THE EFFECT OF ACCOUNTING-BASED EARNINGS ATTRIBUTES ON CEO COMPENSATION

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CHAPTER 1

INTRODUCTION

1.1 Background

Chief executive officer (CEO) compensation has increased dramatically in recent years. The mean of CEO compensation for S&P 1500 firms increased from $2.5 million in 1992 to over $8.8 million in 2006. The appropriateness of CEO compensation is an issue of concern to shareholders, regulators, academics, and the financial press. For instance, the U.S. Congress held a hearing on CEO compensation on May 20, 2003, to consider the appropriateness of CEO compensation in the post-Enron era. A survey indicates that about 40 percent of the members of boards of directors believe that CEO pay is too high[1]. Besides the amount of pay, the criteria for setting pay for CEOs have received attention. Many studies have explored the determinants of CEO compensation and types of compensation (e.g., Agarwal 1981; Daily et al. 1998; Vafeas 2003).

[1] According to a study of U.S. boards of directors conducted by Heidrick & Struggles International Inc., and the Center of Effective Organizations at the University of Southern California's Marshall School of Business.

One stream of CEO compensation research relates to the pay-performance relationship. Holmstrom (1979) argues that a CEO should receive compensation based on his/her actions. Many types of performance measures are used in practice (e.g., accounting numbers, stock returns, and customer satisfaction rates) because a CEO's actions are unobservable. Earnings are the most common performance measure in a pay-performance system (Lambert and Larcker 1987; Jensen and Murphy 1990; Gaver et al. 1995; Core et al. 2003). According to contemporary economic theory, earnings provide information about management's actions and also encourage efficient risk-sharing between contracting parties (Holmstrom 1979; Gjesdal 1981). Moreover, they shield CEOs from fluctuations in firm values that are beyond CEOs' control and can remove the "noise" in stock prices (Sloan 1993; Kim and Suh 1993; Bushman and Indjejikian 1993; Leone 2006).

Earnings, however, may be subject to manipulation and are often viewed as a short-term measure, and thus may not be as connected to firm value as desired (Dechow and Sloan 1991; Healy 1985). In general, the earnings of each firm have unique characteristics, which are called "earnings attributes." Francis et al. (2004) classify earnings attributes into two types: accounting-based and market-based. The accounting-based earnings attributes are persistence, accrual quality, predictability, and smoothness. The market-based earnings attributes are value relevance, timeliness, and conservatism. Accounting-based earnings attributes are expected to be more related to CEO performance because they are derived from accounting numbers, which are not affected by the volatility of the stock market.

Accounting-based earnings attributes may reveal the presence of manipulation and may also reflect long-term prospects of firms. Therefore, compensation contracts that include earnings attributes are likely to motivate managers to look beyond the current-period earnings, without sacrificing the use of earnings as a contracting vehicle. Theoretically, compensation committees should rely on a performance measure that has less "noise" (Banker and Datar 1989)[2]. Earnings attributes can be used as one of the determinants to assign a weight to earnings in compensation contracts because they also indicate the level of "noise" in earnings and can be used to reduce this noise.

How earnings are used is also affected by corporate governance. CEOs in firms with weak corporate governance have high bargaining power on compensation matters (Newman and Mozes 1999). Such CEOs influence compensation committees to rely more on controllable performance measures such as current accounting earnings (Core et al. 1999) and to ignore the quality of earnings (Peng 2005). However, strong corporate governance can improve the use of earnings by adjusting compensation to reflect underlying earnings attributes that may indicate earnings management and will also capture the long-term effect of earnings. Consequently, a stronger correlation between desirable earnings attributes and compensation is expected in firms with strong corporate governance.

Prior studies indicate that desirable accounting-based earnings attributes are assigned greater value in securities markets (e.g., Lev and Kunitzky 1974; Francis et al.

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[2] Prior studies generally measure "noise" as the variance of the performance measure (e.g. Lambert and Larcker 1987; Sloan 1993).

2005). Prior research also indicates that compensation committees use additional information to adjust earnings-based performance measures (e.g., Dechow et al. 1994; Gaver and Gaver 1998). Some studies find that they adjust for earnings persistence (Baber et al. 1998) or earnings accruals (Peng 2005). However, whether compensation committees simultaneously adjust for all four accounting-based earnings attributes in executive compensation contracts has not been investigated.

This study differs from earlier studies in three ways. First, it investigates the simultaneous effects of accounting-based earnings attributes on CEO compensation. A few studies separately investigate either earnings persistence or accrual quality (Baber et al. 1998; Ashley and Yang 2004), but none so far has explored the effects of four earnings attributes. Second, this study considers the impact on CEO pay of corporate governance and the simultaneous use of accounting-based earnings attributes. Prior studies that examined corporate governance and some earnings attributes separately have found that they are related to CEO compensation (e.g., Baber et al. 1998; Core et al.1999). Finally, this study extends prior research by using five different measures of CEO compensation: (1) salary, (2) cash bonuses, (3) cash salary plus cash bonus, (4) stock-based compensation, and (5) total compensation.[3] Prior research has typically used cash compensation (salary plus bonus) as a proxy for CEO compensation. Different measures of compensation produce different results (Core et al. 2003). This distinction has become an especially important issue because cash compensation for top executives

[3] See definitions of variables in Appendix A.

appears to have become a less important component of the overall CEO pay (Bushman and Smith 2001).

There are thus three research questions. First, when designing CEO compensation, do compensation committees simultaneously consider the interactions between each of the four accounting-based earnings attributes and the accounting earnings measure? Second, is the effect of earnings attributes on the relationship between earnings and CEO compensation higher in firms with strong corporate governance? Third, are the relationships affected by the definitions of compensation?

1.2 Motivation

The motivation for this study is based on the usefulness of accounting-based earnings attributes for evaluating earnings as a performance measure. The compensation literature indicates that CEOs are evaluated using earnings and stock returns (Lambert and Larcker 1987; Jensen and Murphy 1990; Bushman et al. 1998, 2006). In capital markets research, several studies find that the accounting-based earnings attributes provide information for estimating the firm's value (Lev and Kunitzky 1974; Kormendi and Lipe 1987; Collins and Kothari 1989; Ali and Zarowin 1992; Luttman and Silhan 1995; Francis et al. 2005; Chan et al. 2006). In addition, the accounting-based earnings attributes indicate the quality of earnings and measure properties of earnings in several aspects. For example, the attributes imply characteristics such as persistence of earnings. Therefore, accounting-based earnings attributes should be useful for CEO performance evaluation and should be considered when compensation committees make decisions about how much weight to place on earnings.

The use of earnings attributes in compensation contracts likely depends on the level of the firms' governance (e.g., the structure of compensation committees or boards of directors). The reason is that CEOs in firms with weak corporate governance firms may persuade compensation committees to ignore earnings attributes. Hence, the study on the effect of accounting-based earnings attributes on CEO compensation should include corporate governance factors.

1.3 Contribution

This study contributes to the literature in several ways. First, it contributes to the CEO compensation literature (Clinch 1991; Balsam 2002; Carter et al. 2007). Although prior research tests the effect of earnings attributes on CEO compensation, only persistence and accruals are investigated for their effect on salary, bonus, and cash compensation (Baber et al. 1998; Ashley 2004; Peng 2005). This research is the first attempt to explore the effect of all four accounting-based earnings attributes on several definitions of CEO compensation.

