THE INFORMATION CONTENT OF ACCOUNTING ACCRUALS WHEN ACCOMPANIED BY CASH OR STOCK DIVIDENDS

by

Elisabeth Dedman*
Nottingham University Business School

Wei Jiang
Manchester Business School

Andrew Stark
Manchester Business School

This draft 09/01/2016

JEL classifications: Payout policy (G35); value of firms (G32)**;** information and market efficiency (G14)

Keywords: accruals; cash dividends; stock dividends.

*Corresponding author: elisabeth.dedman@nottingham.ac.uk

THE INFORMATION CONTENT OF ACCOUNTING ACCRUALS WHEN ACCOMPANIED BY CASH OR STOCK DIVIDENDS

Abstract

Unusually high accounting accruals are observable to sophisticated investors, who must then decide whether the accruals represent managerial manipulation of reported earnings or an indication of future firm performance. We hypothesise that the distribution of dividends contains information relevant to this decision. We predict that income-increasing accruals will be lower when a *cash* dividend is paid but that remaining reported accruals contain information relevant to future earnings and market value. We predict that *stock* dividends are issued to smooth EPS growth and are therefore positively associated with income-increasing accruals, also conveying information about future earnings and market value. Our analysis strongly supports our hypotheses.

THE INFORMATION CONTENT OF ACCOUNTING ACCRUALS WHEN ACCOMPANIED BY CASH OR STOCK DIVIDENDS

1. INTRODUCTION

The flexibility inherent in an accrual accounting system allows expert managers to convey their private information to stakeholders of the firm *via* company financial reports (Healy and Palepu, 1993). The reporting of expenses matched to revenues for a period is designed to allow financial statements to represent a fairer picture of the organisation's performance over a period than would be obtained by reporting on a cash basis (Dechow, 1994). There are, however, drawbacks to enabling managers to exercise discretion in their accounting choices. For example, opportunistic managers may manipulate accruals in order to report income which meets or beats analysts' earnings forecasts (Graham, Harvey and Rajgopal, 2005). Managers sometimes manage reported earnings for contracting purposes, either *ex ante* or *ex post*, for example in order to set or achieve bonus targets (e.g. Healy, 1985; Bergstresser and Philippon, 2006). Such practices diminish the quality of the information conveyed through the financial reports by reducing the predictive ability of earnings in relation to future cash flows (Badertscher, Collins and Lys, 2012). Without some form of credible assurance, investors may therefore discount income reported on an accruals basis, particularly where reported accruals are positive (i.e. income-increasing) and comparatively large.

Relatively unsophisticated investors can readily observe the magnitude of total accruals from the financial statements as they are essentially the difference between earnings and operating cash flows for a period. More sophisticated investors may further be able to assess whether a firm is reporting unexpectedly high accruals as various ways of measuring expected ('normal') accruals have been developed. The difference between actual and expected accruals is often interpreted as the amount by which reported earnings have been managed. It is not necessarily the case, however, that unexpectedly high levels of accruals are a result of opportunistic income manipulation. For example, a firm may have won a sales contract which requires them to build up inventories. This would result in high reported accruals which truly reflect the manager's positive private information about future performance.

While sophisticated investors may be able to calculate the extent to which accruals deviate from expectations, they are not easily able to determine *ex ante* whether unexpected accruals are a result of opportunistic earnings management or a reflection of managers' private information. One way for managers to signal that reported earnings are sustainable, and not due to the manipulation of reversible accruals, is to concurrently distribute cash dividends. A cash distribution credibly indicates that the quality of reported earnings is high. The reasons for this are that: (a) managers rarely

cut dividends so they represent a commitment to shareholders (Lintner, 1956; Brav, Graham, Harvey and Michaely, 2005); and (b) dividends require cash. A lack of cash to distribute a portion of reported earnings would indicate problems with earnings quality (Breeden, 2003). Several studies offer evidence supportive of a positive association between earnings quality and cash dividends. Skinner and Soltes (2011) report higher levels of earnings persistence in dividend-paying US firms over a thirty-one year time period (1974-2005). Tong and Miao (2011), also examining US firms, find that dividend paying firms report lower absolute levels of discretionary accruals, as well as more value-relevant earnings, interpreting these findings as evidence that dividends are associated with higher earnings quality. Caskey and Hanlon (2013) find that dividend paying companies are less likely to engage in fraudulent reporting in the US.

If the reporting of opportunistic discretionary accruals is diminished when the firm pays a cash dividend, it may be argued that any remaining abnormal accruals will convey a stronger signal of management expectations of future firm performance than they would in the absence of the dividend corroboration. Though this conjecture has received limited attention in the literature until now, it is supported by preliminary evidence from New Zealand, with Koerniadi and Tourani-Rad (2011) finding that positive discretionary accruals of dividend-increasing firms are significantly associated with the market response to dividend announcements and to future firm profitability.

It may also be argued that the joint information effect of discretionary accruals and distributions to shareholders is not restricted to cash dividends but also applies to stock dividends. Prior literature has established that managers fixate on earnings per share targets, which include reporting positive earnings, beating last period's earnings, and meeting or beating analyst forecasts (e.g. Burgstahler and Eames, 2006; Degeorge, Patel and Zeckhauser, 1999; Bergstresser and Philippon, 2006). If managers are keen to maintain or increase earnings per share, then voluntary actions which increase the number of shares in issue can be used to credibly signal managerial optimism about future earnings. In the presence of this commitment to future earnings growth, the market will perceive positive abnormal accruals accompanied by a stock increases as an indication of managerial optimism. Though there is some literature on managers' incentives and practices in relation to *reducing* the number of shares in issue (e.g. Young and Yang, 2011), the practice of increasing the number of shares in issue has received less attention. In a somewhat related study, Louis and Robinson (2005) report that the market positively prices positive abnormal accruals reported in the quarter prior to a stock split announcement, which is consistent with our argument.

In order to test our hypotheses, we require a setting where both cash and stock dividends are prevalent, preferably with a weak information environment, where the benefits to signalling are higher. We therefore adopt China as our experimental setting, an environment where cash dividends are much more commonly paid than in the US and, importantly, non-cash distributions in the form of stock dividends, are also common. Additionally, China has a relatively weak information environment (Piotroski and Wong, 2012), a characteristic which increases the incentive of managers to use signals to convey their private information (Arya, Glover and Sunder, 2003). These factors combine to make China an ideal setting for this piece of research.

