

**Does Improved Disclosure Lead to Higher Executive Compensation?  
- Evidence from Two Opposing Accounting and Auditing Standards Rule  
Changes\***

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February 2013

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\* We wish to thank Tom Bates, Brian Burnett, Mark Chen, Gerry Gay, Jingling Guan, John Kose, Di Li, Zhi Li and Sugata Ray for valuable discussions and comments. The authors are solely responsible for all remaining errors and omissions.

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# **Does Improved Disclosure Lead to Higher Executive Compensation? - Evidence from Two Opposing Accounting and Auditing Standards Rule Changes**

## **Abstract**

Using two exogenous rule changes in accounting and auditing standards, this study tests the theoretical prediction in Hermalin and Weisbach (2012) that increased disclosure should lead to higher executive compensation. The argument is that, because better monitoring allowed by increased disclosure tends to affect managers adversely, managerial compensation rises as a compensating differential. This study employs a difference-in-differences approach that exploits two exogenous disclosure rule changes which are opposite in nature and the unique dual-class share system in China. We find that after China adopted a set of tightened accounting and auditing standards in 2007, the executive compensation of the affected firms increased more compared to the firms that had issued foreign B-shares and thus were already subject to more stringent standards prior to the rule change. Furthermore, after December 2010 when the Hong Kong listed mainland Chinese firms were allowed to use the less strict accounting and auditing standards of mainland China, the affected firms experienced a negative change in executive compensation relative to the mainland Chinese firms that have foreign B-shares and are not listed in the Hong Kong Exchange. These findings demonstrate increased compensation is a potential cost for shareholders generated by stricter disclosure rules. The results also suggest that the recent increasing trend in executive compensation could, in part, be attributed to greater disclosure imposed by governance reforms.

**Keywords:** Information disclosure, executive compensation, accounting standards, governance, China, difference-in-difference

## 1. Introduction

Increased disclosure is generally viewed as beneficial to shareholders owing to its potential roles to reduce information asymmetry and to mitigate agency problems. The costs associated with the increased disclosure, however, are less recognized<sup>1</sup>. In addition to the direct reporting costs and the costs of revealing proprietary information to rivals, Hermalin and Weisbach (2012) suggest another cost for shareholders – increases in executive compensations. One major argument is that since the better monitoring allowed by the increased disclosure tends to affect managers adversely, managerial compensation rises as a compensating differential.<sup>2</sup> A naïve analysis that considers only the direct benefits from the improved disclosure without taking into account increases in executive compensation, among other costs, would overstate the benefit of increased disclosure. Furthermore, if increased disclosure leads to higher executive compensation, the recent increasing trend in executive compensation could, in part, be explained by greater disclosure imposed by governance reforms.

An assessment on whether increased disclosure leads to higher compensation can be complicated by potential endogenous problems. Specifically, in a cross-sectional analysis, the extent of disclosure a firm chooses and the executive compensation can be driven by unobserved firm and/or executive characteristics. In a time series framework,

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<sup>1</sup> Papers that analyze the costs associated with increased disclosure usually focus on costs such as preparation of accounting reports, revealing proprietary information to competitors, and less obviously, being harmful to firm-bank relationship. See for example, Verrecchia (1983).

<sup>2</sup> Hermalin and Weisbach (2012) present a series of monitoring models including learning-based and agency-based and prove that managers prefer less informative disclosure regimes under mild conditions. For example, in a hidden-action agency model, the contract to induce CEO not to take undesired actions is less costly when the probability that such actions get detected is higher with better information environment. Thus, CEO's equilibrium payoff is negatively associated with the informativeness of the information structure. In a learning model, the estimator of the CEO's ability based on better information is a riskier estimator in the sense of second-order stochastic dominance. When the CEO's payoff is such that he is risk averse in the estimator, he prefers less informative environment.

simply documenting a correlation between executive compensation and disclosure is insufficient because this relation can be driven by macroeconomic factors or policy initiatives that may be independent of disclosure. In this paper, we identify the causal effect of disclosure on executive compensation by employing a difference-in-differences approach that exploits two exogenous disclosure rule changes that are opposite in nature, and the unique dual-class share system in China. Given that the changes in disclosure quality of the two rules are in the opposing directions, utilizing both events reduces the likelihood of the results to be driven by some random factors around the event time.

On January 1, 2007, China adopted a new system of accounting standards based on International Financial Reporting Standards (IFRS) and also a new set of auditing standards. The goal is to raise the quality of financial information and boost investor confidence. This exogenous rule change allows us to test whether compensation rises as a consequence of the enhanced disclosure<sup>3</sup>. In addition, the unique dual-share class system in China provides a convenient control group. Specifically, Chinese companies may issue A-shares to Chinese citizens or B-shares to foreign investors, overseas Chinese, or Chinese citizens with foreign currency. Firms that have issued B-shares have been required to report financial statements based on International Accounting Standards (IAS) and to use an international recognized auditor. In contrast, companies with A-shares only use Chinese accounting standards and use Chinese auditors operating under Chinese auditing standards. Therefore, the new accounting and auditing rule should have less or

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<sup>3</sup> We are not the first to exploit change in accounting standards as a measure for change in the level of disclosure. Leuz and Verrecchia (2000), for example, exploit an experimental setting where a small number of German firms *voluntarily* switch from the German accounting standard to either the International Accounting Standards or U.S. GAAP. Compared with theirs, our setting carries a major advantage. Because the new standards in China were issued by the government and were *mandatory* for all listed firms, our sample of firms are less subject to thorny problem of selection bias as argued by Joos (2000). Although we cannot quantify the change in disclosure around the event, our auxiliary analysis reveals that investors turn their stocks more frequently after 2007, implying a real increase in disclosure.

no effect on the firms that have B-shares since they were already subject to tighter accounting and auditing requirements prior to the rule change. We thus use the firms that have B-shares as a control group. We find that, during our four-year event period, the firms with only A-shares experience a greater increase in executive compensation after the rule change than the control group. The difference in the increase in compensation is statistically and economically significant. For example, after controlling for the changes in compensation for the control firms, firm characteristics, and other factors that may affect compensation, the compensation of affected firms increases by 15.4% following the rule change. The results are similar when we use a two-year event window. To further eliminate the concern that the results are driven by a temporal factor in January 2007 that are unrelated to the rule change, we run a “placebo” test using January 2006 as a hypothetical event date. We find that the changes in compensation following the hypothetical event are not significantly different between the treatment and the control groups.

On December 15, 2010, Hong Kong Exchanges (HKE) allowed Mainland Chinese firms to use Mainland accounting standards and employ auditors based in Mainland China. The affected firms were previously required to use Hong Kong’s (or international) accounting and auditing standards. Since a number of studies have documented that the Mainland auditing firms are of relatively low quality compared with international firms due to either low professionalism or lack of independence (Xiao, Zhang and Xie (2000)), we expect the disclosure environment to become less stringent for these Chinese firms listed in Hong Kong after the change. This event provides a rare opportunity for our study since it goes against the trend in other jurisdictions where

regulators are pushing for more stringent accounting and auditing standards. Using a difference-in-differences approach, we examine the executive compensation of the Mainland Chinese firms listed in the HKE in a one-year window before and after the rule change. We use the Mainland Chinese firms that are not listed in the HKE but have B-shares as a control group. The firms in the control group are not affected by the accounting and auditing rule change but are similar to the treated firms. We find that compared to the control group, the changes in executive compensation of the affected firms are, on average, negative and statistically significant. Specifically, after controlling firm characteristics and other factors that may affect compensation, the executive compensation of the affected firms on average decreases 12.3% after the rule change, compared to changes in compensation of the control group. We also run a similar “placebo” test using December 2009 as a hypothetical event date. We find that the changes in compensation following the hypothetical event are not significantly different between the treatment and the control groups. This alleviates the concern that the results are driven by a temporal factor in December 2010 that is unrelated to the rule change.

In addition to the difference-in-differences method, we also employ a panel regression, with an alternative measure of disclosure, for all firms listed in the Shenzhen Stock Exchange (SSE) in the period 2003 to 2009. In 2003, the SSE began to evaluate the disclosure quality for all firms listed in its exchange on an annual basis. The results of the evaluation are summarized by a disclosure ranking (excellent, good, qualified, and unqualified) for each firm. The firms are evaluated through a variety of public disclosure documents such as routine reports, temporary reports, and press releases. They are also

evaluated on how quickly they respond to inquiries from the SSE. The construction of the ranking is based on four metrics: timeliness, accuracy, completeness, and the legitimacy of the information presented. These metrics have been used to evaluate firms until 2008 when the exchange added two additional metrics: truthfulness and fairness. To make sure the disclosure quality is measured consistently, we separate our sample to two sub-periods, years 2003 to 2007 and years 2008 to 2009. Results from the panel regression indicate that the level of executive compensation is positively associated with the disclosure quality of the firms. The results also hold when firm characteristics and other factors that may affect compensation are included as control variables. Specifically, we find that, on average, one rank increase in disclosure quality is associated with 12.7% and 19% increase in executive compensation for the two sub-periods 2003 to 2007 and 2008 to 2009, respectively. This association is mainly driven by changes from an ‘unqualified’ to an ‘excellent’ ranking. Since the level of disclosure is a choice variable (i.e., some unobserved factors could drive a firm’s disclosure decision and the level of executive compensation), the association between disclosure quality and executive compensation suggested by the panel regressions can’t be interpreted as a causal relation. We rely on our previous tests on the exogenous rule changes to draw causal inference.

The previous analysis, while establishing a causal link between disclosure and executive compensation, does not address the specific underlying channels through which executive compensation is impacted. Specifically, the observed increase in executive compensation could be due to the fact that greater scrutiny associated with the increased disclosure tends to affect managers adversely, managerial compensation rises as a

compensating differential; alternatively, if the cash flows of a firm increase as a result of improved disclosure, then the increase in compensation may be because managers with some bargaining power capture part of the gain. Note that these two forces could work in tandem as well. Our empirical evidence supports that managerial compensation rises as a compensating differential. Specifically, we find that there are no significant changes in firm value, as proxied by operating performance (return on assets), Tobin's Q and stock return around the 2007 rule change. Since the observed operating performance is usually calculated as the net of all operating expenses, including executive compensation, an insignificant result may be an indication that the managers capture a significant portion of the value gain. To investigate whether this is the case, we revise this measure by adding the top three executive compensations to the operating income. We did not find a significant change in this revised measure either. In addition, we find that the increase in compensation only exists for firms whose managers have less bargaining power. Since a manager's utility is more likely to be set at the reservation level if the managers have less bargaining power, these results suggest that the second mechanism, even if it plays a role, can't be the sole source of increased compensation. The results from the 2010 event are largely consistent with the previous one although we find that Tobin's Q increases after the HKE's adoption of Chinese Accounting and Auditing Standards in December 2010. This result suggests that the decrease in compensation around this event can only be explained by the first channel because the alternative channel would have predicted an opposite direction of change in compensation.

In addition to the two exogenous regulatory rule changes that are opposing in nature and the unique dual-class share system that constitute an ideal laboratory for our



study, the Chinese market offers another advantage. The executive compensation in China rarely consists of equity-based pay, but is almost always in the form of cash compensation (i.e., salary and bonuses). This unique feature allows our measure of compensation to be unaffected by stock prices. Since disclosure can affect firm value such as through the channel of reduced information asymmetry, the characteristics of the cash-only compensation in China allow us a cleaner test.

