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Keywords

dividend policy, payout policy, international accounting, information environment, IFRS, insider trading laws

Disciplines

Accounting | International Business

Dividend Payouts and Information Shocks*

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This paper examines changes in firms' dividend payouts following an exogenous shock to the information environment. Traditional signaling, agency, and voluntary disclosure models predict that the more is commonly known about a firm and its competitors in the marketplace, the less private information managers will have to reveal themselves via costly signals or cash disbursements. To test these predictions, we analyze the dividend payment behavior for a global sample of firms around the mandatory adoption of IFRS and around the initial enforcement of new insider trading laws. Both events have the potential to improve the general information environment in the economy. We find that following the two events firms are less likely to pay (or increase) cash dividends, but more likely to cut (or stop) such payments. The changes in dividend policy occur around the time of the informational shock and only in countries and for firms subject to the regulatory change. In further analyses we find that the information content of dividends, measured as three-day absolute announcement returns, is lower after the informational events. The findings underscore that firms' payout policies, among other things, depend on the extent of information about all firms in the economy.

JEL classification: G14, G15, G35, K22, M41

Key Words: *Dividend policy, Payout policy, International accounting, Information environment, IFRS, Insider trading laws*

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1. Introduction

In perfect and complete financial markets a firm's value is not affected by its dividend policy (Miller and Modigliani 1961). However, if markets are less than perfect, for instance, in the presence of taxes, asymmetric information, or incomplete contracts, dividend payouts are economically meaningful. In this study, we focus on the role of cash dividends as a means for managers to convey information about their type, firm profitability, risk, or other value relevant items to corporate outsiders. In such a setting, dividends can serve as signaling device.[1] The basic idea behind dividend signaling models is that managers adjust dividend payments to signal their private information about the prospects of the firm to outside investors in a way that is too costly for lower quality firms to replicate (e.g., Bhattacharya 1979; Miller and Rock 1985; John and Williams 1985). Thus, dividends serve as a costly mechanism that helps management credibly overcome the adverse selection problem.

While most empirical studies of dividend signaling examine the relation between today's signal and future realizations of firm performance (e.g., Benartzi, Michaely, and Thaler 1997; Nissim and Ziv 2001; Grullon, Michaely, and Swaminathan 2002), we study the relative costs of dividend payouts as a signal and how firms' cost tolerance varies as a function of the extent of the adverse selection problem between corporate insiders and outsiders. More specifically, we examine changes to firms' dividend signaling behavior when they experience an exogenous shock to the information environment. The intuition is that a richer information environment with more useful and transparent accounting information should mitigate part of the adverse

[1] We motivate and develop the paper's empirical predictions primarily from a signaling perspective. However, we can derive the same predictions under the free cash flow hypothesis (e.g., Lang and Litzenberger 1989) or in a disclosure framework in which dividends serve as a voluntary disclosure (with little or no discretion) about the risky assets of the firm (e.g., Dye 1985; Jung and Kwon 1988; Verrecchia 1990). See Section 2 for details. Furthermore, we are aware that the use of dividends for signaling purposes is not uncontested in the literature (see e.g., Allen and Michaely 2003 for an overview).

selection problem between managers and investors, thereby decreasing the propensity of managers to communicate private information through dividend signaling. Such a prediction follows from the general setup of the signaling models. With a good type and a bad type firm, the good type firm tries to distinguish itself by issuing a signal as long as the costs associated with the signal fall below the additional valuation premium from escaping the pooling equilibrium. If the firms' information environment improves, for instance, because firms are required to adopt a more transparent set of accounting standards or existing reporting and disclosure rules are more tightly enforced, outside investors should be better able to assess each individual firm's type a priori. As a result, the expected valuation premium for the good type firm becomes lower, and (assuming the costs of signaling remain the same) the firm is less likely to issue a dividend signal. Hence, among other things, a firm's dividend signaling behavior should reflect changes in the extent of the adverse selection problem over time.

We empirically test these predictions in a large global dataset with dividend payment information for firms from 38 countries over the 1993 to 2008 period. Using international data allows us to exploit the larger variation in adverse selection across countries and increases the likelihood of identifying firms that use dividend payouts as information signals.[2] In addition, we observe more exogenous shocks to firms' information environment, and these shocks are not necessarily aligned in time, which often is the case in single country studies. This approach strengthens our identification strategy.

[2] For instance, it has been shown that dividend signaling is prevalent in countries like the U.K. (Braggion and Moore 2011) or informative with regard to current earnings in countries like Germany (Amihud and Murgia 1997). At the same time, the U.S. evidence on dividend signaling is rather mixed (e.g., DeAngelo, DeAngelo, and Skinner 2000; Nissim and Ziv 2001; Grullon, Michaely, and Swaminathan 2002), which might be due to the existence and popularity of less costly alternatives like share repurchases (Fama and French 2001). In our global sample we find that the proportion of firms with share repurchases consistently hovers below the ten percent mark, and that share repurchases rather behave as complements than substitutes for dividends (at the same time the nominal amount of share repurchases increases substantially over the sample period).

Specifically, we utilize two separate country-level events that both have the potential to improve the general information environment for a large portion of the firms in an economy. First, we consider the mandatory adoption of International Financial Reporting Standards (IFRS) that took place in the mid 2000's around the globe. Compared to local GAAP in many countries, IFRS is more capital-market oriented and provides more extensive measurement and disclosure rules (e.g., Ding et al. 2007; Bae, Tan, and Welker 2008). Consistent with this notion, several studies have shown capital-market benefits, improvements of accounting properties, and positive effects on financial analysts' ability to forecast future performance around the mandatory adoption of IFRS (e.g., Barth, Landsman, and Lang 2008; Daske et al. 2008; Byard, Li, and Yu 2011).[3] Our second informational event is a country's initial enforcement of newly introduced insider trading (IT) laws. As Bhattacharya and Daouk (2002) have shown, it is rather the first prosecution than the introduction of IT laws that matter for capital market participants to update their priors. Consistently, evidence suggests that analyst following increases, analysts forecast a broader set of measures, financial reporting quality improves, and stock prices become more informative upon the restriction of insider trading (Bushman, Piotroski, and Smith 2005; Hail 2007; Fernandes and Ferreira 2009; Zhang and Zhang 2012). Thus, both events are associated with a general improvement of the information environment. Moreover, because the events occur at the country level, they are largely exogenous for the individual firm.[4]

[3] Note that we do not require or stipulate that the improvement of firms' information environment is driven by the adoption of IFRS per se (as it has been shown that this is not necessarily the case; e.g., Daske et al. 2013; Christensen, Hail, and Leuz 2012). We rather use mandatory IFRS adoption as a proxy for changes in firms' information environment due to various (undefined) reasons. Furthermore, the effects of IFRS adoption do not have to apply to each and every firm in the economy. As long as at least some firms are affected, or management ex ante expects a leveling of the playing field, the firm might adjust its dividend policy.

[4] Unless a firm decides to avoid IFRS reporting or IT enforcement by going private or moving the trading of its shares to an unregulated market.

We start our analyses with descriptive evidence on firms' payout policies. For our global sample contained in Worldscope we find that the proportion of dividend paying firms decreases from about 76% to 50% over the 1993 to 2008 period. At the same time, the proportion of firms with share repurchases, which in the U.S. have been shown to act as a substitute (Grullon and Michaely 2002), never exceeds 10%. In terms of nominal amounts, both dividend payments and share repurchases more than quadruple over time, suggesting that relatively fewer firms distribute more cash to their shareholders. When we zoom in on the two informational events and distinguish between treatment and benchmark firms, different trends appear. For instance, while the proportion of dividend paying firms after the IFRS mandate decreases sharply, the same number decreases only slightly and with a delay in countries with no change in the accounting standards. A similar pattern is present around the first prosecution of new IT laws.

To formally test the differential time-series, we next conduct a difference-in-differences analysis, and estimate changes in the propensity of dividend payments following the two informational events using logit regression analysis. We find that after the mandatory adoption of IFRS and after the first enforcement of IT laws firms are less likely to pay cash dividends and undertake fewer dividend per share increases (or dividend initiations) but more frequent dividend per share decreases (or cessations of dividend payments). This finding holds in the full sample, when holding the sample constant, after including additional controls like the wedge between dividend and capital gains tax rates, and in a specification with firm fixed effects. In an attempt to assess our identification strategy, we show that the change in dividend paying behavior starts around the time of the informational event, and is not present in countries that did not adopt IFRS or in which there was no change in IT enforcement over the sample period. The effect also does not extend to a subset of firms that presumably was already more transparent and hence,

less likely to rely on dividend payouts as information signal, namely firms that voluntarily switched to IFRS before the mandate and firms whose shares were cross-listed on a U.S. exchange.

In a second series of tests, we examine changes to the information content of dividend announcements. If dividend payouts become less informative because there exists more common information to begin with, we expect investors to make smaller revisions to their priors upon the release of the dividend signal. We measure the information content of dividend announcements with three-day absolute abnormal stock returns. Results from an OLS regression analysis indicate that dividend announcement returns are lower following the mandatory adoption of IFRS and the first enforcement of IT laws, not only compared to the firms' own history but also relative to the benchmark firms. This finding applies to all dividend payments, and separately for dividend per share increases and reductions. Again, we do not find lower dividend announcement returns for the subset of voluntary IFRS firms and firms with a U.S. cross-listing, as one would expect if these firms already have more transparent reporting before. Thus, in line with the propensity results, the information content analysis suggests that payments of cash dividends have become a less useful tool for managers to overcome the adverse selection or moral hazard problem after an information shock to the firms in the economy.

Finally, we extend our logic to a firm-specific instead of a country-wide informational event. That is, we center our analyses around the voluntary adoption of IFRS reporting and around the (voluntary) cross-listing on a U.S. exchange. Both firm events have been shown, under certain circumstances, to go along with an improvement of the information environment (e.g., Barth, Landsman, and Lang 2008; Daske et al. 2013; Bailey, Karolyi, and Salva 2006; Hail and Leuz 2009), and therefore have the potential to affect the relative costs of dividends as information

signal. Yet, in this case the firm does not react to an exogenous information shock, but to its own disclosure choices.[5] Consistent with this idea, we find that the likelihood of dividend payments and the information content of dividend announcements are lower after firms have voluntarily switched to IFRS reporting. However, we do not find such evidence after firms have cross-listed their shares on a U.S. exchange.

Our study contributes to the literature in at least two ways. First, we show that an exogenous shock to the information environment affects firms' demand for and choice of dividends as an information signal. This finding is relevant for various theories of dividend payouts. From a signaling perspective, it provides a new explanation for changes in dividend policies aside from taxes (Bernheim and Wantz 1995) or the availability of less costly substitutes like share repurchases (Grullon and Michaely 2002; DeAngelo, DeAngelo, and Skinner 2000). It also empirically shows that firms' cost tolerance of issuing a signal depends on the extent of information about all firms in the economy. Under the free cash flow hypothesis, the evidence lends support to the prediction that better monitoring reduces concerns about overinvestment and hence lets managers retain more cash within the firm, which else they would have paid out to show their commitment to shareholder interests. In a voluntary disclosure framework, the finding shows that more precise common information reduces the need for managers to release private information about future firm performance via dividends (e.g., Verrecchia 1990). On a more descriptive level, we provide evidence that firms' payout policies, among other things, reflect a country's mandatory disclosure and reporting rules and regulatory environment.

[5] Similar to our main analyses, we do not require to identify the exact reasons for the change in the information environment or that all firms are equally affected for our predictions to apply. However, because by definition voluntary IFRS adoption and U.S. cross-listings are endogenous (with other factors potentially affecting firms' dividend policy), we see this as a weaker power test.

Second, we contribute to the literature on the economic consequences of disclosure (see Leuz and Wysocki 2008 for an overview), and show that changes in the general information environment have real consequences in terms of reducing the frequency and in some instances the amount of cash payouts to investors. This interpretation might help clarify prior evidence on the link between information quality and investment efficiency (e.g., Biddle, Hilary, and Verdi 2009) in that better information not just mitigates under-investment via relaxing financing constraints, but also by increasing the availability of cash (from dividends). Finally, our evidence highlights the role that regulatory changes to the disclosure environment might play in reducing the deadweight costs of signaling (Miller and Rock 1985).

The remainder of the paper proceeds as follows. In Section 2, we develop the hypotheses and discuss the related literature. In Section 3, we outline the research design, describe the sample selection, and provide descriptive statistics. Section 4 contains the results of the propensity and information content analyses of dividend payments. Section 5 concludes.

2. Hypothesis Development and Related Literature

In this section, we discuss the general relation between the common information environment and dividend payouts as a device to convey private information, and from within the signaling perspective develop a simple expository model to derive our main hypotheses. We then review the empirical evidence on dividend payouts to place our predictions in context.

