THE EFFECT OF MANDATORY IFRS ADOPTION ON THE STEWARDSHIP USEFULNESS OF FINANCIAL REPORTING

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ABSTRACT

We examine how China's mandatory IFRS adoption affects domestically listed state-controlled Chinese firms' sensitivity of the CEO's cash compensation to accounting earnings, a proxy for the stewardship usefulness of financial reporting. We find that the CEO's pay-for-performance sensitivity is significantly positive in the pre-adoption period but declines significantly after the mandatory IFRS adoption. The decline is stronger for firms more significantly affected by the IFRS adoption. We find no evidence of a significant decline in the pay-for-performance sensitivity for a group of state-controlled Chinese firms not affected by the mandatory IFRS adoption. Consistent with our conjecture that managerial compensation is designed to increase shareholder value to a greater extent in central-government-controlled firms than in local-government-controlled firms, we find that the negative effect of the mandatory IFRS adoption is stronger for central-government-controlled firms. Overall, our results suggest that China's mandatory IFRS adoption reduces the stewardship usefulness of financial reporting.

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I. INTRODUCTION

It has been long recognized by investors, standard setters, and researchers around the world (see Christensen and Demski 2003; Watts 2006; O'Connell 2007) that the two primary objectives of financial reporting are to provide financial information that is useful to investors in securities valuation (referred to as valuation usefulness) and incentive contracting (referred to as stewardship usefulness). Prior research shows that valuation usefulness and stewardship usefulness are related but distinct concepts (see Gjesdal 1981; Paul 1992; Lambert 2001; Bushman et al. 2006). Lambert (2001, 41) provides a detailed discussion about the distinction between the two concepts and shows analytically that in general, the way information is aggregated for valuation purposes is not the same way this information would be aggregated for compensation purposes (see also Bushman et al. 2006). Hence, a change in a financial reporting system that increases the valuation usefulness does not necessarily increase the stewardship usefulness or vice versa.

In recent years, both the International Accounting Standards Board (IASB) and the U.S. Financial Accounting Standards Board (FASB) have gradually shifted their focus to valuation usefulness (e.g., fair value accounting). In a proposed converged Conceptual Framework for financial reporting announced in July 2005, the IASB and FASB argued that stewardship is a subset of (rather than being distinct from) the overall financial reporting objective of decision-usefulness and therefore decided not to designate stewardship as a separate financial reporting objective (see IASB 2005, para. 24). This decision turned out to be controversial and generated heated discussions during the process of revising the IASB's conceptual framework for financial reporting (see IASB 2006, 2008). In the final adopted version of the IASB's Conceptual Framework taking effect in September 2010 (see IASB 2010), the IASB continues to designate decision-usefulness as the overall objective of

financial reporting (see OB2) but acknowledges the importance of stewardship in standard setting (see OB4).

With the worldwide adoption of IFRS, there is a growing concern that failure to designate stewardship as a separate financial reporting objective may diminish the overall usefulness of financial reporting (e.g., Ball 2006; O'Connell 2007; Sunder 2009; Watts 2003, 2006). For example, Watts (2003) argues that existing observed accounting practices are shaped by multiple institutional forces, including not only the valuation demand but also non-valuation demands (e.g., debt and compensation contracting). Hence, a narrow focus on the valuation usefulness of financial reporting could produce unintended negative consequences and impose significant costs on investors and the economy. This concern is more acute in weak investor protection countries because financial markets in those countries are usually small and less developed and therefore investors' demand for the valuation usefulness of financial reporting is relatively lower. On the other hand, investors' demand for the stewardship usefulness of financial reporting is relatively higher because audited financial statements are one important corporate governance mechanism investors rely on to control for agency costs (see Watts 2006).

Because IFRS is principles-based and allows managers significant discretion in financial reporting, there is also a concern that the implementation and enforcement of IFRS are of low quality. As a result, the quality of IFRS-based financial reports may not be high from the perspectives of either valuation usefulness or stewardship usefulness or both. Again, this concern is more acute in weak investor protection countries because the legal enforcement of laws and regulations is much weaker in these countries.

There is a large and growing accounting literature devoted to assessing the consequences of mandatory IFRS adoption around the world. Most studies in this literature focus on the valuation usefulness of financial reporting. Given that valuation usefulness and

stewardship usefulness are not identical concepts, one cannot use the results on the valuation usefulness of financial reporting to draw conclusions about the stewardship usefulness of financial reporting or vice versa. To our best knowledge, there is little empirical research on the effect of mandatory IFRS adoption on the stewardship usefulness of financial reporting, especially in weak investor protection countries (see Section II for a detailed review of related research).

The objective of this study is to provide the first empirical evidence on the effect of mandatory IFRS adoption on the stewardship usefulness of financial reporting in a representative weak investor protection country, China. According to Allen et al. (2005), China, along with Mexico and Indonesia, is ranked one of the worst financial markets in terms of investor protection. China adopted a new set of Chinese Accounting Standards (CAS) on January 1, 2007 that is substantially converged with the International Financial Reporting Standards (hereafter referred to as mandatory IFRS adoption for brevity). Following Bushman et al. (2006) and Ozkan et al. (2012), we use the sensitivity of the CEO's annual cash compensation (salary and bonus) to accounting earnings (hereafter referred to as managerial pay-for-performance sensitivity) to proxy for the stewardship usefulness of financial reporting. As the majority of publicly listed Chinese firms are controlled by the Chinese government, we limit our sample to state-controlled Chinese firms that are solely listed on the domestic stock exchanges (referred to as A share firms) to avoid complications associated with mixing firms with different ownership structures.

Besides the fact that it is a representative weak investor protection country, China is interesting to study in itself because China is the number two economy in the world and the largest developing country that has embraced IFRS. In addition, the mandatory IFRS adoption represents a major overhaul of China's accounting standards. Hence, it is of great

importance not only to relevant Chinese stakeholders but also to IASB to assess the economic consequences of China's mandatory IFRS adoption.

If a publicly listed firm's primary objective is to maximize shareholder value and accounting earnings play a stewardship role, optimal contracting theory suggests that we should expect a positive association between managerial compensation and accounting earnings (see Holmstrom 1979). Consistent with this prediction, we find that the CEO's annual cash compensation is positively correlated with contemporaneous accounting earnings for state-controlled A share firms in the pre-IFRS adoption period 2005-2006. However, the managerial pay-for-performance sensitivity drops significantly in the post-IFRS adoption period 2007-2009. These findings are consistent with the hypothesis that the mandatory IFRS adoption reduces the stewardship usefulness of financial information and therefore value-maximizing shareholders of state-controlled A share firms optimally adjust the managerial pay-for-performance sensitivity to a lower level in the post-IFRS adoption period.

To demonstrate more convincingly the effect of mandatory IFRS adoption on the pay-for-performance sensitivity and rule out alternative explanations, we perform several additional empirical analyses. First, we show that the observed decline in the managerial pay-for-performance sensitivity is more pronounced for state-controlled A share firms whose accounting earnings are more significantly affected by the IFRS adoption.

Second, we show that the managerial pay-for-performance sensitivity does not change significantly from the pre-IFRS adoption period to the post-IFRS adoption period for a group of Hong Kong-listed state-controlled Chinese firms that are subject to the same mainland China institutional forces but are not affected by China's mandatory IFRS adoption. This result suggests that the negative effect of mandatory IFRS adoption on the pay-for-performance sensitivity for state-controlled A share firms is unlikely due to confounding mainland China institutional forces.

Third, we examine the impact of mandatory IFRS adoption on the managerial pay-for-performance sensitivity for central-government-controlled A share firms and local-government-controlled A share firms separately. As detailed in Section IV, we argue that local-government-controlled A share firms are less likely than central-government-controlled A share firms to pursue shareholder value maximization as their primary firm objective; as a result, managers of local-government-controlled A share firms should face a weaker pay-for-performance sensitivity than managers of central-government-controlled A share firms. Accordingly, to the extent that the mandatory IFRS adoption reduces the stewardship usefulness of financial reporting, we should expect the negative impact of the IFRS adoption on the managerial pay-for-performance sensitivity to be stronger for central-government-controlled A share firms than for local-government-controlled A share firms. On the other hand, if the negative impact of mandatory IFRS adoption on state-controlled A share firms' managerial pay-for-performance sensitivity is due to confounding mainland China institutional forces, we should not expect the negative impact of IFRS adoption to differ between the two types of state-controlled A share firms.

We find that the managerial pay-for-performance sensitivity for central-government-controlled A share firms is almost three times as large as the managerial pay-for-performance sensitivity for local-government-controlled A share firms in the pre-IFRS adoption period. More importantly, the decline in the managerial pay-for-performance sensitivity in the post-IFRS adoption period is significant for central-government-controlled A share firms but not significant for local-government-controlled A share firms. These results provide further corroborative evidence that the observed decline in state-controlled A share firms' pay-for-performance sensitivity is due to China's mandatory IFRS adoption rather than confounding mainland China institutional forces.

The rest of the paper is organized as follows. Section II discusses the institutional background and relevant research. Section III presents the regression model and discusses the predictions. Section IV describes the sample selection procedures and discusses the regression results. Section V performs a battery of sensitivity checks. Section VI concludes.