Our study contributes to the empirical literature examining the effects of disclosure. Previous studies find evidence that disclosure improves liquidity and lowers the cost of capital (e.g. Welker (1995), Botosan (1997), Healy, Hutton, and Palepu (1999), Lang and Lundholm (2000)). Concerning the costs of disclosure, a number of papers focus on proprietary costs of disclosure and find that proprietary costs influence firms' voluntary disclosure decision (Harris (1998), Berger and Hann (2003), and Leuz (2004)). Our study documents an alternative cost of disclosure to shareholders – increases in executive compensation, which has not received much attention in the literature. The cost of disclosure should be adequately taken into account, otherwise, a disclosure reform that raised the level of disclosure may make shareholders worse off if the direct benefit is less than the resulting costs.

Our paper adds to the studies on the determinants of executive compensation. Our finding that improved disclosure leads to higher compensation can, in part, explain the observed increasing trend in executive compensation. Some recent theories have developed to explain the recent increases in the pay level of the managers. For example, Hermalin (2005) proposes that CEOs are forced to work harder because of the improved governance and thus pay must increase as a compensation for the disutility of the

additional efforts. Gabaix and Landier (2008) suggest that, in a framework of competitive markets and rare skills, the rise in executive pay can be explained by an increase in firm size. Bebchuk and Fried (2004) advocate the managerial entrenchment view and Hall and Murphy (2003) argue that rise in total compensation may be largely driven by increases in stock market valuations. Empirically, Peters and Wagner (2009) document that CEO turnover risk is positively associated with compensation and suggest that increases in turnover risk play a role for the rise in CEO pay.

## **2. Institutional Background of the Two Exogenous Rule Changes**

### **2.1. Convergence of PRC GAAP to IRFS: 1/1/2007**

The deepening of economic reforms and the opening of stock exchanges in Shanghai in 1990 and Shenzhen in 1991 created a demand for improved accounting standards for the purpose of quality financial reporting. As a result, the Ministry of Finance (MOF) issued the first set of accounting standards in 1992, the Accounting Standards for Business Enterprises (ASBEs). This was the first step by the Chinese government to converge the country's accounting system with the international accounting disclosure practices. Prior to the adoption of the standards, the Chinese accounting system was cash based and served mainly for the purpose of tax collection. The new standards changed this by switching to accrual based accounting and breaking the link with taxation. Although the MOF adopted some principles from the International Accounting Standards (IAS), convergence was limited. As a result, significant differences exist between the ASBEs and its international counterpart. As evidence, empirical studies have shown that earnings prepared under the old ASBE largely deviate from those prepared under IAS (Chen, Gul and Su (1999), Chen, Sun and Wang (2002))

Since 1992, the MOF have revised the old standards several times<sup>4</sup>, but the most significant change was made in 2006 when the MOF issued a set of improved standards, known as the new ASBEs<sup>5</sup>. The new standards became effective on January 1, 2007 and were mandatory for all public Chinese firms. Dramatically different from the previous changes, this one brought the Chinese accounting systems into closest conformity with those issued by the International Financial Reporting Standards (IFRS). As pointed out by Jun Wang, vice Minister of the MOF, “the main theme of the change is to harmonize the Chinese accounting standards to the international standards”.<sup>6</sup>

The new ASBEs, which consist of a Basic Standard and 38 Specific Standards<sup>7</sup>, cover nearly all of the topics under the current IFRS. The basic standard provides a general framework, such as accounting principles and definitions. The Specific Standards provide detailed guidelines in implementing the standards for different accounting areas. Besides its wide coverage, what also makes the new ASBEs starkly distinct from previous ones is that it significantly improves the current disclosure requirement by creating a complete financial reporting system. It redefines all aspects related to information disclosure such as timing, scope, and content. As a concrete example for the scope and timing, the new standards require disclosure of complete, detailed and timely information in the footnotes, in addition to the four basic financial statements. For the content, it requires disclosure of information regarding related party transactions,

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<sup>4</sup> For example, the MOF advanced the harmonization of accounting standards in 1998. Some study argues that, without sufficient infrastructure such as quality auditing, the harmonization in 1998 lead to reduction in disclosure quality because it provides more flexibility to managers.

<sup>5</sup> To distinguish the ASBEs issued in 2007 from the one in 1992, we refer to the later as the new ASBEs.

<sup>6</sup> See report by Jun Wang,

[http://www.mof.gov.cn/pub/kjs/zhengwuxinxi/lingdaojianghua/200807/t20080711\\_57244.html](http://www.mof.gov.cn/pub/kjs/zhengwuxinxi/lingdaojianghua/200807/t20080711_57244.html)

<sup>7</sup> See Deloitte Touche Tohmatsu (2006) for details regarding the changes.

business combinations of entities under common control, business segments, and geographic segments.

The accounting standards regulate the reporting choices available to managers when presenting the firm's financial statements (Healy and Palepu (2001)). Thus, the quality of disclosure critically depends on the quality of accounting standards. Empirical evidence has shown that standards based on IFRS are associated with better disclosure quality. For example, based on a sample of firms from 21 countries, Barth, Landsman, and Lang (2008) document that firms that adopt international accounting standards display better accounting quality<sup>8</sup>. Since the new ASBE is substantially close to the international standards, we argue that the change should greatly improve the disclosure quality<sup>9</sup>. Studies document a decrease in earnings management and an increase in value relevance of accounting measures after the 2007 accounting rule change, which indicates an improvement in accounting quality (Liu, Yao, Hu, and Liu (2011), Qu, Fong, and Oliver (2012)).

Another interesting feature that is important to our analysis is the dual class system of the Chinese capital market. Specifically, the Chinese firms can issue two classes of stocks: A shares exclusively to domestic investors, and B shares to international investors. Both A and B shares are traded on the two domestic Chinese stock exchanges and shares from both classes carry exactly the same voting and cash flow rights. Recognizing the difference in investors, the A shares are denominated in

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<sup>8</sup> Their sample includes Chinese firms that issue B shares to international investors. These firms are required to prepare the financial statements under international standards. For additional evidence, see also Leuz and Verrecchia (2000).

<sup>9</sup> By no means are we arguing that the new ASBE is identical to IFRS. However, as long as the convergence of Chinese accounting standards towards IFRS is material, it should generate variation in disclosure quality.

Yuan while B shares are denominated in foreign currencies, i.e., US\$ in Shanghai, and HK\$ in Shenzhen. Most relevant to our study, the Chinese regulators requires firms that issue A shares prepare their financial statements using Chinese accounting standards and firms that issue B shares use international standards.<sup>10</sup> Therefore, the new ASBE should affect the disclosure quality for firms that issue A shares only.

## **2.2. HK stock exchange adopts mainland accounting and auditing rules: 12/15/2010**

Our second event, in contrast to the first one, relates to a situation where the disclosure quality falls after the event. On Dec 15 of 2010, the Hong Kong Exchange approved that Mainland Chinese companies to use Chinese accounting standards and employ auditors based in Mainland China. Previously, the financial statements of Hong Kong listed Mainland Chinese firms are required to be prepared under either the IFRS or the Hong Kong Financial Reporting Standards (HKFRS). The purpose of this change, according to the Exchange, is to reduce compliance costs for mainland incorporated companies listed in Hong Kong.

Relaxing the rules will cut costs for mainland companies listed in Hong Kong since the firms don't have to prepare two sets of financial statements. But the rule change is also raising concerns about fraud. Investors will not be able to count on the quality of the Hong Kong auditors. Hong Kong's Securities and Futures Commission must rely on Mainland Chinese authorities to root out fraud. A number of studies have documented that Chinese auditing firms are of relatively low quality compared to international firms due to either low professionalism or lack of independence. For

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<sup>10</sup> Therefore, firms that issue both A and B shares are required to prepare two sets of financial statements under different accounting standards.

example, Xiao, Zhang and Xie (2000) suggest that the auditing practices in Mainland China suffer from “lack of audit independence, the shortage of well-qualified auditors, an environment of extensive corruption, and the existence of many misconceptions about the audit”. We argue that the disclosure environment become less stringent for Chinese firms listed in the HKE after the rule change.

### **3. Data and Summary Statistics**

We obtain stock market data, firms’ financial and accounting information, and firms’ governance related variables such as executive compensation, board size, and number of independent directors from the China Stock Market & Accounting Research (CSMAR) database, provide by GTA Information Technology. We obtain share class information from RESSET ([www.resset.cn](http://www.resset.cn)). These two datasets have been widely used in research concerning China’s finance and accounting issues (see, for example, Calomiris et al (2010)).

Since our analysis utilizes two exogenous events occurring in January 2007 and December 2010, respectively, we construct two samples with each corresponding to one of the events. As mentioned in Section 2, the first event affects those firms that issue A shares only. Thus, in our first sample, these firms are used as the treatment group<sup>11</sup>. For the control group, ideally we would use firms that share exactly the same attributes as the treated firms but are not affected by the rule changes. The firms that issue both A and B share stocks serve this purpose reasonably well. These firms provide the closest proximity to the treated group because they are also traded domestically in the Shanghai or Shenzhen Stock Exchange. In addition, the B shares carry exactly the same voting and

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<sup>11</sup> Here we borrow the terminology from the experimental literature.

cash flow rights as the A shares. As discussed earlier, these dual-class share firms are required to prepare two sets of financial statements: one under the Chinese accounting standards and the other using the international standards<sup>12</sup>. Since these dual-class share firms have already adopted the more stringent international standards and used international recognized auditors, the change in the Chinese accounting and auditing standards is less likely to affect the disclosure environment for these firms. Following the literature, we eliminate firms in the financial and utility industries in constructing all samples.<sup>13</sup> We restrict our sample period to year 2005 to 2008, a symmetric 4 year-window, with 2 years prior and subsequent to the effective date of the new standards<sup>14</sup>. Notice that for the same company, the IPO year for A share may be different from B share. If the same firm issued A shares before the standards change while issuing B share after the standards change, this could contaminate our results. We verify that there are no firms of this type in our sample.

The second event should affect the disclosure quality of the Chinese firms that issue H shares, thus our treatment group consists of firms that issue both A and H shares. The firms that issue both A and B shares are used as our control group. The firms in this control group are not affected by the rule change since they are not listed in the HKE. In addition, they conform to relatively similar accounting and auditing standards to those of the H-shares because the B share market is open to international investors.

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<sup>12</sup> One feature of the Chinese capital market is that firms listing A shares are required to report under Chinese standards, whereas firms with B shares report using International Financial Reporting Standards (IFRS), and firms with H shares report under Hong Kong accounting standards or IFRS. See (Echer and Healy 2000).

<sup>13</sup> Including firms in the financial and utility industry yields qualitatively similar results.

<sup>14</sup> The reason that we use two years of data instead of one is because the bargaining process between executives and owners may take some time and one year data may not fully capture the effect of the policy change. While we also present results using only one year data surrounding the event, the bulk of analysis is based on two years of data.

