

Abstract

Based on the coverage of analysts' forecasts of Chinese listed companies for years 2005 to 2011, this study empirically tests the impact of top executives and firm leadership shareholding and cash compensation on analyst optimism and forecast dispersion as indicators of analysts' assessment of firm intrinsic value. We show that executives and firm leadership cash compensation significantly reduces the earnings expectations and increases earnings uncertainties. Managerial shareholding exhibits insignificant effects on analyst opinions. Further analysis using the excessive component of cash compensation gives strong support for the managerial power view of compensation. Our findings appear robust after considering the type of corporate control and measures of shareholder protection. Dividend payout and shareholder activism appear to have significant influence on the effects managerial power has on analyst opinions, whereas block tradable shareholders and equity incentives exert no influence on such effects.

JEL classification: G15, G32

Keywords: Executive Compensation; Analyst Forecast; Managerial Shareholding; Managerial Power; China

1. Introduction

A vibrant strand of literature on firm governance addresses how managerial behavior and compensation affect firm value using ex-post accounting performance and observed market prices, such as Tobin's Q ratio (See Bai et al., 2004; Wei et al., 2005; Firth et al, 2006b; Hu and Zhou, 2008; Yuan et al, 2008; Chen et al., 2009; Conyon and He, 2011; Liu et al., 2012). Studies that employ the viewpoint of stock analysts' earnings forecasts and analysts' forecast dispersion in the context of emerging countries such as China are scant. Both analysts' earnings forecasts and forecast dispersion represent the market expectations for firm performance and a reflection of uncertainty over cash flows i.e. a proxy for risk (Yu, 2010). Das et al. (1998); Bowen, Chen and Cheng (2008) and Lang, Lins and Miller (2004) note that analysts' forecast are an important determinant of firm valuation and have a time and informational advantage over historical earnings data and that analysts' forecasts are superior to time series models (Fried and Givoly, 1982; O'Brien, 1988; Butler and Lang, 1991). As information intermediaries and external monitors of corporate performance, analysts directly influence security valuation as well as investors' judgment and behavior (Jiraporn, Liu and

Kim, 2012; Yuan et al., 2008). Yuan et al. (2008) found analysts to have a positive effect on firm performance, and Moshirian et al. (2009) report that stock prices react strongly to stock analyst recommendations and revisions in emerging markets including China. In a related study of Chinese firms, Truong (2011) reports that hedge strategy based on earnings announcements surprises can generate excess portfolio return.

In this study, we examine the effects of firm executives and overall leadership shareholding and compensation on analysts' earnings forecasts and analysts' forecast dispersion. Firm governance is an important indicator of the future profitability of the firm (Durnev and Kim, 2005; Klapper and Love, 2004). Our argument here is that within-firm governance and managerial compensation provide value relevant information that influences analysts' forecasts and their perception of risk. To this end, we utilize the coverage of analysts' earnings forecasts from a new dataset which compiles firm level forecasts from the top 50 Chinese securities companies whose major business is brokerage, consultancy, sponsoring securities offering and listing, and asset management.

The exploration of the relationship between executives and board shareholding, compensation, and analysts' forecasts and risk assessment in the world's largest emerging market appear significant for the following reasons. First, the nature of Chinese leadership of firms appears to be different from that in Western countries. According to Chen, Ezzamel and Cai (2011), firm leadership in China mirrors the characteristics of Chinese society: its collectivist culture, the harmony, socialist politics and the associated political connections. A distinct characteristic of Chinese capital markets is that the share ownership is highly concentrated in the hands of the central and local governments (Firth, et al. 2006a)¹. The leaders of Chinese firms are predominantly insiders with political connections as most Chinese listed companies have evolved from state owned enterprises (SOEs). The government frequently appoints top managers and the managers' compensations do not relate to stock returns (Firth, et al. 2006a). Independent directors are not truly independent and

¹ Chinese listed firms have multiple classes of shares: shares that can be traded by domestic investors (A-shares), shares denominated in foreign currencies and reserved for foreign investors (B-shares), and shares of companies listed or cross-listed overseas (H-shares listed in Hong Kong). Approximately 5% of firms issue both A and B shares. A special feature of the ownership structures in China is the existence of non-tradable shares owned by the state to retain control over the listed firms which are classified as state shares and legal person shares, which are often also state owned. The state's shares are administered by government bodies, such as state asset management agencies or institutions authorized to hold shares on behalf of the state, such as wholly state-owned investment companies (Firth, et al. 2006a).

often play coordinated and harmonious roles in running the companies along with executive managers, especially for the majority of the listed firms that were previously SOEs (Lin et al. 1998, Feinerman 2007). Although Chinese firms maintain both a board of directors and a board of supervisors, the supervisory board appears to be ineffective (Tam, 2002; Dahya et al. 2003; Wang, 2007); it is often undermined by its composition (Wang 2007) and a poorly defined monitoring role with respect to the board of directors and managers (Tam, 2002; Yuan et al., 2009). Wang, Tsui and Xin (2011) also indicate that the top managers in Chinese firms have supreme authority over their organizations and are the primary decision makers. Such features of firm leadership result in excessive management power which may detriment performance, distort the use of pay as incentive device to improve performance and exacerbate agency problems. For this reason, the Chinese market is particularly suitable for our study on executive ownership, cash compensation, and analysts' forecasts as agency theory suggests that executives/board ownership and appropriate compensation schemes serve to mitigate agency conflicts and improve protection of minority interests. In this context, we define executives, directors, and supervisors as firm leadership. In similar vein, the last decade has seen successive reforms in the compensation of senior management and of board membership in China along with the non-tradable shares reforms led by the China Securities Regulatory Commission (CSRC) as measures to improve the quality of corporate governance (CSRC, 2000, 2002, 2005ab, 2007a).

Second, the use of analysts' earnings forecasts and dispersion in the Chinese emerging market is therefore timely and an important departure from the previous studies that have used only realized earnings data and measures based on market values. The quality of within-firm governance, in particular, management power and managerial compensation are reflected in the analysts' earnings forecast information. Moreover, financial analysts tend to interact directly with management and raise questions on different aspects of earnings numbers through earnings release conferences (Yu, 2010). It may therefore be conjectured that if corporate governance matters for firm value and this relationship is fully incorporated by the market, then analysts' forecast earnings should convert into firm value (as measured by stock price).

The contribution of this study is twofold. First, we add to the understanding of the link between managerial ownership, cash compensation and analyst coverage in the world's largest emerging market. The focus of analyst coverage is interesting and significant because

analysts represent important outside governance mechanisms that is neither directly controlled by the firm nor entirely environmentally determined (see Lang et al., 2004). In this regard, the study sheds lights on how analysts, an important external monitoring group, incorporate within governance mechanisms particularly managerial shareholding and cash compensation into their earnings forecasts. Second and from a broader perspective, this study contributes to managerial shareholding, compensation and agency theory discourse which has attracted intense debate predominantly in advanced market economies with relatively little attention in emerging economies such as China. The sheer size of Chinese stock markets and the continual opening of the stock markets to international investors warrant an examination of how corporate governance mechanisms affect investors' expectations.

The remainder of this study is structured in the following way. The next section introduces the background of corporate governance reforms in China, particularly managerial shareholding, compensation, and leadership reforms. Section 3 reviews the related literature and develops the hypotheses of the study. Section 4 describes the data and methodology. Section 5 comprises the results and discussions, followed by a brief conclusion in section 6.

2. Research Background: Compensation Reforms and Firm Governance in China

The recent decades have seen systematic reforms in China and China's integration into the world economy. In 2001, the Chinese Security Regulation Commission (CSRC) passed the Code for Corporate Governance for Listed Firms, which enjoined all publicly traded firms to report the sum of the total compensation for the three highest-paid managers and the three highest paid board members. In 2002 and 2005, the CSRC modified the 2001 law to highlight the importance of reporting each individual board member's and top management's total compensation as the sum of salary, bonus, stipends, and other benefits. From July 2005, the CSRC allowed publicly traded firms that had successfully completed structural reforms to allow their top management, board members and supervisory board members, excluding independent directors to own shares (CSRC 2005a). Further administrative measures governing the equity incentives of listed firms were issued in 2005 (CSRC 2005b). In 2006, guidelines on equity incentives for state controlled listed companies were issued by the State-Owned Assets Supervision and Administration Commission of the State Council and Ministry of Finance (SASAC 2006). Modifications of the guidelines for director, supervisor, and executive shareholding of the company and shareholding changes were issued in 2007 by CSRC (CSRC 2007b).