2.1. Information Environment and Dividend Signaling

Spence (1973, 1974) formalizes a theory of signaling, in which (privately informed) sellers in a marketplace emit a signal about a commodity and buyers without inside information respond to that signal. While Spence's primary focus was on the labor market, his theory has also been

applied to financial markets in which there is an adverse selection problem with shareholders unable to distinguish (*a priori*) the 'quality' of a cross-section of firms (e.g., Bhattacharya 1979; Miller and Rock 1985). These signaling models build on the idea that managers (with private information about the prospects of the firm) can send a 'signal of quality' to outside investors which 'lower quality firms' find too costly to replicate (see Allen and Michaely 2003 for an overview). Many authors suggest that dividend announcements or payouts serve to convey such inside information to corporate outsiders, and do so at a sensible cost. Hence, they consider dividends an ideal signaling device.

Most empirical studies of dividend signaling examine the relation between today's signal and future realizations of firm performance or focus on the tax-induced costs of signaling (see Section 2.2). At the same time, relatively little is known about the direct relation between the magnitude of the adverse selection problem and a firm's signaling behavior.[6] We contribute to filling this void by investigating whether an exogenous change in the information environment impacts the frequency and information content of firms' dividend signaling. Our primary hypotheses relate to a change in the information environment for the average firm in the economy, for instance, due to new disclosure and reporting regulation. The intuition is that a richer information environment with more useful accounting information should mitigate part of the adverse selection problem between managers and investors. This in turn decreases managers' incentives to communicate private information through financial signaling.

A simple theoretical characterization aids the exposition of the above intuition and serves as basis for our empirical predictions. There are two types of firms in the universe – good and bad. α represents the fraction of the good type, and $1-\alpha$ is the fraction of the bad type. The good type

[6] One exception is Dewenter and Warther (1998).

firm has a value of V_G, the bad type firm has a value of V_B, and $V_G > V_B$. The cost of signaling for the good type is K, and the cost of signaling for the bad type is $2K$. While investors do not know whether a specific firm (e.g., Firm$_i$) is the good or bad type, the fraction of the good type firms in the economy (i.e., α) is common knowledge.

In the base case with no information or very poor information, investors price every firm at $\alpha V_G + (1-\alpha)V_B$, which is the weighted average value and is less than V_G. In order to avoid being under-valued, the good type firm issues a signal to distinguish itself, but only if $V_G - K > \alpha V_G + (1-\alpha)V_B$. This implies that the upper bound of the signaling cost the good type firm is willing to bear equals $K = (1-\alpha)(V_G - V_B)$.

Now we introduce the effect of better information for the average firm. The critical assumption is that when the information environment improves, investors can assess the type of a specific firm (good or bad) more precisely *a priori*. For example, suppose Firm$_i$ is the good type. With better information, investors' updated priors for Firm$_i$ being the good type is larger than the unconditional probability (i.e., $\alpha_i > \alpha$). Consequently, the upper bound of the signaling cost the good type firm is willing to bear changes to $K' = (1-\alpha_i)(V_G - V_B)$. Under the assumption that $\alpha_i > \alpha$, we have $K' < K$. It follows that for the good type firm, the cost tolerance level of signaling has become lower in the richer information environment. Assuming that the absolute cost of signaling remains the same (e.g., K_i for Firm$_i$), more good type firms will hit the threshold level and not issue a signal any longer. With regard to dividends as a signaling device, this leads to the following hypothesis (in alternative form):[7,8]

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[7] If we assume $\alpha_i < \alpha$ (i.e., the updated probability of being a good type firm is lower), then $K' > K$, and we would expect fewer good type firms to hit the threshold (assuming there are some good type firms left) leading to an *increase* in dividend signaling.

H_1: After an exogenous improvement of the common information environment, firms will pay fewer dividends.

Empirically, we expect to observe a lower propensity to pay dividends for firms subjected to an informational shock that improves financial reporting transparency. At the same time, these firms should be less likely to initiate or increase dividend-per-share payouts, and more likely to cease or cut such payments.

Our second hypothesis deals with the market reaction to the information signal. It follows from the above characterization. With better information the good type firm faces a lower valuation premium to be gained from signaling. That is, in a richer information environment (and without signaling), investors price the good type firm at the weighted average value of $\alpha_i V_G + (1-\alpha_i)V_B$, which is greater than the average value of $\alpha V_G + (1-\alpha)V_B$ with poor information. Thus, (holding the absolute cost of the signal K_i constant) the average market reaction by investors should be lower upon the release of the signal. This leads to the following hypothesis regarding the information content of dividend payouts (in alternative form):

H_2: After an exogenous improvement of the common information environment, the information content of dividend payments is lower.

Empirically, we expect to observe a reduced market reaction for all dividend payments regardless whether they mark an increase or decrease in dividends per share.

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[8] We can also derive hypothesis H_1 from the voluntary disclosure literature. For instance, Dye (1985), Jung and Kwon (1988, Proposition 3), and Verrecchia (1990, Corollary 2) show that the more is known about a set of risky assets a priori (or commonly), the less pressure the market exerts on a manger to reveal what he or she knows privately. If we interpret dividends as disclosure about the risky assets (e.g., confirming that earnings information is backed up by cash; see e.g., Amihud and Murgia 1997), then an improvement in the general knowledge about the risky assets leads to fewer dividend payments. Similarly, under the free cash flow hypothesis, dividends are seen as a disciplinary mechanism subjecting managers to the forces of the capital markets (e.g., Lang and Litzenberger 1989). Better information enhances the monitoring ability of outside shareholders, thereby reducing the need for dividend payouts to mitigate concerns about overinvestment.

Finally, we briefly discuss the consequences that an information shock might have on firms that use signaling devices other than dividends or that do not rely on signaling. We distinguish two cases. First, if investors can already infer V_G from the firms' financial reports because their disclosures are transparent enough to avoid pooling, no dividend signaling is needed and the exogenous change in the information environment should have no effect. For instance, non-U.S. firms whose shares are cross-listed on a U.S. exchange are subject to extensive filing requirements with the U.S. Securities and Exchange Commission and to market pressures by financial analysts and the media. This can lead to substantial market benefits due to lower information asymmetries (e.g., Doidge, Karolyi, and Stulz 2004; Hail and Leuz 2009). For these firms, a general improvement of the information environment likely has no effect at all. Second, there might be firms for which the information shock cancels out an existing signal. That is, the good type firm uses a signaling device other than dividends whose effect on investors' priors is similar to the information shock. In that case, the good type firm likely has to adjust its signaling strategy and even initiate or increase dividend signaling. For instance, the voluntary adoption of IFRS has been shown, under certain circumstances, to improve a firm's transparency (e.g., Barth, Landsman, and Lang 2008; Daske et al. 2013), and hence could serve for signaling purposes. However, once IFRS reporting is mandatory, the value of the signal becomes moot, and firms might have to look for alternative ways to signal their type.[9]

[9] Note that it is not clear whether voluntary IFRS adoption is an effective signaling tool because not all voluntary IFRS adopting firms necessarily improve the transparency of their financial reporting (Daske et al. 2013). In that case, we would expect H_1 and H_2 to apply when the general information environment improves (i.e., voluntary IFRS adopters should see fewer dividend payouts and a reduction in information content).

2.2. Payout Policy as a Signaling Device

In this section, we briefly summarize the empirical evidence on dividend payout policy as a signaling device.[10] The majority of dividend signaling studies focuses on U.S. firms, and we can classify them into three categories: (1) studies that examine the relation between dividend changes and subsequent earnings changes, (2) studies on the stock market reaction to unexpected dividend changes, and (3) studies on tax-based dividend signaling. The first two categories center on the necessary conditions for dividend signaling; the third category relies on the sufficient conditions for dividends to act as a costly signal.

Studies in the first category follow the argument that if managers' private information affects their decisions about dividend payouts, then dividend changes should be followed by subsequent earnings changes in the same direction. Consequently, forecasts of future earnings that include dividend information should be superior to those without dividend information. While several studies find no or only weak support of this argument (e.g., Gonedes 1978; DeAngelo, DeAngelo, and Skinner 1996; Benartzi, Michaely, and Thaler 1997; Grullon, Michaely, and Swaminathan 2002), there exist counterexamples. For instance, Nissim and Ziv (2001) provide strong evidence that dividend changes are positively related to future earnings, profitability, and abnormal earnings. Similarly, for a sample of U.K firms at the turn of the 19th century (and therefore in a setting with little interference by taxation and other institutional constraints), Braggion and More (2011) find that contemporaneous dividend changes predict future earnings changes. Finally, Yoon and Starks (1995) extend the analysis of dividend payouts' predictive power to future capital expenditures and analyst earnings forecast revisions.

[10] Aside from signaling, several other explanations exist for firms' dividend policy such as agency conflicts (e.g., Lang and Litzenberger 1989; DeAngelo, DeAngelo, and Stulz 2006) or clientele effects (e.g., Dhaliwal, Erickson, and Trezevant 1999; Graham and Kumar 2006; Dahlquist, Robertsson, and Rydqvist 2007).

Studies in the second category argue that if dividends act as a signaling device about firms' future prospects, then changes in dividends should convey information to the market and lead to a reaction by investors. A number of studies report significant excess returns around the announcement of dividend changes: positive (negative) announcement returns are associated with positive (negative) changes in dividends (e.g., Petit 1972; Aharony and Swary 1980; Healy and Palepu 1988). Probably most related in spirit to our study, Dewenter and Warther (1998) compare dividend policies in the U.S. and Japan. They show that Japanese firms, particularly members of a keiretsu, face less adverse selection and fewer agency conflicts than U.S. firms. Consequently, Japanese firms experience smaller stock price reactions to dividend omissions and initiations, are less reluctant to stop or cut dividend payouts, and their dividends are more responsive to earnings changes.

Studies in the third category focus on a tax-based explanation of dividend signaling. All else equal, a dividend change of a given size should convey more information in periods when the tax differential between dividends and capital gains is higher. Consistent with this idea and hence dividend signaling, Bernheim and Wantz (1995) show that the share price reaction to dividend changes is larger in periods following an increase in dividend tax rates. Amihud and Murgia (1997) study the market reaction to dividend changes in Germany where dividends are favorably taxed relative to capital gains. Contrary to the prediction from the tax-based signaling models, they find a similar market reaction to dividend changes as in the U.S.[11]

[11] Similarly, Denis and Osobov (2008) find that in a cross-country setting dividend payouts are concentrated among the largest, most profitable firms, with retained earnings comprising a large fraction of total equity. They conclude that these are the firms least likely in need of costly signals to convey private information.

3. Research Design and Data

In this section, we describe our empirical identification strategy and develop the regression models to test our two main hypotheses. We then discuss the sample selection and variable construction and provide descriptive statistics on payout policies in our global sample.

3.1. Empirical Model and Identification Strategy

We examine the impact of an informational shock on dividend payouts using a large panel dataset with yearly firm-level observations from 38 countries around the world. Specifically, we investigate whether (i) the propensity of firms to pay dividends, and (ii) the information content of dividend announcements change surrounding significant improvements in the information environment for the average firm in the economy. That is, we examine the effects of changes in the adverse selection and moral hazard problems on dividend payouts from both the perspective of the firm and the market. To test for changes in the propensity of paying dividends following an informational event (H_1), we estimate the following logit regression model:

$$Pr(Dividend\ Payments) = \beta_0 + \beta_1\ InfoEvent + \sum \beta_j\ Controls_j + \sum \beta_i\ Fixed\ Effects_i + \varepsilon. \quad (1)$$

The dependent variable, *Dividend Payments*, is a binary indicator variable marking positive dividends per share (set equal to '1'). In years without dividend payments or in case of missing data, we set this variable to '0'. In some of the analyses, we replace the dividend payments variable with indicators for year-to-year increases (decreases) in dividends per share.

Our main variable of interest is the difference-in-differences estimator *InfoEvent*. This variable takes on the value of '1' for all firm-years subjected to the informational shock and '0' otherwise. We use two exogenous country-level events to proxy for a general improvement of the information environment in an economy, namely the mandatory adoption of IFRS in many

countries around the world and the first prosecution under newly introduced insider trading (IT) laws.[12] The first event led to accounting standards that compared to many local GAAPs are more capital-market oriented and provide more extensive measurement and disclosure rules (e.g., Ding et al. 2007; Bae, Tan, and Welker 2008). Consistent with this notion, several studies have shown that mandatory IFRS adoption is associated with capital-market benefits, improvements of accounting properties, and positive effects on analysts' ability to forecast future earnings for at least some firms in the economy (e.g., Daske et al. 2008; Byard, Li, and Yu 2011; Landsman, Maydew, and Thornock 2012). The second event follows from the finding in Bhattacharya and Daouk (2002) who show that it is rather the first prosecution than the introduction of IT laws that matter for capital market participants to update their priors. Consistently, evidence suggests that analyst following increases, analysts forecast a broader set of measures, financial reporting quality improves, and share prices become more informative upon the restriction of insider trading (Bushman, Piotroski, and Smith 2005; Hail 2007; Fernandes and Ferreira 2009; Zhang and Zhang 2012).[13] For both informational events, H_1 predicts that $\beta_1 < 0$, consistent with a reduction in the propensity to pay dividends.