Our main variable of interest, executive compensation, is measured as the total cash compensation for the top three executives. The level and the structure of executive compensation in China, similar to the practices in Western countries, are designed to align the interests of managers with those of shareholders and are determined by the Compensation Committees under the Board of Directors. This is also the case for state-owned public firms.<sup>15</sup> The cash compensation is defined as the sum of basic salary, bonus, and stipends. This definition of executive compensation in China has been used previous studies (e.g. Firth et al, (2006) and Conyon and He (2011)). Incentive based compensation such as restricted stocks and option grants is rarely used in China.<sup>16</sup> For example, the number of firms that adopted stock-based compensation plans in 2006, 2007 and 2008 are 23, 8 and 22, respectively. We also repeat our test after excluding the firms that used equity-based compensation and the results are virtually unchanged. The fact that executive compensation in China is mainly in the form of cash rules out the possibility that changes in compensation are caused by changes in stock prices through equity-based compensation. In particular, since disclosure can potentially increase stock price through reduced information asymmetry, executive compensation rises if managers hold a portion of total compensation as stocks or options. Thus, the cash feature of executive compensation in China allows a cleaner test for our study.

We include variables that previous literature has documented to affect executive compensation as controls. These include measures related to firm performance such as

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<sup>15</sup> Since the release of *The Code of Corporate Governance for Listed Firms* by Chinese Security Regulatory Commission in 2002, the percentage of firms that set up the Compensation Committees has increased from a little over 30% to around 100 percent in 2010. See Firth et al (2006) for background information on executive compensation practices in China.

<sup>16</sup> Chinese firms began to adopt stock-based compensation in 2006 after China Security Regulation Commission (CSRC) issued Guidelines on Incentive Plans at the end of 2005.



return on assets, stock return, and sales (Jensen and Murphy (1990)).<sup>17</sup> Including these variables is intuitively appealing because these are metrics that are commonly used in compensation contracts. Since managers in poor-governed firms are more likely to extract rents from shareholders (e.g., in the form of perquisites), we include a set of governance variables including executive stock ownership, CEO and chairman duality, the percentage of independent directors, board size, and a variable for ownership structure, measured by the ownership of the largest shareholder, as additional controls.<sup>18</sup> Lastly, Aggarwal and Samwick (1999) argue that firm risk is an important determinant of executive compensation. We include stock return volatility as proxy for firm risk as an additional control. We winsorize our compensation, asset return, leverage, stock return and stock return volatility variables, at the 1<sup>st</sup> and 99<sup>th</sup> percentiles. It should be clear that, although in theory these covariates should have an impact on compensation, given the exogenous nature of our identification strategy, the estimates on our variable of interest should not be greatly affected regardless of whether these variables are included.

Panel A of Table I provides the summary statistics on the characteristics of the firms in the treatment and the control groups for the tests regarding the January 2007 event. The firm characteristics are measured at the fiscal year-end of 2005 and 2006 (i.e., prior to the year that the rule change took effect.) As shown in the table, the profitability measures, leverage, and the governance variables appear to be similar between the two groups. For example, the average return on assets (ROA) is 0.01 for both groups. The leverage ratio is also very close with treatment firms have a slightly lower average (0.53

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<sup>17</sup> Here sales can also be used as a proxy for firm size. A positive association between firm size and executive compensation is well documented in empirical studies.

<sup>18</sup> CEO tenure and geographic locations can also affect compensation. These variables, however, are not identified in a fixed effect model.

vs. 0.57). The total assets and the compensation of the treatment group are smaller than those of the control group. For example, the average cash compensation for the firms that issue both A and B shares is around 1 million Yuan, relative to around 600 thousand Yuan for its counterpart. This is consistent with the argument that large firms usually pay their executives more (Schaefer (1998), and Conyon and He (2011)). Since these firm characteristics are measured at the year-end prior to the test period, the differences in the characteristics is not caused by the change in the accounting standards in 2007.

Panel B of Table I provides the summary statistics for the sample firms used in our tests corresponding to the December 2010 event. Compared to the control firms, the firms in the treatment group are larger in size, have fewer incidents when the CEO is also the Chairman, and are more likely to have State ownership. We control these differences in our empirical analysis. Panel C of Table I provides the summary statistics for the sample firms used in our panel regressions. The key independent variable, *disclosure*, is a measure for disclosure quality and ranked from 0 to 3, with a higher number indicating better quality. Other variables are defined analogously.

## **4. Empirical Tests and Results**

### **4.1. The impact of the rule change in Chinese accounting and auditing standards in January 2007**

The change in accounting standards in 2007 introduces an exogenous shock to the disclosure regime for firms that issue A shares only. We exploit this rule change to assess the effect of disclosure quality on compensation using a difference-in-differences methodology. Specifically, we employ the following regression model:

$$lcomp_{it} = \alpha_i + \eta_i + \beta_1 x_{it} + \beta_2 Ashare_i * After_t + \varepsilon_{it} \quad (1)$$

where  $lcomp_{it}$  is the natural logarithm of the top three executive cash compensation for firm  $i$  in year  $t$ .  $\alpha_t$  and  $\eta_i$  are year and firm fixed effects, respectively.  $x_{it}$  are observed firm characteristics such as return on assets, sales, stock return, governance variables, etc.  $Ashare_i$  is a dummy variable that equals one if a firm issues A shares only;  $After_t$  is a dummy variable indicating whether an observation is observed after 2006. Our coefficient of interest,  $\beta_2$ , measures the effect of the rule change on cash compensation. The firm fixed effects allow the difference between the treated and the control firms to be fully controlled. The time dummies control market wide fluctuations. We cluster standard errors at the firm level to account for correlations in standard errors (Petersen (2009)).<sup>19</sup> An implicit assumption embedded in the model is that, in the absence of the rule change, the percentage change in compensation over time for the treated firms would have remained the same as the control firms.<sup>20</sup>

This model essentially compares the changes in compensation for the treatment group with those of the control group. The firms in the control group are similar to the treated firms but are not subject to the rule change, yet they can be used as the counterfactual change in compensation for the treated firms had the change in standards not taken place. Compared to a naïve analysis that simply examines the change in compensation for the treated firms, the difference-in-differences approach allows us to control for the effects of unobserved factors such as industry or market wide fluctuations

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<sup>19</sup> Another way of adjusting standard error is to allow unrestricted covariance metrics for firms within the same industry and year by clustering at industry-year level. The results based on this type of clustering are even stronger as we got a smaller standard error.

<sup>20</sup> While we can't explicitly prove that this "equal trend" assumption holds, our empirical analysis later provides compelling evidence about the validity of our identification strategy.

occurring around the event time, thus largely reducing the possibility of making inferences based on spurious relations.

#### 4.1.1. Main Results

Panel A of Table II provides the results for the difference-in-differences analysis of the effect of the change in Chinese accounting and auditing standards in January 2007 on executive compensation. The sample includes all listed firms in China that issue A shares only (the treatment group) and the firms that issue both A and B shares (the control group). The dependent variable is the natural logarithm of the sum of the cash compensations for the top three executives. *Ashare* is a dummy variable indicating if a firm issues A shares only; *After* is a dummy variable which equals one for years after 2006. We include firm characteristics as control variables such as return on assets (*ROA*), annual stock return (*RET*), stock return volatilities calculated using weekly returns (*Vol(RET)*), leverage measured as total debt divided by total asset, *Chairman/CEO Duality* dummy indicating if the chairman and CEO are the same person, Board Independence measured as the ratio of the number of independent directors divided by the total number of the directors, the *SOE* dummy which indicates if the firm is state owned, and *Ownership* which is the proportion of stocks held by the largest shareholder<sup>21</sup>. The industry classification is based on the Chinese Security Regulatory Commission Industry Classification. Robust standard errors, which are clustered at the firm level, are in parenthesis. We include firm fixed effects in models (4)-(6) and all regressions include year fixed effects.

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<sup>21</sup> In unreported table, we also include market value and executive turnover as addition control variables and the results remain virtually unchanged.

An overarching message from results in this table is that the improved disclosure indeed increases executive compensation: the coefficients on the interaction term between *Ashare* and *After* dummy are positive and statistically significant for all six models. Taking model (6) which includes all control variables as an example, the coefficient on the interaction term is 0.154 and is statistically significant at the one percent level, which translates into an average 15.4% increase in executive compensation, *relative* to the increase for the control firms, following the change in the disclosure environment. The magnitude of this number is economically significant, given that the average annual growth rate of the cash compensation for the executives in A-share firms is around 18 percent during the past 10 years. The coefficient on the interaction term between *Ashare* and *After* dummy in model (5) is similar in magnitude to that in model (6), even though model (6) includes additional control variables. The same pattern is also observed when we compare the coefficients on the interaction term in model (2) to that in model (3). This observation provides compelling evidence for the validity of the difference-in-differences methodology employed in this study: if the firms that issue both A and B shares provide a reasonable control for the firms that issue A shares only, we should not observe a significant change in coefficient estimates on the interaction term when we add additional controls.

The coefficients on the control variables are generally in the predicted directions and are consistent with the existing literature that studies compensation issues in China (Conyon and He (2011)). For example, executives are compensated more in firms that are larger in size (Gabaix and Landier (2008)), earn a higher return on assets, and/or experience higher revenue growth. This result is also consistent with the industry

practice in China<sup>22</sup>. In contrast, stock returns do not affect compensation. The results suggest that executive compensation are not linked to stock performance and are consistent with the fact that executive compensation in China rarely contains equity-based component. As for the governance variables, CEO/Chairman duality is associated with higher compensation in the OLS regressions, which may indicate that CEOs who also hold the position of Chairman of the Board have more bargaining power over compensations. Lastly, we find that more concentrated ownership, measured by the percentage of the stocks held by the largest shareholders, is associated with less executive compensation.

Panel B reports the results for the difference-in-differences approach using a two-year event window. Panel C reports the results excluding the firms that use equity-based compensation from the sample. As shown in the Panels B and C, the results are virtually unchanged compared to those in Panel A. Panel D reports the results for a ‘placebo’ test where we use the hypothetical event date of January 2006, which is one year before the actual event date. As shown in the panel, the coefficient on the interaction term between *Ashare* and *After* dummy is not significant regardless of the model specifications. The results alleviate the concern that the significant results observed in Panels A, B, and C are driven by some contemporaneous factor in 2007 unrelated to the rule change.

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<sup>22</sup> A casual scan of the filings of Chinese firms reveals that earnings and revenue growth are the two most common performance measures included in the executive compensation contracts.

## **4.2. The Impact of HKE's Adoption of Chinese Accounting and Auditing Standards in December 2010**

In December 2010, the HKE permitted Chinese firms listed in Hong Kong to use Mainland Chinese accounting standards and local auditors to examine their financial statements. The affected firms were previously required to use Hong Kong's or international accounting standards and international auditing firms. Since a number of studies have documented that Chinese auditing firms are of relatively low quality compared to international firms due to either low professionalism or lack of independence (Xiao, Zhang and Xie (2000)), we expect the disclosure environment to become less stringent for Chinese firms listed in Hong Kong after the rule change.