Second, this study provides guidelines for compensation committees to set CEO compensation packages. The review of the literature in capital market research shows the positive relationship between of earnings attributes and stock prices. Hence, the earnings attributes should be included in CEO compensation models. However, no studies show how to use accounting-based earnings attributes in CEO compensation. This study is more comprehensive, including using accounting-based earnings attributes in several types of CEO compensation. Thus, the results of this study may provide guidelines to compensation committees in applying earnings attributes to specific types of

compensation. The results of this study may reduce the conflict among shareholders, compensation committees, and CEOs when setting performance measures and compensation contracts.

Finally, this study might also be of interest to shareholders, standard setters, and regulators. The results could enhance these groups' understanding of the impact of accounting-based earnings attributes and corporate governance on CEO compensation. Shareholders can use this study as a guideline to evaluate the appropriateness of CEO compensation contracts. They can monitor whether compensation committees consider the long-term values of their firms by including earnings attributes in the contracts. In terms of standard setters, this study provides evidence for the usefulness of earnings attributes in decision making. Hence, standard setters are encouraged to focus on earnings attributes when announcing new accounting standards. Regulators, such as the SEC, can also use this study to determine appropriate regulations and disclosures about CEO compensation and corporate governance. In addition, the SEC can use the methods and results of this study to detect firms where CEO pay is unreasonably high.

CHAPTER 2

REVIEW OF LITERATURE

This study integrates three research areas: earnings attributes, CEO pay-performance relationships (performance measures weights), and corporate governance. This chapter discusses the roles of accounting-based earnings attributes and corporate governance on the CEO pay-performance relationship.

2.1 Literature on the Effect of Accounting-Based Earnings Attributes on CEO Compensation

Francis et al. (2004) use "earnings attributes" to represent earnings quality. Earnings attributes are classified into two categories: accounting-based and market-based. The accounting-based attributes are measured using accounting information only. On the other hand, the market-based attributes are based on the relationship between stock market and accounting data. The accounting-based attributes assume that the function of earnings is effective allocation of cash flows to reporting periods via the accruals process. In terms of the market-based earnings attributes, the assumption is that the function of earnings is to reflect economic income as represented by stock returns. Stock returns are also affected by several factors in addition to managers' actions.

Accounting-based earnings attributes are more related to managers' efforts than are market-based earnings attributes. Hence, this study focuses on the effect of accounting-based earnings attributes. In this section, prior studies on accounting-based earnings attributes and CEO compensation are discussed in detail.

2.1.1 Persistence

Persistence indicates the sustainability or recurrence of earnings (Francis et al. 2004). Lipe (1990) describes persistence as the time-series relationship between current-period unexpected earnings and future earnings. He finds that components of earnings differ in persistence, and these differences are useful in explaining cross-sectional differences in security market reactions to accounting disclosures. The effect of persistence is positive because greater persistence means a larger reaction to unexpected earnings.

Prior empirical studies show that investors value earnings persistence. Capital market studies find that earnings persistence is positively related to stock prices (Lev 1983; Kormendi and Lipe 1987; Collins and Kothari 1989; Ali and Zarowin 1992). CEO compensation researchers are motivated by capital market contexts to investigate the effect of earnings persistence on compensation. Baber et al. (1998) show that compensation committees consider earnings persistence when rewarding managers based on earnings. They find that the strength of the relationship between CEO cash compensation (salary and bonuses) and earnings is associated with measures of earnings persistence. However, earnings persistence does not appear to affect equity-based compensation (options and restricted stock). Including the level of earnings in their

compensation model, Baber et al. (1999) still support the positive relationship between earnings persistence and the weight on earnings as performance measures.

Like Baber et al. (1998), Ashley and Yang (2004) discovered that firms with high earnings persistence place more weight on earnings than do firms with low earnings persistence. In addition, they also find that firms with high earnings persistence use more cash compensation to pay CEOs than do firms with low earnings persistence. Similarly, Nwaeze et al. (2006) use earnings persistence as one of the determinants of earnings qualities. They show that an increase in ratio of the quality of cash flow from operations to the quality of earnings has a negative impact on the weight of earnings in CEO compensation contracts.

2.1.2 Accruals Quality

When accruals are included, the earnings numbers can reflect firm performance better than can cash flows. However, managers have some discretion over the recognition of accruals. They can use accrual numbers as signals for their private information or to opportunistically manage earnings. Several studies show that signaling is expected to improve the ability of earnings to measure firm performance because managers have more information about their firms' cash-generating ability (Holthausen and Leftwich 1983; Holthausen 1990; Healy and Palepu 1993). Dechow and Dichev (2002) introduce a measure of earnings quality by relating current accruals to the last-period, current-period, and next-period cash flows from operations.

In terms of CEO compensation contracts, shareholders should not only use earnings but also additional information about the CEO's actions relating to cash flow.

Kumar et al. (1993) investigate whether cash flows from operations and working capital from operations provide incremental information over earnings in explaining mangers' annual compensation. They find that compensation models that include working capital from operations can explain executive compensation better than models based on earnings alone. Natarajan (1996) investigates the role of operating cash flows and accounting accruals in executive compensation. The results show that earnings and cash flows together can better explain cash compensation than can earnings alone. Hence, current accruals and cash flows from operations are aggregated for setting performance evaluations. Balsam (1998) also finds that discretionary accruals are positively associated with CEO cash compensation. Based on these studies, operating cash flows and accruals provide additional information to explain executive compensation. In terms of performance weight, Peng (2005) finds that accrual quality is positively related to the weight on earnings as a performance measure in cash compensation and total CEO compensation, but not for equity-based compensation.

2.1.3 Predictability

Earnings predictability is defined as the ability of past earnings to predict future earnings, which is reflected in the variance of the shocks in the univariate earnings process (Lipe 1990). Predictability of earnings increases when the variance decreases. Analysts and investors prefer earnings with high predictability because the current earnings information becomes more useful in predicting future earnings. Although both predictability and persistence are measured by earnings and lag earnings, these two

earnings attributes are different. Predictability is measured by the variances of the shocks in earnings, whereas persistence reflects the autocorrelation in earnings (Lipe 1990).

This study had found only one paper about the effect of earnings predictability on CEO performance, and it is not directly relevant. Asthana and Ye (2007) explore the determinants of the asymmetrical weighting of transitory gains over losses for CEO compensation. Unlike Lipe (1990), they use the standard deviation of returns on assets as a proxy for earnings predictability. The results show an increase in the relationship between CEO compensation and transitory gains when earnings predictability declines. In addition, they also find that the asymmetrical weighting is strong in firms where the CEO is also the Chairman of the Board, but it is weak in firms with a high level of external monitoring (firms in regulated industries).

2.1.4 Smoothness

There are two opposing opinions on whether earnings smoothness is a desirable attribute. On one hand, some researchers support the benefits of smooth earnings (Ronen and Sadan 1981; Chaney and Lewis 1995; Demski 1998). They reason that managers can use their private information about future income to smooth out transitory fluctuations. Smooth earnings numbers are more useful for making decisions. On the other hand, some researchers view earnings smoothness as an undesirable earnings characteristic because managers can manipulate earnings smoothness by timing recognition or changes in accounting policies. Hence, some studies use earnings smoothness as a proxy for earnings management (e.g., Leuz et al. 2003; Boonlert-U-thai et al. 2006).