The model in Eq. (1) also includes a comprehensive set of firm-level $Controls_j$ (see Section 3.2) and $Fixed\ Effects_i$. These variables are important because a firm's dividend policy also reflects such factors as cash constraints, investment opportunities, profitability, payout history, or alternative payout mechanisms. In our main specification, we include country, one-digit SIC industry, and year fixed effects, which account for time-invariant unobserved

[12] Note that we do not stipulate that either IFRS adoption or IT enforcement *per se* lead to an improvement in the information environment, but rather these events proxy for changes in the disclosure and reporting policies of some firms around the time they took place.

[13] The impact of insider trading on the information environment is not a priori clear. On the one hand, the presence of insiders can crowd out the information collection of outside investors. On the other hand, insider trading can contribute to the timely incorporation of new information into stock prices. Fernandes and Ferreira (2009) find that in their global sample of firms tightening insider trading laws improves the information environment via either more informative stock prices or increased public information collection.

correlated variables along those dimensions (e.g., country-specific restrictions or general trends in dividend payouts over time). As both mandatory IFRS adoption and IT enforcement are regulatory initiatives on the country level, we draw statistical inferences based on standard errors clustered by country.[14]

To test hypothesis H_2 (i.e., whether the information content of dividends changes after an informational event), we build on Eq. (1) and estimate the following OLS regression model:

$$CAR(Div.\ Announcement) = \alpha_0 + \alpha_1\ InfoEvent + \sum \alpha_j\ Controls_j + \sum \alpha_i\ Fixed\ Effects_i + \nu. \quad (2)$$

We use three-day *Dividend Announcement Returns* as the dependent variable, and compute them as the absolute value of the cumulative abnormal returns around the declaration date of firms' annual dividend per share. Abnormal returns are equal to the daily raw return of a firm's share minus the return on the local market index. We use the same definition and coding of *InfoEvent* in the analysis and hence, under H_2 expect $\alpha_1 < 0$, suggesting a reduction in information content of dividend announcements. We use a different set of firm-level $Controls_j$ in the information content analysis (see Section 3.2) because the main concern here is the effect of confounding events like earnings announcements or the magnitude of the change in dividends as well as firm attributes related to the announcement of dividend payouts. The model includes country, industry, and year $Fixed\ Effects_i$, and we again assess the statistical significance of the coefficients with standard errors clustered by country.

3.2. Sample and Variable Description

Our sample comprises all firm-year observations between 1993 and 2008, for which we have sufficient Worldscope and Datastream data to estimate our base regressions in Eq. (1). We

[14] We also provide results using firm fixed effects in the robustness tests. Furthermore, the results remain largely unaffected and none of the inferences change if we double-cluster the standard errors by country and year.

start in 1993 because before that no reliable dividend data is available in Worldscope. We require firms to have total assets of 10 US$ million or more, and limit the sample to countries with at least 10 observations with dividend information.[15] This leaves us with a maximum of 254,073 firm-year observations from 38 countries. Table 1 provides a sample breakdown of unique firms and firm-years by country and year. It also contains information on the number of dividend payments, and dividend per share increases and decreases. The latter two numbers include the initiation and the cessation of dividend payments.

As Panel A shows, dividend payments are fairly common around the globe. In 58% of the years, firms paid out a dividend, ranging from a high of 84% in Japan to a low of 35% in Canada. In all countries, firms are more likely to increase their dividend payments than to cut dividends per share, suggesting that a firm's payout history is an important determinant of dividend policy. Panel A also lists the year when IFRS reporting became mandatory (Daske et al. 2008) and when the first IT enforcement took place (Bhattacharya and Daouk 2002).[16]

Panel B shows the general trend in dividend payments over time. The number of dividend payments, increases, or decreases goes down over the sample period. Even so, almost half of the firms continue to pay dividends at the end of the sample period in 2008. This is remarkable because 2008 coincides with the beginning of the global financial crisis, which likely contributed to the unusually low number of dividend increases and the unusually high number of dividend cuts in that year. The negative time trend becomes even more obvious in Figure 1, Panel A, in which we plot the proportion of dividend paying firms from 1993 to 2008. From 2001 on, the

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[15] We further exclude firms that voluntarily adopted IFRS before the mandate or whose shares are cross-listed on a U.S. exchange from the base sample, but will use them in separate analyses later (see Section 4.4).

[16] When coding the *InfoEvent* indicator we use December 31st of the mandatory IFRS year as the cutoff value. For IT enforcement, we assign it to '1' in the year the first prosecution took place in a country. Because we do not have the exact enforcement date, we assess this research design choice in the robustness test section.

downward trend came to a halt, and there was no further reduction in firms that paid a dividend. The graph also shows that internationally share repurchases never gained the same popularity as in the U.S. (Fama and French 2001). The proportion of firms with share repurchases hovers below the 10 percent mark. In terms of nominal amounts, a different picture appears. As Panel B of Figure 1 illustrates both total dividend payments and share repurchases surged substantially over the sample period. The two graphs taken together suggest that relatively fewer firms disbursed increasingly larger cash amounts to shareholders, in particular when it comes to the small number of firms with share repurchases. These time-series trends in the data underscore the importance of our difference-in-differences design.

In Table 2, we present descriptive statistics for the variables used in the regression analyses. In Eq. (1), the propensity model, we use the following control variables: the binary indicator *Share Repurchases* stands for an alternative payout mechanism to dividends. A negative sign suggests that the two ways of disbursing cash to shareholders act as substitutes; a positive sign indicates that they are complements. *Total Assets* are a proxy for firm size and maturity. Larger, more mature firms are more likely to pay dividends. The *Market-to-Book* ratio serves as a proxy for growth opportunities and indicates the need for firms to retain cash. We expect a negative sign. Financial *Leverage* is a proxy for a firm's capital structure and interest payments, but also for potential agency conflicts. Both suggest a negative sign. We expect more profitable firms, measured with *Return on Assets*, to be more likely to pay dividends. In line with Chay and Suh (2009) we include *Return Variability* as a proxy for firms' cash-flow uncertainty. Firms with higher stock volatility are less likely to pay dividends fearing future cash shortfalls. Finally, we include a lagged *Dividend Payments* indicator in the model to capture a firm's payout history.

In Eq. (2), the information content model, the following control variables are included: an *Overlap with Earnings Announcement* indicator, which takes on the value of '1' if the earnings announcement occurs within five days of the dividend announcement. If so, the coefficient should be positive. Δ *Dividend per Share* and Δ *Earnings per Share* are the year-to-year changes in dividends and earnings per share, and capture the news effect.[17] We also include size, market-to-book, leverage, and profitability. For more details on the variable measurement, see the notes to Table 2.

4. Empirical Results

In this section, we first describe the results of the propensity analyses of paying dividends. We then assess the identification strategy we employ to capture changes in the information environment in an economy, and conduct various robustness tests. Next, we discuss the results of the tests on the changes in the information content of dividend announcements. We conclude with an extension of our analyses to firm-level information shocks.

4.1. Analyses of the Propensity to Pay Dividends

We start examining hypothesis H_1 with graphically plotting the percentage of dividend paying firms separately for firms in the treatment countries and the benchmark countries centered on the informational events (i.e., in the event year $t = 0$). Figure 2, Panel A, contains the graph for mandatory IFRS adoption for the 3 years before and after the informational event. For reference purposes we also include the total percentage of dividend payers. As predicted, the trends across the two groups of firms are different. While the proportion of dividend paying firms subject to the IFRS mandate decreases sharply following the regulatory change, the same

[17] We scale Δ *Dividend per Share* and Δ *Earnings per Share* by price, but obtain very similar results when using percentage changes or assets per share as deflator.

number decreases only slightly and with a delay in countries that did not require a switch in accounting standards. Thus, in a relative sense, there are fewer IFRS firms paying dividends, and the change coincides with the introduction of the new accounting rules. Panel B of Figure 2 shows the same graph for IT enforcement beginning in year *t*–3 through year *t*+5. We again observe that the percentage of dividend paying firms drops at a faster pace (and beginning in the event year) in the treatment countries relative to the benchmark countries (i.e., countries with no IT laws, or where the IT laws had already been enforced earlier).

Next, we conduct a simple difference-in-differences analysis of the percentage of dividend paying firms around the two events and present results in Panel A of Table 3. Such a comparison across the cells of a two-by-two matrix is a straightforward way to account for unobserved differences between treatment and benchmark firms and to control for general trends in the data.[18] We report results for the full sample and a constant sample, for which we require at least eight firm-year observations per firm. Throughout the panel, the tenor of the results is the same. The difference-in-differences is always negative and highly significant, indicating that the proportion of dividend paying firms decreased more after IFRS adoption and after the first IT enforcement relative to the benchmark countries. For example, considering the upper-left panel, the percentage of dividend paying firms decreases by 4.43 percentage points following the IFRS mandate. At the same time, the proportion of dividend payers *increases* by 1.80 percentage points in countries without regulatory change. The resulting difference-in-differences is -6.23 and significant. The results are consistent with a change in the information environment affecting firms' propensity to pay dividends, at least in a univariate setting.

[18] To allow for a true difference-in-differences comparison we split the benchmark firms into a pre and post period using December 31st, 2005 (IFRS setting), and the year 1996 (IT setting) as cutoff value.

In Panel B of Table 3 we explicitly account for other confounding factors, and report the coefficients from estimating Eq. (1) using logit regression. We tabulate results for the full sample (Models 1, 3, and 4) and the constant sample (Model 2).[19] Our main variable of interest, *InfoEvent*, has always the expected sign (negative for dividend payments and increases; positive for dividend decreases). In the IFRS setting, the coefficient is significant at the one percent level when using *Dividend Payments* as the dependent variable and at the ten percent level for *Dividend Increases* and *Dividend Decreases*. In the IT setting, the *InfoEvent* coefficient is always significant at the five percent level or better. These results suggest that firms are less likely to pay dividends or announce dividend increases, and more likely to cut dividends per share or stop dividend payments following the two informational events. The control variables behave as expected and are generally highly significant. Large, profitable firms with a history of paying dividends continue to do so, while highly levered firms with many growth prospects and volatile stock returns are less likely to disburse cash for dividends. We find no evidence that share repurchases substitute for dividend payments. If anything, they act as complements as shown by the significantly positive coefficients in the IT setting.[20] Overall, we interpret the above results as consistent with a lower propensity to pay dividends after an informational shock that improves financial reporting transparency and reduces the adverse selection and moral hazard problem in the economy.

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[19] In unreported analyses we repeat our tests (and confirm the results) for a sample of firms that is most likely to pay dividends (for various reasons). That is, in a first step we estimate Eq. (1) using the U.K. observations (based on the finding in Braggion and Moore 2011 that U.K. firms are likely to use dividends as information signals). In a second step, we apply the estimated coefficients from the U.K. model to predict the likelihood of dividend payments for the entire sample. We classify all firm-years with a predicted probability greater than 0.5 as potential dividend payers, and include them in the reduced sample (regardless whether the firm paid a dividend or not). By limiting our analyses to years with an ex ante higher likelihood of dividend payments, we hope to reduce the confounding effects of firms that never paid a dividend during the sample period.

[20] Note that when using *Dividend Decreases* as dependent variable, the expected sign on all the control variables reverses. Furthermore, because by definition the lagged *Dividend Payments* variable takes on a value of '1' for all dividend decreases, we do not include it in the model.

4.2. Assessing Identification and Robustness Tests

The inferences we draw from the above analyses rely on the assumption that our difference-in-differences approach is able to separate the effects of an informational shock from other factors potentially affecting firms' dividend policies, in particular a general tendency toward fewer dividend payments over time (as seen in Panel A of Figure 1). We therefore conduct a series of robustness and falsification tests to assess the validity of our empirical identification strategy. If not mentioned otherwise, all tests build on our base specification for the full sample (i.e., Model 1 in Panel B of Table 3).