China has a two-tier system of firm governance, namely board of directors and supervisory board. Chinese Corporate Law requires listed companies to maintain a board of directors, as well as supervisory board and to hold an annual shareholder meeting. The corporate law specifically defines the board of directors as a decision-making unit and the supervisory board as a monitoring mechanism. Both the board of directors and the supervisory board are appointed by, and must report to, the shareholders of the firm. The board of directors is empowered to appoint the CEO and other senior managers, call shareholder meetings, implement the resolutions of shareholder meetings, determine internal management systems and undertake necessary decisions. Another distinctive feature of firm governance in China is that most of the directors are insiders, as most Chinese listed companies have evolved from SOEs, with the managers of these SOEs being appointed as directors (Lin et al. 1998, Feinerman 2007). Duchin, Matsusaka and Ozbas (2010) demonstrate that the inside directors on the board should lead to better performance because insider directors tend to have superior information about company activities compared to corporate outsiders. Moreover, a number of studies have documented that Chinese board members act in a coordinated role with the senior management and harmonious way (Shan and McIver, 2011).

3. Literature Review and Hypotheses Development

3.1 Executives, leadership shareholding, and analyst forecast

Corporate governance generally constitutes the set of complementary mechanisms that help to align the actions and decisions of top managers with the interests of shareholders. When the shareholders are too diffused to monitor the managers, corporate assets can be used for the benefit of the managers rather than for maximizing shareholder wealth. It is well documented that one way of resolving this problem is to align the interests of managers and shareholders by offering managers equity stake in the firm (Jensen and Meckling, 1976). Consistent with alignment view of managerial ownership, executive shareholding reduces information risk in financial reporting (Yu, 2008). Byard et al. (2006) also argue that aligning the interests of managers and shareholders reduces the information asymmetry between them and improves the quality of information available to users of financial reports (e.g., financial analysts). The resultant quality of governance should correlate positively with the analysts' forecast accuracy and reduce forecast dispersion. Avramov et al. (2009) suggest that forecast dispersion, which measures uncertainty about the next year's earnings, is an important component of asset valuation and negatively related to future stock returns. Yu (2010) also

argues that the disclosure of corporate governance information affects analysts' forecast optimism and reduces forecast dispersion. We expect that the analysts' expectations about future earnings are likely to be reflected in stock prices.

In this study, we examine shareholdings by top executive as well as firm leadership groups that include all executives, and board of directors and supervisors. While using executives' shareholding is common in prior literature, the use of shareholdings of general firm leadership groups appears appropriate for the Chinese settings since they tend to play more coordinated roles to help build consensus around firm strategies. Such features of firm leadership in China may empower executives and board members to pursue self-interests (managerial entrenchment) and reduce value maximization incentives. This is in line with Chen, Liu, and Li (2010) that entrenched insider managers in China collude with government officials and expropriate a firm's assets. However, as posited by agency theory, equity ownership by executives and board members mitigates the associated agency costs and may result in increased earnings expectations and reduced earnings uncertainties. The above argument leads to the following hypotheses:

H1a: Executive and leadership shareholdings will increase analysts' forecast optimism

H1b: Executive and leadership shareholdings decrease earnings uncertainty and analysts' forecast dispersion

3.2 Executives, leadership cash compensation and analyst forecast

The Code of Corporate Governance for Listed Firms in China recognizes the use of cash incentive-based bonus pay and CEO compensation as means of minimizing conflict of interest between managers and shareholders (Firth et al., 2006a). The top management pay in China is primarily made up of cash compensation with very few firms using executive stock option schemes with very limited disclosures. While a number of studies have examined managerial incentive schemes in China, evidence suggests that the relationship between cash compensation and firm performance is mixed (Kato and Long, 2006; Firth et al., 2006a; 2007). For example, Cordeiroa et al. (2013) find that the sensitivity between executive compensation and firm accounting performance is significantly stronger when firm accounting performance is positive or firm performance exceeds the industry or regional median benchmarks compared to cases when firm accounting performance is negative or is below industry or regional median benchmarks. However, Zhou and Swan (2003) conclude

that cash compensation plays a negligible role in providing incentives to managers. Other studies such as Core, Holthausen and Lacker, 1999; Brick, Palmon and Wald, 2006 find a negative relation between executive pay and performance. Given the mixed results so far, priori, we are a theoretically agnostic on whether cash compensation as incentive has positive or negative influence on analyst forecast opinion. This leads to the following hypothesis:

H2a: Cash compensation varies with analysts' forecast optimism

H2b: Cash compensation varies with analysts' forecast dispersion

The literature on executive compensation and performance has been approached and analyzed from two main contrasting theoretical standpoints, i.e. optimal/efficient contracting and managerial power (Bebchuk and Fried, 2003, 2004). The optimal contracting approach is premised on the fact that executive compensation packages emanate from arm's length dealing between independent corporate boards and executives which leads to the creation of efficient managerial contracts and incentives for curbing agency problems by aligning the interests of managers and shareholders (Jensen and Murphy, 1990; Lin et al., 2012). Optimal contracting therefore posits a strong positive relationship between executive compensation and performance, on the assumption that executives have less control in determining their pay (Dong et al., 2010; Borisova et al., 2012). In contrast, the managerial power approach views executive compensation as an outcome of close interpersonal relationships and negotiations between powerful corporate executives, especially CEOs, and weak corporate boards, which leads to the creation of inefficient managerial contracts that magnifies agency problems by increasing the conflict of interests between managers and shareholders (Bebchuk and Weisbach, 2010; Ntim et al., 2013). Under managerial power approach, the literature indicates that the highly paid executives tend to have more power (Bebchuk and Fried, 2004) and this power may exacerbate agency problems. A number of researchers such as Core et al. (1999), Brick, Palmon and Wald (2006) have rendered some support to this notion and suggest that excess compensation is associated with greater agency problems and poor performance.

The optimal contracting view assumes that executives have less control in determining their pay (see Dong et al., 2010; Borisova et al., 2012 for review) and compensation package provides managerial performance incentives and alignment of manager and shareholder interests (Jensen and Murphy, 1990; Lin et al., 2012) which may also result in less earnings

uncertainty. Therefore, the normal (predicted) cash compensation component based on firm level determinants may reflect this type of influence on analyst forecast. In contrast under the managerial power perspective, the abnormal (excessive) cash compensation for management is perceived as greater executive influence which may lead to an abuse of power, managerial entrenchment, and negatively affect firm earnings (Bebchuk and Fried, 2004; Chen, Liu, and Li, 2010). In this regard, excessive cash compensation leads to lower levels of forecast optimism, adds uncertainty over future earnings and widens forecast dispersion. Therefore, we hypothesize:

H3a: Predicted cash compensation is positively related to analysts' optimism and negatively related to analysts' forecast dispersion

H3b: Excessive cash compensation is negatively related to analysts' optimism and positively related to analysts' forecast dispersion

4. Data and Methodology

4.1 Data and Variables

Data on executive shareholdings and cash compensation are collected from the China Stock Market and Accounting Research (CSMAR) database, along with similar information on the board of directors and supervisors for all A-share listed companies. The statistics, based on the available information for the years 2005 – 2011, are reported in Table 1. Approximately 1/2 and 2/3 of the firms-year observations have zero executive and zero overall firm leadership shareholding, respectively. Among the observations with positive shareholdings, executive management shareholding is approximately 4.46% while overall leadership shareholding constitutes approximately 6.94%. The mean total cash compensation for the top 3 executives and the total cash compensation for overall leadership of the firm are 1.22 million and 3.25 million Chinese Yuan, respectively.