No study directly focuses on the effect of earnings smoothness on CEO compensation contracts, but three papers are relevant to earnings smoothness. Francis et al. (2004) define earnings smoothness as the ratio of the variance of earnings to the variance of cash flow from operations. Therefore, smoothness relates to the weight of the accounting performance measures in CEO compensation contracts. Lambert and Larcker (1987) and Adams (1987) show that market performance measures are weighted more than accounting performance measures when the variance of accounting performance measures is high relative to the variance of market performance measures. Demski (1998) views earnings smoothness as a desirable attribute and uses a two-period principal-agent model to explain that the principals can motivate the managers to smooth earnings by using incentive plans.

2.2 Literature on the Effects of Governance Structure on CEO Compensation

As one of the main promoters to lay the foundations for corporate governance, the Organization for Economic Co-operation and Development (OECD)[4] defines corporate governance as follows:

> "Procedures and processes according to which an organisation is directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among the different participants in the organisation – such as the board, managers,

[4] OECD is an international organization that helps governments to tackle the economic, social and governance challenges of a globalized economy. Source: http://stats.oecd.org/glossary/detail.asp?ID=6778.

shareholders and other stakeholders – and lays down the rules and procedures for decision-making."

Corporate governance is associated with a variety of firm-level mechanisms. These mechanisms can be classified into two broad categories: external and internal (Cremers and Nair 2005).

2.2.1 External Mechanisms: Takeover Protection

Takeover protection and the market for corporate control are the primary external mechanisms for corporate governance. Theory and empirical evidence suggest that takeover protections address governance problems (e.g., Jensen 1988; Scharfstein 1988). High takeover protection implies weak corporate governance. Borokhovich et al. (1997) investigate CEO compensation of companies that adopt particular provisions such as various types of anti-takeover charter amendments. They find that these firms report higher CEO compensation in the year of adoption and the subsequent three years compared to firms that do not adopt these provisions. Similarly, Bernard and Mullainathan (1998) investigate the impact on executive compensation of changes in states' anti-takeover legislation. They find that pay-for-performance sensitivities and levels of CEO pay increase after the adoption of anti-takeover legislation. In terms of CEO performance measures, Davila and Penalva (2006) find that firms with higher takeover protection put more weight on accounting-based performance measures (return on assets) than on stock-based performance measures (market return).

2.2.2 Internal Mechanisms

Blockholders of stocks and the boards of directors are often seen as the primary internal monitoring mechanisms (Cremers and Nair 2005). Klein (2002) measures the internal governance mechanism using four aspects: audit committee independence, board independence, relationship investing, and CEO shareholdings. However, Section 301 of the Sarbanes-Oxley Act of 2002 mandates that firms have audit committees comprised solely of independent directors. Therefore, in this study, the audit committee aspect is omitted. Based on Core et al. (1999), CEO duality, board size, and the effectiveness of outside directors are additional aspects in this study. Overall, this study focuses on the following internal mechanisms: board independence, CEO duality, board size, outside director effectiveness, relationship investing, and CEO shareholdings.

2.2.2.1 Board Independence

The governance literature documents that the two most important functions of a corporate board of directors are monitoring executive management and designing executives' compensation contracts (Hermalin and Weisbach 2003). The major role of the board of directors is to encourage CEOs to act in the shareholders' best interests and to protect shareholders from CEOs' opportunistic behavior (Brown and Lee 2006). Boards are likely to be ineffective, however, if executives have significant influence over them (Jensen 1993; Bebchuk and Fried 2003).

The studies on the relationships between top executive compensation and board independence show mixed results. For example, Weisbach (1988) finds that outside-dominated boards inherently do a better job of monitoring managers. Finkelstein and

Hambrick (1989) show that executive compensation is not related to the percentage of outside directors. On the other hand, Lambert et al. (1993), Boyd (1994), and Core et al. (1999) find a positive relationship between CEO compensation and the percentage of outside directors on the board.

2.2.2.2 CEO Duality

Prior studies find that the effectiveness of board control decreases when a CEO is the chair of the board (Finkelstein and Hambrick 1989; Yermack 1996).A CEO who also serves as the chair has the influence to increase his compensation. Core et al. (1999) and Cyert et al. (2002) find that the existence of CEO duality increases the level of CEO compensation. Davila and Panalva (2006) find that firms with CEO duality tend to place more weight on earnings as a performance measure.

2.2.2.3 Board Size

Large board size has been viewed as having a negative impact on firms. A large board is less effective in monitoring the CEO and is susceptible to the influence of the CEO because of the poor communication and decision-making abilities characteristic of larger groups (Lipton and Lorsch 1992; Jensen 1993). Several studies use board size as a measure of board quality (Yermack 1996; Cyert et al. 2002; Weber 2006). Core et al. (1999) also find that firms with larger boards pay greater compensation.

2.2.2.4 Outside Director Effectiveness

The board may have low monitoring effectiveness when it is composed of directors who are too old or serve on too many boards. Core et al. (1999) find that firms

with low outside director effectiveness pay high CEO compensation. The National Association of Corporate Directors (NACD) also considers age and availability as indicators of the quality of directors. Based on NACD guidelines (1996), outside directors are classified as “old” directors when they are 70 years old or older. Outside directors are classified as “busy” directors when they serve on three or more other corporate boards.

2.2.2.5 Relationship Investing

Core et al. (1999) show that outside blockholders play monitoring roles such that firms with influential external owners have stronger governance than those without significant investors. Like Finkelstein and Hambrick (1989), Core et al. (1999) show that CEO compensation decreases when a firm has an external blockholder who owns at least 5% of the equity. Cyert et al. (2002) find a negative relationship between stock ownership by a large shareholder and the level of salary, equity, and bonus compensation. Relationship investing involves a large blockholder who takes an active role in monitoring a major firm’s activities. Relationship investing is often achieved by giving a large non-management shareholder or one of his representatives a seat on the board of directors (Klein 2002). Being on the board gives this investor the opportunity to monitor the firm’s financial reporting process.

2.2.2.6 CEO Shareholdings

CEO shareholdings is one of the proxies for corporate governance mechanisms. The results of the studies on the relationship between CEO shareholdings and earnings management are unclear (e.g., Klein 2002). The effects of CEO shareholdings on

compensation are also inconclusive. On one hand, Lambert et al. (1993), Core et al. (1999), and Randoy and Nielsen (2006) find a significant negative relationship between CEO ownership and CEO compensation. On the other hand, Holderness and Sheehan (1988) find that managers who are majority shareholders in publicly held companies get higher compensation than other top officers. Similarly, Cyert et al. (2002) show that CEOs with high stockholdings receive higher compensation than CEOs with low stockholdings.

2.3 Summary

In conclusion, capital market studies investigate the effects of earnings attributes on firm values. Only a few studies focus on the influence of persistence and accruals attributes on CEO pay. In terms of corporate governance, several studies examine the effect of corporate governance on the level and compensation mix of CEO compensation. However, prior studies examine the effects of earnings attributes and corporate governance on CEO compensation contracts separately.