First, we assess the timing of the informational shock and report results in Panel A of Table 4. Instead of estimating a single event indictor, we break up the entire sample period into four sub-periods by including three separate indicator variables for the two years leading up to the event (years t–2 and t–1), the two years around the event (years t and t+1), and the remaining years ($t \geq +2$). The years before t–2 serve as the base period. If the change to the information environment occurs around the 'true' event year, we expect the first of the three indicator variables to be insignificant, the second (containing the 'true' event year) to be negative and smaller than the preceding period, and the third still negative but not discernable from the middle coefficient. This pattern is what we observe in the IT setting. Only after the first IT enforcement took place the propensity to pay dividends went down, and stayed at lower levels afterwards. In the IFRS setting, the middle-period coefficient is insignificantly negative (but as indicated by the F-test significantly smaller than in the preceding two years). The coefficient becomes significantly negative in period $t \geq +2$. Thus, it seems that around mandatory IFRS the information environment took longer to adapt, consistent with learning or uneven IFRS

implementation during the early years. Overall the time-series pattern around both events is indicative of a change in the information environment at about the same time.

Second, we counterfactually assign event years to the benchmark countries. That is, we introduce a separate *InfoEvent* indicator for firms in countries that did not adopt IFRS or did not initiate the enforcement of IT laws during the sample period. In the IFRS setting, the counterfactual event indicator is set to '1' for years ending on or after December 31st, 2005; in the IT setting, we randomly assign the 'true' event dates to the benchmark countries, and do so for all benchmark countries and separately for countries in which the first prosecution took place before our sample period and countries without IT laws.[21] There should be no effect around these artificial events for benchmark firms. In Panel B of Table 4, we report the 'true' and the counterfactual event indicators together with *p*-values from an *F*-test comparing the two. As expected, none of the counterfactual event indicators is statistically significant, and in three of the four cases the coefficient is significantly smaller than the 'true' event variable. Only when comparing to the countries without IT laws, the two coefficients are not distinguishable.

Third, we contrast the treatment effects to a set of firms for which ex ante it is not obvious whether the informational shock should have any effect because they presumable already follow a transparent reporting and disclosure regime (i.e., counterfactual firms). More specifically, we include firms that voluntarily switched to IFRS reporting before it became mandatory and foreign firms whose shares are listed on a U.S. exchange as additional benchmark group.[22] That is, we add a separate *InfoEvent* indicator for these firms to the model that takes on the value of '1' after the informational shock. Table 4, Panel C, presents the results of the analyses. We

[21] We repeat this random assignment ten times and each time the results are very similar to those reported.

[22] We identify voluntary IFRS adopters based on Daske et al. (2013), and U.S. exchange listed firms based on Hail and Leuz (2009). We require each firm to have at least one observation pre and post the informational events (i.e., the mandatory adoption of IFRS and the first enforcement of IT laws).

make two observations: (i) the treatment effect is largely unaffected by the inclusion of the additional firms; (ii) we do not find any significant change in dividend policy for voluntary IFRS adopting firms and cross-listed firms after the informational events.[23] This finding suggests that the counterfactual firms are not affected by the change in the information environment, because presumably investors can already infer their type and effectively monitor managers regardless of dividend payouts.[24]

Fourth, we conduct a series of robustness tests to assess various research design choices and report results in Table 5. Panel A contains the results for the IFRS setting. In the first three models, we separately add three controls: net cash flows from operations divided by total assets as a proxy for cash constraints, retained earnings divided by the book value of total equity as a proxy for firm maturity and earnings power, and the wedge between yearly dividend and capital gains tax rates for individuals, which captures the relative disadvantage of dividend payouts compared to share repurchases. As expected, the first two additional control variables are significantly positive; the tax wedge is insignificant. In the next two models, we replace the country and industry-fixed effects with firm-fixed effects using the full and constant sample. This accounts for time-invariant firm attributes, but also substantially reduces the number of observations due to lack of variation in the dependent variable. Finally, we exclude observations from the U.S., the largest sample country, and in the last model further drop 2008, the year of the financial crisis, which according to Table 1 likely was unusual. All the *IFRS Adoption* coefficients are negative and, with the exception of Model 2, significant.

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[23] The coefficients across treatment firms and counterfactual firms are only significantly different in one of the four cases, which is likely due to the low power of the test because we only have very few voluntary IFRS and U.S. cross-listed firms.

[24] We do not find evidence that mandatory IFRS adoption or IT enforcement cancel out an existing signal and require firms to re-differentiate, for instance, by increasing the propensity of dividend signaling. We examine voluntary IFRS adoption and U.S. cross-listings as standalone informational events in Section 4.4.

Panel B of Table 5 contains the sensitivity analyses for the IT setting. We again include the three additional control variables in the model (i.e., net cash flows, retained earnings and tax rate wedge), estimate two firm-fixed effects specifications, and exclude the U.S. observations. Moreover, we estimate a model in which we drop the IT enforcement year from the analysis. This helps avoid the misclassification of firm-years due to the unknown exact date of the initial prosecution of the new IT laws. Except for Model 4, the results are significant, consistent with those reported earlier, and support our main prediction.

4.3. Analyses of the Information Content of Dividend Payments

In this section, we turn to hypothesis H_2 stipulating that after an exogenous improvement to the information environment, the information content of dividend payments decreases. We present results of estimating Eq. (2) using OLS regression in Table 6, Panel A. We report results for all dividend announcements (full and constant sample), and separately for announcements of dividend increases and decreases. The three-day absolute *Dividend Announcement Returns* serve as a proxy for information content. Because we need dividend (and earnings) announcement dates from Worldscope, the sample is substantially smaller than in the propensity analyses. Throughout the panel, our main variable of interest, the *InfoEvent* coefficient, is negative and with one exception significant. This indicates that markets react less to the announcement of dividend payments, increases, and decreases following the mandatory adoption of IFRS or the first prosecution of IT laws. A smaller market reaction is indicative of lower information content of dividend payouts after an information shock. The control variables behave largely as expected. In particular, the closeness of an earnings announcement has positive spillover effects, and the magnitude of the dividend-per-share change matters. Moreover, large firms with a

generally richer information environment to begin with seem to convey less information during the days of the dividend announcements.

Next, we repeat some of the robustness tests for the information content analysis, and report results in Panel B of Table 6. We estimate the information content of dividend announcements using firm-fixed effects instead of country and industry-fixed effects, eliminate the U.S. observations from the sample, and in the IFRS setting also drop the year 2008 (in the IT setting drop the year of the initial prosecution of the new laws). Throughout the panel, the coefficient on *IFRS Adoption* and *IT Enforcement* is negative and with the exception of one of the firm-fixed effects specifications significant at the 11 percent level or better (two-tailed). These results corroborate our earlier findings.

Finally, in Panel C of Table 6, we again contrast the treatment effects to the change in information content for voluntary IFRS adopting firms and firms with a U.S. cross listing around the two informational events. That is, we add a separate binary indicator for these counterfactual firms to the model, and code it as '1' beginning at the informational event date.[25] The table allows the following insights: (i) when we include the additional benchmark firms, the treatment effect of mandatory IFRS adoption and IT enforcement is largely unaffected; and (ii) neither voluntary IFRS firms nor U.S. cross-listed firms experience a significant decline in information content around the two informational events. The latter result suggests that these firms presumably were already transparent enough so that investors did not have to rely on dividend payouts as source of private information. Overall, the information content findings align with the propensity tests, and taken together suggest that after an improvement of the common information in the economy, firms *as well as* investors rely less on dividend payouts.

[25] We use the same data sources to identify the counterfactual firms as in Table 4, Panel C, and require voluntary IFRS and U.S. cross-listed firms to have at least one observation pre and post the informational event.

4.4. Extending the Analysis to Firm-Level Informational Shocks

In this section, we extend the logic of our tests to two firm-specific (instead of country-level) informational events, namely the voluntary adoption of IFRS before it became mandatory (from 1993 to 2004), and the cross listing of shares on a U.S. exchange (from 1993 to 2008). Both events have been shown, under certain circumstances, to go along with an improvement of the information environment (e.g., Barth, Landsman, and Lang 2008; Daske et al. 2013; Bailey, Karolyi, and Salva 2006; Hail and Leuz 2009), and have the potential to affect firms' dividend policies. The two firm-level events address concerns regarding the time-clustering of regulatory changes, in particular mandatory IFRS, and offer some corroborating evidence.[26]

In Table 7, we present the results from replicating the propensity and information content analyses, but now centered on the firm-specific informational events. To do so, we code the *InfoEvent* indicator as '1' for fiscal years with reporting under the new accounting standards (as identified by Daske et al. 2013) or following the initiation of the U.S. cross-listing program (as identified by Hail and Leuz 2009). We require firms to have at least one observation pre and post voluntary IFRS adoption or the U.S. exchange listing, which substantially reduces the number of treatment firms. In the voluntary IFRS setting, we find a negative and significant *InfoEvent* coefficient in both the propensity and information content analysis. This suggests that voluntary IFRS adopters are less likely to pay dividends and investors react less to dividend announcements after voluntary IFRS adoption. For U.S. cross-listed firms, we find negative *InfoEvent* coefficients, but the results are not statistically significant. One explanation is that these are generally growing firms that could not afford to pay dividends before the cross listing.

[26] At the same time, the firm-specific events likely suffer from endogeneity issues. However, because we are not interested in identifying the exact source of the change in the information environment (but rather use the events as a proxy for such a change), our analyses should be less affected.

Overall, the results around the firm-specific information events are generally consistent with, but weaker than in our main analyses. We conclude that a change in the information environment is associated with the use of dividends, but this relation is likely mitigated in a voluntary disclosure setting.

5. Conclusion

This paper examines changes in firms' propensity to pay dividends and in the information content of dividend announcements following an exogenous information shock. Thus, we analyze the value of dividend payments as a means to convey private information from the firm's and the market's perspective. We argue that more precise common information ex ante reduces the adverse selection problem between managers and investors, makes it easier ex post for outside shareholders to monitor management behavior, and puts less pressure on management to reveal private information. All these forces should reduce the demand for and the value of dividend payouts as commitment and information device. To test these predictions, we examine the dividend payment behavior for a global sample of firms around two events, namely the mandatory adoption of IFRS and the initial enforcement of new IT laws. Both events have the potential to enhance the underling information structure for all firms in the economy.

Consistent with our predictions, we find that following our two informational events firms are less likely to pay (or increase) cash dividends, but more likely to cut (or stop) such payments. The changes in dividend policy occur around the time of the informational shock and only in countries and for firms subject to the regulatory change. In further analyses we find that the information content of dividends, measured as three-day absolute announcement returns, is lower after the informational events. Finally, we extend our analysis to firm-specific instead of country-wide informational events, and find that the likelihood to pay dividends and the

information content of dividend announcements are lower for voluntary IFRS adopters. In sum, our findings show that enhancing the information environment significantly affects firms' demand for *and* the perceived value of dividend payments. They also suggest that regulatory changes to the disclosure environment have real consequences in terms of reducing the cash payouts to investors and the deadweight costs of dividend signaling.

An important caveat of our study is that the analysis focuses only on dividend payments. This leaves room for interesting extensions. First, following an information shock firms might choose less costly ways of disbursing cash to shareholders than dividend payments. While we control for share repurchases in our tests, this is still a plausible scenario. Second, regulatory changes to the disclosure environment could enhance the credibility of financial reports, which in turn makes it possible for managers to move away from cash-based information signals with no or little discretion to more subjective (but less costly) means to convey private information (e.g., management forecasts, conference presentations, firm-initiated media coverage). We leave these issues to future research.