We adopt the same difference-in-differences methodology as described in the first rule change in January 2007. Concerning this second rule change, the affected firms are the ones that issue both A and H shares. The H shares are traded in the Hong Kong Exchange. The control firms are the firms that issue both A and B shares. The firms in this control group are not affected by the rule change since they are not listed in Hong Kong. In addition, they conform to a relatively similar accounting and auditing standards to those of the H-shares because B shares are sold to international investors. Since the policy took effect at the end of 2010, we use 2011 as the year when the AH-share firms are affected by the policy change.

### **4.2.1. Main Results**

Table III reports the results of a difference-in-differences model that estimates the effect of the Hong Kong Exchange's adoption of the Chinese accounting standards and

local Mainland auditors on executive compensation. The sample includes all listed firms in China that issue both A and H shares (the treatment group) and the firms that issue both A and B shares (the control group). The dependent variable is the sum of the cash compensations for the top three executives in the logarithm form. *AH share* is a dummy variable which equals one if firm issues both A and H shares; *After* is dummy variable which equals one for year 2011. We include the same set of control variables as the ones used in the regression models in Table II. Robust standard errors, clustered at the firm level, are in parenthesis.

As shown in Table III, the coefficients on the interaction terms between *AH share* dummy and *After* dummy are negative and statistically significant for all six models except model (3).<sup>23</sup> For example, the coefficient on the interaction term for model (6) is -0.123 and is statistically significant at ten percent level. This indicates that, on average, the executive compensation for the AH-share firms decreased by 12.3% *relative* to the AB-share firms after the exogenous decrease in the disclosure quality when the Hong Kong allows Mainland Chinese firms to use local accounting standards and auditors.<sup>24</sup> The magnitude of the disclosure effect is very close to those reported in Panel A of Table II. The coefficients on the control variables are generally consistent with the observations in Panel A of Table II as well.<sup>25</sup>

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<sup>23</sup> In unreported table, we also include market value and executive turnover as additional control variables and the results remain virtually unchanged.

<sup>24</sup> Note that, given our estimation strategy, the decrease in executive compensation for AH-share firms in absolute term is about 4.8% (0.075-0.123) based on Model (6).

<sup>25</sup> We manually checked the auditors of the AH share firms before and after the event and found that there are about 1/3 of the firms that actually switched to mainland auditors after the rule change. The limited sample size does not allow us to have a valid statistical inference if we break the treatment firms to two groups. However, our results based on the overall sample are consistent with the prediction in Hermalin and Weisbach (2012) that a reform that increases disclosure for some firms will result in greater compensation for all CEOs.



Panel B reports the results excluding the firms that use equity-based compensation from the sample. As shown in the Panel, the results are virtually unchanged compared to those in Panel A. To alleviate the concern that the significant results observed in Panels A and B are driven by temporal factors in December 2010 independent of the rule change, we run the same ‘placebo’ test as in previous event where we use the hypothetical event date of December 2009, which is one year prior to the actual event date. The results are reported in Panel C. The coefficients on the interaction term between *AH share* and *After* dummy are mostly not significant, which suggest that the observed effect of disclosure on compensation is real.

#### **4.3. Panel Regressions with an Alternative Measure for Disclosure Quality**

The analysis in the previous sections exploits the shifts in disclosure regimes caused by two exogenous rule changes to identify the causal effect of disclosure on executive compensation. In this section, we utilize an alternative measure for disclosure quality – the disclosure ranking, a commonly used measure for disclosure quality in the accounting literature (Healy and Palepu (2001)). Starting in 2003, the Shenzhen Stock Exchange (SSE) began to evaluate the disclosure quality for all firms listed in this exchange on an annually basis. The results of the evaluation are summarized by a subsequently released disclosure ranking (excellent, good, qualified, and unqualified) for each listed firm in the SSE. Firms are evaluated through a variety of public disclosure documents such as routine reports, temporary reports, and press releases; they are also evaluated on how quickly they respond to inquiries from the Exchange. According to the Exchange, the construction of the ranking is based on four metrics: timeliness, accuracy, completeness, and legitimacy of the information presented. These metrics have been used

to evaluate firms until 2008 when the exchange added two additional metrics: truthfulness and fairness. To make sure the disclosure quality is measured consistently, we separate our sample to two sub-periods, the 2003-2007 period and the 2008-2009 period. For brevity, we do not report summary statistics on firm-level variables separately for each sub-period.

The panel regressions using disclosure rankings as a measure for disclosure quality are estimated by pooled OLS and the results are reported in Table IV. The tests are run separately for each sub-period. The dependent variable in model (1) is the compensation in the current year, while the dependent variable in model (2) uses compensation in the next year. Considering the marginal effect of disclosure may not be constant for each rank, we use one dummy variable for each rank as the independent variables in model (3).<sup>26</sup> As shown in Table IV, the coefficients on *Ranking* variable are positive and statistically significant for all four models. For example, the coefficient is 0.127 for model (2), which suggests that, when firms move up a disclosure rank, there is on average an increase in executive compensation by about 12.7% for the subsequent year. The results hold for both sub-periods.<sup>27</sup> In addition, the coefficient on R3 is statistically significant, while the coefficients on R1 and R2 are not. This suggests that the association between disclosure quality and compensation is mainly driven by the changes from the ranking of the ‘worst’ to the ‘best’. A possible reason for this result is that the gap between ‘worst’ and ‘best’ capture the largest variation in disclosure quality and thus is more likely to capture its effect on compensation. The observed association

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<sup>26</sup> We did not use fixed effect estimation because firms’ disclosure policies appear to remain fairly constant over time.

<sup>27</sup> In unreported table, we also include market value and executive turnover as additional control variables and the results remain virtually unchanged.

between disclosure quality and executive compensation are consistent with the previous results using the exogenous shocks. Since the level of disclosure is a choice variable, some unobserved factors may drive disclosure decision and executive compensation. The association between disclosure quality and executive compensation suggested in the panel regression can't be interpreted as a causal relation. We reply on our previous tests using exogenous shocks to establish the causal relation.

## **5. Further Tests**

The previous results indicate that increased disclosure quality *on average* causes an increase in executive compensation but are silent about the exact mechanisms through which that improved disclosure affects executive compensation. Since the executive compensation in China rarely consists of equity-based pay, the increase in compensation can't be a direct consequence of an increase in firm value due to the lower cost of capital associated with reduced information asymmetry. We propose that, because better monitoring allowed by increased disclosure tends to affect managers adversely, managerial compensation rises as a compensating differential. However, it does not preclude the possibility that if the profit of a firm increases as a result of improved disclosure, the compensation can increase if managers who have bargaining power capture part of the increase in profit. Note these two mechanisms are not mutually exclusive. Since the first mechanism is the central hypothesis of this paper, we take two routes to investigate whether it plays a role in explaining the changes in executive compensation. We first examine the changes in firm profit around the event. If there are no significant increases in firm profit, the observed increase in executive compensation is unlikely to be driven solely by the second mechanism.

To illustrate the second route, let's suppose that a manager's utility ( $U$ ) is determined by the level of disclosure ( $D$ ) and the compensation (as in Hermalin and Weisbach (2012)), which is further decomposed into two components: reservation wage ( $W$ ) and excess compensation ( $X$ ). We define the reservation wage for a given level of disclosure as the wage at which a manager's utility is equal to his reservation utility. When an increase in disclosure adversely affects managers, the reservation wage of a manager increases. Excess compensation is defined as the fraction of the pay that is above the level of reservation wage, and it captures the effect of managers' bargaining power over compensation decisions (i.e., it equals zero for managers who do not have bargaining power and is greater than zero for managers who do). It is easy to see that for managers who have no bargaining power, the observed compensation is simply equal to the reservation wage (i.e.,  $X = 0$ ). Thus, when an increase in disclosure leads to an increase in reservation wage, this increase in reservation wage is directly reflected in the observed compensation. In contrast, for the managers who have bargaining power (i.e.,  $X > 0$ ), how an increase in disclosure would affect compensation is less clear. This is due to the fact that the direction in which the excess component ( $X$ ) of the compensation change depends on the specific circumstances, thus an increase in a manager's reservation wage may not be detected from the observed compensation.

We separate our sample firms into two subgroups: one whose CEOs have the bargaining power and the other one whose CEOs don't, and run separate regression of executive compensation on disclosure for each of the two subgroups. Our results based upon the above analysis support the mechanism that managerial compensation rises as a

compensating differential. The alternative mechanism, even if it plays a role, can't fully explain the increase in compensation.

## **5.1 The Rule Change in Chinese Accounting and Auditing Standards in January 2007**

### **5.1.1 Changes in Firm Profit**

We first examine whether there are changes in firm profit around the disclosure standard change, where firm profit is measured by operating performance (return on assets). The alternative mechanism to the increased compensation whereby managers with some bargaining power capture part of the increase in profit can play a role only when there is an increase in firm profit after the disclosure. As shown in Appendix Panel A, the changes in operating performance measured using return on assets are not statistically significant. We also compute return on assets by adding the top three executive compensation to the operating income.<sup>28</sup> There is again no significant difference in this revised measure of return on assets. The results suggest that there is no improvement in firm profit after disclosure, indicating that the increases in compensation are unlikely to be caused by the second mechanism. We also examine Tobin's Q, calculated as the sum of market value of tradable shares, book value of non-tradable shares, and book value of debt divided by total assets,<sup>29</sup> and annual stock returns around the disclosure rule change and find insignificant results as well<sup>30</sup>. These additional

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<sup>28</sup> The operating income used in previous calculation of return on assets is net of executive compensation.

<sup>29</sup> In Chinese capital market, a certain percentage of the shares, owned by the State and/or legal persons, are not tradable on the stock exchanges. This is so even after the 2006 "Share Split" reform.

<sup>30</sup> Since the changes in firm value and stock price reaction should occur at the time of the announcement of the disclosure policy instead of the actual effective date, our results do not imply that the disclosure rule change has no value effect.

results rule out the explanation that the increases in compensation are due to increases in market value of the firms.

### **5.1.2. Managerial Bargaining Power**

To provide further evidence that the alternative mechanism to the increased compensation can't fully explain our results, we reexamine the relation between disclosure and managerial compensation for the subgroup of the firms whose managers don't have bargaining power. If the increase in managerial compensation is solely due to managers with bargaining power capturing all or some of the increase in profit associated with the improved disclosure, the increases in managerial compensation should not exist for this subgroup of firms. If instead managerial compensation rises as a compensating differential because better monitoring allowed by increased disclosure tends to affect managers adversely, we should observe that the increase in compensation exists for firms whose managers don't have bargaining power. Intuitively, this is because a manager's utility is more likely to be set at the reservation level if the manager has no bargaining power. Therefore, when a manager's utility is negatively affected by improved disclosure, an increase in wage serves to replenish the manager's loss in utility.

We separate the firms into two groups based on manager bargaining power and examine whether the increase in compensation holds for each subgroup. Following prior literature, we measure manager bargaining power using two proxies: CEO tenure and CEO/Chairman duality. CEOs with longer tenure are considered to have more bargaining power. We define CEOs with long tenure as CEOs whose tenures are longer than the median tenure for all CEOs in 2007, the year when the new accounting standards become effective. We then run separate regressions for the two subgroups. The results based on

this proxy are presented in Panel A of Table V. As we can see, the coefficient on the interaction term between After dummy and Ashare is positive and statistically significant for the subgroup whose CEOs have relatively short tenure. In contrast, for the other subgroup of firms, we find that the increase in compensation is much smaller in magnitude and is insignificant.