We present the following results. Firstly, we demonstrate that, even in an environment where cash dividends are much more commonly paid than in the US, there is a negative association between cash dividends and average, absolute, and positive abnormal accruals, as measured using the modified Jones model developed by Dechow, Sloan and Sweeney (1995) and after controlling for other economic characteristics that can have an association with abnormal accruals. Secondly, in explicit tests of the association between share increasing activity and accruals, we find a significant *positive* association between the issuance of stock dividends and average, absolute, and positive abnormal accruals. Consistent with accruals conveying managers' private information, abnormal accruals have a predictive association with next year's earnings which is incremental to those of normal accruals and cash flow from operations, and they are positively priced. In line with our predictions, stock dividends are more likely to be issued by firms experiencing accelerated earnings per share growth and they are positively associated with future earnings. Our main finding is, however, that there is a positive and significant joint effect of dividends and abnormal accruals in the prediction of earnings and market values, whichever type of dividend is declared, and incremental to the main predictive effects of dividend distribution and abnormal accruals. This is consistent with dividend distribution providing a credible corroborative signal to investors in firms reporting unexpectedly high accruals.

Our study contributes to the literature in several ways. We add to the debate on the circumstances in which the reporting of high levels of accruals is informative rather than opportunistic. We also contribute to the literature on the association between dividends and earnings quality, demonstrating, in particular, the role of stock dividends in this issue. Finally, we highlight the important joint signalling role of accruals and cash and stock dividends in a weak information environment.

The rest of the paper is structured as follows. Section 2 reviews relevant literature and develops our hypotheses. Section 3 describes how we select our research setting and data, with the following section detailing our empirical methodology. Section 5 presents the results of our data analyses and section 6 concludes.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Although accrual accounting, by matching revenues to expenses for a particular time period, is designed to improve the quality of reported earnings, the flexibility introduced by the system renders the earnings number vulnerable to opportunistic manipulation by managers. Badertscher *et al.* (2012) describe three generally accepted reasons for why managers make discretionary accounting choices and argue that these affect the ability of reported earnings to predict future firm performance. The first view, which they term the 'informational perspective', is that managers use their discretion to enhance the ability of reported information to predict future performance. The second reason is to deceive investors about the underlying economic performance of the firm because this benefits the manager. An example of this is where managers use accruals to meet or beat analysts' earnings forecasts (Graham *et al.*, 2005; Burgstahler and Eames, 2006) or to increase the issue price around IPOs (Teoh, Welch and Wong, 1998). A third reason relates to contracting. For example, if a manager's bonus is based on accounting earnings, then s/he has incentives to manipulate earnings to maximise compensation (Healy, 1985; Bergstresser and Philippon, 2006).

Managers utilising their accounting discretion to improve the predictive ability of financial reports will benefit from sending a credible signal that identifies them as the first type so their reported earnings are perceived to be high quality. Further, even if managers are not using any form of accounting discretion and, instead, are making good faith attempts to follow GAAP, they might still wish to send credible signals that enable users of financial reports tio distinguish between whether abnormal accruals are the result of opportunist manipulation or are the result of legitimate business transactions.

One way to boost the credibility of unexpectedly high reported earnings, or earnings with an unexpectedly high accruals component, is to concurrently distribute cash dividends. No amount of creative accounting can manufacture cash to distribute to shareholders so paying out a portion of earnings helps to corroborate the reported profit figure. Evidence of an association between paying dividends and earnings quality is provided by several US studies. Skinner and Soltes (2011) show that dividend payers exhibit more persistence in earnings than non-payers, irrespective of the size of the dividend. Similar, though weaker, results obtain from conducting their tests on another form of cash distribution in the US – share buybacks. Tong and Miao (2011) supplement this evidence by examining the association between dividend payer status and discretionary accruals in the US, reporting lower levels of earnings management and more value-relevant earnings in firms which pay cash dividends.

They also find a negative association between share buybacks and evidence of accruals management. Caskey and Hanlon (2013:818) make the point that 'managers committing fraud cannot maintain the same dividend policy as managers of firms that achieve similar *reported* performance without manipulating earnings.' They provide evidence for this by showing that firms which pay cash dividends are significantly less likely to be subject to an Accounting and Auditing Enforcement Release (AEER) than similar firms which do not pay dividends. Our first hypothesis reflects these findings, testing whether dividends are associated with earnings quality, measured using abnormal accruals. We test in particular whether cash dividends act as a constraint on income-increasing discretionary accounting choices:

H1: Cash dividends are negatively associated with positive abnormal accruals.

For our second hypothesis, we consider the joint role of accruals and stock dividends in communicating earnings quality. Managers exhibit a strong preference for meeting or beating analysts' forecasts, which are largely based on earnings per share (EPS) (Graham *et al.,* 2005; Badertscher *et al.,* 2012). Dichev, Graham, Harvey and Rajgopal (2013) report that around 20% of US managers admit to managing earnings in any one period, typically within 10% of EPS. Young and Yang (2011) find that managers with EPS-contingent compensation contracts are more likely to reduce the number of shares in issue, thereby increasing reported EPS. Earlier, we argued that unexpectedly large positive accruals may be due to managers' private information about future firm performance, such as a new contract which requires an increase in inventory.[1] In this case, managers may encourage investors to view their reported earnings from an informational perspective by taking actions to *increase* the number of shares in issue. We would therefore expect to see a positive association between high levels of positive accruals and the issuance of a stock dividend:

H2: Stock dividends are positively associated with positive abnormal accruals.

We have argued that managers are strongly averse to actions which reduce EPS. As stock dividends dilute the number of shares in issue, we would expect stock-dividend firms to exhibit *ex ante* accelerated EPS growth, such that *ex post* EPS does not deviate from its trend following the stock dividend:

H3: Firms experiencing ex ante accelerated EPS growth are more likely to issue stock dividends.

[1] The effect of this would be to decrease cash with no concurrent effect on earnings, thus widening the gap between earnings and cash flow from operations. In turn, this effect shows up in the error term in estimations of normal accruals and increases the measure of abnormal accruals.

We are making the case that stock dividends represent a signal of managers' private information about future earnings. We test this in our next hypothesis:

H4: Stock dividends are positively associated with future earnings.

If investors view stock dividends as credibly communicating that unexpectedly high reported accruals are due to managers' expectations about the future, rather than a representation of opportunistic earnings management, then this will be reflected in market values:

H5: When stock dividends are issued, the market attaches a positive value to abnormal accruals.

A similar argument to that used in H5 may be applied to cash dividends. If the distribution of a cash dividend effectively limits the opportunistic reporting of accruals by management, it may be argued that any remaining abnormal accruals credibly convey information about future firm performance. Although this has not been explicitly tested in the literature to our knowledge, Koerniadi and Tourani-Rad (2011) find that positive discretionary accruals of dividend-increasing firms in New Zealand are significantly associated with the market response to dividend announcements and to future firm profitability. We test our conjecture with Hypothesis 6:

H6: When a cash dividend is paid, abnormal accruals will have a positive association with firm value.

The next section discusses the selection of our experimental setting and our data.