(Insert Table 1 here please)

We collect consensus analysts' forecasts from systems provided by Wind Information Co., Ltd (WIND). WIND compiles the analysts' earnings forecasts for Chinese A shares listed companies from the top 50 securities companies in China, and 2005 is the first year when this data became available. Approximately 1/3 of the listed firms are covered by analysts each year. We collect $FEPS_{it}$, which represents the one-year forward forecast of earnings per share

for financial year t calculated as the average forecasts made by the security companies within a 90 day window up to the end of April of each year. Thus, these forecasts reflect the most recent financial report information². In addition, the maximum and minimum values of forecasts made by these institutions are also collected as FMAX and FMIN, respectively. Over the sample period 2005-2011, we obtained 4,257 observations of consensus forecasts and on average each of these consensus values represents forecasts by 6 institutions. Our forecast data compare favorably to the samples used in previous studies such as Ang and Ma (1999), Hu et al. (2008), Barniv (2009), Truong (2011), and Xu et al. (2013)³. Due to our interest in the analysts' consensus expectations, the institutional forecasts compiled by WIND are advantageous compared to the individual analyst forecasts used in prior studies with regard to Chinese analysts. Each individual institutional forecast represents a recommendation by one of the 50 institutions (either an individual analyst or a team of analysts following the same firm within an institution). Compared to the average of the individual analyst forecasts, using the average of the institutional forecasts reduces any bias towards the views of larger institutions that have more analysts following the same firm. As all forecasts made by analysts have a valid period of time, we restrict our data to include forecasts that are still valid when calculating the average forecasts, and further, new forecasts are used to update the previous forecasts from the same institution to avoid double counting. In addition to earnings forecasts, we also collected the realized earnings per share before extraordinary items denoted as NEPS_{it} from the WIND company financial data; we then construct the following measures of the analysts' opinion:

Analyst optimism, $OPTIMISM_{it} = 100 * (FEPS_{it} - NEPS_{it})/P_{it}$

Forecast dispersion⁴, $DISPERSION_{it} = 100 * (FMAX_{it} - FMIN_{it})/P_{it}$

Both measures are multiplied by 100 and scaled by the price per share at the end of April to ensure consistency when comparing across firms. Using price adjusted optimism and dispersion measures is consistent with Truong (2011) thus avoiding problems associated with negative earnings compared to alternative measures scaled by realized earning. When we

² The financial year for all Chinese listed firms is the calendar year, and annual reports are published before the end of April.

³ Xu et al. (2013) employ 10,326 firm-year individual analyst forecasts compiled by CSMAR throughout sample years 2003-2010; Hu et al. (2008) use survey collected data for 2002-2003 with 184 valid responses. Our dataset is also larger than the international editions of the Institutional Brokers Estimate System (I/B/E/S), which covers large firms according to Truong (2011).

⁴ Since the average number of institutional forecasts for calculating the consensus expectations is 6, we adopt a difference measure of forecast dispersion rather than a standard deviation measure.

replace the mean analyst forecast with the median analyst forecast from WIND, the results in this study are unchanged.

Other financial and accounting data are also collected from CSMAR and WIND. The summary statistics of the sample variables incorporated in the paper matched against the available analysts' forecasts are reported in Table 2. We note that the mean of $OPTIMISM_{it}$ is 1.95; thus, the analysts' forecasts are optimistic compared to realized earnings. This is consistent with the literature on the upward bias of analyst forecasts (See Ramnath et al., 2008 for reviews). Moshirian et al. (2009) also find that there is a stronger positive bias in analyst recommendations in emerging markets, including China, compared with that in developed markets. Clearly, a negative value reflects a pessimistic view relative to realized earnings.

(Insert Table 2 here please)

Table 3 shows pairwise correlations among the variables. Analysts' optimism is negatively correlated with the percentages of shareholdings by firm leadership and executives as well as their total cash compensation. Analysts' forecast dispersion is negatively correlated with the shareholding variables but positively correlated with the cash compensation variables.

(Insert Table 3 here please)

4.2 Models and Methods

We adopt the following fixed-effects models to test our hypotheses on the relationship between the executive/leadership shareholdings, cash compensation and the level of analysts' consensus forecast optimism and forecast dispersion:

$$OPTIMISM_{it} = \alpha_i + \beta \text{Shareholding}_{it} + \lambda \text{Pay}_{it} + \gamma X_{it} + \tau_t + \varepsilon_{it}$$

$$DISPERSION_{it} = \alpha_i + \beta \text{Shareholding}_{it} + \lambda \text{Pay}_{it} + \gamma X_{it} + \tau_t + \varepsilon_{it}$$

The models include fixed firm effects α_i , fixed time effects τ_t , and a disturbance term ε_{it} . Shareholding_{it} refers to the percentages of executives' or average leadership shareholding per person variables Ex.S.H and L.SH. Variable Pay_{it} refers to the log of top 3 executives' or

average leadership cash compensation per person $\text{Log}(\text{Ex.P.})$ and $\text{Log}(\text{L.P.})$ ⁵. In particular, annual report information on shareholding and cash compensation values are regressed against the observed consensus analysts' optimism and forecasts dispersion over the 90 days window following the publish of financial reports. X_{it} refers to a number of control variables that may affect analyst expectations, and they include the following factors: 1. Professional investors, block tradable shareholders, independent director monitoring measured by the percentage of institutional investors' shareholding at the past year's end (INS.H), the percentage of shareholding by top 10 tradable shareholders in total (SH.CON), and the number of independent directors to total number of directors ratio (B.IND.), respectively. 2. Stock performance, measured by, annual stock volatility as standard deviations of returns (Volatility) and, Jensen's alpha measure of excess stock returns against the Shanghai Stock Composite Index (Alpha). 3. Growth potential, measured by the Price-to-book ratio at the end of April (P/B) and three years historical average growth in earnings (GROWTH). 4. Recent period accounting profitability, measured by return on equity using earnings before extraordinary items (ROE) and earnings quality measured as percentage of earnings from operating activities (EARN.Q). 5. Firm size and financial leverage as measured by, the log of total market capitalization of both tradable and restricted A and B shares in Chinese Yuan at the end of April (LOG(MC)) and the log of the value of debt as a percentage of market value of equity at the end of April (LOG(D/E)). We apply the methods proposed in Arellano (1987) and Stock and Watson (2008) to obtain standard errors that are robust to cross-sectional heteroskedasticity and within-panel (serial) correlation by clustering on the panel variable.

Following Core, Holthausen and Lacker (1999) findings, we expect that the predicted component of compensation arising from the characteristics of board and ownership structure in addition to factors such as firm size and performance. For H3a and H3b, we use the following approach. We first adopt a fixed-effects model and estimate the expected cash compensation based on determinants including managerial equity shareholding and board independence as measures of managerial structural power in determining their compensations, Tobin's Q ratio as a proxy for firm growth opportunities, return on equity as profitability associated pay reward, and firm size measured by market capitalization.

⁵ Alternatively, we test models using the total leadership cash compensations, and our findings are consistent with the results reported.

$$\begin{aligned} \text{Log}(PAY_{it}) = & \alpha_i + \beta_1 * \text{Shareholding}_{it} + \beta_2 * \text{LOG}(\text{Tobin's } Q)_{it} + \beta_3 * \text{ROE}_{it} \\ & + \beta_4 * \text{LOG}(\text{MC})_{it} + \beta_5 * \text{B.IND}_{it} + \tau_t + \varepsilon_{it} \end{aligned}$$

The excessive cash compensations for executives and firm leaders are then calculated as the difference between their actual pay minus the expected pay from the model predictions.

$$\text{Excessive Log}(PAY_{it}) = \text{Actual Log}(PAY_{it}) - E[\text{Log}(PAY_{it})]$$

We then incorporate the predicted and excessive cash compensation values in our models on the consensus analysts' forecast optimism and analyst' forecast dispersion.