CEOs who also hold the position of Chairmen of the Boards are also considered to have more bargaining power over business decisions.<sup>31</sup> The variable *duality* takes value of one if CEO and Chairman is the same person, zero otherwise. The results based on this proxy are presented in Panel B. Again, we see results that are highly consistent with the one based on CEO/Chairman duality: the coefficients on the interaction term between Ashare and After are positive and statistically significant only for the subgroup whose CEOs are different from the Chairmen.

Overall, our results based on the 2007 event support the argument that managerial compensation rises as a compensating differential because better monitoring allowed by increased disclosure tends to affect managers adversely. The results do not suggest that the increase in compensation is solely due to managers with bargaining power capturing all or some of the increase in profit associated with the improved disclosure.

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<sup>31</sup> Consistent with this classification, in an unreported regression using the 2007 event, we find that CEOs who are also the Chairman of the board on average are paid 10% more than CEOs who are not, even after controlling for other firm attributes, such as size, profitability, risk, etc.

## **5.2. Hong Kong Exchange' Adoption of Chinese Accounting and Auditing Standards in December 2010**

### **5.2.1. Changes in Firm Profit**

In this section, we test the same hypotheses as those in the previous section using the 2<sup>nd</sup> event – Hong Kong Exchange's Adoption of Chinese Accounting and Auditing Standards in December 2010. We first examine whether there are changes in firm profit around the disclosure standard change. As shown in Appendix Panel B, the changes in operating performance measured using return on assets are not statistically significant. There is again no significant difference in the revised measure of return on assets calculated by adding the top three executive compensation to the operating income. These results suggest that the drop in executive compensation is unlikely to be caused by a drop in firm profit associated with the reduced disclosure. In additional tests, although there is no significant change in annual stock return, we find that the change in Tobin's Q is positive and statistically significant. The evidence that there is no decrease in average firm value after the rule change rules out the explanation that the reduction in compensation is caused by a reduction in firm value. Overall, the results support the argument that the reservation wage of managers reduces as a result of the reduced disclosure. This conclusion is consistent with the inference drawn from the results on the 2007 event.

### **5.2.2. Managerial Bargaining Power**

We investigate whether the decrease in managerial compensation exist for firms whose managers have no bargaining power to provide further evidence about the



mechanisms that drive the reduced compensation. As argued previously, when a firm's manager do not have bargaining power, her utility is more likely to be set at the reservation level. When an exogenous shock in disclosure boosts her utility to a level that is higher than the reservation utility, her compensation decreases so that the reservation utility is maintained. Since the compensation is equal to the reservation wage for a manager who has no bargaining power (i.e.,  $X = 0$ ), the changes in the observed compensation is equivalent to changes in reservation wage. Therefore, a decrease in the observed compensation for firms whose managers don't have bargaining power would support the argument that the decrease in compensation is due to a decrease in reservation wage. As discussed in the previous sections, the prediction for managers who have the bargaining power are less clear since their compensation includes the excess component, which by definition is greater than zero, and thus the decrease in reservation wage may not translate into a decrease in the observed compensation.

Following the 2007 event, we define CEOs with more bargaining power as CEOs who have relatively long tenure or who hold the position of Chairmen of the Boards. As shown in Table VI, the coefficient on the interaction term between *After* dummy and *AH Share* is negative and statistically significant for the subgroup whose CEOs have short tenure (Panel A) and are different from the Chairmen (Panel B). Due to insufficient observations, we cannot estimate the model for the subgroup whose CEOs are also the Chairmen. The results again confirm the our initial conjecture that executive compensation increases (decreases) as compensating differential due to improved (reduced) disclosure and the alternative mechanism can't be a sole drive for the change.

## 6. Conclusion

The empirical literature on information disclosure has largely focused on its benefits such as reducing information asymmetry between outsiders and insiders, and mitigating agency costs between managers and shareholders. The costs associated with increased disclosure, in contrast, are relatively less explored. The theoretical models in Hermalin and Weisbach (2012) show that, when a CEO's utility depends on the level of disclosure and compensation, greater disclosure leads to higher executive compensation. The argument is that increased compensation is a compensating differential to the CEOs for the disutility induced by disclosure.

The empirical examination on the causal effect of disclosure on executive compensation is challenging due to potential endogeneity issues. There can be unobserved factors that simultaneously affect a firm's disclosure decision and its executive compensation. We overcome the endogeneity issue by exploiting two exogenous rule changes that occurred in China. The first one is the convergence of Chinese accounting and auditing standards to a more stringent set of international standards in January 2007. The second rule change is the approval of Mainland Chinese firms listed in Hong Kong to use the less stringent accounting and auditing standards of mainland China in December 2010. We identify the causal effect of disclosure on executive compensation by employing a difference-in-differences approach around these two exogenous rule changes. Given that the changes in disclosure quality of the two rules are in the opposing directions, utilizing both events makes it less likely for the results to be driven by some temporal factors occurring at the event time but unrelated to the rule change. Furthermore, since regulators in most jurisdictions are pushing for more

diligent accounting and auditing, this second event goes against the trend and provides us a rare laboratory.

Consistent with the theoretical prediction, this study documents that improved disclosure leads to higher executive compensation, and thus reveals another cost of disclosure that has received little attention. Specifically, we find that, after China adopted a set of tightened accounting and auditing standards in January 2007, the executive compensation of the affected firms increased by 15.4% compared to the firms that were already subject to a set of more stringent accounting and auditing rules prior to the rule change. Furthermore, after December 2010, when the Hong Kong Exchange listed mainland Chinese firms are allowed to use the less strict accounting and auditing standards of mainland China, the affected firms experience a negative change of 12.3% in compensation relative to the mainland Chinese firms that are not listed in the Hong Kong Exchange. Our finding implies that a naïve analysis that considers only the direct benefits from improved disclosure without taking into account the increases in compensation, among other costs, would overstate the benefit of increased disclosure. Furthermore, our study indicates that the recent increasing trend in executive compensation could, in part, be explained by greater disclosure imposed by governance reforms.

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### Table I Summary Statistics

This table reports the summary statistics for firms in the treatment and control groups for the two rule changes in accounting and auditing standards. Panel A provides the summary statistics for the treatment and the control firms for the rule change in Chinese accounting and auditing standards in January 2007. The sample includes all listed firms in China that issue A shares only and the firms that issue both A and B shares. The firm characteristics are calculated for 2005-2006, the period prior to the 2007 accounting standards change. Pay3 is the sum of the cash compensation for the top 3 executives. ROA is return on assets, calculated as operating income divided by total assets. Vol(RET) are stock return volatilities calculated using weekly stock returns. Leverage is measured as total debt divided by total asset. CEO/Chairman Duality is a dummy variable that equals one if the chairman and the CEO are the same person. Independent Director is the ratio of the number of independent directors over the total number of directors. SOE is a dummy variable that equals one if the firm is State owned, zero otherwise. Ownership is proportion of stock held by the largest shareholder.

Panel B reports the summary statistics for the treatment and the control firms for the rule change when the Hong Kong Exchange adopted Chinese auditors for mainland firms listed in Hong Kong in December 2010. The sample includes all listed firms in China that issue both A and H shares and the firms that issue both A and B shares in 2010 (prior to the change taking effect).

Panel C reports the summary statistics for all listed firms in Shenzhen Stock Exchange that issue A shares only. The sample period is 2003-2011 (the SSE started to compile the data on disclosure quality in 2003). Disclosure is an ordinal variable ranging from 0 to 3, with a higher value indicating better disclosure.

#### Panel A The firms in the treatment and the control groups for the January 2007 Event

Variables	A-Share Firms (Treatment Group)			AB-Share Firms (Control Group)		
	Mean	Std. Dev	N	Mean	Std.Dev	N
Pay3 (in thousands RMB)	619.79	534.81	2,344	1,010.84	956.47	159
ln(Pay3)	13.04	0.79	2,344	13.54	0.73	159
Total Assets (in millions RMB)	2,582	4,823	2,356	4,788	6,935	161
Revenue (in millions RMB)	2,083	5,099	2,354	3,920	6,336	160
ROA	0.01	0.09	2,356	0.01	0.09	161
RET	0.40	0.81	2,263	0.39	0.76	161
Leverage	0.53	0.22	2,356	0.57	0.23	161
Executive Holding (%)	0.01	0.04	2,356	0.00	0.00	161
CEO/Chairman Duality	0.13	0.33	2,337	0.14	0.35	160
Independent Director (%)	0.35	0.05	2,343	0.36	0.05	160
Number of Directors	9.37	1.96	2,343	9.39	1.84	160
SOE	0.60	0.49	2,354	0.74	0.44	161
Ownership (%)	38.10	15.71	2,356	36.29	16.58	161
Vol(RET)	0.06	0.02	2,260	0.07	0.02	156

Panel B The firms in the treatment and the control groups for the December 2010 event

Variables	AH-Share Firms (Treatment Group)			AB-Share Firms (Control Group)		
	Mean	Std. Dev	N	Mean	Std. Dev	N
Pay3 (in thousands RMB)	2,435.55	1,407.89	45	1,691.24	1,298.04	82
ln(Pay3)	14.51	0.71	45	14.06	0.78	82
Total Assets (in millions RMB)	68,338	95,434	45	11,530	26,980	82
Revenue (in millions RMB)	54,028	100,422	45	6,843	12,139	82
ROA	0.06	0.04	45	0.04	0.08	82
RET	0.00	0.32	42	0.06	0.36	81
Leverage	0.54	0.19	45	0.54	0.24	82
Executive Holding (%)	0.00	0.02	45	0.00	0.00	82
CEO/Chairman Duality	0.02	0.15	42	0.18	0.38	79
Independent Director (%)	0.39	0.08	44	0.36	0.05	82
Number of Directors	9.77	2.29	44	9.02	1.76	82
SOE	0.93	0.25	44	0.70	0.46	81
Ownership (%)	43.34	13.01	45	34.53	16.36	82
Vol(RET)	0.05	0.01	42	0.06	0.01	80

Panel C Sample firms for the panel regressions

Variables	Mean	Median	Std.Dev	Min	Max	N
Pay3 (in thousands RMB)	928.04	620.00	1,015.92	47.60	6,029.10	3,958
Ln(Pay3)	13.29	13.34	0.97	10.77	15.61	3,958
Disclosure	1.71	2.00	0.69	0	3	3,990
Total Assets (in millions RMB)	4,549	1,837	11,288	0	296,208	3,990
Revenue (in millions RMB)	3,558	1,029	9,272	-4	133,344	3,983
ROA	0.01	0.02	0.12	-0.74	0.31	3,989
RET	0.36	-0.06	1.02	-0.77	4.20	3,901
Leverage	0.59	0.54	0.39	0.09	2.62	3,989
Executive Holding (%)	0.00	0.00	0.01	0.00	0.20	3,990
CEO/Chairman Duality	0.16	0.00	0.37	0	1	3,939
Independent Director (%)	0.36	0.33	0.06	0.00	0.71	3,921
Number of Directors	9	9	2.04	3	18	3,921
SOE	0.62	1.00	0.49	0	1	3,990
Ownership (%)	35.76	31.13	16.00	3.62	89.41	3,990
Vol(RET)	0.07	0.06	0.02	0.03	0.14	3,816

Table II The Impact of the Chinese Accounting and Auditing Standard Rule Change on Executive Compensations

This table reports the results of a difference-in-differences model that estimates the effect of the rule change in Chinese accounting and auditing standards in January 2007 on executive compensations. The sample includes all listed firms in China that issue A shares only (the treatment group) and the firms that issue both A and B shares (the control group). Panels A and B report the results for the tests using four-year and two-year event widow, respectively. Panel C excludes the firms that use equity-based compensation. Panel D uses the hypothetical event date of January 2006. The dependent variable is the natural logarithm of the sum of the cash compensations for the top three executives. Ashare is a dummy variable which equals one if a firm issues A shares only; In Panels A, B, and C, After is dummy variable which equals one for years after 2006. In Panel D, After is dummy variable which equals one for years after 2005 based on the hypothetical event date of January 2006. ROA is return on assets, calculated as operating income divided by total assets; RET is annual stock return; Leverage is measured as total debt divided by total asset; Executive Holding is the percentage shares owned by executives; CEO/Chairman Duality is a dummy which equals one if the CEO and Chairman are the same person; Independent Director is the ratio of the number of independent directors divided by the total number of the directors; SOE is a dummy variable which equals one if the firm is State owned; Ownership is the proportion of stocks held by the largest shareholder. Vol(RET) is stock return volatilities calculated using weekly returns; The industry classification is based on the Chinese Security Regulatory Commission Industry Classification. Robust standard errors, which are clustered at the firm level, are in parenthesis. \*, \*\*, and \*\*\* indicate significance at the 10%, 5% and 1% levels, respectively.