3. EXPERIMENTAL SETTING AND DATA

In order to test our hypotheses, we need a setting where both cash and stock dividends are regularly declared by firms. This excludes the US, the favoured setting for prior research, because stock dividends are not a feature of payout policy in this environment – indeed they do not even warrant a mention in the comprehensive study of US payout policy by DeAngelo, DeAngelo and Skinner (2008). A weaker information environment than that of the US is also desirable, as this increases the incentive and value to managers of conveying their private information via credible signals (Arya, Glover and Sunder, 2003; Dedman and Jiang, 2014). Our preferred

experimental conditions lead us to select China as our research setting, where both cash and stock dividends are regular features of corporate payout policy (Chen, Firth and Gao, 2002), the information environment is weak (Piotroski and Wong, 2012), and where managers have been shown to view EPS targets as important (Xiao, 2015).

We use the China Stock Market and Accounting Research database (CSMAR) to construct an initial dataset comprising all profitable firms listed on either the Shanghai Stock Exchange or the Shenzhen Stock Exchanges that issue only 'A' shares over the period of 2002 to 2011. 'A' shares are traded on both exchanges, relate to companies incorporated in mainland China, and are not usually available to non-Chinese investors. We restrict our sample to all non-financial firms with relevant data and use the CSMAR industry codification to classify our sample into six broadly defined industry categories.

We exclude loss-making firms because, in China, they are subject to stringent regulations which may lead to them being delisted. As a consequence, loss-making firms have strong incentives to manipulate earnings in order to return to profitability (Jiang and Wang, 2008; Cheng, Aerts and Jorissen, 2010), and their incentives regarding discretionary accruals may therefore differ from those of profit-making firms. As is the case in the US (Skinner and Soltes, 2011) very few Chinese loss-making firms declare any kind of dividend (Dedman *et al.*, 2015), so removing loss-making firms from our analysis is unlikely to affect our conclusions.

During our sample period, starting from 2005, China conducted the split share structure reform (SSSR). This reform, which saw the large number of previously non-tradable shares become tradable, was centrally managed over a period of years in order to prevent the market becoming flooded with newly tradable shares. We control for this change by identifying the year in which each firm implemented the reform and excluding from our analysis firm-year observations with a reform taking place. Our final sample consists of 9,180 firm-year-observations, the annual distribution of which is reported in Table 1. As can be seen, there are many fewer observations in 2006, when many Chinese firms were undertaking their share restructure.

[TABLE 1 HERE]

4. EMPIRICAL METHODOLOGY

4.1 Accruals-based Earnings Management

A number of prior studies on earnings management employ measures of abnormal accruals to proxy for earnings quality and earnings management (e.g., Jones, 1991; Subramanyam, 1996; Zang, 2012). Following this literature, we use abnormal accruals as surrogates for accrual-based earnings management. Abnormal accruals are measured as the difference between firms' actual accruals and the 'normal' level of accruals, with the latter estimated using the following modified Jones (1991) model, as proposed by Dechow, Sloan and Sweeney (1995):

$$\frac{TA_t}{Assets_{t-1}} = \alpha_0 + k_1 \frac{1}{Assets_{t-1}} + k_2 \frac{\Delta SALES_t - \Delta AR_t}{Assets_{t-1}} + k_3 \frac{PPE_t}{Assets_{t-1}} + \varepsilon_t \quad (1)$$

where TA_t is the total accruals in year t (earnings minus operating cash flows), $Assets_{t-1}$ is total assets at the beginning of period t, $\Delta Sales_t$ is the change in sales from year t-1 to t, ΔAR_t is the change in accounts receivables from year t-1 to t and PPE_t is the gross property, plant and equipment in year t. We estimate the above cross-sectional regression for every industry and year and use the coefficient estimates to calculate normal accruals for each firm year (Subramanyam, 1996). The estimated residuals capture abnormal accruals (AAC), and are our proxy for accrual-based earnings management. Pre-managed earnings, which is the non-discretionary component of earnings, is defined as the sum of operating cash flow and expected (normal) accruals. Equivalently, pre-managed earnings can be calculated using earnings minus AAC.

4.2 Regression Models for Dividends and Earnings Management

We use the following regression models to examine the association between cash/stock dividend paying status and proxies for earnings management:

$$AAC_t = \alpha_0 + k_1 CD\_DUMMY_t + k_2 SD\_DUMMY_t + \sum_m k_{4,m}\, Control_{m,t} + \varepsilon_t \quad (2)$$

CD_DUMMY is a dummy variable set to 1 if the firm pays cash dividends in year t, and 0 otherwise. SD_DUMMY is a dummy variable set to 1 if the firm pays stock dividends in year t, and 0 otherwise.

We include various control variables. Following Tong and Miao (2011), we control for firm size (*SIZE*) using the logarithm of market value; growth prospects using book-to-market ratio (BV_MV) and sales growth rate (*SGR*); firm performance using return on assets (*ROA*); and firm maturity using firm age (*AGE*) and the ratio of retained earnings to total assets (*RE*). These variables are shown to be important determinants

of a firm's propensity to pay dividends (e.g., Fama and French, 2001; DeAngelo, DeAngelo and Stultz, 2006), and are also associated with earnings management behavior (e.g., Watts and Zimmerman, 1990; McNichols, 2000; Lang and Lundholm, 1993). In addition, we control for the effects of leverage on earnings management behaviours using the ratio of debt to equity (*LEVERAGE*), following DeFond and Jiambalvo (1994) and Barton and Waymire (2004).

A few studies examine earnings management in China. Kuo, Ning and Song (2014) explore the association between a number of corporate governance variables and earnings management activities in China. Following their findings, we include top management compensation (*PAY*), measured as the logarithm of total compensation received by top three executives.[2] Wang and Yung (2011) suggest that state enterprises are less likely to manage earnings than privately-owned firms in China. Accordingly, we include a dummy variable equal to 1 if the state shareholder is the largest shareholder for year t, and 0 otherwise (*STATE*). We also control for related party transactions in our regressions, as it is documented in the literature that Chinese firms tend to manage earnings through non-operating transactions with related parties, in addition to engaging in other earning management activities (Aharony, Wang and Yuan, 2010; Ding, Zhang and Zhang, 2007; Wang and Yung, 2011). Following Wang and Yung (2011), we use the 'non-operating income to sales' ratio (*NOI*) as a proxy for related party transactions. During our sample period, China experiences the split share structure reform. To capture its effects we include a dummy variable equal to 1 for the post-reform observations, and 0 for the pre-reform period (*REFORM_DUMMY*). We also include industry dummies as additional controls for industry-wide performance.

Zang (2012) suggests that managers use real earnings management and accruals management as substitutes in the US, while Kuo *et al.* (2014) report a positive association between real earnings management and accruals earnings management proxies in China. Following prior studies (e.g., Dechow, Kothari and Watts, 1998; Roychowdhury, 2006; Kuo *et al.*, 2014), we use a combination of three individual measures to detect real earnings management. The three equations below are all estimated cross-sectionally for each industry year.