II. INSTITUTIONAL BACKGROUND AND RELATED RESEARCH

Institutional Background

Taking effect on January 1, 2007 for all publicly traded firms listed on the two domestic stock exchanges, the newly adopted Chinese Accounting Standards (CAS) substantially differ from the old CAS. The new CAS comprise a basic standard, which is akin to a conceptual framework, and 38 specific standards that address nearly all the issues covered in the International Financial Reporting Standards (IFRS). Among the 38 standards, 16 are revisions of previously existing standards and 22 are newly created. Except for certain modifications that reflect China's unique circumstances and environment, the new CAS are substantially converged with IFRS.[1] Deloitte Touche Tohmatsu (2006) indicates that the new CAS are not simply an expansion of the disclosure requirements, but change the primary basis of accounting in mainland China.

A key distinction between the old CAS and the new CAS is the adoption of fair value accounting under the new CAS. In addition, the new CAS provide firm managers with increased discretion in financial reporting, such as R&D, goodwill, revenue recognition, etc.[2]

In order to ensure the successful implementation of the new CAS, Chinese regulators introduced a series of supporting regulations that took effect over the period 2007-2009. The

[1] Examples of the major differences between the new accounting standards and IFRS are the definition and disclosure of related party transactions, business combinations of entities under common control, and fair value measurement (see Deloitte Touche Tohmatsu 2006 for the details).

[2] See Deloitte Touche Tohmatsu (2006) for a detailed discussion of the differences between the old CAS and new CAS.

most noteworthy include the following: the new risk-based auditing standards that are similar to International Standards on Auditing issued by the International Auditing and Assurance Standards Board, Guides to Chinese Accounting Standards, and Basic Standards on Firms' Internal Control. In addition, starting from 2006 multiple government agencies (including the Ministry of Finance, the China Securities Regulatory Commission (CSRC), and China Institute of CPA) organized large-scale training on the new CAS. Furthermore, the CSRC treated listed firms' implementation of the new CAS as one of its key examination areas during 2006-2008.

Because of the substantial improvement in the quality of accounting standards, Chinese regulators expressed optimism that the newly adopted CAS would result in a significant improvement in Chinese firms' financial reporting quality. The new CAS have also won limited international recognition. In December 2007, the HKICPA recognized the new CAS as equivalent to Hong Kong Financial Reporting Standards (HKFRS), which are identical to IFRS. In December 2010, the Hong Kong Stock Exchange decided to allow mainland-incorporated companies listed in Hong Kong to have an option to present financial statements using the new CAS and audited by an approved mainland audit firm. In addition, in November 2008 the European Securities Committee (ESC) voted to permit Chinese issuers to use the new CAS when they enter the EU market without adjusting financial statements in accordance with IFRS endorsed by the EU.

However, there are also doubts whether mandatory IFRS adoption can result in desirable economic consequences due to mainland China's weak investor protection and poor record of enforcement of government regulations. The concern is that firm managers may abuse the increased discretion under the new CAS by engaging in opportunistic earnings management. For example, in a research report on the first-year implementation of the new accounting standards, Ministry of Finance Accounting Division (2008) identified a series of

severe problems, including preparers' lack of understanding and intentional violation of the new accounting standards. Furthermore, it is unclear how an increased emphasis of valuation usefulness in the new CAS (e.g., fair value accounting) would affect the stewardship usefulness of the new CAS. Overall, it is still an open question whether China's mandatory IFRS adoption would result in increased valuation usefulness or stewardship usefulness or both.

Related Research

Even though more than 100 jurisdictions have either fully adopted IFRS or are committed to doing so in the near future (see http://www.iasplus.com), the costs and benefits of global mandatory IFRS adoption are still hotly debated. Proponents claim that the worldwide mandatory IFRS adoption reduces the costs that multinational firms incur in preparing and auditing their financial statements, increases firms' financial reporting quality (e.g., the comparability of financial information across countries), and decreases firms' cost of capital. However, opponents argue that the quality of firms' financial statements depends on not only high-quality accounting standards but also firms' legal and institutional environments and the incentives of managers, investors, and auditors (e.g., Ball et al. 2000; Ball et al. 2003; Hung 2000). Because a country's legal and institutional environments and the incentives of relevant decision makers are often slow to change, opponents predict that the quality of financial reporting is unlikely to converge around the world even with the global mandatory adoption of IFRS. Some commentators even predict that if standard setters ignore such fundamental economic forces when proposing new accounting standards, severe negative consequences would result for not only investors and managers but also standard setters (e.g., Watts 2006).

In response to this important and ongoing debate, there is a growing accounting literature that analyzes the consequences of the worldwide mandatory IFRS adoption. Most empirical studies focus on the valuation usefulness of financial reporting.[3] After surveying the existing literature, Bruggemann et al. (2011) conclude that the effect of mandatory IFRS adoption on the stewardship usefulness of financial reporting is an under-researched area.

There are a few recent studies that have analyzed the effect of mandatory IFRS adoption on managerial compensation.[4] Wu and Zhang (2011) use a sample of Continental European firms to examine the effect of mandatory IFRS adoption on the sensitivity of *CEO turnover* to foreign peers' accounting performance. They find that the mandatory IFRS adoption results in an increase in the use of relative performance evaluation based on foreign peers' accounting information, consistent with greater financial reporting comparability associated with the mandatory IFRS adoption. Though not the focus of their study, Wu and Zhang (2011) find no evidence that the mandatory IFRS adoption is significantly associated with either a decrease or increase in the sensitivity of CEO turnover to their own firms' accounting performance.

In contrast to Wu and Zhang (2011), Ozkan et al. (2012) find evidence based on a similar sample of Continental European firms that mandatory IFRS adoption results in an increased sensitivity of managerial *cash compensation* to own firms' accounting performance for countries with a large difference between IFRS and their pre-adoption local accounting

[3] The most common issues examined by this literature include accounting quality (e.g., Cascino and Gassen 2010; Ahmed et al. 2010; Christensen et al. 2008; Capkun et al. 2011; Lang et al. 2010), users of financial statements such as analysts (e.g., Byard et al. 2011; Tan et al. 2009; Shahzad 2010) and institutional investors (e.g., DeFond et al. 2011), value relevance of accounting information (e.g., Aharony et al. 2010; Barth et al. 2011; Wu and Zhang 2009a; Landsman et al. 2011; Beuselinck et al. 2010), and cost of capital (e.g., Li 2010; Daske et al. 2008). Bruggemann et al. (2011) conduct a thorough review of this literature and conclude that the overall evidence is mixed.

[4] Wu and Zhang (2009b) use a sample of Continental European firms to examine the effect of *voluntary* IFRS adoption on the sensitivity of CEO turnover to accounting performance. However, the inference from their study cannot be readily extended to mandatory IFRS adoption because forced IFRS adopting firms are likely to face different incentives than voluntary adopting firms (see Ball et al. 2003).

standards. However, Voulgaris et al. (2011) find that UK's mandatory IFRS adoption is associated with a decrease in the use of accounting-based performance measures. They attribute the decrease to the adoption of fair value accounting.

Finally, using a sample of Hong Kong listed property firms, Chen and Tang (2011) examine how revaluation gains and losses, which are required by IFRS to be moved from equity to income, are associated with executive cash compensation post Hong Kong's mandatory IFRS adoption in 2005. They find revaluation gains are positively associated with executive cash compensation after but not before the mandatory IFRS adoption. They attribute this finding to managerial opportunism because the association is more evidenced in firms with greater agency problems. In addition, they find no evidence that executive compensation is penalized for reporting revaluation losses in the post adoption period. Chen and Tang (2011) do not explicitly examine the effect of mandatory IFRS adoption on the stewardship usefulness of financial reporting.

One common thread of the preceding studies is that they all cover countries or markets with strong investor protection. For example, Kaufmann et al.'s (2009) investor protection (rule of law) rating in 2007, the first year of China's mandatory IFRS adoption, is 1.69 for United Kingdom, 1.44 for Hong Kong, and 1.75 for the median of the 16 European countries used in Wu and Zhang (2011) and Ozkan et al. (2012).[5] These ratings are high given that Kaufmann et al.'s (2009) investor protection ratings follow a normal distribution with a mean of zero and a standard deviation of one. In contrast, China's investor protection rating is only -0.45. Prior research shows that the effects of mandatory IFRS adoption are different for weak versus strong investor protection countries (e.g., Daske et al. 2008; Byard et al. 2011). Hence, it is difficult to determine ex ante whether the evidence from the prior studies based on strong investor protection countries can be generalized to weak investor

[5] Except for Italy (0.41), Greece (0.69), and Portugal (0.95), the rule of law rating for the remaining 13 European countries is always above 1.

protection countries such as China. An important contribution of our study is to provide the first empirical evidence on the effect of mandatory IFRS adoption on the stewardship usefulness of financial reporting in a representative weak investor protection country, China.

Academic research on the costs and benefits of China's mandatory IFRS adoption is still at its infancy. The results from this research are mixed. For example, Liu et al. (2011) find that China's mandatory IFRS adoption is associated with decreased earnings management and increased value relevance of accounting measures. In contrast, He et al. (2011) find evidence of earnings management to avoid reporting losses by managers of listed Chinese firms by using the discretion in fair value accounting under the new CAS. However, He et al. (2011) do not compare the extent of overall earnings management before versus after the mandatory IFRS adoption. The implications of the findings from Liu et al. (2011) and He et al. (2011) to our study are unclear because earnings management could affect either valuation usefulness or stewardship usefulness or both. To our knowledge, no study has directly examined the effect of China's mandatory IFRS adoption on the stewardship usefulness of financial reporting.