5. Results and Discussions

5.1 Managerial Shareholding, Cash Compensation, and Analyst Forecast

The results in Table 4 models 1-4 show that executives/leadership shareholding does not exert significant influence on analyst consensus optimism. It was expected that the alignment of the interests of managers and shareholders would reduce conflict of interest (information risk and asymmetry), improve the quality of information available to financial analysts but this appears not to be the case and hence hypothesis H1a is unsupported. The findings may be explained by the coordinated nature of firm leadership in Chinese firms (Shan and McIver, 2011). The coordination of executives and insider directors may mean that executives face little or no scrutiny from independent directors and supervisory board members (Lin et al. 1998; Tam, 2002; Dahya et al. 2003; Feinerman 2007; Wang, 2007; Yuan et al., 2009) and hence analysts may take that into account in arriving at their forecasts. This is also in line with the findings reported by Lang et al. (2004) indicating that analysts are less likely to place reliance on firms with governance mechanism which provides potential incentives to withhold or manipulate information. With massive power in the hands of firm leadership in China, this appears to be the case. Regarding the relationship between the effects of leadership and executive cash compensation on analyst forecast optimism, our results in models 1-4 of Table 4 document significant and negative coefficients indicating that cash compensation has a negative influence on analysts' earnings forecasts. The results render support for hypothesis H2a. The results appear consistent to the conclusions drawn by Core, Holthausen and Lacker (1999); Brick, Palmon and Wald (2006) who find a negative relation between executive pay and firm value. The coefficients on the interaction variables between managerial shareholding and cash compensation in models 2 and 4 are positive suggesting

that managerial shareholding appears to ameliorate the negative impact of cash compensation in hypothesis 2a however the result is statistically insignificant.

(Insert Table 4 here please)

Models 5-8 of Table 4 show that executive/leadership shareholdings have negative but insignificant impact on the analysts' forecast dispersion. Hypothesis H1b is unsupported. In terms of executive and leadership group cash compensation, we document the positive coefficients for the compensation variables in these models, suggesting that cash compensation appears to increase forecasts dispersion, rendering support for hypothesis H2b. The results support opacity hypothesis which posits that stronger leadership/executive power makes the information environment more opaque thereby increasing the analyst forecasts dispersions. Agency conflicts may increase the potential for the firm leadership to withhold or manipulate information in order to mask inefficiencies and make monetary gains through cash compensation (Demsetz and Lehn, 1985; Aboody and Lev, 2000; Bartov and Mohanram, 2004). Thus the tendency to strategically reveal selected information magnifies information asymmetry between the firm leadership and analysts leading to increased analyst forecast dispersion. Similar to the results in models 1-4, the interaction variables between managerial shareholding and cash compensation appear insignificant in affecting forecasts dispersion.

The control variable in Table 4 regressions show that analysts make more optimistic forecasts for firms with lower recent accounting return on equity and stock abnormal returns measured by Jensen's Alpha. Such signs appear to suggest that past profitability and abnormal stock returns are good indicators of future realized earnings and therefore negatively to the optimism measure⁶. The significant and positive signs on the ownership concentration ratio suggest that block tradable shareholders have a positive influence on analyst optimism suggesting monitoring role of large tradable shareholders and higher earnings expectations.

5.2 Predicted and Excessive Cash Compensation and Analyst Forecast

The results that top executives and firm leadership cash compensations are related to analyst forecast optimism and dispersion may also be viewed from two main competing theoretical perspectives, i.e. optimal contracting and managerial power. Our further analysis in Table 5

⁶ See Chen, Firth, and Gao (2011) on the persistence of earnings of Chinese firm and how the different types of firm ownership and control may have differential impacts on the information content of earnings components.

takes into account these influences on forecasts using the predicted and excessive cash compensation components.

(Insert Table 5 here please)

Our results on analyst optimism do not support the optimal contracting view as illustrated by the significant negative signs on the predicted component of cash compensation in models 1 and 2. In fact, if optimal contracting provides significant managerial incentives, one may expect that the predicted component of cash compensation to be positively related to earnings expectations and analyst optimism. Indeed, in contrast to the assumption of optimal contract perspective, Chinese executives have significant structural power and tend to have control over their colleagues' actions and how they are remunerated (Li et al., 2007). The negative association between cash compensation and analyst forecasts reflects the suboptimal performance of a management that puts self-interest ahead of shareholder interests (Brick, Palmon and Wald, 2006). In comparison, our results show strong support for the management power view. The negative relationship between excessive cash compensation and analyst forecast optimism as reported in models 3 and 4 of the table indicates that excessive compensation reflects managerial power which exacerbates the agency problems and are detrimental to the firm earnings. The findings appear consistent with evidence in the literature (Core, Halthausen and Larcker, 1999; Brick, Palmon and Wald, 2006), which finds a negative relation implying that paying executive excess pay exerts negative influence on performance.

Regarding our further analysis on the dispersion of analysts' forecasts reported in the models 5-8 of Table 5. The negative and significant coefficients on the predicted compensation variables suggest that normal levels of cash pays to executives and board members reduce earnings uncertainty. While cash compensation exceeds normal level, excessive pay as a reflection of management power increases earnings uncertainty. This is in line with the management power perspective and consistent with earlier results in Table 4.

5.3 Shareholder Protection, Excessive Cash Compensation, and Analyst Forecast

As robust tests, we further incorporate corporate governance mechanisms that provide minority shareholder protection in our analysis. These mechanisms are the type of ownership control (government versus private), block tradable shareholdings (top 10 tradable shareholder total stock holdings), cash dividend payout ratio, equity incentives reform, and shareholder meetings attendance rate. Interactions between shareholder protection measures

and the excessive cash compensation variable are added to our models of analyst opinions and results are reported in Tables 6 and 7.

(Insert Table 6 here please)

In Table 6, interaction variables appear insignificant and excessive cash pay is consistently negative and significant in determining analyst optimism except for the shareholder meetings attendance rate in models 9 and 10. The interaction variables in models 9 and 10 are significant and excessive cash compensation has a positive but insignificant influence on analyst optimism in models 9 and 10. These findings suggest that shareholder activism may provide effective monitoring on firm executives and leadership and be taken as a good sign for analysts. In both Tables 6 and 7, we show that government control has insignificant effect on the influence that excessive cash compensation has on forecast optimism and dispersion. This suggest that our findings here are robust regardless any potential political influences due to state versus private controls. Models 5 and 6 in Table 7 show that dividend payout can significantly reduce managerial power influence on earnings uncertainty which is consistent with the use of cash dividend as a monitoring device (La Porta, et al. 2000). Similar to Table 6 results, managerial power becomes insignificant after controlling for shareholder activism in models 9 and 10. In both tables, block tradable shareholders and equity incentives play insignificant roles in shaping analyst opinions towards excessive managerial compensations.

(Insert Table 7 here please)

6. Conclusions

In this paper, we investigate the impact of top executives and firm leadership shareholdings and cash compensation on proxies for consensus analysts' sentiment regarding firm earnings expectations and earnings uncertainty based on a new dataset. These two proxies are forecast optimism and forecast dispersion, which are fundamental indicators for the analysts' assessment of firm intrinsic values that are unobservable. We argue that consensus and goal congruence among Chinese firm leadership empowers executive management and exacerbates agency costs. Analysts as an external corporate governance mechanism follows closely information on corporate governance and their earnings forecasts reflect the effects of within-firm governance quality. We show that top executives and the average leadership shareholdings per person have influence on analyst opinions. We further test executive and leadership compensation from two main competing theoretical perspectives i.e. optimal

contracting and managerial power and our results are in line with the managerial power view (Core, Halthausen and Larcker, 1999; Brick, Palmon and Wald, 2006). We find that both cash compensation and excessive cash compensation exert significantly negative influence on analyst forecast optimism and positive effect on their forecasts dispersion. Our results indicate that analysts see excessive cash compensation in Chinese firms as reflection of managerial power which may lead to suboptimal firm performance.

The implication here is self-evident suggesting how executives and board members are compensated in emerging economies matter and are reflected in analysts' assessment and their reportage of their optimism about the firm. In fact, this study confirms that analysts constitute a key external monitors for minority shareholders and important to investment decision making in emerging countries such as China where information asymmetry appears severe. Another important implication of this study is that, firm leadership compensation in emerging markets, particularly, China tends to increase agency costs despite the extensive reforms over the last decade. In particular, minority interest and protection remain weak in emerging countries and further reforms appear necessary by the government to protect all investors. Despite the contribution of this study, future research may further incorporate incentives pay reform data⁷ and test the extent of success and impact on firm performance and market expectation.

⁷ Around 164 firms have successfully implemented incentives pay reforms up to the end of 2011.