First, we estimate the normal level of cash flow from operations using the following equation:

[2] Kuo *et al*. (2014) argue that logarithm of total number of tradable shares is an important determinant for earnings management in China. We do not include this variable because it is highly correlated with the size measure. However, the results remain unchanged after we include it in our regressions.

$$\frac{CFO_t}{Assets_{t-1}} = \alpha_0 + k_1 \frac{1}{Assets_{t-1}} + k_2 \frac{Sales_t}{Assets_{t-1}} + k_3 \frac{\Delta Sales_t}{Assets_{t-1}} + \varepsilon_t,$$

(3)

where CFO_t is the cash flow from operations reported in the statement of cash flows in year *t*. $Sales_t$ is the sales in year *t*. Abnormal CFO is measured as actual CFO minus the normal level of CFO calculated using the estimated coefficients from equation (3). As suggested by Roychowdhury (2006), sales management activities lead to lower current-period CFO than the normal level of sales. We multiply the residuals by -1 as our first proxy for real earnings management (denoted as *RM_CFO*). A higher level of RM_CFO indicates a higher level of real earnings management in terms of sales manipulation.

Second, we estimate the normal level of production costs using the following equation:

$$\frac{PROD_t}{Assets_{t-1}} = \alpha_0 + k_1 \frac{1}{Assets_{t-1}} + k_2 \frac{Sales_t}{Assets_{t-1}} + k_3 \frac{\Delta Sales_t}{Assets_{t-1}} + k_4 \frac{\Delta Sales_{t-1}}{Assets_{t-1}} + \varepsilon_t,$$

(4)

where $PROD_t$ is the sum of cost of goods sold in year *t* and the change in inventory from *t*-1 to t; $\Delta Sales_{t-1}$ is the change in sales from year *t*-2 to *t*-1. The normal level of production costs is measured using the fitted values from equation (4). Abnormal production is therefore total production costs minus normal production costs. Again, we multiply this by -1 so that a higher level of our variable, RM_PROD indicates a higher level of real earnings management in terms of inventory overproduction, which leads to a reduction in the cost of goods sold.

Third, we estimate the normal level of discretionary expenditures using the following equation:

$$\frac{SGA_t}{Assets_{t-1}} = \alpha_0 + k_1 \frac{1}{Assets_{t-1}} + k_2 \frac{Sales_{t-1}}{Assets_{t-1}} + \varepsilon_t,$$

(5)

where SGA_t captures discretionary expenditures and equates to selling, general and administrative expenses in year *t*. The normal level of discretionary expenses is measured using the fitted values from equation (5), with the abnormal level of discretionary expenditures calculated as actual minus estimated normal discretionary expenditure. We multiply this measure (denoted as RM_SGA) by -1 as our third proxy for real earnings management in order that a higher level of RM_SGA indicates a greater amount of cuts in discretionary expenditures to increase earnings.

Following Cohen, Dey and Lys (2008), we construct an aggregate measure, RM, which is equal to the sum of RM_CFO, RM_PROD and RM_SGA. A larger value of RM suggests more real earnings management.

4.3 Accelerated EPS growth and the propensity to pay stock dividends

We argue that increasing the number of shares in issue conveys private information about future earnings expectations as, unless earnings grow, this action would reduce EPS and cause managers to miss important benchmarks. We construct a measure with the aim of predicting the distribution of stock dividends based on EPS growth, using the EPS that would have been reported had the firm not increased its share base. The variable is an indicator variable which takes the value of one if EPS growth is greater than expected. We measure unexpected EPS as this year's growth rate minus last year's growth rate, so an acceleration in EPS growth rate is seen to provide an incentive to issue stock dividends. We call this variable SD_INCENTIVE, and code it one if there is an increase in EPS growth rate, otherwise zero. We also measure future (one year ahead) unexpected earnings growth as next year's growth rate minus this year's growth rate and call this SD1_INCENTIVE, coding it one if there is an increase, otherwise zero.

Our variable definitions are contained in Table 2, below.

[TABLE 2 HERE]

Table 3 reports descriptive statistics for our sample firms, while Table 4 reports the correlations between them. Apart from the strong association between RM and RM_PROD there are no indicators of problematic relationships between variables.

[TABLE 3 HERE]

[TABLE 4 HERE]

5. ANALYSIS

Prior literature suggests the payment of cash dividends restricts the opportunistic use of income-increasing accruals in the US (Tong and Miao, 2011). Our first hypothesis tests whether this applies to an environment which differs in some important respects. Chinese firms have a much higher propensity to pay cash dividends than their counterparts in the US or UK. Dedman and Jiang (2014) report that, between 2002 and 2012, an average of 56.9% of Chinese listed companies paid cash dividends, compared to 29.4% in the US and 49.3% in the UK. These differences may indicate material differences in dividend payout choices in China, or they may simply be due to higher levels of growth in China over this time period, resulting in a higher proportion of

optimistic managers in the population. For example, Chinese GDP per capital increased from $3,217 in 2003 to $10,917 in 2012, an increase of 339%, whereas US GDP per capita increased by 135% (from $38,128 to $51,435) over the same period. Different from the US or UK, the propensity to pay cash dividends in China is found to be not associated with free cash flows (Huang, Shen and Sun, 2011), which is not totally surprising as firms in China can borrow to sustain their dividend payment. This suggests that the US finding that cash dividends constrain earnings management does not automatically apply in China. If it does apply, then we expect to observe a negative association between income-increasing abnormal accruals and cash dividends.

Our second hypothesis predicts a *positive* association between stock dividends, which increase the number of shares in issue, and income-increasing abnormal accruals. These first two hypotheses are tested in Table 5, which reports the results of regression tests on the association between total, absolute, positive and negative abnormal accruals, and the two types of distribution, after controlling for various factors detailed in the previous section.

Columns 1 and 2 of Table 5 report a significant negative association between cash dividends and both total abnormal accruals (AAC) and the absolute value of abnormal accruals (|AAC|), respectively. As there are likely to be differing incentives and consequences of managing earnings upwards as opposed to downwards, we are interested in differentiating between income-increasing and income-decreasing accruals. Further, Hribar and Nichols (2007) caution against relying on the absolute value of abnormal accruals as a measure of earnings management, so columns 3 and 4 report the results of splitting the abnormal accruals into positive and negative values, respectively. The results in these columns indicate that the negative association between cash dividends and earnings management is only significant for income-increasing accruals. This is consistent with prior literature from the US which suggests the payment of cash dividends mitigates opportunistic earnings management (Skinner and Soltes, 2011), and supports H1. Table 5 also provides support for H2, reporting strong positive associations between the distribution of a stock dividend and abnormal accruals. Again, the association is restricted to income-increasing abnormal accruals, as expected.