III. RESEARCH DESIGN

We use the following firm fixed effects regression model to test the effect of China's mandatory IFRS adoption on state-controlled A share firms' stewardship usefulness of financial reporting (firm and year subscripts are omitted for brevity):

$$\text{Ln(COMP)} = \beta_0 + \beta_1 RET + \beta_2 ROA + \beta_3 CONTROL + \beta_4 RET \times CONTROL + \beta_5 ROA \times CONTROL + \gamma_0 POST + \gamma_1 POST \times RET + \gamma_2 POST \times ROA + \gamma_3 POST \times CONTROL + \gamma_4 POST \times RET \times CONTROL + \gamma_5 POST \times ROA \times CONTROL + \varepsilon \quad (1)$$

See the appendix for all variable definitions.

The dependent variable COMP includes the CEO's annual cash compensation (salary and bonus). Prior U.S. research (e.g., Core et al. 2003) indicates that a typical U.S. firm CEO's pay-for-performance sensitivity comes from three major sources: (a) annual cash compensation; (b) equity holdings; and (c) turnover. Typically a U.S. CEO's pay-for-performance sensitivity from equity holdings dwarfs the CEO's pay-for-performance sensitivity from cash compensation. Hence, a narrow focus on the CEO's cash compensation would understate the CEO's total pay-for-performance sensitivity and may result in difficulty in inference. In our setting we do not suffer from this problem because due to legal restrictions, equity-based incentives such as stock option compensation are rarely used in state-controlled A share firms during our sample period. In addition, Ke et al. (2012) find no evidence that state-controlled A share firms' CEO turnover is sensitive to firm performance. Therefore, we can simply rely on model (1) to measure the CEO's total pay-for-performance sensitivity for state-controlled A share firms.[6]

Following prior research (e.g., Bushman et al. 2006; Ozkan et al. 2012), we use the sensitivity of the CEO's annual cash compensation to accounting earnings (i.e., the coefficient on ROA) as a proxy for the stewardship usefulness of financial reporting.[7] The coefficient on POST×ROA captures the effect of mandatory IFRS adoption on the stewardship usefulness of financial reporting. To the extent that state-controlled A share firms' objective is shareholder value maximization and ROA is incrementally informative about the CEO's performance, optimal compensation contracting theory would predict the

[6] State-controlled Chinese firm executives often enjoy significant perks (Cai et al. 2005). We do not include perks in COMP because data on perks are not readily available. In addition, the provision of perks is typically associated with an executive's job title rather than his performance. Therefore, it seems unlikely that omitting perks would significantly affect our inferences.

[7] Mandatory IFRS adoption affects not only ROA but also other financial statement items. While it is interesting to study how mandatory IFRS adoption affects the stewardship usefulness of non-ROA items (e.g., leverage), we decided not to focus on non-ROA items because there is no existing theory that would guide us to develop ex ante predictions. In contrast, there is an established theoretical and empirical literature on the stewardship usefulness of ROA (e.g., Bushman et al. 2006).

coefficient on ROA to be significantly positive (see Holmstrom 1979; Banker and Datar 1989). More importantly, if mandatory IFRS adoption reduces (increases) the stewardship usefulness of financial reporting and accordingly ROA becomes less (more) informative as a measure of the CEO's performance, we should expect the coefficient on POST×ROA to be significantly negative (positive).

Consistent with U.S. research, we also include RET as an additional control for firm performance. To the extent that the CEO's cash compensation is partially based on RET, we expect the coefficient on RET to be significantly positive. In addition, to the extent that mandatory IFRS adoption reduces (increases) the stewardship usefulness of accounting earnings, optimal compensation contracting theory (e.g., Lambert and Larcker 1987) would predict the coefficient on POST×RET to be positive (negative).[8]

Prior research suggests that the CEO's pay-for-performance sensitivity varies with both time-invariate and time-variate firm characteristics. Hence, we include CONTROL (which contains a list of control variables) and its interactions with RET and ROA. Following prior research (e.g., Davilla and Penalva 2006; Leone et al. 2006; Ke et al. 2012), CONTROL contains ln(ASSETS), GROWTH, LEV, LARGEST_OWN, and REGU. We allow all the coefficients to vary with POST because the accounting variables in the pre- and post-IFRS adoption periods are based on different accounting standards and thus the coefficients on the regression variables may change across the two periods. To reduce the influence of outliers, all continuous variables are winsorized at the top and bottom 1%. To avoid multicollinearity, we demean all the continuous explanatory variables included in the COMP regression.

Finally, we include firm fixed effects in the regression to control for correlated omitted determinants of COMP. Due to inherent differences in the nature of the business

[8] It is unclear whether state-controlled A share firms would use stock returns RET to determine the CEO's pay due to the immaturity and volatility of mainland China' stock markets. Hence, as a robustness check, we also run all of the regressions excluding RET and obtain similar inferences (results untabulated).

across firms, the type of hired CEO and accordingly the level of the CEO's pay likely differ across firms. Hence, it is important to use firm fixed effects to control for such cross-firm differences in order to increase the estimation efficiency of the regression model and avoid the correlated omitted variable problem.[9]

IV. REGRESSION RESULTS

Results for the Full Sample of State-Controlled A Share Firms

The sample and descriptive statistics

Table 1 details our sample selection procedures for state-controlled A share firms. A listed firm is defined to be state-controlled if the immediate largest shareholder of the listed firm is a state-owned enterprise or a government agency. The immediate largest shareholder of listed Chinese firms is typically the controlling shareholder because Chen et al. (2009) show that most Chinese firms are dominated by a single largest shareholder whose ownership far exceeds that of the second largest shareholder.

We limit our sample to 2005-2009 because the SASAC's regulations on managerial compensation of central-government-controlled Chinese firms were relatively stable during this period. For example, accounting earnings were explicitly required as a performance measure in all executive compensation contracts. Starting from 2010, the SASAC required central-government-controlled Chinese firms to use EVA (economic value added) to assess firm performance in executive compensation contracts. Hence, we do not include the firm years subsequent to 2009 in our sample. In addition, 2005 is the first year when the CSRC required listed firms to disclose data on individual directors' compensation. We exclude financial firms because they are subject to different government regulations (including

[9] An alternative approach to controlling for firm fixed effects is to estimate regression model (1) using a change specification. We do not follow this alternative approach because our panel data set is unbalanced and therefore a change specification would result in a significant loss of approximately 40% of the observations used in regression model (1).

managerial compensation), especially during the period after the 2008 financial crisis. We exclude the firm years with CEO turnover because firm performance during the CEO turnover years likely reflects the contribution of both the departing and incoming CEOs. In addition, the CEO cash compensation for such years is not for the whole year and thus it is not comparable with the compensation in other firm years. We require each firm to have at least one year data in both the pre- and post-IFRS adoption periods in order to make sure that any documented changes in the CEO's pay-for-performance sensitivity are not due to the change in the number of unique firms over the two periods.

Table 2 reports the descriptive statistics for our key regression variables for state-controlled A share firms for the pre-IFRS adoption period 2005-2006 (Panel A) and the post-IFRS adoption period 2007-2009 (Panel B) separately. Most of the data on A share firms are obtained from the following commercial databases: RESSET, CSMAR, and CCER. For the firm years with missing data, to the extent possible, we also hand collected the missing data from annual reports. There are a few interesting empirical regularities about the state-controlled A share firms. First, the CEO's annual cash compensation (salary and bonus) increases significantly from the pre-IFRS adoption period to the post-IFRS adoption period. Second, accounting performance (ROA) is comparable but the abnormal stock performance (RET) behaves quite differently for the two time periods. However, the correlation between ROA and RET is significantly positive in both time periods (untabulated). Third, stock ownership is highly concentrated as evidenced by the large mean (median) value of LARGEST_OWN.

Regression result of model (1)

Table 3 shows the firm fixed effects regression result of CEO cash compensation for state-controlled A share firms. The coefficient on ROA is significantly positive, suggesting

that in the pre-IFRS adoption period the CEO's cash pay is positively linked to accounting earnings (ROA) while holding the other determinants of the pay-for-performance sensitivity constant.[10] The coefficient on our key variable of interest POST×ROA is significantly negative, suggesting that the sensitivity of the CEO's annual cash pay to accounting earnings declines in the post-IFRS adoption period while holding the other determinants of the pay-for-performance sensitivity constant. This evidence is consistent with the notion that the mandatory IFRS adoption reduces the stewardship usefulness of financial reporting and therefore the optimal weight of accounting performance in the CEO's cash compensation is reduced in the post period.

The coefficient on POST×ROA is consistent with the anecdotal evidence suggesting that the SASAC, the controlling shareholder of central government-controlled A share firms, became concerned about the potential negative impact of China's mandatory IFRS adoption on the stewardship usefulness of financial reporting. For example, prior to the fiscal year 2007 (the first post-IFRS adoption year) annual report filing deadline in early 2008 the SASAC issued a supplemental regulation that explicitly permitted (but did not mandate) state-controlled Chinese firms under its control to exclude earnings related to trading and available-for-sale securities from the performance benchmarks in the annual managerial performance evaluation (see SASAC 2008). This is probably the most direct evidence we are aware of on the impact of China's mandatory IFRS adoption on the stewardship usefulness of financial reporting.

The coefficient on RET is significantly negative, inconsistent with the common expectation that managerial pay should be positively tied to stock performance. However, the coefficient on POST×RET is significantly positive, suggesting that the CEO's cash

[10] Strictly speaking, the coefficient on ROA is only for the special case where the values of the variables in CONTROL are all set to zero in the pre-adoption period. Hence, we also set the values of the variables in CONTROL at the mean in the pre-adoption period and the coefficient on ROA for this representative mean firm is 2.339.

compensation is more closely tied with stock return in the post period. The positive coefficient on POST×RET is consistent with the optimal compensation contracting theory (e.g., Lambert and Larcker 1987): when the weight on ROA declines due to reduced quality of ROA as a measure of managerial performance, it is optimal to put more weight on RET in managerial compensation contracts. As noted before, omitting RET from the compensation model does not affect the inference for ROA and POST×ROA.