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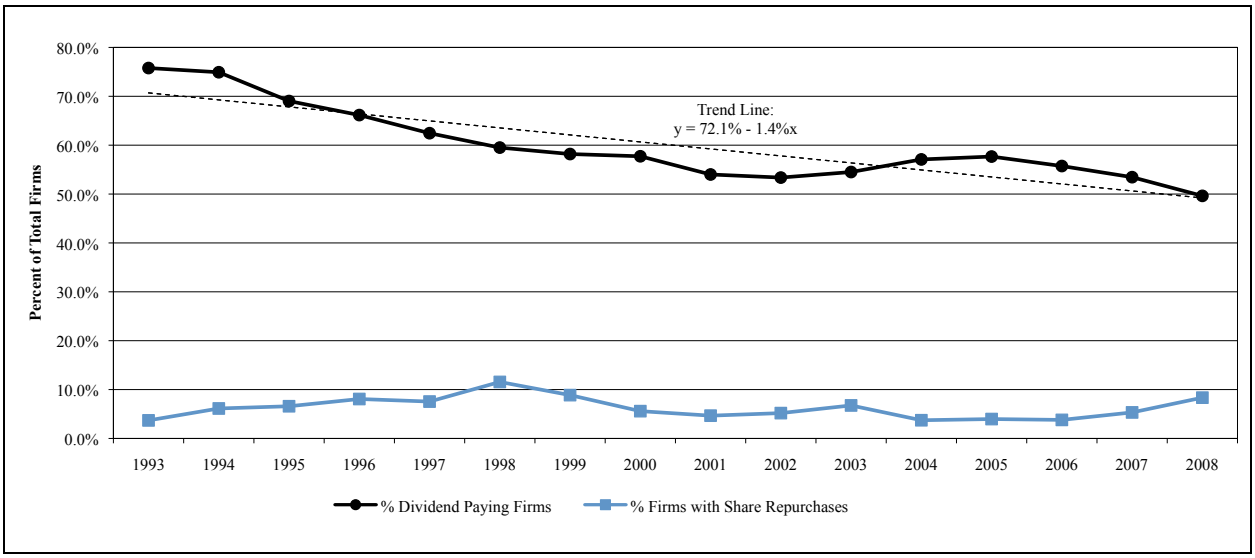
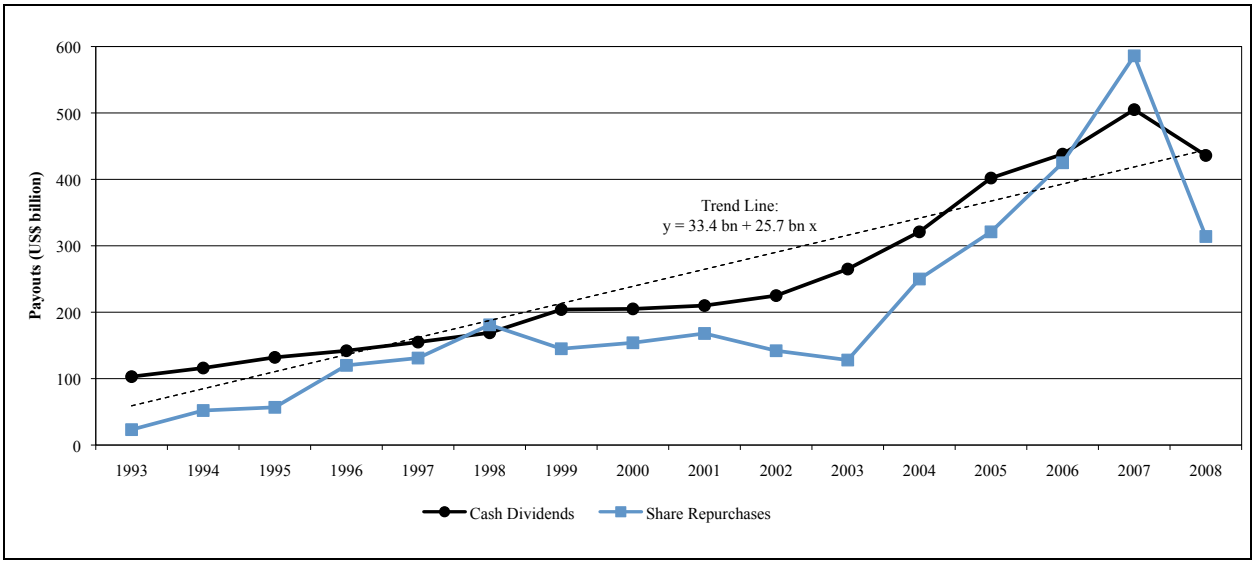
Figure 1: Proportion of Dividend Paying Firms and Dividend Payouts over Time

Panel A: Percent of Firms with Dividend Payments or Share Repurchases from 1993 to 2008



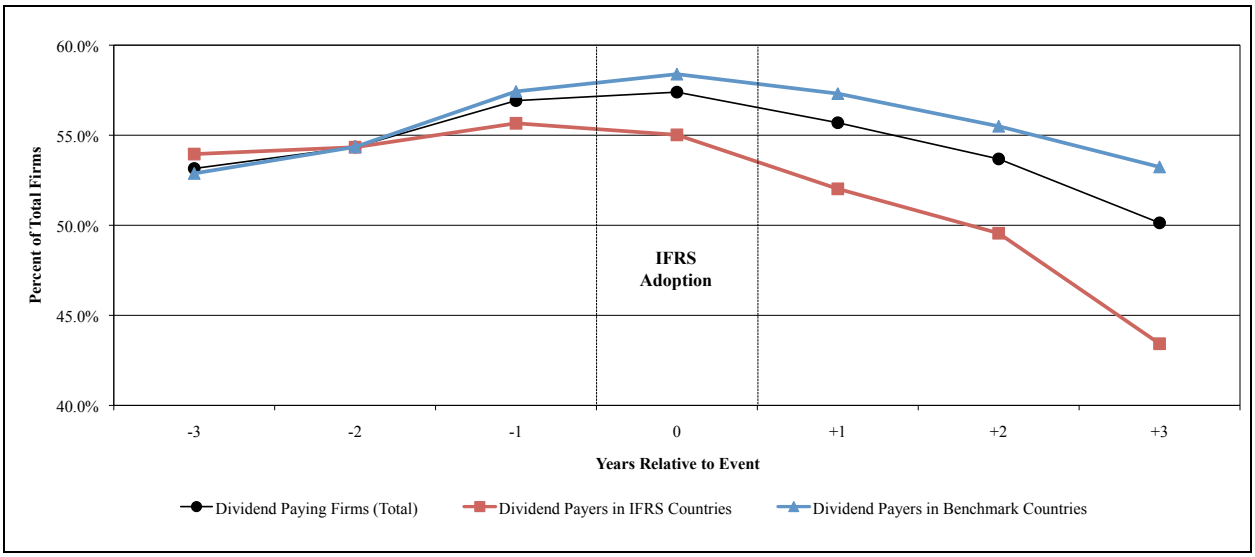
Panel B: Payouts for Dividends or Share Repurchases from 1993 to 2008 (in US$ billion)



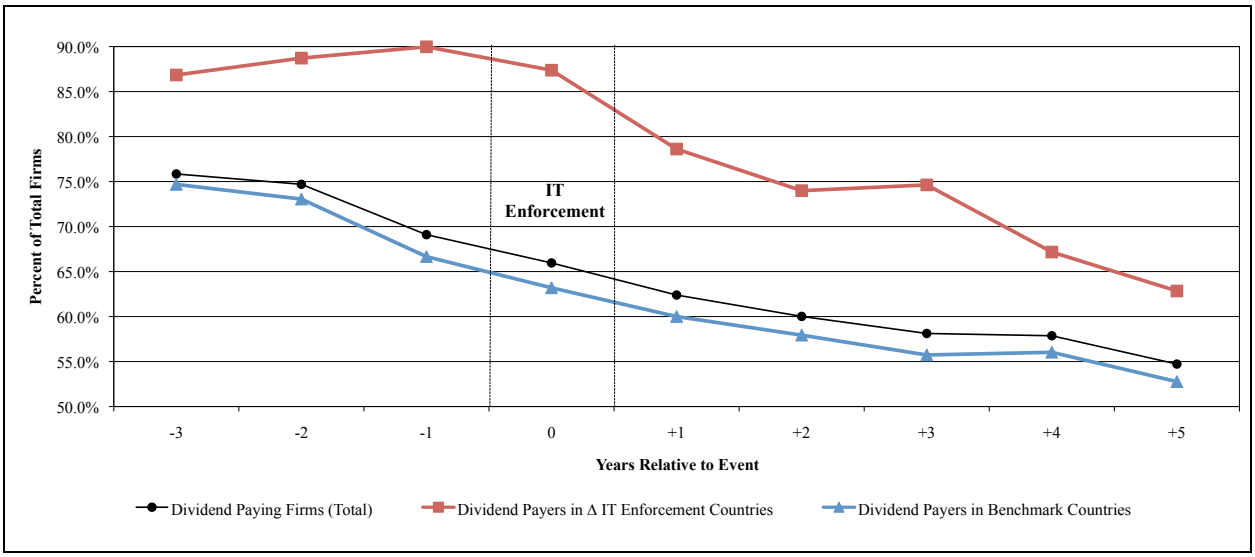
The figure plots the time-series of the percentage of firms with dividend payments or share repurchases (Panel A) and the corresponding US$ amounts (Panel B). The sample comprises all firm-year observations from 38 countries over the 1993 to 2008 period with dividend and control variable data available (see Table 1). We also plot a linear trend line for the dividend payments. We measure dividend payments using the dividends per share item in Worldscope (field 05101). Share repurchase data is from SDC Platinum.

Figure 2: Proportion of Dividend Paying Firms by Informational Event

Panel A: Percent of Firms with Dividend Payments around Mandatory IFRS Adoption



Panel B: Percent of Firms with Dividend Payments around Insider Trading Enforcement



The figure plots the percentage of firms with dividend payments over time around two significant changes in firms' information environment. The base sample comprises all firm-year observations from 38 countries over the 1993 to 2008 period with dividend and control variable data available (see Table 1). In Panel A, we focus on the subset of years surrounding the mandatory introduction of IFRS reporting. In Panel B, we focus on the subset of years surrounding the first enforcement of insider trading (IT) laws. We align the observations in event time, and plot separate lines for the total sample, the treatment sample countries, and the benchmark countries. We measure dividend payments using the dividends per share item in Worldscope (field 05101).

Table 1: Sample Composition by Country and Year

Panel A: Number of Observations, Dividend Payment Behavior, and Institutional Variables by Country

Country	*Unique Firms*	*Firm-Years*	*Dividend Payments*		*Dividend Increases*		*Dividend Decreases*		*Mandatory IFRS Adoption*	*Insider Trading Enforcement*
			N	*%*	*N*	*%*	*N*	*%*		
Argentina	69	537	221	41.2	150	27.9	107	19.9	n.a.	1995
Australia	1,967	10,110	4,300	42.5	3,222	31.9	1,238	12.2	2005	1996
Austria	72	299	193	64.5	129	43.1	73	24.4	2005	n.a.
Belgium	172	936	647	69.1	507	54.2	166	17.7	2005	1994
Bermuda	66	307	177	57.7	123	40.1	47	15.3	n.a.	n.a.
Brazil	363	1,905	1,233	64.7	740	38.8	557	29.2	n.a.	Before 1993
Canada	1,799	9,214	3,178	34.5	2,185	23.7	993	10.8	n.a.	Before 1993
China	1,856	8,790	4,122	46.9	2,496	28.4	2,485	28.3	n.a.	n.a.
Denmark	225	2,088	1,415	67.8	785	37.6	369	17.7	2005	1996
Finland	148	1,082	830	76.7	516	47.7	349	32.3	2005	1993
France	1,049	5,875	3,545	60.3	2,475	42.1	1,207	20.5	2005	Before 1993
Germany	823	3,960	1,827	46.1	1,150	29.0	798	20.2	2005	1995
Greece	355	2,414	1,500	62.1	938	38.9	743	30.8	2005	1996
Hong Kong	1,016	7,626	4,387	57.5	2,810	36.8	1,897	24.9	2005	1994
Hungary	29	120	52	43.3	30	25.0	23	19.2	2005	1995
India	1,001	5,160	4,036	78.2	2,512	48.7	874	16.9	n.a.	1998
Indonesia	397	2,717	1,353	49.8	819	30.1	629	23.2	n.a.	1996
Ireland	94	508	259	51.0	211	41.5	61	12.0	2005	n.a.
Israel	197	1,138	411	36.1	269	23.6	202	17.8	2008	Before 1993
Italy	159	817	494	60.5	319	39.0	208	25.5	2005	1996
Japan	4,594	46,592	39,144	84.0	13,913	29.9	5,922	12.7	n.a.	Before 1993
Korea (South)	1,230	7,853	4,757	60.6	2,506	31.9	1,648	21.0	n.a.	Before 1993
Luxembourg	29	169	116	68.6	93	55.0	27	16.0	2005	n.a.
Malaysia	1,137	8,824	5,794	65.7	3,517	39.9	2,655	30.1	n.a.	1996
Mexico	123	868	396	45.6	288	33.2	137	15.8	n.a.	n.a.
The Netherlands	210	1,267	848	66.9	577	45.5	298	23.5	2005	1994
New Zealand	162	961	681	70.9	456	47.5	237	24.7	2007	n.a.
Norway	312	1,991	1,026	51.5	662	33.2	348	17.5	2005	Before 1993
Philippines	227	1,529	608	39.8	414	27.1	254	16.6	2005	n.a.
Singapore	691	5,004	3,481	69.6	2,047	40.9	1,594	31.9	2003	Before 1993
South Africa	567	3,162	2,030	64.2	1,596	50.5	539	17.0	2005	n.a.
Spain	189	1,250	889	71.1	669	53.5	260	20.8	2005	1998
Sweden	499	3,366	1,886	56.0	1,395	41.4	405	12.0	2005	Before 1993
Switzerland	145	1,284	979	76.2	567	44.2	224	17.4	2005	1995
Taiwan	1,389	9,063	5,182	57.2	3,361	37.1	2,260	24.9	n.a.	Before 1993
Thailand	568	4,544	3,019	66.4	1,682	37.0	1,378	30.3	n.a.	1993
United Kingdom	2,687	17,682	11,651	65.9	9,298	52.6	2,640	14.9	2005	Before 1993
United States	10,281	73,061	29,355	40.2	22,900	31.3	6,302	8.6	n.a.	Before 1993
Total	36,897	254,073	146,022	57.5	88,327	34.8	40,154	15.8		