[TABLE 5 HERE]

The results pertaining to our control variables also provide interesting information. Our real earnings management measure, RM, is significantly associated with accruals management and operates in the same direction, i.e. income-increasing RM is positively associated with income-increasing accruals and negatively associated with income-decreasing accruals. More profitable firms are more likely to report income-

increasing accruals, and less likely to report income-decreasing accruals. Higher book-to-market firms, and larger firms, are also more likely to engage in income-increasing accruals, and less likely to engage in income-decreasing accruals. Companies enjoying higher sales growth report higher accruals of both signs. There is a positive relationship between our measure of related party transactions (*NOI*) and positive abnormal accruals, consistent with some firms employing more than one method of earnings manipulation. The total compensation of the three top managers (*PAY*) is not found to be associated with accruals behaviour. State ownership is not found to be associated with abnormal accruals. Although prior US literature (Louis and Robinson, 2005) reports a significant relationship when using a measure of analyst following to proxy for the information environment, we do not find a convincing association between this and our earnings management measures. We speculate that this is due to China having a generally poor information environment, with very little disclosure outside of the financial statements, which may limit the informational advantage of analysts (less information to analyse) relative to those in the US.

Table 6 reports the results of tests of H3, which predicts that firms with increased EPS growth are more likely to issue stock dividends, which increase the number of shares in issue. Column (1) contains results from a binary logit regression examining the likelihood a company issues a stock dividend in the year. The main variable of interest is our SD_Incentive dummy, which indicates whether a company *would have* enjoyed an acceleration in its EPS growth had it not increased the number of shares in issue during the year. The coefficient on SD_Incentive is strongly positive, consistent with H5. We then look at stock dividend choices over a two year period, relating them to EPS acceleration in the current and following year, reporting the results of these multinomial logit tests in columns 2-4. The results again strongly support H3. A company is much more likely to issue stock dividends in the current year if there is EPS acceleration in the current year (column 2). If there is a two-year acceleration in EPS growth, then the company is significantly more likely to issue stock dividends both this year and next year (column 3). Finally, if there is no acceleration in EPS in the current year, but then extra growth next year, the company is significantly more likely to issue stock dividends next year (column 4) but not this year. These associations are robust to the inclusion of a comprehensive set of control variables.

[TABLE 6 HERE]

Hypothesis 5 predicts that the market will attach a positive value to abnormal accruals when they are accompanied by a stock dividend. Our sixth hypothesis assumes that, if cash dividends constrain opportunistic earnings management, then any remaining abnormal accruals will convey credible information about future performance. In this case, the combination of a cash dividend and positive abnormal accruals should be valued positively by the market. Table 7 contains the results of tests of H5 and H6.

We test the hypotheses by examining the individual associations between accruals and dividend distributions and future earnings/current market value, then by including an interaction term which tests for any incremental explanatory power offered by a combination of abnormal accruals and dividend distribution. The positive and significant coefficients on both interaction terms (SD_dummy × abnormal accruals and CD_dummy × abnormal accruals) in regressions relating to both next period's earnings and this period's market value support both H5 and H6. Other components of income (expected accruals and cash flow from operations) also positively predict next year's income, as do the main effect dividend dummy terms SD_dummy and CD_dummy. Distributing either type of dividend conveys information about future earnings, but distributing them together with reporting abnormal accruals contains incremental information about future performance. Interestingly, the coefficient on the main effects cash dividend dummy variable is negative and significant. This is consistent with prior literature from China which argues that cash dividend payments are used to tunnel cash out of companies and which reports negative stock price reactions to the announcement of cash dividends (Wei, 1998; Chen, Fung and Leung, 2009). As such, the signalling role of cash dividends alone has been found to be limited (Chen, Firth and Gao, 2002). The positive significant coefficient on interaction of our cash dividend dummy with abnormal accruals therefore provides new evidence of a credible signalling role for cash dividends when combined with abnormal accruals.

[TABLE 7 HERE]

6. SUMMARY AND CONCLUSIONS

We exploit a relatively weak information environment, where signalling by managers carries higher benefits, to examine the joint information content of unexpectedly high accounting accruals and dividends, both in the form of cash and stock dividend. Using a large sample of Chinese data from 2002-2012, we confirm that the US finding that cash dividends constrain earnings management holds in this environment. Conducting tests which cannot be done on US data due to differences in corporate payout practices, we are also able to show that managers issue stock dividends in response to accelerated EPS and in expectation of future earnings increases. Investors respond significantly more positively to abnormally high levels of accruals when they are accompanied by either a cash or a stock dividend, indicating that the joint dividend-accrual signal is valuable to them. This response is apparently rational as both cash and stock dividends are positively associated with future earnings when they are accompanied by abnormal accruals.

Of course, these results may not generalise to other settings. We argue, however, that the sheer size of China's economy means events in this country are of international significance in their own right. The creation and subsequent opening up of China's capital markets to outsiders represent significant developments in China's recent history. Western investors, increasingly crucial to China's growth, still have much to learn about how firms and managers behave in China however, which creates difficulties in the assessment of Chinese firms. This study makes some contribution to our current knowledge gap by examining the relationship between cash dividends, stock dividends, and abnormal accruals, in an information environment which is less well-developed than those of large Western economies.

References:

Aharony, J., Wang, J. and H. Yuan (2010). Tunneling as an Incentive for Earnings Management during the IPO Process in China. *Journal of Accounting and Public Policy* 29: 1–26.

Arya, A., Glover, J. and Sunder, S. (2003). Are unmanaged earnings always better for shareholders? *Accounting Horizons* Supplement: 111-116.

Badertscher, B., Collins., D. and T. Lys (2012). Discretionary accounting choices and the predictive ability of accruals with respect to future cash flows. *Journal of Accounting and Economics* 53: 330-352.

Barton, J. and P. Simko (2002). The balance sheet as an earnings management constraint. *The Accounting Review* 77: 1-27.

Barton, J. and G. Waymire (2004). Investor protection under unregulated financial reporting. *Journal of Accounting and Economics* 38: 65–116.

Bergstresser, D. and T. Philippon (2006). CEO incentives and earnings management. *Journal of Financial Economics* 80: 511-529.

Brav, A., Graham. J., Harvey, C. and R. Michaely (2005). Payout policy in the 21st century. *Journal of Financial Economics* 77(3): 483-527.

Burgstahler, D. and M. Eames (2006). Management of earnings and analysts' forecasts to achieve zero and small positive earnings surprises. *Journal of Business Finance and Accounting* 33(5/6): 633-652.

Caskey, J. and M. Hanlon (2013). Dividend Policy at Firms Accused of Accounting Fraud. Contemporary Accounting Research 30(2): 818-850.

Chen, G., Firth, M. and Gao, N. (2002). The information content of concurrently announced earnings, cash dividends, and stock dividends: an investigation of the Chinese stock market. *Journal of International Financial Management & Accounting* 13(2): 101-124.

Cheng, L., Fung, H-G. and Leung, T. (2009). Dividend preference of tradable-share and non-tradable-shareholders in Mainland China. *Accounting and Finance* 49(2): 291-316.