The coefficients on the interactions between firm performance (RET and ROA) and CONTROL are generally insignificant. Notable exceptions are the significant coefficients on ln(ASSETS)×ROA, LEV×ROA and LARGEST_OWN×ROA. The positive coefficient on ln(ASSETS)×ROA suggests that the managerial pay-for-performance sensitivity is stronger for larger firms. One interpretation of this finding is that larger firms have more growth options and thus require a stronger pay-for-performance sensitivity (see Leone et al. 2006). The negative coefficient on LEV×ROA implies that the managerial pay-for-performance sensitivity is lower in firms with higher financial leverage. This finding is consistent with the agency theory of debt (Jensen and Meckling 1976). Since the risk of expropriation from debt holders to equity holders is higher for higher leveraged firms, the optimal pay-for-performance sensitivity should be lower in such firms. We will discuss the significantly positive coefficient on POST×LARGEST_OWN×ROA in Section V.

Mandatory IFRS Adoption's Impact on Accounting Earnings

In this section we demonstrate more directly the effect of China's mandatory IFRS adoption on the managerial pay-for-performance sensitivity of state-controlled A share firms. We expect China's mandatory IFRS adoption to differentially affect the accounting performance of state-controlled A share firms. For firms whose accounting performance is not significantly affected by the mandatory IFRS adoption, we should not expect the

coefficient on POST×ROA to be significantly different from zero, holding everything else constant. Likewise, for firms whose accounting performance in the post-adoption period is significantly affected by the mandatory IFRS adoption, based on optimal contracting theory (see Holmstrom 1979; Banker and Datar 1989; Lambert and Larcker 1987), we should expect the coefficient on POST×ROA to become more negative (positive) if the mandatory IFRS adoption reduces (increases) the stewardship usefulness of financial reporting, holding everything else constant.

To test the above hypothesis, ideally, we should measure the impact of mandatory IFRS adoption on accounting performance using the absolute difference in net income between the old CAS and new CAS for all the years during the post-adoption period 2007-2009. Unfortunately, firms are required to prepare two sets of accounting earnings for only the transition year 2006 and therefore we cannot measure this ideal construct for the years 2007-2009. As a compromise, we use the absolute difference in net income between the new CAS and old CAS for year 2006 as a proxy for the construct (a firm fixed effect). Specifically, we define a new variable GAP that is the natural logarithm of the absolute difference in year 2006 net income between the old CAS and the new CAS scaled by the average beginning and ending total assets in year 2006 based on the old CAS. Then we interact GAP with POST, RET, ROA, POST×RET, and POST×ROA. The coefficient on GAP×POST×ROA is our variable of interest.

Table 4 shows the regression result of model (1) augmented with GAP and its interactions with POST, RET, ROA, POST×RET, and POST×ROA. For brevity, we do not tabulate the coefficients on the control variables in Table 4. Note the coefficient on GAP is not reported because GAP is a firm fixed effect and therefore the coefficient on GAP cannot be estimated in a firm fixed effect regression. While we have a prediction on the coefficient on the three-way interaction GAP×POST×ROA as discussed above, we do not have any ex

ante predictions on the coefficients on the two-way interactions with GAP. Nevertheless, it is important to include the two-way interactions in order to have a meaningful interpretation of the coefficient on our key variable of interest GAP×POST×ROA. We find that the coefficient on GAP×POST×ROA is significantly negative. This evidence suggests that the negative effect of mandatory IFRS adoption on the managerial pay-for-performance sensitivity is stronger for firms whose accounting earnings are more significantly affected by the mandatory IFRS adoption. This result provides more direct evidence on the negative effect of China's mandatory IFRS adoption on the stewardship usefulness of financial reporting.

Hong Kong-Listed State-Controlled Chinese Firms

China's new CAS took effect in the same time (i.e., 1/1/2007) for all domestically listed A share firms. Because there are likely other confounding mainland China macro events that occurred around the same time as China's mandatory IFRS adoption, the coefficient on POST×ROA in the COMP regression could be subject to alternative explanations. The coefficient on GAP×POST×ROA in Table 4 helps reduce but may not completely eliminate such concerns. To further reduce such concerns, we replicate the COMP regression for a sample of Hong Kong-listed state-controlled Chinese firms over the same time period 2005-2009, including state-controlled H share firms (defined as mainland Chinese-controlled firms that are incorporated in mainland China but listed in Hong Kong) and state-controlled Red Chip firms (defined as mainland Chinese-controlled firms that are incorporated outside mainland China and listed in Hong Kong). Because Hong Kong-listed firms are required to adopt IFRS in 2005, these firms' managerial pay-for-performance sensitivity should not be affected by China's IFRS adoption in 2007. However, both state-controlled A share firms and Hong Kong-listed state-controlled Chinese firms are controlled by the Chinese government and operate their businesses on mainland China. Hence, both

types of firms should face the same mainland China institutional forces. Hence, if the negative coefficient on POST×ROA in Table 3 is due to confounding mainland China institutional forces, the coefficient on POST×ROA for Hong Kong-listed state-controlled Chinese firms should be also significantly negative.[11]

Table 5 replicates the regression model (1) for Hong Kong-listed state-controlled Chinese firms that are not affected by China's IFRS adoption in 2007. Panel A of Table 5 describes the sample selection procedures. Panel B of Table 5 shows the descriptive statistics for the key regression variables for the pre-IFRS adoption period and post-IFRS adoption period separately. Hong Kong-listed state-controlled Chinese firms differ from state-controlled A share firms (see Table 2) on several dimensions. Consistent with Ke et al. (2012), the mean and median CEO cash pay are much higher for Hong Kong-listed firms than for A share firms. Hong Kong-listed firms are much larger in size and experience faster sales growth but have lower financial leverage than A share firms. Even though the ownership of the controlling shareholder is pretty high for both types of state-controlled firms, the ownership of the controlling shareholder is much higher in Hong Kong-listed firms than in A share firms.

Panel C of Table 5 shows the regression result of model (1) for Hong Kong-listed state-controlled Chinese firms. For brevity, we do not tabulate the coefficients on the control variables. The coefficient on ROA is significantly positive but the coefficient on POST×ROA is insignificant. Hence, there is evidence that ROA is used in determining managerial cash compensation in the pre-IFRS adoption period but there is no evidence that the managerial

[11] In addition to mainland China institutional forces, Hong Kong-listed Chinese firms are subject to Hong Kong securities regulations. To make sure that the coefficient on POST×ROA for Hong Kong-listed state-controlled Chinese firms is not due to changes in Hong Kong securities regulations, we searched but found no confounding regulations issued by Hong Kong regulators during our sample period. We also discussed this issue with one CSRC official and one knowledgeable Chinese analyst working for a top international investment bank. Both individuals confirmed that there were no confounding Hong Kong regulatory events during our sample period that would affect Hong Kong-listed Chinese firms' managerial compensation.

pay-for-performance sensitivity for Hong Kong-listed state-controlled Chinese firms declines in the post-IFRS adoption period.

We also examine whether the coefficient on POST×ROA is significantly different for state-controlled A share firms and Hong Kong-listed state-controlled Chinese firms. As noted above, Hong Kong-listed state-controlled Chinese firms are much larger than state-controlled A share firms. Even though we include ln(ASSETS) as a control in regression model (1), the effect of firm size on the pay-for-performance sensitivity may not be adequately controlled for due to nonlinearity in the effect of firm size. Hence, we first rerun the model in Table 3 by limiting the sample of state-controlled A share firms to only those firms whose average total assets over 2005-2009 are above 75 percentile of the sample. We select a cutoff of 75th percentile because the average total assets for this subsample are not significantly different from the average total assets for the Hong Kong-listed state-controlled Chinese firms. As shown in Panel A of Table 6, the coefficient on POST×ROA continues to be significantly negative and even larger than the coefficient on POST×ROA for the full sample in Table 3. More importantly, using STATA's suest command, we find that the coefficient on POST×ROA is significantly different for the model in Table 5 and the model in Panel A of Table 6 (two-tailed p=0.077).

Overall, the results in Table 5 and 6 suggest that the negative coefficient on POST×ROA in Table 3 is due to China's mandatory IFRS adoption rather than confounding mainland China institutional effects.

Central-Government-Controlled vs. Local-Government-Controlled A Share Firms

Regression model (1) is built on the implicit assumption that the objective of all state-controlled A share firms is shareholder value maximization. If state-controlled A share firms' primary objective is something other than shareholder value maximization, the CEO's

compensation should be less significantly positively associated with firm performance. Accordingly, we should also expect the mandatory IFRS adoption to have a smaller (either positive or negative) impact on the managerial pay-for-performance sensitivity. In this section we directly examine the impact of this implicit assumption on our predictions by examining central-government-controlled A share firms and local-government-controlled A share firms separately. As we argue below, our implicit assumption is reasonable for central-government-controlled A share firms but it may not hold for local-government-controlled A share firms during our sample period. Therefore, we expect the effect of mandatory IFRS adoption to be smaller for local-government-controlled A share firms.