Panel A Four-year event window (2005-2008)

	Dependent Variable: Ln(Executive Compensation)					
	OLS (1)	OLS (2)	OLS (3)	FE (4)	FE (5)	FE (6)
Ashare	-0.499*** (0.080)	-0.412*** (0.071)	-0.395*** (0.068)			
Ashare*After	0.142*** (0.047)	0.109** (0.049)	0.113** (0.050)	0.152*** (0.045)	0.145*** (0.045)	0.154*** (0.046)
ROA		1.905*** (0.172)	1.799*** (0.201)		0.572*** (0.133)	0.526*** (0.155)
RET		-0.017 (0.014)	0.003 (0.015)		-0.011 (0.009)	-0.008 (0.010)
Ln(Revenue)		0.203*** (0.012)	0.220*** (0.014)		0.109*** (0.023)	0.094*** (0.027)
Leverage			-0.119 (0.084)			-0.262** (0.104)
Executive Holding (%)			0.859*** (0.253)			0.662 (0.528)
CEO/Chairman Duality			0.108** (0.045)			0.031 (0.039)
Independent Director (%)			0.341 (0.303)			0.497** (0.233)
Number of Directors			0.024*** (0.009)			0.015* (0.009)
SOE			-0.020 (0.037)			0.021 (0.057)
Ownership (%)			-0.005*** (0.001)			0.001 (0.002)
Vol(RET)			-1.457** (0.704)			-0.454 (0.453)
Constant	13.473*** (0.077)	9.004*** (0.274)	8.683*** (0.321)	13.012*** (0.010)	10.764*** (0.478)	10.877*** (0.550)
Industry Controls	No	Yes	Yes	N/A	N/A	N/A
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,349	5,020	4,820	5,349	5,020	4,820
R-squared	0.074	0.330	0.346	0.260	0.303	0.324

Panel B: Two-year event window (2006-2007)

	Dependent Variable: Ln(Executive Compensation)					
	OLS	OLS	OLS	FE	FE	FE
	(1)	(2)	(3)	(4)	(5)	(6)
Ashare	-0.484*** (0.085)	-0.408*** (0.075)	-0.391*** (0.072)			
After	0.122** (0.056)	0.102* (0.056)	0.148** (0.058)	0.092* (0.052)	0.088* (0.050)	0.141*** (0.050)
Ashare*After	0.120** (0.058)	0.105* (0.057)	0.071 (0.058)	0.132** (0.054)	0.126** (0.052)	0.116** (0.052)
ROA		1.853*** (0.220)	1.907*** (0.252)		0.238 (0.222)	0.490* (0.260)
RET		-0.027* (0.015)	0.006 (0.019)		-0.014 (0.012)	0.018 (0.015)
Ln(Revenue)		0.215*** (0.014)	0.225*** (0.016)		0.125*** (0.035)	0.111*** (0.041)
Leverage			-0.058 (0.098)			-0.258 (0.184)
Executive Holding (%)			1.308*** (0.339)			0.589 (0.571)
CEO/Chairman Duality			0.081 (0.056)			-0.015 (0.062)
Independent Director (%)			0.200 (0.380)			-0.193 (0.324)
Number of Directors			0.021** (0.010)			0.011 (0.014)
SOE			0.002 (0.041)			-0.016 (0.094)
Ownership (%)			-0.006*** (0.001)			0.000 (0.003)
Vol(RET)			-2.571*** (0.975)			-2.525*** (0.756)
Constant	13.589*** (0.082)	8.878*** (0.318)	8.782*** (0.385)	13.143*** (0.007)	10.582*** (0.727)	11.124*** (0.901)
Industry Controls	No	Yes	Yes	N/A	N/A	N/A
Observations	2,680	2,462	2,352	2,680	2,462	2,352
R-squared	0.036	0.310	0.323	0.175	0.201	0.239

Panel C. Excluding Firms with Equity-based Compensation (2005-2008)

	Dependent Variable: Ln(Executive Compensation)					
	OLS (1)	OLS (2)	OLS (3)	FE (4)	FE (5)	FE (6)
Ashare	-0.489*** (0.079)	-0.404*** (0.071)	-0.389*** (0.068)			
Ashare*After	0.148*** (0.048)	0.110** (0.050)	0.111** (0.051)	0.147*** (0.046)	0.139*** (0.046)	0.146*** (0.047)
ROA		1.873*** (0.176)	1.803*** (0.205)		0.534*** (0.133)	0.494*** (0.156)
RET		-0.020 (0.014)	-0.000 (0.015)		-0.011 (0.010)	-0.008 (0.010)
Ln(Revenue)		0.199*** (0.012)	0.216*** (0.014)		0.109*** (0.024)	0.094*** (0.027)
Leverage			-0.101 (0.084)			-0.245** (0.106)
Executive Holding (%)			0.914*** (0.269)			0.768 (0.548)
CEO/Chairman Duality			0.101** (0.046)			0.024 (0.041)
Independent Director (%)			0.350 (0.305)			0.546** (0.237)
Number of Directors			0.023** (0.009)			0.015* (0.009)
SOE			-0.021 (0.037)			0.019 (0.058)
Ownership (%)			-0.005*** (0.001)			0.001 (0.002)
Vol(RET)			-1.382* (0.719)			-0.483 (0.463)
Constant	13.448*** (0.076)	9.081*** (0.279)	8.767*** (0.329)	12.999*** (0.010)	10.757*** (0.482)	10.848*** (0.557)
Industry Controls	No	Yes	Yes	N/A	N/A	N/A
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,177	4,858	4,659	5,177	4,858	4,659
R-squared	0.073	0.322	0.337	0.256	0.299	0.320

Panel D. 'Placebo' Test Using a Hypothetical Event Date of January 2006 (2004-2007)

	Dependent Variable: Ln(Executive Compensation)					
	OLS (1)	OLS (2)	OLS (3)	FE (4)	FE (5)	FE (6)
Ashare	-0.469*** (0.090)	-0.365*** (0.082)	-0.346*** (0.082)			
Ashare*After	0.046 (0.066)	0.011 (0.062)	-0.008 (0.069)	0.015 (0.061)	-0.007 (0.057)	-0.001 (0.058)
ROA		1.650*** (0.179)	1.543*** (0.206)		0.361*** (0.139)	0.448*** (0.162)
RET		-0.005 (0.014)	0.018 (0.017)		0.005 (0.011)	0.016 (0.012)
Ln(Revenue)		0.212*** (0.013)	0.227*** (0.014)		0.144*** (0.021)	0.133*** (0.022)
Leverage			-0.105 (0.088)			-0.116 (0.111)
Executive Holding (%)			1.415*** (0.353)			0.525 (0.406)
CEO/Chairman Duality			0.095** (0.048)			-0.009 (0.040)
Independent Director (%)			0.499* (0.299)			0.079 (0.247)
Number of Directors			0.025*** (0.009)			0.015* (0.008)
SOE			-0.037 (0.039)			0.027 (0.049)
Ownership (%)			-0.005*** (0.001)			-0.001 (0.001)
Vol(RET)			-1.375* (0.835)			-1.276** (0.532)
Constant	13.391*** (0.088)	8.695*** (0.294)	8.372*** (0.344)	12.952*** (0.012)	10.000*** (0.435)	10.220*** (0.486)
Industry Controls	No	Yes	Yes	N/A	N/A	N/A
Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,101	4,772	4,621	5,101	4,772	4,621
R-squared	0.057	0.296	0.316	0.179	0.216	0.230

Table III The Impact of the Hong Kong Exchange's Adoption of Chinese Accounting and Auditing Standards on Executive Compensations

This table reports the results of a difference-in-differences model that estimates the effect of the Hong Kong Exchange's adoption of Chinese accounting and auditing, effective in December 2010, on the executive compensation. The sample includes all listed firms in China that issue both A and H shares (the treatment group) and the firms that issue both A and B shares (the control group). Panel A include all sample firms. Panel B exclude firms that use equity-based compensation. Panel C uses the hypothetical event date of December 2009. The dependent variable is the natural logarithm of the sum of the cash compensations for the top three executives. AH share is a dummy variable which equals one if a firm issues both A and H shares; In Panels A and B, After is dummy variable indicating year 2011. In Panel C, After is dummy variable that equals one for year 2010 based on the hypothetical event date of December 2009. ROA is return on assets, calculated as operating income divided by total assets; RET is annual stock return; Leverage is measured as total debt divided by total asset; CEO/Chairman Duality is a dummy which equals one if the CEO and Chairman are the same person; Independent Director is the ratio of the number of independent directors divided by the total number of the directors; SOE is a dummy variable which equals one if the firm is State owned; Ownership is the proportion of stocks held by the largest shareholder; Vol(RET) is stock return volatilities calculated using weekly returns; The industry classification is based on the Chinese Security Regulatory Commission Industry Classification. Robust standard errors, which are clustered at the firm level, are in parenthesis. \*, \*\*, and \*\*\* indicate significance at the 10%, 5% and 1% levels, respectively.