CHAPTER 3

THEORY, MODELS, MEASUREMENT, AND VARIABLE DEFINITIONS

3.1 How Performance Measures are Weighted in Setting Compensation

According to agency theory, CEO compensation contracts are based on the principal-agent relationship. The shareholders represent a principal and a CEO represents an agent. Using an agency model, Holmstrom (1979) explains the principal-agent relationship. The agent privately takes an action (e.g., provides effort) which, together with a random state, determines a monetary payoff. The problem is determining how this payoff should be shared optimally between the principal and the agent. If the principal can observe actual actions, the optimal solution is called “the first-best solution.” In the event that efforts are not observable, the principal contracts with the agent based on the jointly observable monetary payoff. In this case, the optimal solution for the principal is “the second-best solution,” and the expected utility for the principal is lower than the utility emanating from the first-best solution. The principal would like to see the agent increase his/her effort level and therefore chooses the reward or incentive function subject to the reservation price constraint and the incentive compatibility constraint. The reservation price constraint requires the principal to pay a minimum amount in order to employ the agent.

The second constraint is that the agent maximizes his/her expected utility by choosing actions subject to the payoff function chosen by the principal. If additional information can be provided, such as earnings attributes, then it is possible that a better contract can be written, improving the well-being of the principal.

Holmstrom (1979) also proposes the "informativeness principle." Based on this principle, any costless performance measure that is marginally informative about the agent's action should be added to other available measures in compensation contracts. Although Holmstrom shows criteria for deciding whether a variable is included in the contract, he does not show how to assign weight to each performance measure. Subsequently, Banker and Datar (1989) studied the relative weights placed on two performance measures.

The optimal compensation contract is assumed as $S[x(a),y(a)]$, where x and y are independently distributed performance measures, and a is the amount of effort that the agent supplies. Banker and Datar (1989) assume that these two performance measures are imperfect signals about the efforts of the agent. They are linearly aggregated for setting an optimal compensation contract (S). Assuming the weight for performance measures x and y are β_x and β_y respectively, $S = \beta_0 + \beta_x x(a) + \beta_y y(a)$. Banker and Datar prove that the relative weights of two given performance measures in the contract are proportional to the "signal-to-noise" ratios of the measures. The relative weights of the two measures (β_x/β_y) in the contract satisfy the following criterion:

$$\frac{\beta_x}{\beta_y} = \frac{\partial E(x \mid a)/\partial a}{\mathrm{var}[E(x \mid a)]} * \frac{\mathrm{var}[E(y \mid a)]}{\partial E(y \mid a)/\partial a} \qquad (1)$$

In terms of signal, $\partial E(x \mid a)/\partial a$ indicates the change in expected value of the measure given the change in the agent's effort level. The signal is the sensitivity of performance measure *x* on the agent's action. In terms of noise, $Var[E(x \mid a)]$ measures the variance of performance measure *x*, conditional on the agent's actions. The relative weight on a performance measure is inversely related to the relative noise in the measure.

Prior researchers have identified and tested the impact of different measures of relative "noise" on the incentive weight placed on stock returns and accounting earnings. They assume that earnings and stock returns both reflect the agent's effort. Thus, they use the time-series properties of earnings and stock returns to measure the variance of each performance measure. For example, Lambert and Larcker's (1987) cross-sectional analyses show that the relative weight put on earnings and stock returns in executive compensation decreases when the relative time-series variance increases.

However, the accounting-based earnings attributes measure not only the variance of earnings as reflected by the predictability attributes, but also other information related to earnings. Earnings attributes may indicate how well the agent's efforts are reflected in earnings. They provide more information about the quality of earnings in addition to the "noise" (the variance of expected earnings) and the "signal" of earnings (the change in expected value of earnings when the agent's action changes).

The association of each attribute to the noise and signal of earnings can be explained as follows. Firms with low earnings persistence may have a high variance of expected earnings (high noise). These firms cannot forecast earnings as well as firms with high earnings persistence. Accrual quality indicates how closely accounting earnings map into cash. Accrual quality shows the extent to which earnings deviate from a systematic

association between firm performance and the agent's true contribution (Peng 2005). High accrual quality can, therefore, better indicate an agent's actions. Like persistence, prior earnings with low predictability are less accurate in estimating future earnings. Thus, the variance of expected earnings increases. Additionally, the sensitivity of earnings to agents' actions in firms with low earnings persistence is inaccurate. The rationale is that no matter how hard these agents work, earnings in these firms are not significantly different from previous years. Earnings smoothness not only provides information on the variance of earnings (noise), but also on the variance of cash flow from operations (CFO) because earnings smoothness is measured by using the variance of earnings and the variance of cash flow from operations. Consequently, agency theory suggests that accounting-based earnings attributes should be considered when compensation committees make decisions about the weight that should be placed on earnings.

3.2 The Pay-Performance Models

Based on prior studies, CEO compensation is regressed on the two performance measures: accounting returns and stock returns. The multiperiod agency model suggests the following function to find the association of change in compensation with unexpected returns and unexpected earnings:

$$\Delta COMP_{i,t} = \beta_0 + \beta_1 UE(R_{i,t}) + \beta_2 UE(x_{i,t}) + e_{i,t} \qquad (2)$$

where

Δ $COMP_{i,t}$ = the change in executive compensation for firm *i* at time *t*,

$UE(R_{i,t})$ = the unexpected common stock returns for firm *i* at time *t*,

$UE(X_{i,t})$ = the earnings innovation (unexpected earnings).

In equation (2), β_1 and β_2 are expected to be positive. In other words, the changes in compensation have positive associations with unexpected stock returns as well as unexpected earnings. The measurement of the change in executive compensation, unexpected return, and unexpected earnings is discussed next.

The cross-sectional variation in the weight of the performance measures can be examined by using a change-specification to avoid an omitted-correlated-variables problem. Murphy (1998) explains that this problem applies to a level specification in compensation studies. The change-specification minimizes the effect of omitted variables that remain relatively constant over one year (e.g., industry variables and firm specific factors).

Based on the model above, relevant measures for performance variables are "surprise" components. Lambert and Larcker (1987) recommend the use of change in return on equity (ROE) as a measure for the "surprise" earnings component in the multiperiod agency model in equation (2), because ROEs are positively autocorrelated (Foster 1986). This explanation can be implied when ROA is used as a measure of earnings. However, stock returns are generally considered to be uncorrelated as well as cross-sectionally and inter-temporally constant (Jensen and Murphy 1990; Baber et al. 1996; Baber et al. 1998). Hence, the level of stock returns is used as a proxy for unexpected stock returns (UE(R)).

Lambert and Larcker (1987), Jensen and Murphy (1990), Baber et al. (1996), and Baber et al. (1998) use return on equity (ROE) as a proxy for accounting returns and raw

common stock returns (RETURN) as a proxy for market returns. They test the pay-performance relationship by using the following model:

$$\Delta COMP_{i,t} = \beta_0 + \beta_{ROE}(ROE_t - ROE_{t-1}) + \beta_{RETURN} RETURN_t + e_t \qquad (3)$$

However, recent research on compensation and corporate governance uses return on assets as accounting performance measures (e.g., Core et al. 1999; Davila and Penalva 2006). To follow recent research, this study uses change in return on assets (*Chgroa*) as a proxy for a change in accounting performance measures. In addition, the problem from negative ROE firms can be solved by using ROA as an accounting performance measure. The following basic model is used in this study:

$$\Delta COMP_{i,t} = \beta_0 + \beta_1 ChgROA_{i,t} + \beta_2 RETURN_{i,t} + e_{i,t} \qquad (4)$$

3.3 Measurement

3.3.1 Measurement of Earnings Attributes

Four accounting-based earnings attributes are measured based on Francis et al. (2004). However, the interpretations of accounting-based earnings attributes proxies are adjusted to make them more easily show the relationships in the compensation models. The large value of each proxy implies a good earnings attribute.