Historically all state-owned Chinese firms operated their businesses according to state planning. Managers of these firms suffered from severe agency problems and lacked incentives to maximize shareholder value. Accordingly, there was little managerial pay-for-performance sensitivity (Li 2000; Wei 2000). Starting from the early nineties, China's central government began to modernize state-owned firms by encouraging them to be incorporated and publicly listed on domestic and international stock exchanges. In particular, since the formation of the SASAC (State-owned Assets Supervision and Administration Commission) as the ultimate controlling shareholder of central-government-controlled A share firms in 2003, the SASAC has implemented numerous regulations to strength the governance of central-government-controlled firms in order to encourage managers to increase shareholder value. One important reform initiative undertaken by the SASAC during our sample period is the implementation of two regulations that require a rigorous annual evaluation of managerial performance and an explicit link between managerial annual compensation and accounting performance (see SASAC 2003, 2004). Furthermore, since 2004 the SASAC has adopted a tough policy of eliminating small and underperforming central-government-controlled firms through forced mergers and acquisitions. As a result of this policy, the number of central-

government-controlled firms shrank from 196 in 2003 to 129 in 2009. As a result of these reform initiatives, we predict a strong managerial pay-for-performance sensitivity for central-government-controlled A share firms during our sample period.

However, managers of local-government-controlled A share firms are likely to have much weaker incentives to maximize shareholder value. One important reason is that the reform of local-government-controlled firms significantly lags behind the reform of central-government-controlled firms. Due to the complexities of reforming state-owned enterprises, the central government's many reform initiatives often started with central-government-controlled firms, which are also strategically more important to the central government (see Ma 2009). In addition, the SASAC does not have the direct supervisory power over local-government-controlled Chinese firms. All of the SASAC's reform initiatives since 2003 are merely advisory to local-government-controlled firms (see SASAC 2003). Local governments have the explicit discretion to design their own regulations that tailor to the specific situations of their local-government-controlled firms. Even if some central government regulations directly apply to local-government-controlled firms, such regulations are often difficult to enforce at the local level due to weak rule of law and the divergence of interests between local governments and the central government (see Batson 2010).[12] Hence, while central-government-controlled firms are subject to the monitoring of multiple central government agencies including the SASAC and the National Audit Office, Chen et al. (2009) indicate that managers of local-government-controlled firms are usually subject to no monitoring at all. Therefore, managers of local-government-controlled firms are often entrenched and have the ability to set their own compensation, which is unlikely to be very sensitive to firm performance.

[12] China's runaway real estate development and ballooning local government borrowing in recent years illustrate the difficulty that the central government has in controlling the behavior of local governments (see Li 2009).

Even in Shanghai, which is at the fore front of China's economic development, the reform of local-government-controlled firms significantly lags behind the reform of central-government-controlled firms. For example, we directly confirmed with an anonymous official working for the State-Owned Assets Supervision and Administration Commission of the Shanghai Municipal Government that Shanghai-government-controlled firms have not followed the SASAC regulations on managerial performance evaluation (see SASAC 2003, 2004) nor used EVA (economic value added) in assessing managerial performance, even though EVA has been used as a managerial performance measure by central-government-controlled Chinese firms since 2010. Some non-listed Shanghai-government-controlled firms do not even have established a formal system of managerial performance evaluation and compensation. Quite often, many Shanghai-government-controlled firms follow ad hoc managerial evaluation and compensation practices such as "different compensation policies for different firms" and "different compensation contracts for different managers" (see, e.g., the SASAC of Shanghai Putuo District 2006).

Another important reason for the weak pay-for-performance sensitivity in local-government-controlled firms is that local government leaders have fixed tenures and their future career prospects directly depend on the local GDP growth during their tenures (see Li and Zhou 2005; Zhou 2004). In addition, local governments have to shoulder a variety of local social responsibilities such as employment and social welfare (see Lin et al. 2004). Hence, local government leaders have a strong incentive to pressure managers of local-government-controlled A share firms, who are under their direct control, to pursue the growth of firm size and employment rather than profit maximization. Consistent with this prediction, prior research shows that local-government-controlled A share firms are more prone to overinvestment (Zhang and Wang 2010), having excess employees on their payrolls (Zeng and Chen 2006), executing related party transactions that hurt minority shareholders' interests

(Cheung et al. 2010; Jiang et al. 2010), and reporting lower accounting earnings (Chen et al. 2009). In order to induce managers of local-government-controlled A share firms to follow the preferences of local government leaders, we expect the latter to have lower incentives to tie managerial pay to firm performance.[13]

In summary, the preceding discussions suggest that managers of local-government-controlled firms should face a lower pay-for-performance sensitivity than managers of central-government-controlled firms during our sample period. Hence, to the extent that the mandatory IFRS adoption reduces (increases) the stewardship usefulness of financial reporting, we should also expect the negative (positive) impact of mandatory IFRS adoption on the managerial pay-for-performance sensitivity to be smaller for local-government-controlled A share firms than for central-government-controlled A share firms. On the other hand, if the predicted negative or positive impact of mandatory IFRS adoption on the managerial pay-for-performance sensitivity is due to confounding effects that affect all state-controlled A share firms, we have no reason to expect the impact of mandatory IFRS adoption on the managerial pay-for-performance sensitivity to differ for the two types of state-controlled A share firms.[14]

Table 7 reports the firm fixed effects regression model (1) for central-government-controlled firms (panel A) and local-government-controlled firms (panel B) separately.[15]

[13] We reviewed a small random sample of managerial compensation contracts for central-government-controlled A share firms and local-government-controlled A share firms. We find that central-government-controlled A share firms' managerial compensation contracts closely follow the SASAC's regulations with accounting earnings as the main evaluation criterion of managerial performance (the weight is approximately 70%). However, local-government-controlled A share firms' managerial compensation contracts often differ significantly from the SASAC's regulations. For example, the weight of accounting earnings is much lower than in central-government-controlled firms. In addition, there are multiple non-earnings based performance evaluation indicators (e.g., asset growth, the amount of external financing, workplace safety, etc.).

[14] To our best knowledge, we are not aware of any confounding mainland China institutional forces that altered the managerial pay-for-performance sensitivity for the two types of state-controlled A share firms differently during our sample period.

[15] A small percentage of the central-government-controlled A share firms are under the direct supervision of a central government ministry other than the SASAC. The inference in Panel A of Table 7 is robust to excluding these firms from the sample of central-government-controlled A share firms.

While the managerial pay-for-performance sensitivity (i.e., the coefficient on ROA) in the pre-IFRS adoption period is significantly positive for both central-government-controlled firms and local-government-controlled firms, the magnitude of the managerial pay-for-performance sensitivity for central-government-controlled firms is almost three times as large as the magnitude of the managerial pay-for-performance sensitivity for central-government-controlled firms (4.725 vs. 1.610). The difference in coefficients on ROA is significantly different using STATA's suest command (two-tailed p=0.001). This result is consistent with our argument that managers of local-government-controlled firms face a weaker pay-for-performance sensitivity than managers of central-government-controlled firms. More importantly, the coefficient on POST×ROA is significantly negative for central-government-controlled firms but insignificant for local-government-controlled firms. The difference in the coefficients on POST×ROA for the two types of firms is significant (two-tailed p=0.027). These results cannot be explained by confounding effects and are consistent with our hypothesis that when a firm's primary objective is shareholder value maximization and the mandatory IFRS adoption reduces the stewardship usefulness of financial reporting, the optimal managerial pay-for-performance sensitivity should decline post the mandatory IFRS adoption.[16]

V. SUPPLEMENTAL TESTS

In this section we perform a series of sensitivity checks to further rule out alternative explanations for the results of state-controlled A share firms. For the sake of brevity, we do not tabulate the results for most of these sensitivity analyses.

[16] We interviewed a few senior managers working for local-government-controlled firms in Shanghai. Consistent with our reported results, none of the senior managers believed that the mandatory IFRS adoption had a significant impact on their managerial compensation.

Split Share Structure Reform

During our sample period the CSRC initiated the split share structure reform that made all non-tradable shares freely tradable. Prior to the split share structure reform, all A share firms had two types of common stocks: non-tradable shares and tradable shares. Non-tradable shares are largely owned by a controlling shareholder while tradable shares are listed on one of the two domestic stock exchanges and can be owned by Chinese citizens, domestic institutions and qualified foreign institutional investors. While the CSRC announced the first pilot batch of four companies for the reform in April 2005, more than 90% of the state-controlled A share firms in our sample completed the reform by the end of 2006, which coincided with China's mandatory IFRS adoption.

Because the primary objective of the split share structure reform is to help align the interests between non-tradable shareholders and tradable shareholders, the reform is expected to help strengthen the managerial pay-for-performance sensitivity. This incentive alignment effect is expected to be larger for firms whose controlling shareholders own a greater percentage of previously non-tradable shares (i.e., LARGEST_OWN).

Regression model (1) has already included the interactions between LARGEST_OWN and the two firm performance measures (RET and ROA) that are allowed to vary with POST. Hence, our inferences in Tables 2-7 have already controlled for the effect of the split share structure reform. We have no ex ante predictions for the coefficients on LARGEST_OWN×RET and LARGEST_OWN×ROA but the coefficients on POST×LARGEST_OWN×RET and POST×LARGEST_OWN×ROA are expected to be positive due to the incentive alignment effect of the split share structure reform.

Table 3 reports the coefficients on LARGEST_OWN×RET, LARGEST_OWN×ROA, POST×LARGEST_OWN×RET, and POST×LARGEST_OWN×ROA. Consistent with the incentive alignment effect of the split share structure reform, the coefficient on

POST×LARGEST_OWN×ROA is significantly positive. However, the coefficient on POST×LARGEST_OWN×RET is insignificant, which could be due to the possibility that RET is not a performance measure used to assess the CEO's performance by state-controlled A share firms.