Cheng, P., Aerts, W. and A. Jorissen (2010). Earnings management, asset restructuring, and the threat of exchange delisting in an earnings-based regulatory regime. *Corporate Governance: An International Review*, 18: 438–456.

Cheng, L., Fung, H-G. and Leung, T. (2009). Dividend preference of tradable-share and non-tradable-shareholders in Mainland China. *Accounting and Finance* 49(2): 291-316.

Cohen, D. A., Dey, A. and T. Lys (2008). Real and accrual based earnings management in the pre- and post-Sarbanes-Oxley periods. *The Accounting Review* 83(3): 757-787.

DeAngelo, H., DeAngelo, L. and R. Stulz (2006). Dividend policy and the earned/contributed capital mix: A test of the life-cycle theory. *Journal of Financial Economics* 81: 227–254.

Dechow, P. (1994). Accounting earnings and cash flows as measures of firm performance: the role of accounting acccruals. *Journal of Accounting and Economics* 18 (1): 3-42.

Dechow, P., Kothari, S. P., and R. Watts (1998). The relation between earnings and cash flows. *Journal of Accounting and Economics* 25: 133–168.

Dechow, P., Sloan, R. and A. Sweeney (1995). Detecting earnings management. *The Accounting Review* 70(2): 193-225.

Dedman, E. and Jiang, W. (2014). *Dividends in China*. Working paper available at SSRN: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2517266

Dedman, E., Jiang, W., and A. Stark (2015). The value relevance and information content of cash and stock dividends in China. *European Journal of Finance* DOI:10.1080/1351847X.2014.996658

DeFond, M. and J. Jiambalvo (1994). Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics* 17: 145–177.

Degeorge, F. Patel, J. and R. Zeckhauser (1999). Earnings management to exceed thresholds. *The Journal of Business* 72(1): 1-33.

Dichev, I., Graham, J., Harvey, C. and S. Rajgopal (2013). Earnings quality: evidence from the field. *Journal of Accounting and Economics* 56 (2-3): 1-33.

Ding, Y., Zhang, H., and J. Zhang (2007). Private vs. state ownership and earnings management: evidence from Chinese listed companies. *Corporate Governance: An International Review* 15: 223–238.

Fama, E. and K. French (2001). Disappearing dividends: changing firm characteristics or lower propensity to pay? *Journal of Financial Economics* 60: 3–43.

Graham, J., Harvey, C. and S. Rajgopal (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics* 40 (1-3): 3-73.

Healy, P. (1985). The effect of bonus schemes on accounting decisions. *Journal of Accounting and Economics* 7 (1-3): 85-107.

Healy, P. and K. Palepu (1993). The effect of firms' financial disclosure strategies on stock prices. *Accounting Horizons* 7(1): 1-11.

Huang, J., Shen, Y. and Sun, Q. (2011). Nonnegotiable shares, controlling shareholders, and dividend payments in China. *Journal of Corporate Finance* 17(1): 122-133.

Jiang, G. and H. Wang (2008). Should earnings thresholds be used as delisting criteria in stock market? *Journal of Accounting and Public Policy* 27: 409–419.

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research* 29: 193–228.

Koerniadi, H. and A. Tourani-Rad (2011). The role of accruals as a signal in earnings and dividend announcements: New Zealand evidence. *Journal of Applied Accounting Research* 12(2): 108-122.

Kuo, J., Ning, L. and X. Song (2014). The real and accrual-based earnings management behaviors: evidence from the split share structure reform in China. *The International Journal of Accounting* 49: 101-136.

Lang, M. and R. Lundholm (1993). Cross-sectional determinants of analyst ratings of corporate disclosures. *Journal of Accounting Research* 31: 246–271.

Lee, E., Walker, M. and C. Zeng (2013). Does IFRS convergence affect financial reporting quality in China? *ACCA Research Report.*

Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings, and taxes. *The American Economic Review* 46(2): 97-113.

Louis, H. and D. Robinson (2005). Do managers credibly use earnings to signal private information? Evidence from the pricing of accruals around stock splits. *Journal of Accounting and Economics* 39: 361-380.

McNichols, M. (2000). Research design issues in earnings management studies. *Journal of Accounting and Public Policy* 19: 313–345.

OECD (2015). *Country statistical profiles: key tables from OECD*. Available online at: http://www.oecd-ilibrary.org/economics Accessed 28 August 2015.

Piotroski, J. and T. J. Wong (2012). Institutions and the information environment of Chinese listed firms. *Capitalizing China,* J. Fan and R. Morck (eds.) University of Chicago Press.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics* 42: 335-370.

Skinner, D. and E. Soltes (2011). What do dividends tell us about earnings quality? *Review of Accounting Studies* 16: 1-28.

Subramanyam, K. (1996). The pricing of discretionary accruals. *Journal of Accounting and Economics* 22: 249-281.

Teoh, S., Welch, I. and T. Wong (1998). Earnings management and the long-run underperformance of initial public equity offerings. *Journal of Finance* 53: 1935-1974.

Tong, Y.H. and B. Miao (2011). Are dividends associated with the quality of earnings? *Accounting Horizons* 25(1): 183-205.

Wang, L. and K. Yung (2011). Do State Enterprises Manage Earnings More than Privately Owned Firms? The Case of China. *Journal of Business Finance and Accounting* 38(7-8): 794–812.

Watts, R. and J. Zimmerman (1990). Positive accounting theory: A ten-year perspective. *The Accounting Review* 65: 131–156.

Wei, G. (1998). An empirical study of dividend payments in Chinese listed companies. *Economic Research Journal* 362: 32-37. (In Chinese)

Xiao, G. (2015). Trading and earnings management: Evidence from China's non-tradable share reform. *Journal of Corporate Finance* 31: 67-90.

Young, S. and J. Yang (2011). Stock repurchases and executive compensation contract design: the role of earnings per share performance conditions. *The Accounting Review* 86(2): 703-733.

Zang, A. (2012). Evidence on the trade-off between real activities manipulation and accrual-based earnings management. *The Accounting Review* 87: 675–703.

Table 1: Distribution of firm year observations through time

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
CD Paying	475	458	552	369	18	516	531	549	566	602	698	5,334
SD Paying	118	170	141	112	4	259	130	168	176	145	92	1,515
All Firms	799	862	919	708	82	923	905	970	1,028	994	990	9,180

Note: The sample includes profit-making firms only. The sample period is from 2002 to 2012. We identify the year in which a firm implemented the split share structure reform (SSR) and exclude firm-year observations with a reform taking place.