3.3.1.1 Persistence

Earnings persistence can be measured as the slope coefficient from a regression of current earnings on lagged earnings (Lev 1983; Ali and Zarowin 1992).

$$X_{i,t} = \phi_{0,i} + \phi_{1,i,} X_{i,t-1} + \nu_{i,t} \qquad (5)$$

The autoregressive model of order one (AR1) is used. Earnings in the model ($X_{i,t}$) are measured by return on assets (ROA), which is firm i's operating income after depreciations in year t (#178), divided by the average total assets of year t (#6).

For each firm year, equation (5) is estimated by using maximum likelihood estimation and rolling ten-year windows. The value of the coefficient is used for measuring the persistence level. $PERSIST = \phi_{1,i}$. A greater *PERSIST* value indicates more earnings persistence.

3.3.1.2 Accrual Quality

Dechow and Dichev (2002) propose and test a measure of accrual quality that captures the mapping of current accruals into last-period, current-period, and next-period cash flows. The earnings of firms with high accrual quality become cash more quickly than those of firms with low accrual quality. McNichols (2002) comments that Dechow and Dichev's (2002) model does not separate the effect of discretionary accruals from the effect of total accruals. Based on Jones's (1991) model, McNichols (2002) proposes the following model for measuring accrual quality.

$$\frac{\Delta WC_{i,t}}{Assets_{i,t}} = \beta_{0,i} + \beta_{1,i}\frac{CFO_{i,t-1}}{Asset_{i,t}} + \beta_{2,i}\frac{CFO_{i,t}}{Asset_{i,t}} + \beta_{3,i}\frac{CFO_{i,t+1}}{Asset_{i,t}} + \beta_{4,i}\frac{\Delta Sales_{i,t}}{Asset_{i,t}} + \beta_{5,i}\frac{PPE_{i.t}}{Asset_{i,t}} + \nu_{i,t} \quad (6)$$

where:

$\Delta WC_{i,t}$ = firm *i*, time *t* change in working capital accounts as disclosed on the statement of cash from operations; or

= increase in accounts receivable + increase in inventory + decrease in accounts payable and accrued liabilities + decrease in taxes accrued + increase (decrease) in other assets (liabilities), which is - [(#302) + (#303) + (#304) + (#305) + (#307)];

$Assets_{i,t}$ = firm *i* the average total assets in year *t* (#6);

$CFO_{i,t-1}$ = firm *i* cash flow from operations in year *t-1*;

$CFO_{i,t}$ = firm *i* cash flow from operations in year *t* (#308);

$CFO_{i,t+1}$ = firm *i* cash flow from operations in year *t+1*;

$\Delta Sales_{i,t}$ = firm *i*, time *t* change in sales (#12);

$PPE_{i,t}$ = firm *i*, time *t* property, plant, and equipment (#7);

$\nu_{i,t}$ = firm *i*, time *t* error term.

Accrual quality is equal to the negative value of the standard deviation of firm i's estimated residuals from equation (6), $Accrual = -\sigma(\hat{\nu}_{i,t})$. A low negative value for *Accrual* indicates good accrual quality.

3.3.1.3 Predictability

Predictability is calculated from equation (5). Predictability is equal to the negative value of the standard deviation from equation (5). $PREDICT = -\sigma(\tilde{\nu}_{i,t})$. A low negative value for *PREDICT* indicates that earnings can be predicted by previous earnings, which implies a good predictability attribute.

3.3.1.4 Smoothness

Francis et al. (2004) use the same measurement as Leuz et al.'s (2003) study to measure earnings smoothness. Leuz et al. (2003) use smoothness as a proxy for earnings management. They suggest the following method to measure earnings smoothness:

$$Smooth_{i,t} = \frac{\sigma(NIBE_{i,t} / Assets_{i,t})}{\sigma(CFO_{i,t} / Assets_{i,t})} \quad (7)$$

where:

σ_i = firm *i* standard deviation

$NIBE_{i,t}$ = firm *i*, time *t* net income before extraordinary items (#18).

$CFO_{i,t}$ = firm *i*, time *t* operating cash flows (#308).

$Assets_{i,t}$ = firm *i*, time *t* average total assets (#6).

Standard deviations are calculated over rolling ten-year windows. Larger values of *Smooth* indicate low earnings smoothness, which is assumed to be a good earnings attribute.

3.3.2 Measurement of Corporate Governance

3.3.2.1 Takeover Protection

Gompers et al. (2003) construct a takeover protection index (G index). The G index for each firm in their sample is formed by adding one point for every provision that reduces takeover vulnerability. There are 24 provisions to construct the G index. A higher G index value implies weak external corporate governance. The G index is collected from the Web site www.finance.wharton.upenn.edu/~metrick/data. For ease in interpretation, a

linear transformation is used: *EG* = 24 - G index. A higher value for *EG* (low takeover protection) implies stronger external corporate governance.

3.3.2.2 Board Independence

Agency theory suggests that the effectiveness of the board's monitoring function is enhanced by director independence (Vafeas 2003). This study uses the criteria for board independence from Klein (2002)[5]. *Ind* is measured by the percentage of outside directors on the board.

3.3.2.3 CEO Duality

Prior studies find that CEO compensation increases when the CEO is also the chairman of the board (Core et al. 1999; Cyert et al. 2002). An indicator variable is a proxy for CEO duality. For ease in interpretation, *Nodual* is an indicator variable equal to one if the CEO is "not" chairman of the board, and zero otherwise.

3.3.2.4 Board Size

Prior studies show that CEOs have more influence and firms have weak corporate governance when board sizes are too large. An indicator variable, *Size*, is equal to one if the board has 7-12 members, and zero otherwise. The variable *Resize* is also used as an

[5] Directors are classified as insiders, outsiders, or affiliated ("grey") with the firm. Insiders are current employees of the company. Outsiders have no ties to the firm beyond being a board member. Affiliated directors are past employees, relatives of the CEO, or those who have significant transactions and/or business relationships with the firms as defined by Items 404(a) and (b) of Regulations S-X, or are on interlocking boards as defined by Item 402(j)(3)(ii) of Regulation S-X.

additional proxy. *Resize* is defined as 1/total number of directors on the board. Consistent with other variables, a higher value for *Resize* indicates strong corporate governance.

3.3.2.5 Outside Director Effectiveness

Based on the National Association of Corporate Directors' (NACD) guidelines (1996), outside directors are classified as "old" directors when they are 70 years old or older. NACD also defines "busy" directors as directors who serve on three or more other corporate boards. Following Core et al. (1999), two proxies are used to measure outside director effectiveness. First, *Pnotold* is the percentage of the outside directors who are less than 70 years old. Second, *Pnotbusy* is the percentage of outside directors who do "not" serve on three or more other boards. Similar to other variables, greater values for *Pnotold* and *Pnotbusy* indicate stronger corporate governance.