Panel A. All sample firms (2010-2011)

	Dependent Variable: Ln(Executive Compensation)					
	OLS (1)	OLS (2)	OLS (3)	FE (4)	FE (5)	FE (6)
AH Share	0.446*** (0.137)	-0.052 (0.153)	-0.080 (0.153)			
After	0.305*** (0.066)	0.239** (0.092)	0.303*** (0.083)	0.160*** (0.033)	0.084** (0.036)	0.075* (0.045)
AH Share*After	-0.241*** (0.091)	-0.176* (0.091)	-0.199* (0.102)	-0.154** (0.063)	-0.134** (0.064)	-0.123* (0.071)
ROA		1.326 (0.890)	1.611 (0.975)		0.546 (0.534)	-0.441 (0.685)
RET		0.115 (0.163)	0.140 (0.158)		-0.141** (0.066)	-0.138** (0.065)
Ln(Revenue)		0.189*** (0.036)	0.209*** (0.038)		0.102 (0.076)	0.171 (0.152)
Leverage			-0.038 (0.340)			-1.134* (0.623)
CEO/Chairman Duality			-0.081 (0.162)			-0.106 (0.126)
Independent Director (%)			-0.045 (0.726)			1.861 (1.692)
Number of Directors			0.087*** (0.030)			0.083 (0.116)
SOE			-0.033 (0.160)			0.095 (0.083)
Ownership (%)			-0.011*** (0.003)			0.004 (0.024)
Vol(RET)			1.696 (4.031)			0.753 (2.368)
Constant	14.059*** (0.087)	10.155*** (0.802)	9.428*** (0.888)	14.285*** (0.013)	12.001*** (1.697)	9.386** (3.808)
Industry Controls	No	Yes	Yes	N/A	N/A	N/A
Observations	226	219	199	226	219	199
R-squared	0.078	0.406	0.513	0.138	0.170	0.260

Panel B. Excluding Firms with Equity-based Compensation (2010-2011)

	Dependent Variable: Ln(Executive Compensation)					
	OLS (1)	OLS (2)	OLS (3)	FE (4)	FE (5)	FE (6)
AH Share	0.486*** (0.140)	-0.008 (0.159)	-0.082 (0.156)			
After	0.297*** (0.067)	0.249*** (0.094)	0.326*** (0.087)	0.166*** (0.034)	0.092** (0.038)	0.085* (0.047)
AH Share*After	-0.237** (0.094)	-0.185* (0.094)	-0.219** (0.109)	-0.167** (0.065)	-0.144** (0.067)	-0.123* (0.069)
ROA		1.201 (0.863)	1.476 (0.997)		0.498 (0.544)	-0.521 (0.679)
RET		0.138 (0.161)	0.170 (0.164)		-0.130* (0.068)	-0.129* (0.072)
Ln(Revenue)		0.184*** (0.037)	0.213*** (0.041)		0.103 (0.077)	0.169 (0.157)
Leverage			-0.081 (0.348)			-1.183* (0.620)
CEO/Chairman Duality			-0.069 (0.166)			-0.107 (0.125)
Independent Director (%)			-0.081 (0.846)			2.369 (2.110)
Number of Directors			0.085*** (0.032)			0.105 (0.132)
SOE			-0.017 (0.167)			0.090 (0.083)
Ownership (%)			-0.012*** (0.004)			0.005 (0.024)
Vol(RET)			1.644 (4.095)			0.901 (2.519)
Constant	14.025*** (0.085)	10.240*** (0.830)	9.407*** (0.951)	14.262*** (0.014)	11.976*** (1.713)	9.028** (3.927)
Industry Controls	No	Yes	Yes	N/A	N/A	N/A
Observations	218	211	191	218	211	191
R-squared	0.091	0.402	0.494	0.144	0.170	0.270

Panel C. 'Placebo' Test Using the Hypothetical Event Date of December 2009 (2009-2010)

	Dependent Variable: Ln(Executive Compensation)					
	(1)	(2)	(3)	(4)	(5)	(6)
AH Share	0.487*** (0.149)	0.014 (0.164)	0.034 (0.131)			
After	0.200*** (0.039)	0.218** (0.105)	0.222** (0.101)	0.200*** (0.039)	0.191*** (0.057)	0.192*** (0.058)
AH Share*After	-0.041 (0.051)	-0.103* (0.056)	-0.116 (0.083)	-0.036 (0.049)	-0.055 (0.052)	-0.053 (0.049)
ROA		1.751** (0.675)	1.557** (0.682)		0.257 (0.314)	0.183 (0.350)
RET		0.062 (0.064)	0.083 (0.075)		0.037 (0.032)	0.039 (0.038)
Ln(Revenue)		0.189*** (0.039)	0.190*** (0.033)		0.194 (0.132)	0.225 (0.160)
Leverage			-0.056 (0.274)			0.261 (0.295)
CEO/Chairman Duality			-0.059 (0.172)			0.165 (0.162)
Independent Director (%)			-0.473 (0.720)			-0.068 (1.272)
Number of Directors			0.093*** (0.027)			0.007 (0.032)
SOE			-0.082 (0.163)			
Ownership (%)			-0.010*** (0.004)			-0.002 (0.006)
Vol(RET)			-1.058 (3.550)			-0.148 (1.448)
Constant	13.859*** (0.089)	9.954*** (0.845)	10.030*** (0.794)	14.027*** (0.014)	9.770*** (2.890)	8.962** (4.118)
Industry Controls	No	Yes	Yes	N/A	N/A	N/A
Observations	251	243	227	251	243	227
R-squared	0.090	0.432	0.537	0.274	0.339	0.384



#### Table IV Executive compensation and disclosure quality

This table reports the results from regressing the executive compensation on a firm's disclosure quality. The sample includes all listed A-share firms in the Shenzhen Stock Exchange. The dependent variable is the natural logarithm of the sum of the cash compensation for the top three executives; Ranking is an ordinal variable indicating the quality of a firm's disclosure. The Ranking variable takes a value of 0 (lowest) to 3 (highest) and is compiled by the Shenzhen Stock Exchange; R1, R2, and R3 correspond to disclosure rankings 1, 2, and 3 respectively, with R0 indicating the benchmark; ROA is return on assets, calculated as operating income divided by total asset; RET is annual stock return; Leverage is measured as total debt/total asset; Executive Holding is the percentage of stocks held by executives; Duality is a dummy which equals one if the Chairman and CEO are the same person; Independent Director is the ratio of the number of independent directors/total directors; SOE is a dummy variable which equals one if the firm is State owned; Ownership is proportion of stockholdings of the largest shareholder; Vol(RET) is stock return volatilities calculated using weekly returns; The industry is based on the Chinese Security Regulatory Commission Industry Classification. Robust standard errors, which are clustered at the firm level, are in parenthesis. \*, \*\*, and \*\*\* indicate significance at the 10%, 5% and 1% levels, respectively.

VARIABLES	2003-2007			2008-2011		
	(1)	(2)	(3)	(1)	(2)	(3)
	Current Compensation	Next Year Compensation	Current Compensation	Current Compensation	Next Year Compensation	Current Compensation
Ranking	0.092** (0.036)	0.127*** (0.039)		0.192*** (0.041)	0.190*** (0.047)	
R1			0.013 (0.096)			-0.157 (0.151)
R2			0.083 (0.103)			0.163 (0.135)
R3			0.264** (0.132)			0.466** (0.183)
ROA	0.957*** (0.235)	1.063*** (0.286)	0.980*** (0.239)	1.517*** (0.358)	1.464*** (0.430)	1.693*** (0.452)
RET	-0.008 (0.030)	0.086* (0.046)	-0.007 (0.030)	0.074** (0.033)	0.050 (0.039)	0.090** (0.036)
Ln(Revenue)	0.240*** (0.026)	0.251*** (0.027)	0.239*** (0.027)	0.171*** (0.024)	0.161*** (0.028)	0.150*** (0.046)
Leverage	0.100 (0.080)	0.113 (0.078)	0.082 (0.083)	0.085 (0.091)	0.106 (0.092)	0.091 (0.094)
Executive Holding (%)	18.054*** (4.121)	14.714*** (2.786)	18.679*** (4.220)	4.590*** (1.561)	4.803*** (1.342)	5.869*** (2.215)
CEO/Chairman Duality	-0.048 (0.067)	-0.010 (0.068)	-0.046 (0.069)	-0.001 (0.078)	-0.014 (0.086)	0.015 (0.083)
Independent Director (%)	0.498 (0.394)	1.059** (0.410)	0.485 (0.395)	-0.262 (0.480)	-0.340 (0.525)	-1.089 (0.980)
Director Number	0.038*** (0.013)	0.039*** (0.014)	0.041*** (0.013)	0.060*** (0.016)	0.063*** (0.016)	0.042* (0.024)
SOE	-0.003 (0.065)	-0.008 (0.067)	-0.012 (0.067)	0.030 (0.070)	0.031 (0.076)	0.015 (0.076)
Ownership (%)	-0.008*** (0.002)	-0.008*** (0.002)	-0.008*** (0.002)	-0.006*** (0.002)	-0.006*** (0.002)	-0.006*** (0.002)
VOL(RET)	-0.189	2.281	-0.720	-2.534	0.887	-1.351

	(1.421)	(1.672)	(1.540)	(1.692)	(2.504)	(2.811)
Constant	7.491***	7.121***	7.580***	9.507***	9.478***	10.572***
	(0.568)	(0.582)	(0.586)	(0.598)	(0.637)	(1.175)
Industry & Year Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,093	1,690	2,093	1,590	1,193	1,590
R-squared	0.344	0.346	0.315	0.378	0.336	0.232

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Table V. The Effect of Manager Bargaining Power and the Increase in Managerial Compensation (the 2007 event)

This table reports the difference-in-differences estimation results for firms in the two subgroups formed based on manager's bargaining power, which is measured using two proxies: CEO/Chairman duality and CEO tenure. The results correspond to the rule change in Chinese accounting and auditing standards in January 2007. CEOs who are also the Chairmen or CEOs with long tenure are considered to have more bargaining power. We define long-tenured CEOs are those CEOs whose tenures are above the median tenure for all CEOs in 2007. Panel A (B) reports the results based on CEO tenure (CEO/Chairman duality).

Ashare is a dummy variable which equals one if a firm issues A shares only; After is a dummy variable which equals one for years after 2006; ROA is return on assets, calculated as operating income divided by total assets; RET is annual stock return; Leverage is measured as total debt divided by total asset; Executive Holding is the percentage shares owned by executives; Independent Director is the ratio of the number of independent directors divided by the total number of the directors; SOE is a dummy variable which equals one if the firm is State owned; Ownership is the proportion of stocks held by the largest shareholder. Vol(RET) is stock return volatilities calculated using weekly returns; The industry classification is based on the Chinese Security Regulatory Commission Industry Classification. Robust standard errors, which are clustered at the firm level, are in parenthesis. \*, \*\*, and \*\*\* indicate significance at the 10%, 5% and 1% levels, respectively.