(continued)

Table 1 (continued)

Panel B: Number of Observations, and Dividend Payment Behavior by Year

Year	*Firm-Years*	*Dividend Payments*		*Dividend Increases*		*Dividend Decreases*	
		N	*%*	*N*	*%*	*N*	*%*
1993	6,090	4,615	75.8	2,547	41.8	1,220	20.0
1994	6,898	5,168	74.9	3,062	44.4	1,215	17.6
1995	8,272	5,710	69.0	3,487	42.2	1,269	15.3
1996	9,677	6,402	66.2	3,937	40.7	1,537	15.9
1997	10,733	6,703	62.5	4,040	37.6	1,751	16.3
1998	11,765	7,001	59.5	4,022	34.2	2,024	17.2
1999	16,069	9,350	58.2	5,539	34.5	2,673	16.6
2000	16,273	9,394	57.7	5,566	34.2	2,534	15.6
2001	17,695	9,556	54.0	5,316	30.0	3,205	18.1
2002	19,711	10,520	53.4	5,876	29.8	3,733	18.9
2003	20,196	11,008	54.5	6,829	33.8	2,938	14.5
2004	21,018	11,998	57.1	7,906	37.6	2,666	12.7
2005	21,846	12,599	57.7	8,218	37.6	3,137	14.4
2006	23,186	12,922	55.7	8,451	36.4	3,136	13.5
2007	24,037	12,849	53.5	8,289	34.5	3,182	13.2
2008	20,607	10,227	49.6	5,242	25.4	3,934	19.1
Total	254,073	146,022	57.5	88,327	34.8	40,154	15.8

The sample comprises a maximum of 254,073 firm-year observations from 38 countries between 1993 and 2008, for which we have sufficient Worldscope and Datastream data to estimate our base regressions (see Table 3). We require firms to have total assets of 10 US$ million, and limit the sample to countries with at least 10 dividend per share observations. We further eliminate firms that voluntarily adopted IFRS before the mandate, or whose shares are cross-listed on a U.S. exchange. The table reports the total number of unique firms as well as the number of firm-years and percentages by country (Panel A) and year (Panel B) for the following cases: (1) firm-years with actual dividend payments measured using the dividends per share item in Worldscope (field 05101), (2) firm-years with increases in dividends per share relative to the prior period (including the initiation of dividend payments), and (3) firm-years with decreases in dividends per share relative to the prior period (including the cessation of dividend payments). Panel A also lists the year of the significant changes in firms' information environment: (i) when IFRS reporting became mandatory in a country (Daske et al. 2008), and (ii) when the first prosecution under insider trading laws took place in a country (Bhattacharya and Daouk 2002).

Table 2: Descriptive Statistics for Variables Used in the Regression Analyses

	N	*Mean*	*Std. Dev.*	*P1*	*P25*	*Median*	*P75*	*P99*
Dependent Variables:								
Dividend Payments (Indicator)	254,073	0.575	0.494					
Dividend Increases (Indicator)	254,073	0.348	0.476					
Dividend Decreases (Indicator)	254,073	0.158	0.365					
Dividend Announcement Returns (3 Days)	102,566	0.036	0.037	0.000	0.011	0.024	0.048	0.177
Control Variables:								
Share Repurchases (Indictor)	254,073	0.060	0.237					
Log(Total Assets) (US$ million)	254,073	12.287	2.001	7.941	10.955	12.170	13.482	17.538
Market-to-Book (Ratio)	254,073	2.281	2.714	0.302	0.897	1.501	2.572	14.648
Leverage (Ratio)	254,073	0.218	0.191	0.000	0.041	0.186	0.349	0.727
Return on Assets (Ratio)	254,073	0.033	0.122	-0.474	0.006	0.041	0.094	0.268
Return Variability (Std. Dev.)	254,073	2.751	1.204	0.772	1.846	2.548	3.477	6.169
Overlap with Earnings Announcement (Indictor)	102,566	0.224	0.417					
Δ Dividend per Share (Ratio)	102,566	0.002	0.015	-0.051	0.000	0.001	0.005	0.052
Δ Earnings per Share (Ratio)	102,566	0.000	0.148	-0.415	-0.013	0.005	0.021	0.353

The sample comprises a maximum of 254,073 firm-year observations from 38 countries between 1993 and 2008 for which sufficient Worldscope financial data and Datastream stock price data exist (see Table 1). The table presents descriptive statistics for the variables used in the regression analyses. We employ the following dependent variables: *Dividend Payments* is a binary indicator marking firm-years with positive dividends per share (set equal to '1'). In firm-years with no dividend data or zero dividends we set this variable to '0'. *Dividend Increases* (*Decreases*) is a binary indicator marking firm-years with a year-to-year increase (decrease) in dividends per share. We measure *Dividend Announcement Returns* as the absolute value of the cumulative abnormal returns over the three days surrounding the declaration date of the annual dividends per share (field 05913). We compute abnormal returns as daily raw returns minus local market returns. We use the following control variables: we define a binary indicator marking firm-years with *Share Repurchases* as indicated in SDC Platinum. *Total Assets* are denominated in US$ million. *Market-to-Book* is the ratio of market value of equity divided by book value of equity. *Leverage* is the ratio of total debt divided by total assets. *Return on Assets* is the ratio of operating income divided by average total assets. We measure *Return Variability* as the annual standard deviation of daily stock returns over a firm's fiscal year (multiplied by 100). *Overlap with Earnings Announcement* is a binary indicator marking dividend announcements within five days of the annual earnings per share report date (field 05904). Δ *Dividend per Share* and Δ *Earnings per Share* are the year-to-year changes in dividends and earnings per share scaled by price per share at the end of the fiscal year. Accounting data and market values are measured as of the fiscal-year end. Except for variables with natural lower or upper bounds, we truncate all variables at the first and 99th percentile, and we use the natural log of the raw values where indicated.

Table 3: Changes in Dividend Payment Behavior around Informational Events

Panel A: Difference-in-Differences Analysis of Dividend Payments around Mandatory IFRS Adoption and Insider Trading Enforcement

		Full Sample				*Constant Sample*		
Mandatory IFRS Adoption:		2001-2004 Pre-Adoption Period (a)	2005-2008 Post-Adoption Period (b)	(b)-(a)		2001-2004 Pre-Adoption Period (a)	2005-2008 Post-Adoption Period (b)	(b)-(a)
Mandatory IFRS Adopters	(i)	54.82% N = 23,912	50.39% N = 25,531	-4.43%***	(i)	68.37% N = 11,448	71.12% N = 10,000	2.75%***
Non-IFRS Adopters	(ii)	54.35% N = 57,059	56.15% N = 61,794	1.80%***	(ii)	66.68% N = 25,712	71.80% N = 25,712	5.12%***
	(i)-(ii)	0.47%	-5.76%***	-6.23%***	(i)-(ii)	1.69%***	-0.68%	-2.37%***
		Full Sample				*Constant Sample*		
Insider Trading Enforcement:		Pre-Enforcement Period (a)	Post-Enforcement Period (b)	(b)-(a)		Pre-Enforcement Period (a)	Post-Enforcement Period (b)	(b)-(a)
Δ Enforcement Countries	(i)	88.55% N = 2,367	61.80% N = 25,934	-26.75%***	(i)	89.01% N = 1,947	76.28% N = 9,203	-12.73%***
Non-Enforcement/Always Enforcement Countries	(ii)	71.01% N = 18,943	56.21% N = 117,153	-14.80%***	(ii)	74.43% N = 15,773	66.14% N = 60,312	-8.29%***
	(i)-(ii)	17.54%***	5.59%***	-11.95%***	(i)-(ii)	14.58%***	10.14%***	-4.44%***

(continued)

Table 3 (continued)

Panel B: Logit Regression Analysis of Dividend Payments around Mandatory IFRS Adoption and Insider Trading Enforcement

	Mandatory IFRS Adoption				*Insider Trading Enforcement*			
	(1) Dividend Payments (Full Sample)	*(2) Dividend Payments (Constant Sample)*	*(3) Dividend Increases (Full Sample)*	*(4) Dividend Decreases (Full Sample)*	*(1) Dividend Payments (Full Sample)*	*(2) Dividend Payments (Constant Sample)*	*(3) Dividend Increases (Full Sample)*	*(4) Dividend Decreases (Full Sample)*
Informational Events:								
IFRS Adoption	-0.350***	-0.467***	-0.262*	0.124*	–	–	–	–
	(-3.64)	(-3.27)	(-1.76)	(1.69)				
IT Enforcement	–	–	–	–	-0.534**	-0.694***	-0.305**	0.464***
					(-2.28)	(-3.18)	(-2.12)	(2.58)
Control Variables:								
Dividend Payments$_{t-1}$	4.058***	4.493***	2.057***	–	4.089***	4.707***	2.079***	–
	(9.36)	(8.14)	(4.25)		(7.62)	(7.52)	(3.55)	
Share Repurchases	0.085	0.038	0.099	-0.129	0.178***	0.059	0.206***	-0.233***
	(0.97)	(0.54)	(1.45)	(-1.54)	(2.79)	(1.36)	(3.19)	(-6.76)
Log(Total Assets)	0.235***	0.195***	0.176***	-0.167***	0.188***	0.178***	0.116***	-0.137***
	(9.16)	(10.74)	(9.43)	(-9.04)	(6.65)	(6.71)	(3.03)	(-5.27)
Market-to-Book	-0.073***	-0.122***	-0.008	-0.017	-0.081***	-0.103***	-0.005	-0.013
	(-5.83)	(-5.46)	(-1.00)	(-0.66)	(-6.38)	(-4.13)	(-0.65)	(-0.86)
Leverage	-1.096***	-1.354***	-0.249***	0.657***	-1.667***	-1.784***	-0.385*	1.002***
	(-3.58)	(-3.38)	(-3.06)	(5.69)	(-4.32)	(-3.44)	(-1.95)	(15.07)
Return on Assets	10.541***	11.789***	8.746***	-8.378***	10.776***	10.286***	8.986***	-9.979***
	(7.79)	(5.66)	(6.96)	(-11.57)	(4.63)	(3.57)	(5.42)	(-7.67)
Return Variability	-0.469***	-0.529***	-0.180**	0.330***	-0.634***	-0.761***	-0.308***	0.358***
	(-11.56)	(-7.97)	(-2.42)	(5.91)	(-17.46)	(-20.75)	(-4.17)	(11.50)
Country-, Industry-, and Year-Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included
Pseudo R^2	65.4%	68.5%	29.8%	15.6%	67.2%	70.1%	30.7%	14.6%
N	168,296	72,872	168,296	90,288	164,397	87,235	164,397	96,208
N Treatment Firm-Years	25,531	10,000	25,531	12,909	25,934	9,203	25,934	16,001
N Treatment Firms	9,073	2,681	9,073	4,580	5,781	1,104	5,781	3,860

The table reports changes in firms' dividend payment behavior following a significant change in the information environment. We consider two informational events: (i) the mandatory introduction of IFRS reporting (from 2001 to 2008), and (ii) the first enforcement of insider trading (IT) laws (from 1993 to 2004). We report results for the full sample (see Table 1) and a 'constant' sample for which we require at least eight observations per firm. In Panel A, we report the number of observations and the percentage of dividend paying firms across treatment and benchmark sample countries before and after the informational event. For mandatory IFRS we use December 31, 2005, and for IT enforcement the year 1996 as cutoff for the benchmark firms. We indicate statistical significance of differences across cells with *t*-tests. In Panel B, we report logit coefficient estimates and (in parentheses) *z*-statistics based on robust standard errors clustered by country from regressing *Dividend Payments* (or *Dividend Increases* and *Decreases*) on an informational event indicator plus controls. The *IFRS Adoption* variable takes on the value of '1' for fiscal years ending on or after December 31 of the year of the IFRS mandate; the *IT Enforcement* variable takes on the value of '1' for all fiscal years ending in or after the year of the first IT prosecution. For details on the remaining variables see Tables 1 and 2. We use the natural log of the raw values and lag the variables by one year where indicated. We include country-, industry, and year-fixed effects in the regressions, but do not report the coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Table 4: Assessing Identification of the Changes in Dividend Payment Behavior around Informational Events