3.3.2.6 External Blockholders

Similar to Finkelstein and Hambrick (1989), Core et al. (1999) find that CEO compensation is low in firms with an outside 5% blockholder. The existence of a blockholder implies strong corporate governance. An indicator variable *Outside* is used as a proxy for relationship investing. Based on Klein (2002), *Outside* takes on the value of one if an outside 5% blockholder sits on the board and zero otherwise.

3.3.2.7 CEO Shareholdings

Share is a proxy for CEO ownership. It is measured by the percentage of common equity owned by the CEO. High CEO ownership does not imply strong corporate governance because the relationship between managerial stockholdings and earnings

management as well as the relationship between CEO shareholdings and CEO compensation are both inconclusive (Klein 2002).

3.4 Variable Definitions

3.4.1 CEO Compensation

The use of various definitions of CEO compensation has been supported: First, theoretically, Baker (1987) notes that the slope coefficients estimated from regressions of cash compensation on performance measures do not have any theoretical interpretation derived from the model. Second, recent compensation studies also support using a variety of compensation definitions. Core et al. (2003) find that the differences in definitions lead to different results. Finally, Bushman and Smith (2001) document that the cash compensation of top executives appears to have become a less important component of the overall CEO pay.

Hence, this study uses five specifications of the dependent variable $\Delta COMP$ to evaluate whether various compensation components are structured differently based on earnings attributes. Five specifications are defined as follows:

- *Salary*
- *Cash bonus* is measured by annual bonus only.
- *Cash* is the sum of salary and annual bonus.
- *Stock-based compensation* is the sum of the value of stock options, stock appreciation rights, phantom stocks, and restricted stock.
- *Total compensation* is the sum of the value of all seven compensation categories: salary, bonus, other annual compensation, restricted stock, value of

option grants, long- term incentive plan payouts (LTIP payout), and other compensation[6].

In order to reduce heteroscedasticity, CEO compensation is changed to the natural log form. For example, Δ log(CEO compensation) = log ($Cash_t$ / $Cash_{t-1}$) This approach was previously used by Finkelstein and Hambrick (1989), Boyd (1994), Randoy and Nielsen (2006), and Davila and Penalva (2006).

3.4.2 Performance Measures

3.4.2.1 Change in Accounting-Based Performance Measures

Using survey data, Murphy (1998) finds that most firms use at least one measure of accounting profits, either the dollar amount of profits, earnings per share, a profit margin, or percentage return. Thus, prior studies use different measures of accounting earnings: net income before extraordinary items (Baber et al. 1999), return on equity (Lamber and Larcker 1987; Baber et al. 1996, 1998, 1999), return on assets (Sloan 1993; Core et al. 1999; Core and Larcker 2002; Davila and Penalva 2006), and earnings per share (Sloan 1993; Core et al. 2003). There is no consensus on a particular accounting measure of performance. In this study, return on assets (ROA) is used as a proxy for accounting-based performance measures, consistent with more recent studies.

[6] See Appendix A for details

3.4.2.2 Stock-Based Performance Measure

Annual stock market return on the common stock is usually used as a stock-based performance measure in CEO compensation research (Lambert and Larcker 1987; Sloan 1993; Core et al. 1999; Davila and Penalva 2006). Stock returns *(Return)* are defined by annual stock returns, which are calculated from monthly stock returns. *Return* is equal to continuous compound returns. Prior studies have assumed that the expected stock returns are both cross-sectionally and intertemporally constant. Therefore, this study uses level of *Return*, instead of change in *Return*, as a proxy for stock-based performance measures.

3.4.2.3 Interaction Terms between each Accounting-Based Earnings Attribute and Earnings

There are four interaction terms in this category: change in ROA and persistence (*ChgroaPersist)*, change in ROA and accruals (*ChgroaAccruals)*, change in ROA and predictability (*ChgroaPredict)*, and change in ROA and smoothness (*ChgroaSmooth)*. They are included simultaneously in the model to examine whether accounting-based earnings attributes increase the weight of ROA in compensation contracts. Each interaction term is also examined separately.

The interaction terms between stock returns and earnings attributes are not included in the model. Prior studies find that accounting-based earnings attributes are properly impounded in security prices (Lev and Kunitzky 1974; Kormendi and Lipe 1987; Collins and Kothari 1989; Luttman and Silhan 1995; Francis et al. 2005; Chan et al. 2006). Therefore, it is redundant to include these interaction terms because their coefficients are expected to be zero.

3.4.3 Control Variables

Based on prior research, five control variables are included in the model: two interaction control variables and three individual control variables.

3.4.3.1 Interaction Control Variables

Two interaction terms are used as control variables because they affect the weight of performance measures in the CEO contracts rather than the level of CEO compensation directly. First, the model controls for firm growth. Lambert and Larcker (1987) and Adams (1987) find that firms place more weight on market than on accounting performance measures when firms have high growth opportunities. Similarly, Baber et al. (1996) show that the association between CEO compensation and stock returns is higher in firms that have a larger investment opportunity set. This paper uses the market-to-book ratio *(MB)* at the beginning of the year as a proxy for the firm's investment opportunities. Firms with low growth opportunities (low *MB)* put more weight on accounting performance measures.

Second, the percentage of CEO ownership *(Share)* is also controlled. Sloan (1993) explains that CEOs could affect the sensitivity of CEO pay to accounting performance in two different ways. On one hand, CEOs with high stockholdings decrease the sensitivity of salary and bonus compensation to earnings performance. The reason is that when high CEO shareholdings provide a strong link between CEO wealth and firm performance, it is unreasonable to tie CEO compensation to earnings numbers. On the other hand, CEOs with high stockholdings increase the sensitivity of salary and bonus compensation to earnings performance. High CEO stockholdings provide a strong link

between CEO wealth and stock-price performance, including the noise in stock-price performance. Consequently, compensation committees try to limit the sensitivity of CEO wealth to noise in stock-price performance by placing more weight on accounting earnings as performance measures.

Lambert and Larcker (1987) and Adams (1987) find that firms place relatively more weight on stock returns than on accounting earnings when CEOs have low stock ownership in the firm. Sloan (1993) finds that the sensitivity of CEO compensation to earnings performance (ROA) decreases when firms have high CEO stockholdings. The *Share* variable is excluded when the study tests the effect of earnings attributes and corporate governance on CEO compensation. The reason is that CEO ownership is used as a measure of corporate governance.

Some prior studies include the variances of the performance measures (especially variance of earnings) as control variables (Peng 2005; Davila and Penalva 2006). However, the variances of accounting-based performance measures are excluded from this study because they relate to the earnings attributes examined in this study[7]. In addition, prior studies on the effect of earnings persistence on CEO compensation often do not incorporate the variances of performance measures into the model (e.g., Baber et al. 1998 and 1999).

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[7] For example, the proxy for smoothness is $\frac{\sigma(CFO_{i,t} / TotalAsset_{i,t-1})}{\sigma(NIBE_{i,t} / TotalAsset_{i,t-1})}$, which may have high correlation with Var(ROA).