Panel A. CEO tenure as a proxy for CEO bargaining power

	Dependent Variable: Ln(Executive Compensation)					
	Short Tenure			Long Tenure		
	(1)	(2)	(3)	(1)	(2)	(3)
Ashare*After	0.227*** (0.063)	0.221*** (0.062)	0.220*** (0.061)	0.031 (0.060)	0.012 (0.060)	0.029 (0.067)
ROA		0.632*** (0.153)	0.503*** (0.177)		0.642*** (0.246)	0.582* (0.333)
RET		-0.015 (0.011)	-0.010 (0.013)		0.003 (0.016)	0.004 (0.015)
Ln(Revenue)		0.108*** (0.026)	0.095*** (0.031)		0.123*** (0.039)	0.110*** (0.039)
Leverage			-0.257** (0.125)			-0.288* (0.162)
Executive Holding (%)			1.146 (0.926)			0.370 (0.313)
Independent Director (%)			0.603** (0.285)			0.478 (0.425)
Number of Directors			0.003 (0.011)			0.037*** (0.014)
SOE			0.031 (0.071)			0.021 (0.074)
Ownership (%)			0.002 (0.002)			-0.000 (0.002)
Vol(RET)			-0.366 (0.570)			-0.956 (0.720)
Constant	12.989*** (0.013)	10.764*** (0.526)	10.849*** (0.640)	13.103*** (0.018)	10.548*** (0.796)	10.492*** (0.812)
Year & Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,616	3,347	3,243	1,550	1,499	1,468
R-squared	0.270	0.319	0.332	0.294	0.338	0.350

Panel B. CEO/Chairman duality as a proxy for CEO bargaining power

	Dependent Variable: Ln(Executive Compensation)					
	duality = 0			duality = 1		
	(1)	(2)	(3)	(4)	(5)	(6)
Ashare*After	0.153*** (0.044)	0.130*** (0.044)	0.135*** (0.045)	0.185 (0.142)	0.216 (0.144)	0.131 (0.136)
ROA		0.677*** (0.145)	0.655*** (0.156)		0.349 (0.394)	0.043 (0.392)
RET		-0.005 (0.010)	-0.005 (0.010)		-0.007 (0.023)	0.021 (0.031)
Ln(Revenue)		0.128*** (0.026)	0.112*** (0.028)		-0.020 (0.078)	-0.037 (0.099)
Leverage			-0.212** (0.097)			-0.633*** (0.239)
Executive Holding (%)			1.766 (1.848)			4.117*** (1.259)
Independent Director (%)			0.464* (0.261)			-0.093 (0.704)
Number of Directors			0.015 (0.010)			0.040 (0.025)
SOE			0.006 (0.060)			-0.011 (0.151)
Ownership (%)			0.001 (0.001)			-0.001 (0.004)
Vol(RET)			-0.318 (0.481)			-1.929 (1.312)
Constant	13.009*** (0.011)	10.370*** (0.526)	10.487*** (0.565)	13.059*** (0.031)	13.464*** (1.557)	13.867*** (1.981)
Year & Firm Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,534	4,305	4,177	772	676	643
R-squared	0.276	0.325	0.343	0.222	0.245	0.288

Table VI. The Effect of Manager Bargaining Power and the Increase in Managerial Compensation (the 2011 event)

This table reports the difference-in-differences estimation results for firms in the two subgroups formed based on manager's bargaining power, which is measured using two proxies: CEO tenure and CEO/Chairman duality. The results correspond to the Hong Kong Exchange's adoption of Chinese Accounting and Auditing Standards in December 2010. CEOs who are also the Chairmen or CEOs with long tenure are considered to have more bargaining power. We define long-tenured CEOs are those CEOs whose tenures are above the median tenure for all CEOs in 2011. Panel A (B) reports the results based on CEO tenure (CEO/Chairman duality).

AH share is a dummy variable which equals one if a firm issues both A and H shares; After is a dummy variable which equals one for year 2011; ROA is return on assets, calculated as operating income divided by total assets; RET is annual stock return; Leverage is measured as total debt divided by total asset; Independent Director is the ratio of the number of independent directors divided by the total number of the directors; SOE is a dummy variable which equals one if the firm is State owned; Ownership is the proportion of stocks held by the largest shareholder. Vol(RET) is stock return volatilities calculated using weekly returns; The industry classification is based on the Chinese Security Regulatory Commission Industry Classification. Robust standard errors, which are clustered at the firm level, are in parenthesis. \*, \*\*, and \*\*\* indicate significance at the 10%, 5% and 1% levels, respectively.

Panel A. CEO tenure as a proxy for CEO bargaining power

	Dependent Variable: Ln(Executive Compensation)					
	Short Tenure			Long Tenure		
	(1)	(2)	(3)	(1)	(2)	(3)
After	0.243*** (0.053)	0.143** (0.064)	0.154** (0.071)	0.112** (0.045)	0.033 (0.039)	0.007 (0.038)
AH Share*After	-0.263** (0.113)	-0.309** (0.137)	-0.274** (0.129)	-0.071 (0.081)	-0.016 (0.075)	-0.031 (0.072)
ROA		-1.863 (1.224)	-1.177 (1.485)		1.410** (0.671)	0.747 (0.928)
RET		-0.225 (0.139)	-0.160 (0.124)		-0.108** (0.052)	-0.055 (0.083)
Ln(Revenue)		0.285 (0.215)	0.207 (0.226)		0.119** (0.057)	0.254 (0.168)
Leverage			-0.173 (0.816)			0.413 (0.809)
Independent Director (%)			4.127 (3.189)			0.455 (1.125)
Number of Directors			0.118 (0.163)			0.255* (0.137)
SOE			0.154 (0.134)			
Ownership (%)			-0.013 (0.027)			0.029 (0.040)
Vol(RET)			-1.040 (3.690)			0.476 (3.416)
Constant	14.081*** (0.022)	7.887* (4.714)	7.492 (5.503)	14.588*** (0.019)	11.868*** (1.324)	4.846 (5.041)
Observations	119	114	112	89	88	82
R-squared	0.227	0.329	0.429	0.121	0.165	0.287



Panel B. CEO/Chairman duality as a proxy for CEO bargaining power

	Dependent Variable: Ln(Executive Compensation)		
	(1)	Duality = 0	
		(2)	(3)
After	0.152*** (0.035)	0.095* (0.055)	0.103* (0.058)
AH Share*After	-0.168** (0.070)	-0.160** (0.081)	-0.155* (0.079)
ROA		0.535 (0.659)	0.118 (0.698)
RET		-0.157** (0.075)	-0.151** (0.073)
Ln(Revenue)		0.025 (0.189)	0.013 (0.188)
Leverage			-0.603 (0.654)
Independent Director (%)			2.039 (1.704)
Number of Directors			0.095 (0.117)
SOE			0.091 (0.091)
Ownership (%)			-0.007 (0.026)
Vol(RET)			0.759 (2.560)
Constant	14.334*** (0.015)	13.763*** (4.228)	12.865*** (4.445)
Observations	189	183	178
R-squared	0.117	0.160	0.231

## Appendix. The Impact of Improved Disclosure on Firm Value

This Table reports the results of the difference-in-differences estimates of the effect of change in disclosure on firm value which is proxied by Tobin's Q, annual stock return, Return on Assets. Panel A reports the results corresponding to the rule change in Chinese accounting and auditing standards in January 2007. The results for Hong Kong Exchange's Adoption of Chinese Accounting and Auditing Standards in December 2010 are reported in Panel B. Tobin's Q is measured as the sum of market value of tradable shares, book value of non-tradable shares, and total debt divided by total assets; RET is annual stock return; ROA1 is the return on asset, calculated as operating income plus the top three executive compensation divided by total assets; ROA is return on asset, calculated as operating income divided by total assets. Ashare is a dummy variable which equals one if a firm issues A shares only; After in Panel A (Panel B) is dummy variable which equals one for years after 2006 (2010). Leverage is measured as total debt divided by total asset; Executive Holding is the percentage shares owned by executives; CEO/Chairman Duality is a dummy variable that equals one if the chairman and the CEO are the same person; Independent Director is the ratio of the number of independent directors divided by the total number of the directors; SOE is a dummy variable which equals one if the firm is State owned; Ownership is the proportion of stocks held by the largest shareholder. Vol(RET) is stock return volatilities calculated using weekly returns; The industry classification is based on the Chinese Security Regulatory Commission Industry Classification. Robust standard errors, which are clustered at firm level, are in parenthesis. \*, \*\*, and \*\*\* indicate significance at the 10%, 5% and 1% levels, respectively.

Panel A. The rule change in Chinese accounting and auditing standards in January 2007 (2005-2008)

VARIABLES	(1) Tobin's Q	(2) RET	(3) ROA1	(4) ROA
Ashare*After	-0.021 (0.086)	0.032 (0.071)	-0.000 (0.007)	-0.001 (0.007)
ROA	0.702** (0.309)	2.029*** (0.222)		
Ln(Revenue)	-0.272*** (0.055)	-0.070*** (0.027)	0.036*** (0.004)	0.036*** (0.004)
Leverage	-0.016 (0.152)	0.200 (0.129)	-0.242*** (0.016)	-0.244*** (0.016)
Executive Holding (%)	-1.045 (0.679)	-1.567*** (0.600)	0.031 (0.085)	0.029 (0.085)
CEO/Chairman Duality	0.080 (0.055)	0.029 (0.045)	-0.002 (0.006)	-0.002 (0.006)
Independent Director (%)	0.278 (0.449)	-0.196 (0.271)	-0.004 (0.034)	-0.006 (0.033)
Number of Directors	-0.010 (0.014)	-0.003 (0.011)	-0.000 (0.001)	-0.000 (0.001)
SOE	-0.110 (0.078)	-0.007 (0.065)	-0.013 (0.008)	-0.014 (0.008)
Ownership (%)	-0.002 (0.002)	-0.001 (0.002)	0.001*** (0.000)	0.001*** (0.000)
Vol(RET)	3.152*** (0.812)	18.769*** (0.886)	-0.074 (0.060)	-0.074 (0.059)
Constant	6.690*** (1.134)	0.235 (0.538)	-0.596*** (0.074)	-0.605*** (0.074)
Year & Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	4,948	4,839	4,929	4,948
R-squared	0.503	0.779	0.277	0.280

Panel B. Hong Kong Exchange' Adoption of Chinese Accounting and Auditing Standards in December 2010 (2010-2011)

VARIABLES	(1) Tobin's Q	(2) RET	(3) ROA1	(4) ROA
After	-0.514*** (0.120)	-0.237*** (0.079)	-0.002 (0.007)	-0.002 (0.007)
AH Share*After	0.398*** (0.146)	0.056 (0.104)	-0.009 (0.008)	-0.009 (0.008)
ROA	2.183 (2.623)	1.831 (1.512)		
Ln(Revenue)	-0.268 (0.458)	-0.287 (0.273)	0.040 (0.027)	0.040 (0.027)
Leverage	0.406 (1.669)	1.100 (1.201)	-0.206** (0.096)	-0.206** (0.096)
CEO/Chairman Duality	-0.424 (0.274)	-0.069 (0.228)	-0.008 (0.017)	-0.008 (0.017)
Independent Director (%)	1.818 (1.348)	1.205 (1.660)	0.024 (0.095)	0.024 (0.095)
Number of Directors	-0.115 (0.097)	-0.030 (0.089)	0.004 (0.006)	0.004 (0.006)
SOE	-1.064*** (0.258)	0.213 (0.131)	-0.060*** (0.009)	-0.060*** (0.009)
Ownership (%)	0.026 (0.039)	-0.013 (0.041)	0.004 (0.003)	0.004 (0.003)
Vol(RET)	18.265*** (5.722)	8.398*** (3.080)	0.544* (0.307)	0.544* (0.307)
Constant	7.442 (10.670)	5.436 (6.741)	-0.929 (0.654)	-0.931 (0.654)
Firm Fixed Effects	Yes	Yes	Yes	Yes
Observations	201	199	201	201
R-squared	0.560	0.471	0.281	0.281