References:

- Aboody, D. and Lev, B., 2000, 'Information asymmetry, R&D, and insider gains', *Journal of Finance*, Vol. 55, pp. 2747–66.
- Ang, J.S. and Ma, Y. 1999. Transparency in Chinese stocks: A study of earnings forecasts by professional analysts, *Pacific-Basin Finance Journal* 7, 129-155.
- Arellano, M. 1987. Computing robust standard errors for within-groups estimators. *Oxford Bulletin of Economics and Statistics* 49: 431–434.
- Avramov, D., Chordia, T., Jostova, G., Philipov, A. 2009. Dispersion in Analysts' Earnings Forecasts and Credit Rating. *Journal of Financial Economics*, 91: 83-101
- Bai, C., Liu, Q., Lu, J., Song, F. M., Zhang, J. 2004. Corporate Governance and Market Valuation in China. *Journal of Comparative Economics* 32: 599-616.
- Barniv, B. 2009. Does Foreign Investor Demand for Information Affect Forecast Accuracy? Evidence from the Chinese Stock Markets. *Journal of International Accounting, Auditing and Taxation*, Vol. 18, pp. 101–118.
- Bartov, E. and Mohanram, P., 2004, 'Private information, earnings manipulations, and executive stock option exercises', *The Accounting Review*, Vol. 79, pp. 889–920.
- Bebchuk L.A, Fried J. 2003. Executive compensation as an agency problem. *Journal of Economic Perspectives* 17: 71–92.
- Bebchuk, L.A. and Fried, J.M. 2004. *Pay without performance: The unfulfilled promise of Executive compensation*, Harvard University Press, Cambridge, MA
- Bebchuk LA, Weisbach MS. 2010. The state of corporate governance research. *Review of Financial Studies* 23, 939–961.
- Borisova, G, Brockman P, Salas J.M, Zagorchev A. 2012. Government ownership and corporate governance: evidence from the EU. *Journal of Banking and Finance* 36, 2917–2934.
- Bowen, R., Chen, X., & Cheng, Q. 2008. Analyst coverage and the cost of raising equity capital: Evidence from underpricing of seasoned equity offerings, *Contemporary Accounting Research*, 25, 657–700.
- Brown, L. D., Griffin, P. A. Hagerman, R. L. and Zmijewski, M. E. 1987. Security analyst superiority relative to univariate time-series models in forecasting quarterly earnings, *Journal of Accounting and Economics* 9, 61–87.
- Brick, I.E., Palmon, O., and Wald, J.K 2006. CEO compensation, director compensation, and firm performance: Evidence of cronyism? *Journal of Finance and Banking*, 12, 403-426
- Brown, L.D and Higgins, H.N. 2005. Managers' forecast guidance of analyst: international evidence, *Journal of Accounting and Public Policy*, 24, 280-299.
- Butler, K.C., and Lang, L.H.P. 1991. Evidence of systematic optimism and pessimism, *Journal of Accounting Research*, 29 Spring, 150-156
- Byard D., Li Y., Weintrop J.2006. Corporate Governance and the Quality of Financial Analysts' Information. *Journal of Accounting and Public Policy* 25: 609–625.
- Chan, K and Hameed, A. 2006. Stock price synchronicity and analyst coverage in emerging markets, *Journal of Financial Economics*, 80, 115-147
- Chen, G. M., Firth, M., and Xu, L. P. 2009. Does the Type of Ownership Control Matter? Evidence from China's Listed Companies. *Journal of Banking and Finance* 33:171-181.
- Chen, G. M., Firth, M., and Gao, D. N. 2011. The Information Content of Earnings Components: Evidence from the Chinese Stock Market. *European Accounting Review* Vol. 20, No. 4, 669–692.
- Chen, J., Ezzamel, M. and Cai, Z. 2011. Managerial Power theory, tournament theory, and executive pay in China, *Journal of Corporate Finance*, 17, 1176-1199.
- Chen, J., Liu, X., and Li, W. 2010. The Effect of Insider Control and Global Benchmarks on Chinese Executive Compensation. *Corporate Governance: An International Review*. Volume 18, Issue 2:107–123

- Canyon, M. J. and He, L. 2011. Executive Compensation and Corporate Governance in China. *Journal of Corporate Finance* 17:1158-1175.
- Cordeiroa, J., Hea, L., Canyonb, M., and Shawc, T. 2013. Chinese executive compensation: the role of asymmetric performance benchmarks. *The European Journal of Finance*. Forthcoming.
- Core, J., Guay, W. and Thomas, R. 2006. Does weak governance cause weak stock returns? An examination of firm operating performance and investors' expectations, *Journal of Finance*, 56, 655-687
- Core, J.E., Holthausen, R.W., and Lacker, D.F. 1999. Corporate governance, chief executive officer compensation and firm performance, *Journal of Financial Economics*, 51, 371-406.
- CSRC, 2000; 2002; 2005b; 2007. Guidelines on Contents and Formats of Information Disclosure of Annual Report for Listed Companies — 2000; 2002; 2005b; 2007 versions. China Securities Regulatory Commission.
- CSRC, 2001. Code of Corporate Governance for Listed Firms. China Securities Regulatory Commission.
- CSRC, 2005a. Regulation for the Stock Options Grants in Public Firms. China Securities Regulatory Commission.
- CSRC. 2007b, regulations on directors, supervisors, and executives shareholding of own company and shareholding changes. China Securities Regulatory Commission.
- Das, S., B. Levine, and K. Sivarmakrishnan. 1998. Earnings Predictability and Bias in Analysts' Earnings Forecasts. *The Accounting Review* 73: 277–94.
- Dahya, J. Karbhari, Y., and Xiao, J.Z. 2003. The usefulness of the supervisory board report in China. *Corporate governance: an international review*, 11 (4), 308–321.
- Demsetz, H. and Lehn, K., 1985, 'The structure of corporate ownership- causes and consequences', *Journal of Political Economy*, Vol. 93 (6), pp. 1155–77.
- Dong Z, Wang C, Xie F. 2010. Do executive stock options induce excessive risk taking? *Journal of Banking and Finance* 34: 2518–2529.
- Duchin, R.; Matsusaka J. G. and Ozbas, O. 2010. When are outside directors effective? *Journal of Financial Economics*, Volume 96, Issue 2, Pages 195–214.
- Durnev, A., & Kim, H. 2005. To steal or not to steal: Firm attributes, legal environment, and valuation. *The Journal of Finance*, 60, 1461–1493.
- Feinerman, J.V., 2007. New hope for corporate governance in China? *China Quarterly*, 191,590-612.
- Firth, M. Fung, P.M. Y. and Rui, O.M. 2006a. Corporate performance and CEO compensation in China, *Journal of Corporate Finance*, 12, 693-714.
- Firth, M. Fung, P.M. Y. and Rui, O.M. 2006b. Firm performance, governance structure and top management turnover in a transitional economy, *Journal of Management Studies*, 43, 6,1289-1330
- Firth, M. Fung, P.M. Y. and Rui, O.M. 2007. How ownership and corporate governance influence chief executive pay in China's listed firms, *Journal of Business Research*, 60, 776-785
- Fried, D. and Givoly D. 1982. Financial analysts forecasts of earnings, *Journal of Accounting and Economics*, 4, 85-107.
- Garner, J.L and Harrison, T.D. 2013. Boards, Executive Excess Compensation, and Shared Power: Evidence from Nonprofit Firms, *The Financial Review*, 48, 617-643.
- Healy, P. and Palepu, K. 2001. Information asymmetry, corporate disclosure and the capital markets: A review of the empirical disclosure literature, *Journal of Accounting and Economics*, 31, 405-440