3.4.3.2 Individual Control Variables

Individual control variables are industry *(INDUSTRY)*, firm's size *(SIZE)*, and year *(YEAR)*. *INDUSTRY* controls for industry trends and is measured based on two-digit SIC codes. Core et al. (1999) explain that larger firms demand higher-quality managerial talent and pay compensation. Cyert et al. (2002) also find that CEOs in large firms receive higher compensation. Hence, a firm's size may affect CEO compensation. *SIZE* is measured by the natural logarithm of average total assets. *YEAR* is an additional dummy variable to control for trends.

CHAPTER 4

STATEMENT OF HYPOTHESES

Based on prior literature, accounting-based earnings attributes provide important information, in addition to stock prices and accounting earnings, to design executive compensation contracts. Both analytical and empirical studies show that the weights on performance measures depend on "signal" and "noise" among performance measures. The accounting-based earnings attributes provide such information. Hence, compensation committees should use the earnings attributes to make decisions on placing the relative weight on earnings. To investigate whether compensation committees simultaneously use all four accounting-based earnings attributes for designing compensation contracts, four hypotheses are tested. In addition, this study examines whether the results are consistent with other definitions of CEO compensation.

4.1 Persistence

Earnings persistence indicates the reoccurrence of earnings. Earnings with low earnings persistence may not be an appropriate performance measure for CEOs because earnings may not signal their efforts. For example, if earnings persistence of a firm is low, a CEO who works harder (using more effort) may not be able to increase future accounting earnings.

Baber et al. (1998 and 1999) find that the weight on earnings increases when a firm's earnings persistence increases. Unlike prior studies, this study tests whether earnings persistence affects CEO compensation when the pay-performance model controls for the other three accounting-based earnings attributes. The first hypothesis is stated in an alternative form, as follows:

H_1: The sensitivity of CEO compensation to change in earnings is greater when earnings have higher levels of persistence.

4.2 Accrual Quality

High accrual quality is desirable to shareholders and investors. Accrual quality shows the extent to which earnings deviate from a systematic association between firm performance and the agent's true contribution (Peng 2005). High accrual quality indicates that earnings can represent the relationship between firm performance and the agent's true contribution. Firms with high accrual quality should assign more weight to earnings than to stock returns in compensation contracts. Peng (2005) finds that accrual quality increases the weight on earnings as a performance measure in CEO compensation. Unlike Peng (2005), this study tests whether accrual quality affects CEO compensation when the pay-performance model includes the other three accounting-based earnings attributes. The second hypothesis is stated in an alternative form, as follows:

H_2: The sensitivity of CEO compensation to change in earnings is greater when earnings have higher levels of accrual quality.

4.3 Predictability

Earnings predictability is a desirable accounting-based earnings attribute because investors use past earnings to predict future earnings more accurately. In addition, Lipe (1990) shows that the ERC increases when earnings predictability increases. This means that accounting earnings with high predictability provide better information for pricing a firm's value. Firms with high earnings predictability may assign more weight to earnings to evaluate the CEOs' performances because these firms have less variance in earnings. The third hypothesis tests whether predictability affects CEO compensation when the pay-performance model includes the other three accounting-based earnings attributes. The third hypothesis is stated in an alternative form, as follows:

H_3: The sensitivity of CEO compensation to change in earnings is greater when earnings have higher levels of predictability.

4.4 Smoothness

On one hand, Leuz et al. (2003) believe that managers can hide changes in their firm's economic performance using both real operating decisions and financial reporting choices. They interpret low volatility of earnings relative to cash flows as indicating greater earnings smoothness and implying high earnings management. On the other hand, other researchers approve of earnings smoothness because managers use their private information about future income to smooth out transitory fluctuation (Demski 1998). Because of these two different opinions on earnings smoothness, the directional effect of earnings smoothness on the relationship between CEO compensation and earnings becomes an empirical question. The fourth hypothesis tests the effect of smoothness on

CEO compensation when the pay-performance model includes the other three accounting-based earnings attributes. The fourth hypothesis is stated in an alternative form, as follows:

H_4: The sensitivity of CEO compensation to change in earnings is associated with earnings smoothness.

4.5 Corporate Governance

In addition to the four earnings attributes discussed previously, corporate governance also impacts the design of CEO performance evaluation. Based on prior research (Core et al. 1999; Davila and Penalva 2006), CEOs in weak corporate governance firms have high bargaining power on compensation contracts. Therefore, corporate governance may influence the use of earnings attributes to weight earnings in compensation contracts. This study explores how differences in corporate governance affect compensation committees' ability to consider accounting-based earnings attributes when they set performance evaluations in CEO compensation. The fifth hypothesis tests the effect of corporate governance on the use of the four earnings attributes in CEO compensation contracts. The alternative form is stated as follows:

H_5: The association between the sensitivity of CEO compensation to change in earnings and earnings attributes is greater for firms with strong corporate governance.

CHAPTER 5

RESEARCH DESIGN

5.1 Data and Sample Selection

To test *H1* to *H4*, this study includes all firm-year observations in the S&P 1500 (S&P 500, S&P MidCap 400, and S&P SmallCap 600) from the years 1998 to 2005 that have the required CEO compensation and financial data. CEO compensation data is from the ExecuComp database. Monthly stock returns are collected from the CRSP database. This return is a holding period return with dividends (variable name = RET). Monthly stock returns are used to calculate annual stock returns. All financial data is from the COMPUSTAT database for the years 1988 to 2005. Although the study period is 1998-2005, data from the previous 10 years is needed to calculate earnings attributes.

To investigate the corporate governance effect (*H5*), all firms in the S&P1500 in 2004 are selected because of the availability of data for the takeover protection index (G index). G index are collected from Web site finance.wharton.upenn.edu/~metrick/data. CEO compensation data is from the ExecuComp database for the year 2003 to 2004. The internal corporate governance data are hand-collected from proxy statements (DEF 14A).

The internal corporate governance variables are the following: number of independent directors, CEO duality, board size, number of outside directors who are sitting on fewer than three boards, number of outside directors who are younger than 70 years old, number of outside directors having at least 5% common equity, and the percentage of common equity owned by the CEO. The corporate governance data showed no firm with outside directors having at least 5% of common equity.

Control for outliers for both sample groups is as follows. First, to increase the homogeneity of the sample, all firms with SIC codes 6000-6999 and 9000-9999, which are banks and financial institutions, are excluded. These firms have special accounting and monitoring standards. Second, to reduce the effect of outliers, the top and bottom 1 percent of the sample with respect to each earnings attribute are trimmed. Third, the statistics test (the Cook's D) to eliminate the outliers is used. Finally, a firm is excluded if the previous year's compensation data is for a different CEO than the current CEO. The reason is that CEO compensation is expected to be indicated by some CEO-specific factors (Sloan 1993).

In Table 1, Panel A, the sample firms are classified based on a two-digit SIC code. Chemical (SIC 28), electrical equipment (SIC 36), utility (SIC 49), and service (SIC 73) industries have more than 400 firm-year observations. However, some industries have few observations. Hence, they are reclassified into 15 groups based on industry types. These 15 groups with the number of firms are the following: Agriculture and food (214), mining and construction (348), manufacturing (244), paper and printing (374), chemical (543), material (436), machinery (392), electrical equipment (504), transportation equipment (285), instrument (363), transportation and communications

(312), utility (493), wholesale and retail trade (932), service (487), and advertising and computer service (298) industries.