Managerial Compensation Reform

In early 2006 the CSRC issued rules that allowed A shares to adopt stock option compensation. Hence, it is possible that the observed decline in the managerial pay-for-performance sensitivity post the mandatory IFRS adoption for state-controlled A share firms reflects a substitution between cash compensation and equity compensation. To rule out this alternative explanation, we identified all of our sample firms that adopted stock option plans during 2005-2009. There are only 57 firm years that implemented stock option plans during 2005-2009. Adding a dummy variable for these 57 firm years to CONTROL in regression model (1) does not affect any of our inferences (not tabulated).

Miscellaneous Robustness Checks

We also performed the following minor robustness checks. First, we use several alternative definitions of accounting performance. Because ROE (return on equity defined as net income divided by the average total equity) is more likely than ROA to be subject to the problem of a small or even negative denominator, following prior research, we use ROA in our primary tests. Inferences are similar if ROA is replaced by ROE or the numerator of ROA uses operating income rather than net income. The only exception is that the coefficient on GAP×POST×ROE becomes insignificant. Second, all of our inferences are robust to adding a dummy variable for negative ROAs to CONTROL in regression model (1). Third, all of our inferences are robust to computing the p values using the two-way clustering of year and firm.

VI. CONCLUSIONS

The objective of this study is to examine how Chinese Accounting Standards' substantial convergence with IFRS in 2007 (referred as China's mandatory IFRS adoption) affects state-controlled A share firms' sensitivity of the CEO's cash compensation to accounting earnings, a proxy for the stewardship usefulness of financial reporting. We find that in the pre-IFRS adoption period the pay-for-performance sensitivity is significantly positive, but post the mandatory IFRS adoption the sensitivity declines significantly, especially for firms whose earnings are more significantly affected by the IFRS adoption. We do not observe a similar decline in the pay-for-performance sensitivity for Hong Kong-listed state-controlled Chinese firms that are not affected by China's mandatory IFRS adoption but face similar mainland China institutional forces.

We also show that managers of central-government-controlled A share firms are more likely motivated by shareholder value maximization than managers of local-government-controlled A share firms as evidenced by the stronger managerial pay-for-performance sensitivity for central-government-controlled A share firms than for local-government-controlled A share firms in the pre-IFRS adoption period. More importantly, we find that the decline in the managerial pay-for-performance sensitivity in the post-IFRS adoption period is larger for central-government-controlled A share firms than for local-government-controlled A share firms. These results are consistent with the theory of optimal compensation contracting that when a firm's objective is shareholder value maximization and China's mandatory IFRS adoption reduces the stewardship usefulness of financial reporting, the optimal managerial pay-for-performance sensitivity should decline post the mandatory IFRS adoption.

Overall, our results suggest that China's mandatory IFRS adoption reduces the stewardship usefulness of financial reporting. Our findings should be of significant interest to accounting standard setters (e.g., IASB, China's Ministry of Finance) who wish to adopt accounting standards that help improve firms' resource allocation. He et al. (2011) argue that the stewardship usefulness of financial reporting is more important than the valuation usefulness of financial reporting in emerging economies like China. If this is true, the evidence from our study suggests that China's mandatory adoption of IFRS, which are regarded as a set of high quality accounting standards, does not achieve its intended objective of improving Chinese firms' financial reporting quality. Our findings also lend support to Watts' (2006) claim that when proposing new accounting standards, a standard setter's failure to heed relevant stakeholders' demands may result in unintended negative consequences.

Our study suggests a few avenues for future research. First, we have only demonstrated the overall effect of China's mandatory IFRS adoption on the pay-for-performance sensitivity. Future research may identify the specific accounting standards in the new CAS that are responsible for the reduced usefulness of financial accounting. Such detailed knowledge is useful to standard setters who wish to improve existing accounting standards. Second, to the extent that the managerial pay-for-performance sensitivity in the pre-IFRS adoption period represents optimal contracting, the reduced managerial pay-for-performance sensitivity resulting from China's mandatory IFRS adoption would push state-controlled A share firms' managerial compensation away from the initial optimal equilibrium (i.e., a loss to shareholder value). Hence, it would be interesting for future research to examine whether shareholders of state-controlled A share firms can identify alternative cost effective monitoring mechanisms in order to bring the managerial compensation structure closer to the initial optimal equilibrium.

REFERENCES

Aharony, J., Barniv, R., and H. Falk. 2010. The impact of mandatory IFRS adoption on equity valuation of accounting numbers for security investors in the EU. European Accounting Review, 19(3), 535-78.

Ahmed, A.S., M. Neel, and D. Wang. 2010. Does Mandatory Adoption of IFRS improve Accounting Quality? Preliminary Evidence. Texas A&M University working paper.

Ball, R. 2006 International Financial Reporting Standards (IFRS): Pros and Cons for Investors. Accounting and Business Research 36 (Special Issue), 5-27.

Ball, R., S. P. Kothari, and A. Robin. 2000. The effect of international institutional factors on properties of accounting earnings. Journal of Accounting and Economics 29: 1–51.

Ball, R., A. Robin, and J. Wu. 2003. Incentives versus standards: Properties of accounting income in four East Asian countries. Journal of Accounting and Economics 36: 235–270.

Banker, R., and S. Datar. 1989. Sensitivity, precision, and linear aggregation of signals for performance evaluation. Journal of Accounting Research 27(1): 21-39.

Barth, M. E., Landsman, W. R., Young, D., and Z. Zhuang. 2011. Relevance of differences between net income based on IFRS and domestic standards for European firms. Workingpaper, Stanford University, University of North Carolina, and Chinese University of Hong Kong.

Batson, A. 2010. China seeks a new self through an old method. The Wall Street Journal online, October 13.

Beuselinck, C., Joos, P., Khurana, I., and S. Van der Meulen. 2010. Mandatory IFRS reporting and stock price informativeness. Working paper, Tilburg University and University of Missouri at Columbia.

Brüggemann, U., J. Hitz, and T. Sellhorn. 2011. Intended and unintended consequences of mandatory IFRS adoption: Extant evidence and suggestions for future research. Working paper, Lancaster University.

Bushman, Robert, Ellen Engel, and Abbie Smith. 2006. An Analysis of the Relation between the Stewardship and Valuation Roles of Earnings. Journal of Accounting Research 44(1), 53-83.

Byard, D., Li, Y., and Y. Yu. 2011. The effect of mandatory IFRS adoption on financial analysts‟ information environment. Journal of Accounting Research, 49(1), 69-96.

Cai, H. B., H. M. Fang and L. C. Xu, 2005, Eat, drink, firms and government: An investigation of corruption from entertainment and travel costs of Chinese firms, NBER Working paper.

Capkun, V., Collins, D. W., and T. Jeanjean. 2011. Does adoption of IAS/IFRS deter earnings management?, Working paper, HEC Paris, University of Iowa and ESSEC Business School.

Cascino, S. and J. Gassen. 2010. Mandatory IFRS adoption and accounting comparability, Working paper, London School of Economics and Humboldt University of Berlin.

Chen, G., M. Firth, and L. Xu. 2009. Does the type of ownership control matter? Evidence from China's listed companies. Journal of Banking and Finance, 33, 171-181.

Chen, K. C. W. and F. Tang. 2011. Relaxation of Conservatism Principle and Distributions to Stakeholders: The Association between the Revaluation Gains under IFRS and Executive Compensation. Working paper, Hong Kong University of Science and Technology and Hong Kong Polytechnic University.

Cheung, Y., P. R. Rau, and A. Stouraitis. 2010. Helping Hand or Grabbing Hand? Central vs. Local Government Shareholders in Chinese Listed Firms. Review of Finance 14: 669–694.

Christensen, H. B., Lee, E., and M. Walker. 2008. Incentives or standards: what determines accounting quality changes around IFRS adoption?, Working paper, University of Chicago and Manchester Business School.

Christensen, J., Demski, J., 2003. Accounting theory: an information content perspective. McGraw-Hill Irwin.

Core, J., W. Guay, and R. Verrecchia. 2003. Are Performance Measures Other than Price Important to CEO Incentives? The Accounting Review 78, 957–81.

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2008. Mandatory IFRS reporting around the world: Early evidence on the economic consequences. Journal of Accounting Research 46: 1085–1142.

Davilla, A., Penalva, F., 2006. Governance structure and the weighting of performance measures in CEO compensation. Review of Accounting Studies 11, 463-493.

DeFond, M., X.S. Hu, M.Y. Hung, S.Q. Li. 2011. The impact of mandatory IFRS adoption on foreign mutual fund ownership: The role of comparability. Journal of Accounting and Economics 51, 240-258.

Deloitte Touche Tohmatsu. 2006. China's new accounting standards: a comparison with current PRC GAAP and IFRS. http://www.iasplus.com/country/china.htm.

Gjesdal, F. 1981. Accounting for Stewardship. Journal of Accounting Research 19(1), 208-231.

He, Xianjie, T.J. Wong, and Danqing Young. 2011. Challenges for Implementation of Fair Value Accounting in Emerging Markets: Evidence from China. Forthcoming in the Contemporary Accounting Research.

Holmstrom, B., 1979. Moral hazard and observability. The Bell Journal of Economics 10, 74-91.

Hung, M. 2000. Accounting standards and value relevance of earnings: An international analysis. Journal of Accounting and Economics 30: 401–420.

