefore, high quality accruals should be closely related to cash flows in years surrounding the recognition of accruals. Accordingly, Dechow and Dichev model working capital accruals as a function of current, past, and future cash flows, and use the standard deviation of residuals from the model as a measure of accruals management. Specifically, their time-series accruals model is given by

$$WCA_{i,t} = \gamma_0 + \gamma_1 FCF_{i,t-1} + \gamma_2 FCF_{i,t} + \gamma_3 FCF_{i,t+1} + \eta_{i,t}, \quad (3)$$

where WCA is firm i 's change in working capital, and FCF is the cash flow from operations. This model, however, focuses on short-term working capital accruals and does not cover long-term accruals.

3. Francis et al. (2005) accruals model ($Accr(F)$)

Francis et al. extend Dechow and Dichev (2002) model by adding sales growth to reflect performance, and adding PPE to capture other accruals including depreciation. This extension results in the following model,

$$TAccr_{i,t} = \lambda_0 + \lambda_1 FCF_{i,t-1} + \lambda_2 CF_{i,t} + \lambda_3 FCF_{i,t+1} + \lambda_4 \Delta REV_{i,t} + \lambda_5 PPE_{i,t} + \xi_{i,t} \quad (4)$$

Francis et al. employ the standard deviation of residuals $\xi_{i,t}$ to measure the quality of accruals. Dechow et al. (2011) argue that time-series regressions assume time-invariant parameter estimates and induce sample survivorship biases. To circumvent these concerns, we employ the procedure of Francis et al. by estimating Eqs. (3) and (4) using cross-sectional regressions for each country. Following Ng (2011), we calculate the standard deviation of residuals using a five-year rolling window for both Dechow and Dichev (2002) and Francis et al. (2005) earnings management metrics.

Appendix B. Variable definitions

Variable	Definition	Data source
<i>Accr(J)</i>	Absolute value of residual accruals obtained from Jones' (1991) model	Worldscope
<i>PAccr</i>	Income increasing/positive residual accruals obtained from Jones' (1991) model	Worldscope
<i>NAccr</i>	Income decreasing/negative residual accruals obtained from Jones' (1991) model	Worldscope
<i>Accr(D)</i>	Standard deviation of residual accruals obtained from Dechow and Dichev (2002) model	Worldscope
<i>Accr(F)</i>	Standard deviation of residual accruals obtained from Francis et al. (2005) model	Worldscope
<i>Prob(S)</i>	Probability of small profit, measured as a dummy variable that takes the value of 1 if return on assets is between 0 and 1%	Worldscope
<i>Prob(SEPS)</i>	Probability of small earnings per share increase, measured as a dummy variable that takes the value of 1 if the ratio $(earnings_t - earnings_{t-1})/totalassets_{t-1}$ is between 0 and 1%	Worldscope
<i>Div</i>	A dummy variable that takes the value of 1 if a firm pays cash dividends in year t	Worldscope
<i>Initiation</i>	A dummy variable that takes the value of 1 if a firm does not pay dividends in year $t - 1$, while initiates dividend payments in year t , and continues to pay dividends in year $t + 1$	Worldscope
<i>Omission</i>	A dummy variable that takes the value of 1 if a firm distributes dividends in year $t - 1$, but eliminates dividends in year t , and continues to not pay dividends in year $t + 1$	Worldscope
<i>Decrease</i>	A dummy variable that takes the value of 1 if a firm decreases its dividend payments from year $t - 1$ to year t , and 0 if otherwise	Worldscope
<i>Increase</i>	A dummy variable that takes the value of 1 if a firm increases its dividend payments from year $t - 1$ to year t , and 0 if otherwise	Worldscope
<i>Div/P</i>	Dividend-price ratio defined as dividends per share scaled by stock price	Worldscope
<i>Div/E</i>	Dividend payout ratio computed as dividends per share scaled by earnings	Worldscope
<i>Repur</i>	A dummy variable that takes the value of 1 if a firm repurchases its shares in year t	Worldscope
<i>HighDiv Vol</i>	A dummy variable that takes the value of 1 if a dividend payer is above the median dividend volatility for each country and year, computed as standard deviation of dividends in the previous 8 years, with the minimum of 5 years of data required, and 0 if the firm is below the median dividend volatility	Worldscope
<i>MV</i>	Log of market capitalization in U.S. dollars	Datastream
<i>LargeSize</i>	A dummy variable that takes the value of 1 if a firm is above the median firm size (measured by <i>MV</i>) for dividend payers and for non-payers, for each country and year, and 0 if the firm is below the median firm size	Datastream
<i>DE</i>	Ratio of total debt to common equity	Worldscope
<i>Sales_g</i>	Annual sales growth rate computed as log of sales in year t scaled by log of sales in year $t - 1$	Worldscope
<i>Age</i>	Number of years since a firm is included in Datastream	Datastream
<i>PPE</i>	Ratio of fixed assets to total assets	Worldscope
<i>ROA</i>	Ratio of net income before extraordinary items plus interest expense to total assets	Worldscope
<i>TA</i>	Log of total assets	Worldscope
<i>IAS</i>	A dummy variable that takes the value of 1 if a firm has adopted International Accounting Standards (IAS)	Worldscope
<i>BigN</i>	A dummy variable that takes the value of 1 if a firm is audited by any of the Big 4, Big 5, or Big 8 auditors	Worldscope; Compustat
<i>Chold</i>	Fraction of shares closely held by insiders and controlling shareholders	Worldscope
<i>ADR</i>	A dummy variable that takes the value of 1 if a firm has issued American Depository Receipts (ADRs)	Depository institutions; U.S. stock exchanges
<i>BM</i>	Log of book-to-market equity ratio	Worldscope
<i>σ_{Ret}</i>	Annualized standard deviation of monthly stock returns	Datastream
<i>CF</i>	Operating cash flows, measured as funds from operations scaled by total assets	Worldscope
<i>HighCF Vol</i>	A dummy variable that takes the value of 1 if a firm is above the median cash flow volatility for each country and year, computed as standard deviation of free cash flows in the previous 8 years, with the minimum of 5 years of data required, and 0 if the firm is below the median cash flow volatility	Worldscope
<i>Issue</i>	A dummy variable that takes the value of 1 if a firm has issued new shares in years $t + 1$ to $t + 3$ subsequent to a dividend payment	Worldscope
<i>Legal Origin</i>	A dummy variable that takes the value of 1 if a firm is of common law origin, and 0 if a firm is of civil law origin	La Porta et al. (1998)
<i>Rule of Law</i>	Strength of a country's legal system and law enforcement protecting minority shareholders	La Porta et al. (1998)
<i>Law & Order</i>	An index that comprises "law" sub-component which assesses the strength and impartiality of the legal system, and the "order" sub-component which assesses popular observance of the law	International Country Risk Guide (ICRG)

(continued)

Variable	Definition	Data source
<i>Gov Effectiveness</i>	An index that reflects perceptions of the quality of public and of civil services, the degree of independence from political pressures, the quality of policy formulation and implementation, as well as the credibility of the government's commitment to such policies	Kaufmann et al. (2009)
<i>Report Extensiveness</i>	An index that captures the extensiveness of financial reporting by examining the inclusion or omission of 90 accounting items in annual financial statements in 1995	Center for Financial Analysis and Research (CIFAR)
<i>Interim Report Quality</i>	An index that indicates the frequency and breadth of interim financial disclosure	Center for Financial Analysis and Research (CIFAR)
<i>Gov Transparency</i>	An index that represents the intensity of governance disclosures used by outside investors to hold officers and directors accountable	Bushman et al. (2004)

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