- Hu, Y., Lin, T. W., Li, S. 2008. An Examination of Factors Affecting Chinese Financial Analysts' Information Comprehension, Analyzing Ability, and Job Quality. *Review of Quantitative Finance and Accounting* 30: 397-417.
- Hu, Y., Zhou, X. 2008. The Performance Effect of Managerial Ownership: Evidence from China. *Journal of Banking and Finance* 32:209902110.
- Jensen, M. C. and Meckling, W. H. 1976. Theory of the firm: Managerial behavior, agency costs, and ownership structure, *Journal of Financial Economics*, 3: 305–60
- Jensen M.C, Murphy K.J. 1990. Performance pay and top management incentives. *Journal of Political Economics*, 98: 225–264.
- Jiraporn, P., Liu, Y. and Kim, Y.S. 2012. How do powerful CEOs affect analysts' coverage, *European Financial Management*, pp.1-24, In Press
- Kato, T.K and Long, C.X. 2006. Executive compensation, firm performance, and enterprise reform in China: evidence from firms listed in Shanghai and Shenzhen Stock Exchanges, *Economic Development and Cultural Change*, 54, 945-983.
- Klapper, L., & Love, I. 2004. Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance*, 10, 703-728.
- La Porta, Lopez-de-Silanes, Shleifer and Vishny. 2000. Agency Problems and Dividend Policies around the World. *The Journal of Finance*, Vol. 55, No. 1, pp. 1-33
- Lang, M., Lins, K., & Miller, D. 2004. Concentrated control, analyst following and valuation: Do analysts matter most when investors are protected least? *Journal of Accounting Research*, 42, 589-622
- Li, D., Moshirian, F., Nguyen, P., Tan, L. 2007. Corporate governance or globalization: what determines CEO compensation in China? *Research in International Business and Finance*, 21, 32–49.
- Lin, J.Y., Cai, F., and Li, Z. 1998. Competition, Policy Burdens, and State-Owned Enterprise Reform, *American Economic Review*, 88, 422-427.
- Liu, C., Uchida, K., and Yang, Y. 2012. Corporate governance and Firm Value during the global financial Crisis: Evidence from China. *International Review of Financial Analysis* 21:70-80.
- Moshirian, F., Ng, D., and Wu, E. 2009. The value of stock analysts' recommendations: Evidence from emerging markets. *International Review of Financial Analysis* 18. 74–83.
- Ntim, C., Lindop, S., Osei,K.A., and Thomas, D.A 2013. Executive compensation, corporate governance and corporate performance, *Managerial and Decision Economics*, in press
- O'Brien, Patricia, C. 1988. Analysts' forecasts as earnings expectations, *Journal of Accounting and Economics* 10, 53-63.
- Ramnath S., Rock, S. and Shane, P. 2008. The Financial Analyst Forecasting Literature: A Taxonomy with Suggestions for Further Research. *International Journal of Forecasting* 24: 34-75.
- SASAC. 2006. Guidelines on equity incentives for state controlled listed companies. State-owned Assets Supervision and Administration Commission.
- Shan, Y. G. and McIver, R. P. 2011. Corporate governance mechanisms and financial performance in China: panel data evidence on listed non-financial companies, *Asian Pacific Business Review*, Vol. 17, No. 3, 301-324
- Stock, J. H., and M. W. Watson. 2008. Heteroskedasticity-robust standard errors for fixed effects panel data regression. *Econometrica* 76: 155–174
- Tam, O.K. 2002. Ethical issues in the evolution of corporate governance in China. *Journal of Business Ethics*, 37 (3), 303-320.
- Truong, C. 2011. Post-earnings announcement abnormal return in the Chinese equity market. *Journal of International Financial Markets, Institutions & Money* 21: 637– 661

- Xu, N., Chan K. C., Jiang X., Yi Z. 2013. Do Star Analysts Know More Firm-specific Information? Evidence from China. *Journal of Banking and Finance* 37: 89–102.
- Yuan, R.L., Xiao, Z., and Zou, H. 2008. Mutual Funds' Ownership and Firm Performance: Evidence from China. *Journal of Banking and Finance* 32(8):1552-1565.
- Yuan, R., Xiao, J. Z., Milonas, N. and Zou, J. H. 2009. The Role of Financial Institutions in the Corporate Governance of Listed Chinese Companies. *British Journal of Management* Volume 20, Issue 4: 562–580.
- Yu, F. 2008. Analyst coverage and earnings management, *Journal of Financial Economics*, 88, 245-271
- Yu, M. 2010. Analyst Forecast Properties, Analyst Following and Governance Disclosures: A Global Perspective. *Journal of International Accounting, Auditing and Taxation*, Volume 19, Issue 1: 1-15
- Wang, J. 2007. The strange role of independent directors in a two-tier board structure of China's listed companies. *Compliance and Regulatory Journal*, 3 (3), 47-55.
- Wang, H., Tsui, A.S. and Xin, K.R. 2011. CEO leadership behaviors, organization performance, and employee attitudes, *The Leadership Quarterly*, 22, 92-105
- Wei, Z., Xie, F. and Zhang, S. 2005. Ownership Structure and Firm Value in China's Privatised Firms: 1991-2001, *Journal of Financial and Quantitative Analysis*. Vol. 40, No. 1, pp. 87-108.
- Zhou, X., Swan, P.L. 2003. Performance thresholds in managerial incentive contracts. *Journal of Business* 76, 665–696.

Table 1: Executive and Leadership Shareholdings and Cash Compensations

Panel A: The percentage of Shareholdings				
	Executives		Total Leadership	
	Holding=0	Holding>0	Holding=0	Holding>0
Obs	3891	4160	2779	5272
Mean	0.00	4.46	0.00	6.94
Std. Dev.	0.00	11.12	0.00	16.33
Min	0.00	0.00	0.00	0.00
Max	0.00	49.85	0.00	65.88

Panel B: Total Cash Compensation in Thousands							
	Executives		Leadership		Obs	Executives	Leadership
	Percentiles	Smallest	Percentiles	Smallest			
1%	86	0	207	0.00	Mean	1218	3249
5%	180	0	441	0.00	Std. Dev.	2367	5934
10%	256	0	626	0.00	Skewness	30	16
25%	432	0	1060	0.00	Kurtosis	1603	558
50%	774		1915				
		Largest	Percentiles	Largest			
75%	1350	30580	3430	88815			
90%	2276	33322	6283	89245			
95%	3340	49318	9213	120360			
99%	8768	141995	26094	270979			

Panel C: Size of Leadership				
	Percentiles	Smallest	Obs	8142
5%	14	8	Std. Dev.	4
10%	15	10	Skewness	1
25%	17	10	Kurtosis	7
50%	19			
	Percentiles	Largest		
75%	22	42		
90%	25	43		
95%	28	56		
99%	35	61		

Notes: Statistics are based on available information for all A-share listed companies for the years 2005 – 2011. Firm leadership is defined as, including all directors, supervisors, and executives. Shareholdings data are collected as the total holdings of all executives and firm leaders. Executives' cash compensations are collected as the sum of the top 3 officers' pays. The size of leadership refers to the total number of people. Total cash compensations for firm leadership are collected as the sum of cash pays to all firm leaders.

Table 2: Summary of Variables

Variable	Obs	Mean	Std. Dev.	Min	Max
OPTIMISM	4210	1.95	3.28	-4.51	19.25
DISPERSION	4210	1.38	1.66	0.01	8.57
FEPS	4257	0.54	0.46	-0.44	5.80
FMAX	4257	0.63	0.55	-0.44	6.40
FMIN	4257	0.46	0.39	-0.65	5.15
NEPS	4257	0.33	0.49	-3.62	5.90
INS.H	4009	29.81	23.14	0.00	82.70
SH.CON	4730	22.19	20.57	0.51	71.67
Volatility	3888	51.82	13.88	25.41	89.90
Alpha	4025	0.26	0.41	-0.53	1.64
P/B	4210	4.67	4.02	0.83	41.80
ROE	4254	8.65	11.36	-34.94	49.16
GROWTH	3336	6.68	135.99	-421.77	248.46
EARN.Q	3369	72.39	50.92	-108.93	107.59
Tobin's Q	4241	2.07	1.27	0.82	8.77
B.IND.	4221	0.36	0.05	0.09	0.67
LOG(MC)	4210	8.58	1.18	5.72	11.84
LOG(D/E)	4085	2.61	1.40	-1.51	5.50
Div. Payout	4754	27.25	31.38	0.00	125.00

Notes: This table reports the summary statistics for the sample used in the regressions. Variables are winsorized at 1% and 99%. The variable names are: FEPS, average institutional analysts' forecasts during 90 days until the end of April; FMAX, the maximum value of such forecasts; FMIN, the minimum value of such forecasts; NEPS, the actual reported earnings per share before extraordinary items; OPTIMISM, the analysts' earnings forecast optimism scaled by price per share, $OPTIMISM = 100 * (FEPS - NEPS) / pt$; DISPERSION, the dispersion in analysts' forecasts scaled by price per share, $100 * (FMAX - FMIN) / pt$; L.NUM, total number of directors, supervisors, and executives; INS.H, the percentage of institutional investors' shareholding at the past year's end; SH.CON, the percentage of shareholding by top 10 tradable shareholders in total. Volatility, annual stock volatility as standard deviations of returns; Alpha, Jensen's alpha measure of excess stock returns against the Shanghai Stock Composite Index; P/B, price to book ratio at the end of April; ROE, return on equity using earnings before extraordinary items; GROWTH, three years historical average growth in earnings; EARN.Q, earnings quality measured as percentage of earnings from operating activities; Tobin's Q, calculated as the total market value of the equity and debt divided by the book value of assets excluding intangible assets, calculated using values at the year's end; B.IND., the number of independent directors to total number of directors ratio; LOG(MC), the log of total market capitalization of both tradable and restricted A and B shares in Chinese Yuan at the end of April; LOG(D/E), the log of the value of debt as a percentage of market value of equity at the end of April. Div. Payout, the percentage of normal earnings per share paid out as cash dividend.