International Accounting Standards Board (IASB). 2005. Agenda Paper 8A, 19 October 2005, Information for Observers. Available at: http://www.iasb.org/Current Projects /IASB Projects /Conceptual Framework/Meeting Summaries and Observer Notes/October 2005.htm.

International Accounting Standards Board (IASB). 2006. Discussion Paper-Preliminary views on an improved conceptual framework for financial reporting: The objective of

financial reporting and qualitative characteristics of decision-useful financial reporting information. London, U.K.: IASB.

International Accounting Standards Board (IASB). 2008. Exposure Draft of An improved Conceptual Framework for Financial Reporting: Chapter 1: The Objective of Financial Reporting; Chapter 2: Qualitative Characteristics and Constraints of Decision-useful Financial Reporting Information. London, U.K.: IASB.

International Accounting Standards Board (IASB). 2010. The Conceptual Framework for Financial Reporting. London, U.K.: IASB.

Jensen, Michael C., and Meckling, William H., 1976. Theory of the firm: managerial behavior, agency costs and ownership structure. Journal of Financial Economics 3, no. 4 (October): 305-360.

Jiang, G., C. Lee, and Heng Yue. 2010. Tunneling through inter-corporate loans: The China experience. Journal of Financial Economics 98: 1-20.

Kaufmann, D., A. Kraay, and M. Mastruzzi. 2009. Governance matters VIII: aggregate and individual governance indicators 1996–2008. Washington, DC: The World Bank.

Ke Bin, Oliver Rui, and Wei Yu, 2012, Hong Kong stock listing and the sensitivity of managerial compensation to firm performance in state-controlled Chinese firms, Review of Accounting Studies, 17(1), forthcoming.

Lambert, Richard A. 2001. Contracting theory and accounting. Journal of Accounting and Economics 32, 3–87.

Lambert, R. A., and D. F. Larcker. 1987. An Analysis of the use of Accounting and Market Measures of Performance in Executive Compensation Contracts. Journal of Accounting Research 25:85-125.

Landsman, W. R., Maydew, E. L., and J. R. Thornock. 2011. The information content of annual earnings announcements and mandatory adoption of IFRS. Journal of Accounting and Economics, forthcoming.

Lang, M., M. Maffett, and E. Owens. 2010. Earnings Comovement and Accounting Comparability: The Effects of Mandatory IFRS Adoption. Working paper, UNC-Chapel Hill.

Leone, A.J., J.S. Wu and J.L. Zimmerman, Asymmetric sensitivity of CEO cash compensation to stock returns. Journal of Accounting and Economics, 2006. 42(1-2): p. 167-192.

Li, Sandy. 2009. Beijing bid to cool property prices ignored. South China Morning Post, December 31, 2009.

Li, Zengquan. 2000, Incentives and Performance, Accounting Research (in Chinese) 1, 24-30.

Li, H. and L. Zhou. 2005. Political turnover and economic performance: the incentive role of personnel control in China. Journal of Public Economics 89, 1743– 1762

Li, S. 2010. Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital? The Accounting Review 85, 607–636.

Lin, Y.F., M.X. Liu, and Q. Zhang. 2004. Policy burdens and the soft-budget constraint: evidence from China. Management World (in Chinese) 8, 81-89.

Liu, C., L.J. Yao, N. Hu, and L. Liu. 2011. The Impact of IFRS on Accounting Quality in a Regulated Market: An Empirical Study of China. Journal of Accounting, Auditing, and Finance 26(4), 659–676.

Ma, H. 2009. China regulates the compensation of heads of business enterprises: first central-government-controlled firms, followed by local-government-controlled firms and other types of Chinese firms (in Chinese). October 23, www.chinanews.com.

Ministry of Finance Accounting Division. 2008. Research report on publicly listed Chinese firms' implementation of the new accounting standards for fiscal year 2007. Accounting Research (in Chinese) 6, 19-30.

O'Connell, Vincent. 2007. Reflections on Stewardship Reporting. Accounting Horizons 21(2), 215–227.

Ozkan, N., Z. Singer, and H. You. 2012. Mandatory IFRS Adoption in Europe and the Contractual Usefulness of Accounting Information in Executive Compensation. Journal of Accounting Research, forthcoming.

Paul, J. 1992. On the Efficiency of Stock-Based Compensation. Review of Financial Studies 5, 471–502.

Ramanna, K. and E. Sletten. 2011. Network Effects in Countries' Adoption of IFRS. Harvard Business School and MIT working paper.

Rogers, W.H., 1993. sg17: Regression standard errors in clustered samples, Stata Technical Bulletin 13, 19-23.

Shahzad, K. 2010. The quality of financial reporting under IFRS: evidence from credit ratings. Working paper, Erasmus University Rotterdam.

State-owned Asset Supervision and Administration Commission (SASAC). 2003. Interim measures for the assessment of management performance of heads of central government-owned enterprises (in Chinese). December 25, 2003.

State-owned Asset Supervision and Administration Commission (SASAC). 2004. Interim measures for the administration of compensation for heads of central government-owned enterprises (in Chinese). June 2, 2004.

State-owned Asset Supervision and Administration Commission (SASAC). 2008. Supplemental provisions for the assessment of management performance of heads of central government-owned enterprises (in Chinese). February 25, 2008.

State-owned Asset Supervision and Administration Commission (SASAC) of Shanghai Putuo District. 2006. Interim measures for the assessment of management performance of heads of Shanghai Putuo District government-owned enterprises (in Chinese). October 30, 2006.

Sunder, S. 2009. IFRS and the Accounting Consensus" Accounting Horizons 23 (1), 101-111.

Tan, H., Wang, S., and M. Welker. 2009. Foreign analyst following and forecast accuracy around mandated IFRS adoptions, Working paper, University of Waterloo, Hong Kong University of Science, and Technology and Queen's University.

Voulgaris, G., K. Stathopoulos, and M. Walker. 2011. IFRS and the Use of Accounting-Based Performance Measures in Executive Pay. Working paper, University of Edinburgh and The University of Manchester.

Watts, R. L. 2003. Conservatism in accounting, Part I: Explanations and implications. Accounting Horizons 17 (3): 207–221.

Watts, R. L. 2006. What has the invisible hand achieved? Accounting & Business Research 36:51-61.

Wei, Gang. 2000. Incentives for Top-Management and Performance of Listed Companies, Economic Review (in Chinese), 32-39.

Wu, J. and I. Zhang. 2009a. The Adoption of Internationally Recognized Accounting Standards: Implications for the Credit Markets. University of Rochester working paper.

Wu, J., and I. Zhang. 2009b. The Voluntary Adoption of Internationally Recognized Accounting Standards and Firm Internal Performance Evaluation. The Accounting Review 84(4), 1281-1309.

Wu, J. and I. Zhang. 2011. Accounting Integration and Comparability: Evidence from Relative Performance Evaluation around IFRS Adoption. University of Rochester working paper.

Zeng, Q.S, and X.Y. Chen. 2006. Government control, excess employees, and labor cost. Economic Research (in Chinese), 5, 74-86.

Zhang Honghui, Wang Zongjun. 2010. Government Intervention, Government Objectives and State-owned Listed Companies' Overinvestment. Nankai Business Review (in Chinese) 13 (3), 101-108.

Zhou, L.A. 2004. The Incentive and Cooperation of Government Officials in the Political Tournaments: An Interpretation of the Prolonged Local Protectionism and Duplicative Investments in China. Economic Research (in Chinese) 3, 33-40.

APPENDIX
VARIABLE DEFINITIONS

Variable name		Definition
State-control	=	A listed firm is defined to be state-controlled if the immediate largest shareholder of the listed firm is a state-owned enterprise or a government agency.
COMP	=	The total annual cash compensation (primarily salary and bonus) paid to the CEO (in RMB).
ROA	=	Net income (net of minority shareholders' interest) divided by the average total assets.
RET	=	The fiscal period raw return minus the market return. The market return is the Hang Seng index return for Hong Kong-listed firms and the Shanghai and Shenzhen composite index return for A share firms.
ASSETS	=	The year-end total assets (in millions of RMB).
GROWTH	=	The annual sales growth rate.
LEV	=	Total debts divided by total assets at the year-end.
LARGEST_OWN	=	Ownership percentage of the largest shareholder of the listed firm.
REGU	=	A dummy variable that equals one for regulated industries and zero otherwise.
GAP	=	The natural logarithm of the absolute difference between the year 2006 net income based on the old CAS and the year 2006 net income based on the new CAS scaled by the average beginning and ending total assets based on the old CAS. Note that GAP is a firm fixed effect and does not vary over time.
POST	=	A dummy variable that equals one for the post-IFRS adoption period 2007-2009, and zero for the pre-IFRS adoption period 2005-2006.