Panel A: Analysis of Years Leading up to and Following the Informational Events

Dividend Payments as Dependent Variable	*IFRS Adoption*		*IT Enforcement*	
	(1) Dividend Payments (Full Sample)	*(2) Dividend Payments (Constant Sample)*	*(1) Dividend Payments (Full Sample)*	*(2) Dividend Payments (Constant Sample)*
Years Relative to Event Year (t = 0):				
Years t–2 and t–1	0.113	0.030	-0.040	-0.143
	(0.85)	(0.15)	(-0.19)	(-0.51)
Years t and t+1	-0.070	-0.170	-0.613*	-0.754**
	(-0.45)	(-0.77)	(-1.89)	(-2.27)
Years $t \geq +2$	-0.439***	-0.702***	-0.547**	-0.801***
	(-2.60)	(-2.73)	(-2.31)	(-3.19)
F-Test for Difference across Coefficients [p-value]				
$Year_{t-2,\, t-1} = Year_{t,\, t+1}$	[0.013]	[0.024]	[0.124]	[0.110]
$Year_{t,\, t+1} = Year_{t \geq +2}$	[0.040]	[0.081]	[0.831]	[0.879]
Control Variables	Included	Included	Included	Included
Fixed Effects	Included	Included	Included	Included
N	168,296	72,872	164,397	87,235

Panel B: Counterfactually Assigning Event Years to Benchmark Countries

Dividend Payments as Dependent Variable	*IFRS Adoption*		*Insider Trading Enforcement*	
'True' Event:				
IFRS Adoption	-0.368***	–	–	–
	(-4.15)			
IT Enforcement	–	-0.676***	-0.667***	-0.537**
		(-2.77)	(-2.75)	(-2.28)
Counterfactual Event:				
Non-IFRS Adoption Countries	0.125	–	–	–
	(1.27)			
Non-IT Enforcement Countries	–	-0.293	–	–
		(-1.50)		
Always-IT Enforcement Countries	–	–	-0.286	–
			(-1.45)	
Never-IT Enforcement Countries	–	–	–	-0.192
				(-0.42)
F-Test for Difference across Coefficients [p-value]	[0.000]	[0.090]	[0.094]	[0.458]
Control Variables	Included	Included	Included	Included
Fixed Effects	Included	Included	Included	Included
N	168,296	164,397	164,397	164,397

(continued)

Table 4 (continued)

Panel C: Changes in Dividend Payments for Firms Not Directly Affected by the Informational Event

Dividend Payments as Dependent Variable	*Around Mandatory IFRS Adoption*		*Around Insider Trading Enforcement*	
	(1) Voluntary IFRS Firms	*(2) U.S. Cross-Listed Firms*	*(1) Voluntary IFRS Firms*	*(2) U.S. Cross-Listed Firms*
Counterfactual Firms:				
Voluntary IFRS Firms	-0.223	–	0.266	–
	(-1.47)		(0.62)	
U.S. Cross-listed Firms	–	0.153	–	0.332
		(0.61)		(0.40)
Informational Event Firms:				
IFRS Adoption	-0.344***	-0.337***	–	–
	(-3.62)	(-3.51)		
IT Enforcement	–	–	-0.528**	-0.532**
			(-2.26)	(-2.27)
F-Test for Difference across Coefficients [p-value]	[0.291]	[0.040]	[0.159]	[0.322]
Indicator for Counterfactual Firms	Included	Included	Included	Included
Control Variables	Included	Included	Included	Included
Fixed Effects	Included	Included	Included	Included
N	174,312	170,153	164,814	164,620

The table assesses the identification of changes in firms' dividend payment behavior following a significant change in the information environment. We consider two informational events: (i) the mandatory introduction of IFRS reporting, and (ii) the first enforcement of insider trading (IT) laws. If not indicated otherwise, we build on our base specification for the full sample (see Model 1 in Panel B of Table 3), and use *Dividend Payments* as the dependent variable. In Panel A, instead of estimating a single event indicator, we include three separate indicator variables for the two years leading up to the event (years t–2 and t–1), the two years around the event (years t and t+1), and the remaining years ($t \geq +2$). In Panel B, we report the 'true' informational event indicators together with indicators for counterfactual events for the benchmark firms. That is, for each benchmark sample country we randomly assign a 'true' event date and set the counterfactual event indicator to '1' beginning on that date. For IT enforcement, we do this separately for all benchmark countries (*Non-IT Enforcement*), countries in which the first IT prosecution took place before the start of our sample (*Always IT-Enforcement*), and countries without IT prosecution over the sample period (*Never-IT Enforcement*). In Panel C, we use firms that voluntarily switched to IFRS reporting before it became mandatory (Daske et al. 2012) and foreign firms whose shares are listed on a U.S. exchange (Hail and Leuz 2009) as an additional benchmark group. That is, we add a separate binary indicator for these counterfactual firms to the model (*Voluntary IFRS Firms* and *U.S. Cross-listed Firms*), and code it as '1' beginning on the informational event date. To capture selection effects, we also include a binary indicator variable that takes on the value of '1' for all firm-years of the counterfactual firms. We require the voluntary IFRS and U.S. cross-listed firms to have at least one observation pre and post the informational event. The table reports logit coefficient estimates and (in parentheses) z-statistics based on robust standard errors clustered by country. We also report p-values from F-tests comparing coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Table 5: Sensitivity Analyses of the Changes in Dividend Payment Behavior around Informational Events

Panel A: Mandatory IFRS Adoption as Informational Event

Dividend Payments as Dependent Variable	*(1) Plus CFO over Total Assets as Control*	*(2) Plus Retained Earnings as Control*	*(3) Plus Tax Rate Wedge as Control*	*(4) Firm-Fixed Effects (Full Sample)*	*(5) Firm-Fixed Effects (Constant Sample)*	*(6) No U.S. Observations*	*(7) No U.S. Observations & No Year 2008*
Informational Events:							
IFRS Adoption	-0.335***	-0.186	-0.312***	-0.518**	-0.740***	-0.311***	-0.282***
	(-3.39)	(-1.33)	(-3.15)	(-2.26)	(-3.20)	(-2.60)	(-3.06)
Control Variables:							
Dividend Payments$_{t-1}$	4.028***	3.802***	4.059***	1.100***	1.554***	3.561***	3.462***
	(9.17)	(7.29)	(9.36)	(4.53)	(6.64)	(17.21)	(16.79)
Share Repurchases	0.071	0.054	0.089	0.306***	0.256***	0.233	0.240
	(0.77)	(0.51)	(0.95)	(3.92)	(3.28)	(1.48)	(1.25)
Log(Total Assets)	0.233***	0.184***	0.235***	1.077***	0.918***	0.269***	0.258***
	(9.23)	(6.02)	(9.18)	(7.22)	(4.08)	(10.85)	(9.85)
Market-to-Book	-0.077***	-0.043***	-0.074***	-0.044**	-0.016	-0.072***	-0.076***
	(-6.22)	(-2.66)	(-5.64)	(-2.06)	(-0.54)	(-4.23)	(-4.41)
Leverage	-1.029***	-0.953***	-1.093***	-4.618***	-5.089***	-1.462***	-1.496***
	(-3.40)	(-2.64)	(-3.59)	(-6.92)	(-4.72)	(-8.97)	(-8.78)
Return on Assets	10.160***	10.500***	10.544***	15.223***	16.586***	12.261***	13.032***
	(7.46)	(5.88)	(7.79)	(8.06)	(5.78)	(11.67)	(11.46)
Return Variability	-0.468***	-0.563***	-0.468***	-0.364***	-0.411***	-0.478***	-0.530***
	(-11.98)	(-14.09)	(-11.85)	(-5.26)	(-5.20)	(-9.22)	(-9.13)
CFO over Total Assets	1.224***	–	–	–	–	–	–
	(3.88)						
Retained Earnings	–	0.573***	–	–	–	–	–
		(2.89)					
Tax Rate Wedge	–	–	-0.005	–	–	–	–
			(1.26)				
Country-, Industry-, and Year-Fixed Effects	Included	Included	Included	Year- & Firm-Fixed Effects	Year- & Firm-Fixed Effects	Included	Included
Pseudo R^2	65.6%	67.3%	65.4%	29.3%	35.6%	61.5%	61.6%
N	165,351	106,993	168,296	46,485	20,928	128,043	111,600

(continued)

Table 5 (continued)

Panel B: Insider Trading Enforcement as Informational Event

Dividend Payments as Dependent Variable	*(1) Plus CFO over Total Assets as Control*	*(2) Plus Retained Earnings as Control*	*(3) Plus Tax Rate Wedge as Control*	*(4) Firm-Fixed Effects (Full Sample)*	*(5) Firm-Fixed Effects (Constant Sample)*	*(6) No U.S. Observations*	*(7) Without Year of Δ IT Enforcement*
Informational Events:							
IT Enforcement	-0.563**	-0.614**	-0.507**	-0.704	-0.716*	-0.548**	-0.551**
	(-2.36)	(-2.19)	(-2.13)	(-1.64)	(-1.82)	(-2.22)	(-2.22)
Control Variables:							
Dividend Payments$_{t-1}$	4.095***	4.076***	4.099***	1.417***	2.071***	3.339***	4.088***
	(7.51)	(7.08)	(7.62)	(5.10)	(8.74)	(14.92)	(7.57)
Share Repurchases	0.164***	0.157**	0.172***	0.248**	0.157	0.331	0.177***
	(2.77)	(2.37)	(3.12)	(2.07)	(0.92)	(1.52)	(2.79)
Log(Total Assets)	0.190***	0.174***	0.189***	1.202***	1.000***	0.231***	0.188***
	(7.45)	(5.78)	(6.74)	(10.66)	(6.53)	(7.47)	(6.67)
Market-to-Book	-0.085***	-0.045***	-0.081***	-0.002	-0.025	-0.077***	-0.082***
	(-6.62)	(-3.06)	(-6.37)	(-0.11)	(-0.85)	(-4.25)	(-6.43)
Leverage	-1.657***	-1.321***	-1.669***	-5.022***	-4.980***	-2.253***	-1.665***
	(-3.92)	(-3.91)	(-4.33)	(-6.87)	(-5.57)	(-9.48)	(-4.30)
Return on Assets	10.320***	9.630***	10.747***	14.641***	15.188***	15.030***	10.747***
	(4.44)	(4.16)	(4.60)	(4.45)	(3.27)	(7.78)	(4.63)
Return Variability	-0.631***	-0.595***	-0.636***	-0.518***	-0.627***	-0.581***	-0.634***
	(-17.75)	(-15.43)	(-16.93)	(-10.04)	(-8.64)	(-14.18)	(-17.53)
CFO over Total Assets	1.266***	–	–	–	–	–	–
	(5.12)						
Retained Earnings	–	0.519***	–	–	–	–	–
		(2.68)					
Tax Rate Wedge	–	–	0.003	–	–	–	–
			(0.53)				
Country-, Industry-, and Year-Fixed Effects	Included	Included	Included	Year- & Firm-Fixed Effects	Year- & Firm-Fixed Effects	Included	Included
Pseudo R^2	67.4%	69.0%	67.3%	34.3%	41.2%	60.3%	67.1%
N	159,913	148,559	163,743	45,747	28,098	110,577	163,304

The table reports sensitivity analyses of our base specification (see Model 1 in Panel B of Table 3) examining changes in firms' dividend payment behavior around (i) the mandatory introduction of IFRS reporting (Panel A), and (ii) the first enforcement of insider trading (IT) laws (Panel B). We use *Dividend Payments* as the dependent variable. In Panel A, we report results for the following models: (1) we add net cash flows from operations divided by total assets (*CFO over Total Assets*) as control variable. (2) We include *Retained Earnings* divided by the book value of total equity in the model. (3) We add the yearly *Tax Rate Wedge* as control variable, i.e., the difference between the dividend tax rate and the capital gains tax rate for individuals in a country. We collect tax rate information from the OECD and from publications by the big audit firms. Next, we replace the country and industry-fixed effects with firm-fixed effects for either the full sample (4) or the constant sample (5). (6) We exclude the largest sample country from the analysis (i.e., the U.S.). (7) We further exclude the year of the financial crisis (i.e., 2008). In Panel B, we replace model (7) with a model that omits the year in which the first IT prosecution took place in a country. The table reports logit coefficient estimates and (in parentheses) *z*-statistics based on robust standard errors clustered by country. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Table 6: Changes in the Information Content of Dividend Announcements around Informational Events

Panel A: OLS Regression Analysis of Dividend Announcement Returns around Mandatory IFRS Adoption and Insider Trading Enforcement