Table 2 Variable Definitions

Variables	Definition
AAC	Abnormal accruals for year t. This is the difference between firms' actual accruals and the normal level of accruals, which is estimated using the modified Jones (1991) model.
|AAC|	Absolute value of DA for year t.
NAC	Expected (normal) accruals for year t, measured by the fitted value of the modified Jones model.
RM_CFO	Abnormal cash flows from operations for year t, multiplied by -1.
RM_SGA	Abnormal discretionary expenses for year t, multiplied by -1.
RM_PROD	Abnormal production costs for year t, multiplied by -1.
RM	Sum of real earnings management proxies for year t, measured as RM_CFO + RM_SGA + RM_PROD.
CD_DUMMY	A dummy variable equal to 1 if a firms declares cash dividends associated with earnings in year t, and 0 otherwise.
SD_DUMMY	A dummy variable equal to 1 if a firms declares stock dividends associated with earnings in year t, and 0 otherwise.
ROA	Return on assets for year t, measured as earnings divided by total assets.
BM	Book-to-market ratio for year t, measured as book value of equity divided by market value.
SIZE	Logarithm of market value for year t.
SGR	Sales growth rate for year t, measured as the percentage change of sales from year t-1 to year t.
LEVERAGE	Leverage for year t, measured as total debt divided by total assets
RE	Retained earnings divided by total assets for year t.
AGE	Firm age for year t, measured as the number of years that a firm has been listed on the Stock Exchanges.
NOI	Non-operating income divided by sales for year t.
PAY	Logarithm of total compensation received by top three executives for year t.
STATE_TOP1	A dummy variable equal to 1 if the State is the largest shareholder for year t, and 0 otherwise.
REFORM_DUMMY	A dummy variable equal to 1 for the post-reform period, and 0 for the pre-reform period.
ANALYST_DUMMY	A dummy variable equal to 1 if a firm is followed by at least one analyst and 0 otherwise.
E1/OTA	Earnings in year t+1 divided by opening total assets (OTA) in year t.
MV/OTA	Market value measured at four months after fiscal year end of year t, divided by OTA in year t.
CFO/OTA	Operating cash flow in year t divided by OTA in year t.
CD/OTA	The amount of cash dividends declared in association with earnings for year t divided by OTA in year t
SD/OTA	(The number of stock dividends declared in association with earnings for year t)
SD_INCENTIVE	A dummy variable equal to one if EPS growth$_t$ > EPS growth$_{t-1}$
SD1_INCENTIVE	A dummy variable equal to one if EPS growth$_{t+1}$ > EPS growth$_t$

Table 3: Descriptive Statistics

	N	Mean	Median	Min	Max	Std Dev
Sample for Earnings Management Analysis						
RM_CFO	9180	0.00	0.00	-0.60	0.58	0.11
RM_SGA	9180	0.00	0.02	-0.60	0.40	0.08
RM_PROD	8950	-0.01	0.01	-1.91	1.05	0.18
RM	8950	-0.01	0.02	-2.54	1.31	0.29
AAC	9180	0.01	0.01	-0.55	0.72	0.11
|AAC|	9180	0.07	0.05	0.00	0.72	0.08
ROA	9180	0.04	0.03	0.00	0.48	0.04
BM	9180	0.42	0.36	-1.40	1.59	0.27
SIZE	9180	14.99	14.90	12.67	18.20	0.97
SGR	9180	0.32	0.16	-0.95	16.19	0.95
LEVERAGE	9180	0.50	0.51	0.06	5.49	0.21
RE	9180	0.04	0.07	-5.51	0.51	0.27
AGE	9180	9.20	9.00	0.00	20.00	4.32
NOI	9180	0.02	0.00	-1.73	2.32	0.09
PAY	9180	13.46	13.50	10.42	15.92	0.91
STATE_TOP1	9180	0.48	0.00	0.00	1.00	0.50
REFORM_DUMMY	9180	0.63	1.00	0.00	1.00	0.48
Sample for Earnings Prediction and Market Valuation Models						
MV/OTA	9180	2.19	1.51	0.21	44.72	2.67
E1/OTA	9165	0.06	0.04	-0.34	2.26	0.12
CFO/OTA	9180	0.06	0.06	-0.40	0.77	0.11
NAC	9180	-0.02	-0.03	-0.51	0.79	0.07
AAC	9180	0.01	0.01	-0.55	0.72	0.11
SD/OTA	9180	0.19	0.00	0.00	6.56	0.63
CD/OTA	9180	0.01	0.01	0.00	0.13	0.02

Note: All variables are as defined in Table 1. The sample period is between 2002 and 2012. Continuous variables are winsorized at the top and bottom 1% level.

Table 4 Pearson Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. RM	1																		
2. AAC	0.43*	1																	
3. |AAC|	0.08*	0.30*	1																
4. NAC	-0.12*	-0.34*	0.06*	1															
5. ROA	-0.37*	0.13*	0.17*	0.06*	1														
6. BM	0.15*	-0.00	-0.14*	-0.09*	-0.28*	1													
7. SD_DUMMY	-0.06*	0.07*	0.07*	0.01	0.19*	-0.09*	1												
8. CD_DUMMY	-0.09*	0.02	-0.05*	-0.03*	0.27*	0.12*	0.18*	1											
9. SIZE	-0.11*	0.04*	0.07*	0.05*	0.37*	-0.22*	0.15*	0.30*	1										
10. SGR	-0.10*	0.01	0.18*	0.06*	0.10*	-0.08*	0.07*	-0.02	0.05*	1									
11. LEVERAGE	0.17*	0.01	0.11*	-0.01	-0.25*	-0.08*	-0.03*	-0.14*	-0.01	0.08*	1								
12. RE	-0.09*	-0.03*	-0.10*	-0.01	0.11*	0.20*	0.10*	0.31*	0.24*	-0.11*	-0.43*	1							
13. AGE	0.01	-0.02*	0.12*	0.15*	0.02	-0.09*	-0.09*	-0.10*	0.27*	0.03*	0.15*	-0.06*	1						
14. NOI	0.03*	0.11*	0.15*	0.05*	0.12*	-0.11*	-0.02*	-0.12*	-0.03*	0	0.13*	-0.36*	0.09*	1					
15. PAY	-0.08*	0.03*	0.06*	0.11*	0.23*	-0.03*	0.07*	0.29*	0.52*	0.01	0.06*	0.22*	0.39*	-0.04*	1				
16. STATE_ TOP1	0.02*	-0.01	-0.07*	-0.11*	-0.07*	0.11*	-0.01	0.04*	-0.07*	0	-0.06*	0.02*	-0.29*	-0.06*	-0.21*	1			
17. REFORM_ DUMMY	-0.01	-0.02	0.12*	0.19*	0.14*	-0.27*	0.01	0.04*	0.48*	0.01	0.08*	0.07*	0.57*	0.10*	0.51*	-0.34*	1		
18. MV/OTA	-0.24*	0.08*	0.23*	0.06*	0.38*	-0.45*	0.12*	-0.06*	0.22*	0.40*	-0.12*	-0.23*	0.07*	0.16*	0	-0.07*	0.17*	1	
19. E1/OTA	-0.26*	0.05*	0.17*	0.04*	0.45*	-0.22*	0.13*	0.16*	0.30*	0.34*	-0.05*	0	0.03*	0	0.15*	-0.03*	0.11*	0.60*	1
20. CFO/OTA	-0.58*	-0.64*	-0.11*	-0.16*	0.35*	-0.10*	0.05*	0.12*	0.16*	0.21*	-0.10*	0.08*	-0.04*	-0.06*	0.03*	0.04*	0	0.29*	0.32*

Note: All variables are as defined in Table 1. The sample period is between 2002 and 2012. Continuous variables are winsorized at the top and bottom 1% level. * denotes relationship is significant at the 5% level.