Table 1

Sample Selection Procedures for State-controlled A Share Firms

Initial sample of A share firms over the period 2005-2009 (firm years)	7,515
Exclude non-state-controlled firms and firms with missing ultimate controlling shareholder data	(2,869)
Exclude firms in the financial industry	(71)
Exclude firms dually listed in Hong Kong	(206)
Exclude firm years with CEO turnover	(880)
Exclude firm years with missing data	(179)
Exclude firms that do not have data in both the pre- and post-IFRS adoption periods	(421)
Final sample over the period 2005-2009 (firm years)	2,889

Table 2

Descriptive Statistics for State-controlled A Share Firms (N=2,889)

Panel A. The pre-IFRS adoption period (N=1,179)

variable	*mean*	*p50*	*s.d.*	*p25*	*p75*
COMP	275,337	219,700	227,904	120,000	357,036
ROA	0.03	0.03	0.05	0.01	0.05
RET	-0.09	-0.13	0.36	-0.33	0.12
ASSETS	3,280	1,980	4,280	1,070	3,760
GROWTH	0.18	0.15	0.32	0.02	0.30
LEV	0.51	0.52	0.18	0.39	0.63
LARGEST_OWN	41.22	40.83	15.76	28.24	53.71
REGU	0.07	0.00	0.25	0.00	0.00

Panel B. The post-IFRS adoption period (N=1,710)

variable	*mean*	*p50*	*s.d.*	*p25*	*p75*
COMP	422,402	332,500	337,498	200,000	526,800
ROA	0.03	0.03	0.06	0.01	0.06
RET	0.30	0.26	0.41	0.04	0.53
ASSETS	5,090	2,670	6,710	1,350	5,550
GROWTH	0.17	0.12	0.37	-0.03	0.30
LEV	0.52	0.54	0.19	0.39	0.66
LARGEST_OWN	37.54	37.38	15.05	25.21	49.58
REGU	0.07	0.00	0.25	0.00	0.00

See the appendix for variable definitions.

Table 3
Firm Fixed Effects Regression Result of CEO Annual Cash Compensation for State-Controlled A Share Firms

	Coefficient	Two-tailed p value
Test variables:		
POST	0.348	0.000
RET	-0.143	0.002
ROA	2.689	0.000
POST×RET	0.138	0.007
POST×ROA	-1.213	0.011
Control variables:		
LN(ASSETS)	0.297	0.000
POST×LN(ASSETS)	-0.009	0.668
GROWTH	-0.053	0.149
POST×GROWTH	0.008	0.885
LEV	-0.404	0.006
POST×LEV	-0.148	0.307
LARGEST_OWN	-0.003	0.061
POST×LARGEST_OWN	0.000	0.879
REGU	0.401	0.024
POST×REGU	-0.059	0.381
LN(ASSETS)×RET	0.004	0.917
POST×LN(ASSETS)×RET	-0.047	0.274
LN(ASSETS)×ROA	1.215	0.002
POST×LN(ASSETS)×ROA	-0.538	0.144
GROWTH×RET	0.004	0.961
POST×GROWTH×RET	0.026	0.826
GROWTH×ROA	0.058	0.919
POST×GROWTH×ROA	-0.671	0.364
LEV×RET	0.069	0.767
POST×LEV×RET	0.174	0.479
LEV×ROA	-3.612	0.002
POST×LEV×ROA	1.968	0.104
LARGEST_OWN×RET	0.001	0.645
POST×LARGEST_OWN×RET	0.000	0.965
LARGEST_OWN×ROA	-0.029	0.194
POST×LARGEST_OWN×ROA	0.046	0.032
REGU×RET	0.067	0.502
POST×REGU×RET	-0.163	0.186
REGU×ROA	-1.212	0.450
POST×REGU×ROA	-1.071	0.444
Within R^2	0.384	

N	2,889

See the appendix for variable definitions. See Section III for the regression model. The reported p values allow heteroskedasticity and any type of correlation for observations of the same firm but assume independence for observations across different firms (Rogers 1993). All the continuous explanatory variables except for ROA and RET are demeaned to avoid multicollinearity. To reduce the influence of outliers, all continuous variables are winsorized at the top and bottom 1%.

Table 4

Firm Fixed Effects Regression Result of CEO Annual Cash Compensation for State-Controlled A Share Firms: Conditional on the magnitude of the IFRS adoption's impact on accounting earnings in 2006

	coefficient	Two-tailed p value
POST	0.343	0.000
RET	-0.126	0.004
ROA	2.581	0.000
POST×RET	0.143	0.007
POST×ROA	-0.966	0.040
GAP×POST	1.935	0.096
GAP×RET	-4.566	0.071
GAP×ROA	21.225	0.078
GAP×POST×RET	-0.614	0.882
GAP×POST×ROA	-40.287	0.002
Within R^2	0.387	
N	2,889	

See the appendix for variable definitions. See Section III for the regression model. For brevity, the coefficients on the other explanatory variables are omitted. The reported p values allow heteroskedasticity and any type of correlation for observations of the same firm but assume independence for observations across different firms (Rogers 1993). All the continuous explanatory variables except for ROA and RET are demeaned to avoid multicollinearity. To reduce the influence of outliers, all continuous variables are winsorized at the top and bottom 1%.

Table 5
Firm Fixed Effects Regression Result of CEO Cash Compensation for Hong Kong-Listed State-Controlled Chinese Firms

Panel A. Sample selection procedures

Initial sample of mainland Chinese-controlled firms that were listed in Hong Kong prior to 2006 over the period 2005-2009 (firm years)	994
Exclude firms in the financial industry	(40)
Exclude firms that changed ownership types between state and private during the sample period	(40)
Exclude non-state-controlled firms	(180)
Exclude firm years with CEO turnover	(123)
Exclude firm years with missing data	(91)
Exclude firms that do not have data in both the pre- and post-IFRS adoption periods	(36)
Final sample over the period 2005-2009 (firm years)	484

Panel B. Descriptive statistics

The pre-IFRS adoption period 2005-2006 (N=189)

variable	*mean*	*p50*	*s.d.*	*p25*	*p75*
COMP	1,759,369	675,000	3,908,140	372,000	1,809,260
ROA	0.05	0.04	0.09	0.03	0.09
RET	-0.07	-0.11	0.41	-0.36	0.17
ASSETS	40,600	7,830	116,000	2,130	23,300
GROWTH	0.26	0.17	0.45	0.06	0.33
LEV	0.44	0.44	0.18	0.29	0.56
LARGEST_OWN	52.24	52.45	15.83	40.61	62.80
REGU	0.08	0.00	0.28	0.00	0.00

The post-IFRS adoption period 2007-2009 (N=295)

variable	*mean*	*p50*	*s.d.*	*p25*	*p75*
COMP	1,897,090	835,313	3,575,121	490,000	2,111,200
ROA	0.05	0.04	0.09	0.01	0.08
RET	0.23	0.14	0.52	-0.13	0.52
ASSETS	52,000	10,300	131,000	2,240	36,400
GROWTH	0.20	0.12	0.50	0.00	0.30
LEV	0.44	0.43	0.19	0.28	0.59
LARGEST_OWN	49.88	50.20	15.62	38.91	62.01
REGU	0.07	0.00	0.25	0.00	0.00

Panel C. Regression result

	coefficient	Two-tailed p value
POST	0.218	0.004
RET	-0.122	0.202
ROA	1.530	0.026
POST×RET	0.164	0.138
POST×ROA	-0.568	0.477
Within R^2	0.278	
N	484	

See the appendix for variable definitions. See Section III for the regression model. For brevity, the coefficients on the other explanatory variables are omitted. The reported p values allow heteroskedasticity and any type of correlation for observations of the same firm but assume independence for observations across different firms (Rogers 1993). All the continuous explanatory variables except for ROA and RET are demeaned to avoid multicollinearity. To reduce the influence of outliers, all continuous variables are winsorized at the top and bottom 1%.

Table 6

Firm Fixed Effects Regression Result of CEO Annual Cash Compensation for State-Controlled A Share Firms: Large versus Small Firms

Panel A. State-controlled A share firms whose average total assets over 2005-2009 are above the 75th percentile of the sample

	Coefficient	Two-tailed p value
POST	0.277	0.000
RET	-0.081	0.443
ROA	3.545	0.000
POST×RET	0.093	0.478
POST×ROA	-3.378	0.019
Within R^2	0.474	
N	723	

Panel B. State-controlled A share firms whose average total assets over 2005-2009 are below the 75th percentile of the sample

	Coefficient	Two-tailed p value
POST	0.389	0.000
RET	-0.264	0.002
ROA	3.276	0.000
POST×RET	0.237	0.009
POST×ROA	-1.780	0.011
Within R^2	0.380	
N	2,166	

See the appendix for variable definitions. See Section III for the regression model. For brevity, the coefficients on the other explanatory variables are omitted. The reported p values allow heteroskedasticity and any type of correlation for observations of the same firm but assume independence for observations across different firms (Rogers 1993). All the continuous explanatory variables except for ROA and RET are demeaned to avoid multicollinearity. To reduce the influence of outliers, all continuous variables are winsorized at the top and bottom 1%.

Table 7

Firm Fixed Effects Regression Result of CEO Annual Cash Compensation for State-Controlled A Share Firms: Central-government-controlled Firms versus Local-government-controlled Firms

Panel A. Central-government-controlled A share firms

	Coefficient	Two-tailed p value
POST	0.327	0.000
RET	-0.170	0.112
ROA	4.725	0.000
POST×RET	0.169	0.161
POST×ROA	-2.448	0.005
Within R^2	0.424	
N	824	

Panel B. Local-government-controlled A share firms

	Coefficient	Two-tailed p value
POST	0.352	0.000
RET	-0.128	0.005
ROA	1.610	0.001
POST×RET	0.115	0.036
POST×ROA	-0.286	0.553
Within R^2	0.377	
N	2,065	

See the appendix for variable definitions. See Section III for the regression model. For brevity, the coefficients on the other explanatory variables are omitted. The reported p values allow heteroskedasticity and any type of correlation for observations of the same firm but assume independence for observations across different firms (Rogers 1993). All the continuous explanatory variables except for ROA and RET are demeaned to avoid multicollinearity. To reduce the influence of outliers, all continuous variables are winsorized at the top and bottom 1%.