	Mandatory IFRS Adoption				*Insider Trading Enforcement*			
3-Day Absolute Dividend Announcement Returns as Dependent Variable	*(1) Dividend Payments* (Full Sample)	*(2) Dividend Payments* (Constant Sample)	*(3) Dividend Increases* (Full Sample)	*(4) Dividend Decreases* (Full Sample)	*(1) Dividend Payments* (Full Sample)	*(2) Dividend Payments* (Constant Sample)	*(3) Dividend Increases* (Full Sample)	*(4) Dividend Decreases* (Full Sample)
Informational Events:								
IFRS Adoption	-0.004**	-0.005***	-0.004**	-0.007**	–	–	–	–
	(-2.36)	(-3.33)	(-2.08)	(-2.57)				
IT Enforcement	–	–	–	–	-0.004*	-0.004**	-0.004	-0.006***
					(-1.86)	(-2.29)	(-1.20)	(-5.53)
Control Variables:								
Overlap with Earnings	0.005***	0.004**	0.006***	0.002	0.002***	0.001**	0.002**	0.003**
Announcement	(3.73)	(2.39)	(5.14)	(1.31)	(2.83)	(2.28)	(2.21)	(2.24)
Δ Dividend per Share	0.049***	0.055**	0.183***	-0.088***	0.018	-0.009	0.176***	-0.106***
	(3.11)	(2.72)	(5.04)	(-2.83)	(0.82)	(-0.38)	(5.69)	(-3.51)
Δ Earnings per Share	-0.003	-0.001	0.001	-0.004**	0.001	0.003	0.005***	-0.000
	(-1.38)	(-0.25)	(0.35)	(-2.61)	(1.03)	(1.53)	(2.93)	(-0.04)
Log(Total Assets)	-0.002***	-0.002***	-0.003***	-0.002***	-0.002***	-0.002***	-0.002***	-0.001***
	(-8.31)	(-9.62)	(-6.98)	(-4.43)	(-10.39)	(-7.94)	(-7.63)	(-8.66)
Market-to-Book	0.000	-0.000	0.000	-0.000	0.000	0.000	0.000*	-0.000
	(0.23)	(-0.40)	(0.43)	(-1.51)	(1.23)	(0.66)	(1.79)	(-0.00)
Leverage	0.008**	0.008	0.007*	0.002	0.004*	0.004	0.001	0.002
	(2.11)	(1.67)	(1.70)	(1.10)	(1.88)	(1.44)	(0.75)	(1.42)
Return on Assets	0.014	0.013	0.007	0.012*	0.004	-0.006	0.004	-0.005
	(1.31)	(0.76)	(1.15)	(1.69)	(0.38)	(-0.47)	(0.58)	(-0.48)
Country-, Industry-, and Year-Fixed Effects	Included	Included	Included	Included	Included	Included	Included	Included
Adjusted R^2	7.0%	6.9%	8.8%	8.2%	7.9%	8.7%	9.5%	7.6%
N	63,723	35,326	40,608	12,466	65,720	42,862	40,612	13,496

(continued)

Table 6 (continued)

Panel B: Sensitivity Analyses of the Dividend Announcement Returns around Mandatory IFRS Adoption and Insider Trading Enforcement

	Mandatory IFRS Adoption				*Insider Trading Enforcement*			
3-Day Absolute Dividend Announcement Returns as Dependent Variable	*(1) Firm-Fixed Effects (Full Sample)*	*(2) Firm-Fixed Effects (Constant Sample)*	*(3) No U.S. Observations*	*(4) No U.S. Observations & No Year 2008*	*(1) Firm-Fixed Effects (Full Sample)*	*(2) Firm-Fixed Effects (Constant Sample)*	*(3) No U.S. Observations*	*(4) Without Year of Δ IT Enforcement*
Informational Events:								
IFRS Adoption	-0.004	-0.004***	-0.004**	-0.005**	–	–	–	–
	(-1.66)	(-2.75)	(-2.03)	(-2.23)				
IT Enforcement	–	–	–	–	-0.002	-0.003	-0.005**	-0.005*
					(-1.10)	(-1.66)	(-2.40)	(-1.94)
Control Variables:								
Overlap with Earnings	0.004**	0.003	0.005***	0.005***	0.003***	0.002***	0.002***	0.002**
Announcement	(2.07)	(1.27)	(3.61)	(3.68)	(4.08)	(4.07)	(2.92)	(2.67)
Δ Dividend per Share	0.029**	0.024	0.056***	0.060***	0.004	-0.016	0.028	0.018
	(2.14)	(1.10)	(3.46)	(3.10)	(0.14)	(-0.56)	(1.21)	(0.82)
Δ Earnings per Share	-0.002	0.000	-0.001	0.001	0.002*	0.003	0.002*	0.001
	(-1.36)	(0.02)	(-0.88)	(0.79)	(1.76)	(1.68)	(1.77)	(0.86)
Log(Total Assets)	-0.001	-0.001	-0.003***	-0.003***	-0.002**	-0.002	-0.002***	-0.002***
	(-0.54)	(-0.62)	(-11.67)	(-9.01)	(-2.26)	(-1.61)	(-10.67)	(-10.32)
Market-to-Book	-0.001	-0.001	0.000	0.000	-0.000	-0.000	0.000	0.000
	(-1.28)	(-1.67)	(0.77)	(0.83)	(-0.85)	(-1.45)	(0.89)	(1.19)
Leverage	0.006	0.003	0.009**	0.009**	0.004	0.002	0.005**	0.003*
	(1.17)	(0.50)	(2.57)	(2.43)	(0.75)	(0.52)	(2.72)	(1.83)
Return on Assets	0.011	0.001	0.013	0.011	0.001	-0.002	0.009	0.003
	(0.88)	(0.06)	(1.13)	(1.13)	(0.08)	(-0.12)	(0.97)	(0.37)
Country-, Industry-, and Year-Fixed Effects	Year- & Firm-Fixed Effects	Year- & Firm-Fixed Effects	Included	Included	Year- & Firm-Fixed Effects	Year- & Firm-Fixed Effects	Included	Included
Adjusted R^2	35.2%	29.0%	6.1%	6.3%	33.8%	24.5%	7.2%	8.0%
N	63,723	35,326	53,550	48,670	65,720	42,862	49,592	65,044

(continued)

Table 6 (continued)

Panel C: Changes in Dividend Announcement Returns for Firms Not Directly Affected by the Informational Event

3-Day Absolute Dividend Announcement Returns as Dependent Variable	*Around Mandatory IFRS Adoption*		*Around Insider Trading Enforcement*	
	(1) Voluntary IFRS Firms	*(2) U.S. Cross-Listed Firms*	*(1) Voluntary IFRS Firms*	*(2) U.S. Cross-Listed Firms*
Counterfactual Firms:				
Voluntary IFRS Firms	-0.004	–	0.018	–
	(-1.62)		(1.20)	
U.S. Cross-listed Firms	–	0.000	–	0.010***
		(0.06)		(4.28)
Informational Event Firms:				
IFRS Adoption	-0.004**	-0.004**	–	–
	(-2.37)	(-2.39)		
IT Enforcement	–	–	-0.004*	-0.004*
			(-1.85)	(-1.86)
F-Test for Difference across Coefficients [p-value]	[0.778]	[0.214]	[0.159]	[0.004]
Indicator for Counterfactual Firms	Included	Included	Included	Included
Control Variables	Included	Included	Included	Included
Fixed Effects	Included	Included	Included	Included
N	65,430	64,490	65,738	65,789

The table reports changes in the information content of firms' dividend announcements following a significant change in the information environment. We consider two informational events: (i) the mandatory introduction of IFRS reporting (from 2001 to 2008), and (ii) the first enforcement of insider trading (IT) laws (from 1993 to 2004). We report results for the full sample (see Table 1) and, where indicated, a 'constant' sample for which we require at least eight observations per firm. The table reports OLS coefficient estimates and (in parentheses) *t*-statistics based on robust standard errors clustered by country from regressing the absolute values of the three-day *Dividend Announcement Returns* on an informational event indicator plus controls. The *IFRS Adoption* variable takes on the value of '1' for fiscal years ending on or after December 31 of the year of the IFRS mandate; the *IT Enforcement* variable takes on the value of '1' for all fiscal years ending in or after the year of the first IT prosecution. For details on the remaining variables see Tables 1 and 2. In Panel A, we report results for (1) all announcements of dividend payments, (2) the announcement of dividend per share increases only, and (3) the announcement of dividend per share decreases only. In Panel B, we report the following sensitivity analyses: we replace the country and industry-fixed effects with firm-fixed effects for either the full sample (1) or the constant sample (2). (3) We exclude the largest sample country from the analysis (i.e., the U.S.). (4) We further exclude the year of the financial crisis (i.e., 2008) or, in the IT setting, omit the year in which the first IT prosecution took place in a country. In Panel C, we use firms that voluntarily switched to IFRS reporting before it became mandatory (Daske et al. 2012) and foreign firms whose shares are listed on a U.S. exchange (Hail and Leuz 2009) as an additional benchmark group. That is, we add a separate binary indicator for these counterfactual firms to the model (*Voluntary IFRS Firms* and *U.S. Cross-listed Firms*), and code it as '1' beginning on the informational event date. To capture selection effects, we also include a binary indicator variable that takes on the value of '1' for all firm-years of the counterfactual firms. We require the voluntary IFRS and U.S. cross-listed firms to have at least one observation pre and post the informational event. Panel C also reports *p*-values from *F*-tests comparing coefficients. Throughout the table, we include country-, industry, and year-fixed effects in the regressions, but do not report the coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).

Table 7: Analysis of Changes in Dividend Payments around Alternative Informational Events

	Voluntary IFRS Adoption		*U.S. Exchange Cross-Listing*	
	(1) Dividend Payments (Logit Regression)	*(2) 3-Day Absolute Dividend Announcement Ret. (OLS Regression)*	*(1) Dividend Payments (Logit Regression)*	*(2) 3-Day Absolute Dividend Announcement Ret. (OLS Regression)*
Informational Events:				
Voluntary IFRS Adoption	-0.444***	-0.006***	–	–
	(-2.78)	(-3.35)		
U.S. Exchange Listing	–	–	-0.115	-0.000
			(-1.00)	(-0.19)
Control Variables:				
Dividend Payments$_{t-1}$	4.075***	–	4.174***	–
	(7.65)		(8.99)	
Share Repurchases	0.180***	–	0.156***	–
	(2.85)		(2.77)	
Overlap with Earnings Announcement	–	0.002***	–	0.003**
		(2.88)		(2.52)
Δ Dividend per Share	–	0.018	–	0.031**
		(0.85)		(2.16)
Δ Earnings per Share	–	0.001	–	-0.001
		(1.04)		(-0.73)
Log(Total Assets)	0.190***	-0.002***	0.216***	-0.002***
	(6.70)	(-10.50)	(8.01)	(-10.07)
Market-to-Book	-0.081***	0.000	-0.071***	0.000
	(-6.45)	(1.24)	(-5.72)	(0.75)
Leverage	-1.666***	0.004*	-1.376***	0.006**
	(-4.34)	(1.88)	(-4.15)	(2.26)
Return on Assets	10.793***	0.004	10.181***	0.010
	(4.64)	(0.41)	(5.90)	(0.93)
Return Variability	-0.635***	–	-0.539***	–
	(-17.79)		(-14.85)	
Indicator for Counterfactual Firms	0.323***	0.003	-0.102	0.003*
	(2.70)	(1.11)	(-0.98)	(1.92)
Country-, Industry-, and Year-Fixed Effects	Included	Included	Included	Included
Pseudo R^2 (Adjusted R^2)	67.0%	7.9%	65.4%	7.0%
N	166,538	66,260	257,932	103,845
N Treatment Firm-Years	1,035	254	2,453	847
N Treatment Firms	325	114	354	140

The table reports changes in firms' dividend payment behavior and in the information content of firms' dividend announcements following a significant change in the information environment. We consider two (firm-level) informational events: (i) the voluntary switch to IFRS reporting before it became mandatory (from 1993 to 2004), and (ii) the cross listing of foreign firms' shares on a U.S. exchange (from 1993 to 2008). The sample consists of our base sample (see Table 1) plus the voluntary IFRS and U.S. cross-listed firms. We require the voluntary IFRS and U.S. cross-listed firms to have at least one observation pre and post the informational event. The table reports logit (OLS) coefficient estimates and (in parentheses) *z*-statistics (*t*-statistics) based on robust standard errors clustered by country from estimating Model 1 in Panel B of Table 3 (in Panel A of Table 6). The *Voluntary IFRS Adoption* variable takes on the value of '1' for fiscal years with reporting under the new accounting standards (as identified by Daske et al. 2012); the *U.S. Exchange Listing* variable takes on the value of '1' for all fiscal years following the initiation of the cross-listing program (as identified by Hail and Leuz 2009). To capture selection effects, we also include a binary indicator variable that takes on the value of '1' for all firm-years of the voluntary IFRS and U.S. cross-listed firms. For details on the remaining variables see Tables 1 and 2. We include country-, industry, and year-fixed effects in the regressions, but do not report the coefficients. ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels (two-tailed).