Table 5: Dividend Paying Status and Abnormal Accruals

	(1) All firms AAC	(2) All firms |AAC|	(3) AAC > 0 AAC	(4) AAC < 0 |AAC|
CD_DUMMY	-0.006**	-0.007***	-0.007**	0.000
	(-2.036)	(-2.770)	(-2.030)	(0.135)
SD_DUMMY	0.006**	0.009***	0.011***	0.001
	(1.973)	(3.395)	(3.403)	(0.352)
RM	0.256***	0.052***	0.198***	-0.113***
	(21.370)	(4.558)	(12.908)	(-10.951)
ROA	0.979***	0.565***	0.922***	-0.134*
	(12.905)	(11.886)	(15.833)	(-1.662)
BV_MV	0.045***	0.000	0.018**	-0.024***
	(6.363)	(0.069)	(2.106)	(-3.304)
SIZE	0.018***	0.006*	0.013***	-0.006*
	(4.986)	(1.946)	(2.992)	(-1.759)
SGR	0.003	0.011***	0.014***	0.005**
	(0.935)	(5.414)	(3.616)	(2.197)
LEVERAGE	0.008	0.036***	0.011	0.024
	(0.726)	(3.707)	(0.955)	(1.625)
RE	0.001	-0.001	-0.007	-0.006
	(0.092)	(-0.048)	(-0.492)	(-0.408)
AGE	-0.003***	-0.001	-0.002	0.001
	(-2.738)	(-1.414)	(-1.537)	(1.043)
NOI	0.084**	0.066***	0.065***	-0.028
	(2.458)	(2.627)	(2.728)	(-0.609)
PAY	0.003	-0.002	-0.002	-0.004
	(0.962)	(-1.072)	(-0.702)	(-1.524)
REFORM_	-0.014***	0.018***	0.006	0.017***
DUMMY	(-2.668)	(3.745)	(0.893)	(2.990)
STATE_	0.003	0.003	0.002	-0.001
TOP1	(1.046)	(1.083)	(0.444)	(-0.183)
ANALYST_	0.005*	0.001	0.002	0.000*
DUMMY	(1.872)	(0.386)	(0.515)	(0.174)
CONSTANT	-0.333***	-0.025	-0.148**	0.177***
	(-5.870)	(-0.529)	(-2.307)	(3.088)
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	8,950	8,950	4,731	4,219
Number of firms	1,180	1,180	1,148	1,123
Adjusted R^2	0.339	0.119	0.338	0.181

Note: All variables are as defined in Table 1. The sample period is between 2002 and 2012. All continuous variables are winsorized at top and bottom 1%. The t-statistics from firm fixed effects models are in parentheses. ***p<0.01, **p<0.05,*p<0.1

Table 6: The Association Between EPS Growth Acceleration and Stock Dividends

	Logit Analysis	Multinomial Logit Analysis		
	(1)	(2)	(3)	(4)
	SD = 1	SD = 1; SD1 = 0	SD = 1; SD1 = 1	SD = 0; SD1 = 1
SD_Incentive	0.721***	0.701***	0.781***	-0.004
	(10.011)	(8.623)	(5.459)	(-0.043)
SD1_Incentive		-0.118	0.980***	1.041***
		(-1.549)	(6.653)	(11.395)
AAC (positive)	1.774***	2.008***	1.709**	1.155*
	(4.260)	(4.355)	(2.092)	(1.942)
AAC (negative)	0.484	0.774	-0.194	0.594
	(0.694)	(0.971)	(-0.167)	(0.751)
CD_dummy	0.837***	0.782***	1.110***	0.107
	(8.096)	(7.213)	(5.123)	(1.054)
ROA	4.739***	4.304***	11.141***	8.057***
	(4.543)	(3.597)	(5.620)	(6.725)
BM	-0.940***	-0.823***	-1.654***	-0.280
	(-5.009)	(-4.317)	(-3.317)	(-1.483)
Size	0.147***	0.183***	0.036	0.040
	(2.880)	(3.417)	(0.314)	(0.695)
Sales growth	0.074*	0.097**	0.067	0.078*
	(1.863)	(2.177)	(1.303)	(1.771)
Leverage	0.875***	0.835***	1.821***	1.511***
	(3.447)	(3.112)	(2.986)	(5.310)
Retained earnings	1.850***	1.976***	2.552***	1.733***
	(5.722)	(5.065)	(4.093)	(4.953)
Firm age	-0.063***	-0.063***	-0.092***	-0.058***
	(-5.231)	(-5.210)	(-3.414)	(-4.384)
Non-operating	0.129	-0.323	0.884	0.099
Income	(0.341)	(-0.615)	(1.215)	(0.195)
Pay	-0.016	-0.073	0.179	-0.009
	(-0.274)	(-1.229)	(1.366)	(-0.137)
SEO	-0.114	-0.146*	-0.034	-0.048
	(-1.367)	(-1.694)	(-0.179)	(-0.521)
Post-reform	-0.259**	-0.260**	-0.452*	-0.321***
	(-2.404)	(-2.249)	(-1.836)	(-2.623)
Constant	-4.627***	-4.375***	-8.340***	-4.055***
	(-5.465)	(-4.931)	(-4.575)	(-4.181)
Industry Dummies	Yes	Yes	Yes	Yes
Observations	7,748	7,748	7,748	7,748

Robust z-statistics in parantheses: ***, **, * = p<0.01, 0.05, 0.1, respectively

Table 7: The Information Content of Abnormal Accruals in the Presence of Dividends

VARIABLES	Dependent variable = E_1/OTA	Dependent variable = MV/OTA
NAC	0.295***	8.633***
	(4.839)	(7.669)
AAC	0.175***	5.400***
	(3.799)	(7.048)
SD_DUMMY	0.111***	0.413***
	(2.979)	(5.581)
CD_DUMMY	0.004***	-0.313***
	(1.602)	(-4.867)
SD_DUMMY x AAC	0.084*	3.402***
	(1.795)	(2.229)
CD_DUMMY x AAC	0.155***	3.189***
	(3.931)	(4.200)
CFO_OTA	0.513***	13.513***
	(9.675)	(11.700)
CONSTANT	0.022***	1.505***
	(6.934)	(20.320)
Firm Fixed Effects	Yes	Yes
Observations	9,165	9,180
Number of firms	1,180	1,180
Adjusted R^2	0.135	0.229