Table 3: Pairwise Correlations

	OPT.	DIS.	Ex.S.H	Log(Ex.P)	L.SH	Log(L.P)	L.NUM	B.IND.	INS.H	SH.CON	Vol.	Alpha	LOG(MC)	P/B	ROE	GROWTH	EARN.Q
DISPERSION	0.11																
Ex.S.H	-0.03	-0.08															
Log(Ex.P)	-0.16	0.15	-0.04														
L.SH	-0.03	-0.08	0.79	-0.08													
Log(L.P)	-0.16	0.13	-0.02	0.93	-0.03												
L.NUM	-0.03	0.16	-0.11	0.33	-0.17	0.28											
B.IND.	0.01	-0.02	0.06	0.06	0.07	0.08	-0.09										
INS.H	-0.10	0.10	-0.05	0.37	-0.08	0.37	0.12	0.04									
SH.CON	-0.04	0.11	0.11	0.05	0.15	0.04	0.05	0.03	0.21								
Volatility	-0.02	-0.09	0.02	-0.07	0.04	-0.06	-0.07	0.01	-0.07	-0.07							
Alpha	-0.28	-0.13	0.05	-0.04	0.06	-0.04	-0.04	-0.02	-0.09	-0.09	0.35						
LOG(MC)	-0.15	0.17	-0.10	0.58	-0.14	0.56	0.37	0.10	0.47	0.47	0.01	-0.02					
P/B	-0.12	-0.17	0.22	0.02	0.22	0.02	-0.12	0.06	0.12	0.12	0.33	0.22	0.12				
ROE	-0.66	0.07	0.03	0.28	0.05	0.28	0.07	-0.01	0.24	0.24	-0.03	0.24	0.28	0.23			
GROWTH	0.00	0.02	0.01	0.00	-0.01	0.02	0.00	0.03	0.02	0.02	-0.02	-0.02	0.02	0.00	0.02		
EARN.Q	-0.01	0.00	0.03	-0.02	0.04	-0.02	-0.02	0.00	0.00	0.00	-0.01	0.00	-0.05	0.01	0.04	0.27	
LOG(D/E)	0.24	0.20	-0.20	-0.09	-0.20	-0.09	0.13	-0.05	-0.16	-0.16	-0.22	-0.17	-0.13	-0.41	-0.23	0.02	-0.02

Note: Variable definitions follow table 2. In addition, L.SH refers to the average shareholding percentage per person by firm leadership groups, including directors, supervisors, and executives; Ex.S.H refers to the total of the top 3 executives' shareholding; Log (L.P) is the log of average leadership cash compensation per person in thousands of Chinese Yuan; Log(Ex.P) is the log of the total for the top 3 executives' cash compensation in thousands of Chinese Yuan.

Table 4: Managerial Shareholding, Cash Compensation, and Analyst Forecast

Dep. Var. Model	Analyst Optimism				Forecast Dispersion			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ex.S.H	0.017 (0.50)	-0.440 (-1.20)			-0.012 (-1.36)	-0.200 (-0.71)		
Log(Ex.P)	-0.289** (-1.97)	-0.311* (-1.75)			0.258** (2.41)	0.249** (2.30)		
L.SH			0.805* (1.88)	-1.039 (-0.51)			-0.217 (-1.04)	-2.048* (-1.89)
Log(L.P)			-0.336** (-1.98)	-0.360** (-1.99)			0.197** (2.03)	0.174** (2.11)
Ex.S.H*Log(Ex.P)		0.032 (1.28)				0.013 (0.66)		
L.SH*Log(L.P)				0.375 (1.06)				0.373* (1.76)
L.NUM			0.020 (0.64)	0.022 (0.68)			-0.004 (-0.23)	-0.002 (-0.15)
B.IND.	0.164 (0.08)	0.225 (0.11)	-0.044 (-0.02)	0.022 (0.01)	-1.071 (-1.07)	-1.046 (-1.07)	-0.996 (-1.03)	-0.931 (-0.98)
INS.H	0.004 (1.13)	0.004 (1.16)	0.005 (1.30)	0.005 (1.41)	0.003 (1.29)	0.003 (1.31)	0.003 (1.24)	0.004 (1.37)
SH.CON	0.040*** (4.29)	0.040*** (4.33)	0.037*** (3.99)	0.037*** (4.04)	0.002 (0.37)	0.002 (0.40)	0.003 (0.50)	0.003 (0.58)
Volatility	-0.007 (-1.39)	-0.007 (-1.37)	-0.008 (-1.59)	-0.008 (-1.54)	0.004 (1.24)	0.004 (1.26)	0.003 (1.16)	0.004 (1.24)
Alpha	-0.867*** (-6.12)	-0.865*** (-6.10)	-0.850*** (-5.99)	-0.845*** (-5.96)	-0.577*** (-6.01)	-0.576*** (-5.99)	-0.589*** (-6.15)	-0.585*** (-6.09)
LOG(MC)	0.003 (1.44)	0.003 (1.45)	0.003 (1.51)	0.003 (1.49)	-0.006*** (-4.38)	-0.006*** (-4.39)	-0.005*** (-4.34)	-0.005*** (-4.40)
P/B	0.045 (1.02)	0.044 (1.01)	0.042 (0.97)	0.042 (0.96)	-0.021 (-1.49)	-0.022 (-1.50)	-0.023 (-1.62)	-0.023 (-1.62)
ROE	-0.192*** (-16.87)	-0.192*** (-16.86)	-0.193*** (-17.16)	-0.193*** (-17.18)	0.025*** (4.19)	0.025*** (4.20)	0.027*** (4.34)	0.027*** (4.36)
GROWTH	0.000 (0.52)	0.000 (0.51)	0.000 (0.49)	0.000 (0.46)	-0.000 (-1.24)	-0.000 (-1.24)	-0.000 (-1.27)	-0.000 (-1.30)
EARN.Q	-0.002 (-1.41)	-0.002 (-1.44)	-0.001 (-1.29)	-0.001 (-1.26)	-0.000 (-0.19)	-0.000 (-0.20)	-0.000 (-0.13)	-0.000 (-0.08)
LOG(D/E)	0.042 (0.59)	0.040 (0.56)	0.039 (0.55)	0.038 (0.53)	0.009 (0.17)	0.008 (0.16)	0.002 (0.03)	-0.000 (-0.00)
Observations	2,835	2,835	2,835	2,835	2,835	2,835	2,835	2,835
R-squared	0.402	0.402	0.404	0.404	0.086	0.086	0.086	0.088
Number of code	831	831	831	831	831	831	831	831
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The dependent variable in models 1-4 is the analysts' earnings forecast optimism scaled by price per share, $OPTIMISM = 100*(FEPS-NEPS)/pt$ and in models 5-8 is $DISPERSION_{it}$ in analysts' forecasts scaled by price per share, $100*(FMAX - FMIN)/pt$. The regressions control for fixed firm effects and year effects, and the corresponding t-statistics are calculated using standard errors adjusted for clusters in stock code. Coefficients on the year dummies are not reported to conserve space. Subsamples are divided based on the presence of executive/leadership shareholdings. Variable definitions follow table 2. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table 5: Predicted and Excessive Cash Compensation and Analyst Forecast

Dep. Var. Model	Analyst Optimism				Forecast Dispersion			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Predicted Log(Ex.P)	-1.929*** (-3.32)				-1.003*** (-4.74)			
Predicted Log(L.P)		-1.490*** (-2.67)				-1.007*** (-4.85)		
Excessive Log(Ex.P)			-0.682*** (-3.06)				0.307*** (2.87)	
Excessive Log(L.P)				-0.725*** (-3.11)				0.228** (2.01)
INS.H	0.010** (2.16)	0.010** (2.08)	0.007 (1.61)	0.008* (1.72)	0.004 (1.62)	0.004* (1.70)	-0.003 (-1.39)	-0.003 (-1.46)
SH.CON	0.003 (0.21)	0.001 (0.10)	0.006 (0.59)	0.005 (0.47)	0.006 (1.03)	0.006 (1.04)	0.014*** (2.96)	0.015*** (3.03)
Volatility	0.015 (1.40)	0.015 (1.34)	0.020*** (3.60)	0.020*** (3.58)	-0.002 (-0.69)	-0.002 (-0.64)	-0.003 (-0.94)	-0.003 (-1.23)
Alpha	-1.860*** (-9.52)	-1.864*** (-9.45)	-1.963*** (-9.77)	-1.951*** (-9.72)	-0.405*** (-4.57)	-0.415*** (-4.66)	-0.410*** (-4.54)	-0.414*** (-4.55)
P/B	-0.120*** (-3.85)	-0.132*** (-4.27)	-0.169*** (-5.78)	-0.172*** (-5.80)	-0.001 (-0.08)	-0.001 (-0.08)	-0.030** (-2.37)	-0.032** (-2.54)
GROWTH	0.000 (0.54)	0.000 (0.52)	0.000 (0.65)	0.000 (0.68)	-0.000 (-0.49)	-0.000 (-0.49)	-0.000 (-0.61)	-0.000 (-0.65)
EARN.Q	-0.002* (-1.67)	-0.002 (-1.64)	-0.002 (-1.40)	-0.002 (-1.47)	-0.000 (-0.49)	-0.000 (-0.48)	-0.001 (-0.69)	-0.000 (-0.58)
LOG(D/E)	0.097 (1.17)	0.121 (1.46)	0.157* (1.81)	0.162* (1.87)	0.022 (0.49)	0.022 (0.48)	0.100** (2.18)	0.091** (2.00)
Observations	2,633	2,630	2,615	2,615	2,633	2,630	2,615	2,615
R-squared	0.180	0.177	0.127	0.127	0.061	0.062	0.050	0.048
Number of firms	831	831	831	831	831	831	831	831
Firm FE	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The regressions control for fixed firm effects and year effects, and the corresponding t-statistics are calculated using standard errors adjusted for clusters in stock code. Coefficients on the year dummies are not reported to conserve space. The dependent variable for models 1-4 is analysts' optimism, and for models 5-8 is forecasts dispersion. Variable definitions follow table 2. *** p<0.01, ** p<0.05, * p<0.1.

We adopt a fixed-effects model to estimate the predicted managerial cash compensation based on determinants including managerial equity shareholding $Shareholding_{it}$ and board independence $B.IND_{it}$ as measures of managerial structural power in determining their compensations, Tobin's Q ratio as a proxy for firm growth opportunities, return on equity ROE_{it} as profitability associated pay reward, and firm size measured by the log of market capitalization $LOG(MC)_{it}$.

$$Log(PAY_{it}) = \alpha_i + \beta_1 * Shareholding_{it} + \beta_2 * LOG(Tobin's\ Q)_{it} + \beta_3 * ROE_{it} + \beta_4 * LOG(MC)_{it} + \beta_5 * B.IND_{it} + \tau_t + \varepsilon_{it}$$

The model includes fixed firm effects α_i and fixed time effects τ_t , and R-squared of the prediction regressions are 37% and 29% for executives cash compensation and average per person leadership cash compensation, respectively. The excessive cash compensations for executives and firm leaders are then calculated as the difference between their actual log pay minus the predicted log pay from the model predictions.

Table 6: Shareholder Protection, Excessive Cash Compensation, and Analyst Optimism

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Excessive Log(Ex.P)	-0.453** (-1.97)		-0.577** (-2.38)		-0.625** (-2.45)		-0.647*** (-2.68)		0.277 (0.57)	
Excessive Log(L.P)		-0.412* (-1.72)		-0.670*** (-2.67)		-0.596** (-2.30)		-0.722*** (-2.93)		0.277 (0.61)
Excessive Log(Ex.P)*Gov. Control	-0.392 (-1.00)									
Excessive Log(L.P)*Gov Control		-0.489 (-1.15)								
Excessive Log(Ex.P)*SH.CON			-0.007 (-1.54)							
Excessive Log(L.P)*SH.CON				-0.004 (-0.79)						
Excessive Log(Ex.P)*Div. Payout					-0.002 (-0.66)					
Excessive Log(L.P)*Div. Payout						-0.005 (-1.33)				
Excessive Log(Ex.P)*Incentive							-0.306 (-0.64)			
Excessive Log(L.P)*Incentive								0.004 (0.01)		
Excessive Log(Ex.P)*Attend									-0.019** (-2.29)	
Excessive Log(L.P)*Attend										-0.020** (-2.43)
Observations	2,766	2,766	2,826	2,826	2,831	2,831	2,831	2,831	2,828	2,828
R-squared	0.132	0.131	0.133	0.131	0.131	0.131	0.131	0.130	0.131	0.130
Number of firms	814	814	829	829	831	831	831	831	831	831
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The regressions control for fixed firm effects and year effects, and the corresponding t-statistics are calculated using standard errors adjusted for clusters in stock code. The dependent variable in panel A is analysts' optimism, and in panel B is forecasts dispersion. Variable definitions follow table 2. Gov. Control is a dummy variable for the type of controlling shareholder which equals to 1 if it is the government and 0 if it is a private investor. SH.CON is the percentage of shareholding by top 10 tradable shareholders in total, a proxy for block shareholders. Div. Payout is the percentage of normal earnings per share paid out as cash dividend. Incentive is a dummy variable which equals to 1 for firms implemented equity incentives reforms and 0 if otherwise. Attend is the attendance rate of shareholder meetings. *** p<0.01, ** p<0.05, * p<0.1.

Table 7: Shareholder Protection, Excessive Cash Compensation, and Forecast Dispersion

Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Excessive Log(Ex.P)	0.296 (1.57)		0.369*** (3.00)		0.429*** (3.59)		0.264** (2.22)		0.338 (1.47)	
Excessive Log(L.P)		0.309 (1.36)		0.266** (2.05)		0.386*** (2.99)		0.180** (1.98)		0.319 (1.30)
Excessive Log(Ex.P)*Gov. Control	-0.016 (0.07)									
Excessive Log(L.P)*Gov Control		-0.098 (-0.37)								
Excessive Log(Ex.P)*SH.CON			-0.003 (-1.25)							
Excessive Log(L.P)*SH.CON				-0.001 (-0.63)						
Excessive Log(Ex.P)*Div. Payout					-0.004** (-2.15)					
Excessive Log(L.P)*Div. Payout						-0.005*** (-2.80)				
Excessive Log(Ex.P)*Incentive							0.346 (1.17)			
Excessive Log(L.P)*Incentive								0.468 (1.21)		
Excessive Log(Ex.P)*Attend									-0.001 (-0.13)	
Excessive Log(L.P)*Attend										-0.002 (-0.35)
Observations	2,766	2,766	2,826	2,826	2,831	2,831	2,831	2,831	2,828	2,828
R-squared	0.050	0.049	0.050	0.048	0.054	0.054	0.051	0.050	0.051	0.049
Number of firms	814	814	829	829	831	831	831	831	831	831
Controls	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Notes: The regressions control for fixed firm effects and year effects, and the corresponding t-statistics are calculated using standard errors adjusted for clusters in stock code. The dependent variable in panel A is analysts' optimism, and in panel B is forecasts dispersion. Variable definitions follow table 2. Gov. Control is a dummy variable for the type of controlling shareholder which equals to 1 if it is the government and 0 if it is a private investor. SH.CON is the percentage of shareholding by top 10 tradable shareholders in total, a proxy for block shareholders. Div. Payout is the percentage of normal earnings per share paid out as cash dividend. Incentive is a dummy variable which equals to 1 for firms implemented equity incentives reforms and 0 if otherwise. Attend is the attendance rate of shareholder meetings. *** p<0.01, ** p<0.05, * p<0.1.