5.2 Model for Testing

The earnings attributes are hypothesized to affect the weight on earnings, rather than on the level of the compensation directly, in the CEO compensation model. Their effects are tested by using interaction terms between proxies for four earnings attributes and accounting performance measures (ROA) after controlling for other variables. Two linear regression models are used in this study. First, the effects of accounting-based earnings attributes on the weight of earnings are tested. Second, the effects of accounting-based earnings attributes and corporate governance on the weight of earnings are tested. The details for each model are explained in the following sections.

5.2.1 Model for Testing the Effects of Accounting-Based Earnings Attributes on CEO Compensation

To test whether earnings attributes affect the weight of earnings (H1 to H4), the change in compensation is regressed on the related variables and control variables. The regression runs cross-sectionally for the years 1998 to 2005. The following is the regression specification:

$$\Delta COMP_{i,t} = \beta_0 + \underset{(+)}{\beta_1 Chgroa_{i,t}} + \underset{(+)}{\beta_2 Return_{i,t}}$$

$$+ \underset{(+/-)}{\beta_3 Persist_{i,t}} + \underset{(+/-)}{\beta_4 Accruals_{i,t}}$$

$$+ \underset{(+/-)}{\beta_5 Predict_{i,t}} + \underset{(+/-)}{\beta_6 Smooth_{i,t}}$$

$$+ \underset{(+)}{\beta_7 ChgroaPersist_{i,t}} + \underset{(+)}{\beta_8 ChgroaAccruals_{i,t}}$$

$$+ \underset{(+)}{\beta_9 Chgroa_i Predict_{i,t}} + \underset{(+/-)}{\beta_{10} ChgroaSmooth_{i,t}}$$

$$+ \underset{(-)}{\beta_{11} ChgroaMB_{i,t}} + \underset{(+)}{\beta_{12} ReturnMB_{i,t}}$$

$$+ \underset{(?)}{\beta_{13} ChgroaShare_{i,t}} + \underset{(?)}{\beta_{14} ReturnShare_{i,t}}$$

$$+ \underset{(+)}{\beta_{15} SIZE_{i,t}} + \sum \phi_j INDUSTRY_{i,t} + \sum \gamma_l YEAR_{i,t} + \varepsilon \qquad (8)$$

The predicted signs of the estimates are displayed in parentheses.

where

$\Delta COMP_{i,t}$ = firm i, time t change in CEO compensation specified as:

(1) salary defined as the natural log of cash salary in year t divided by cash salary in year t-1,

(2) cash bonuses defined as the natural log of bonus in year t divided by bonus in year t-1,

(3) cash compensation defined as the natural log of cash salary plus bonus in year t divided by cash salary plus bonus in year t-1,

(4) stock-based compensation defined as the natural log of the sum of the value of stock options (using S&P's Black Scholes methodology) and the value of restricted stock granted during the year t (#BLK_VALUE + #RSTKGRNT) divided by the sum of the value of stock options and the value of restricted stock granted during the year t-1,

(5) total compensation defined as the natural log of the sum of salary, bonus, other annual, total value of restricted stock granted, total value of stock options granted (using Black-Scholes), long-term incentive payouts, and all other total (#TDC 1) in year t divided by the sum in year t-1;

$RET_{i,t}$ = firm i, year t common stock return, calculated from monthly returns for firm i;

$Chgroa_{i,t}$ = firm i, year t-1 to year t change in firm i's return on assets (ROA) ROA is calculated by firm i's operating income after depreciations in year t (#178), divided by the average total assets of year t (#6);

$Persist_{i,t}$ = firm i, year t earnings persistence estimated as $\phi_{1,j}$ from equation (5) rolling ten-year windows;

$Accruals_{i,t}$ = firm i, year t earnings accruals estimated as $-\sigma(\hat{v}_{j,t})$ from equation (6) rolling ten-year windows;

$Predict_{i,t}$ = firm i, year t earnings predictability estimated as $-\sigma(\tilde{v}_{j,t})$ from equation (5) rolling ten-year windows;

$Smooth_{i,t}$ = firm i, year t earnings smoothness estimated as equation (7) rolling ten-year windows;

$MB_{,t}$ = firm i, year t ratio of market value to book value of assets measured at the beginning of the period. The market value of assets equals the market value of equity plus the book value of total liabilities. The ratio is the market value of assets [(#6 – #60) + (#199 x #25)] divided by the book value of assets (#6);

$Share_{i,t}$ = firm i, year t the percentage of shares owned by the CEO;

$SIZE_{i,t}$ = firm i, year t the natural logarithm of average total assets (#6);

$INDUSTRY_{i,t}$ = firm i, year t the two-digit SIC codes;

$YEAR_{i,t}$ = firm i, year t;

$\beta_{k(k = 0,\ldots, 15)}$ = regression parameters;

$\phi_{j(j=1\text{-}14)}$ = regression parameters for *INDUSTRY*;

$\gamma_{l(l=98\text{-}04)}$ = regression parameters for *YEAR;*

ε = error term;

To examine whether accounting-based earnings attributes interact with earnings to explain change in compensation, the coefficients of the interaction terms between the change in ROA and each accounting-based earnings attribute (β_7, β_8, β_9, and β_{10}) are the principal focus of the study. Under the alternative hypotheses, the weight assigned to change in earnings increases as persistence, accruals, and predictability increase, and thus, the estimated coefficients of β_7, β_8, and β_9 are expected to be positive. In terms of

smoothness, the estimated coefficient of the interaction terms between change in ROA and smoothness (β_{10}) is expected to be nonzero.

Expectations for other parameters are as follows. Prior studies show that stock return and accounting earnings are used as performance measures to pay managers (Lambert and Larcker 1987; Jensen and Murphy 1990; Clinch 1991; Ely 1991; Sloan 1993; Kaplan 1994; Bushman et al. 1998; Bushman and Smith 2001; Core et al. 2003). Therefore, positive relationships between compensation and stock returns as well as between compensation and accounting earnings are expected ($\beta_1>0$, $\beta_2>0$).

Prior studies (e.g., Adams 1987; Baber et al. 1996) find cross-sectional variation in the sensitivity of CEO compensation to earnings and stock-price performance. Their results show that CEO compensation is relatively less sensitive to earnings performance, but more sensitive to stock-price performance, when there is a high ratio of the market-to-book value of equity (a proxy for growth opportunities). Low growth firms (low *MB)* are expected to rely more on earnings than on stock returns as performance measures ($\beta_{11}<0$ and $\beta_{12}>0$). Regarding CEO shareholdings, the signs for the interaction terms between performance measures (*ROA* and *RET*) and *Share* are unpredictable because of two different opinions on the effect of CEO ownership on the weight of earnings in compensation contracts.

5.2.2 Model for Testing the Effects of Accounting-Based Earnings Attributes and Corporate Governance on CEO Compensation

To test whether earnings attributes as well as corporate governance affect the weight of earnings (*H5*), each corporate governance variable is used as a *GOV* variable

one at a time. *GOV* interacts with *ROA* and each earnings attribute. *GOV* also interacts with *ROA* and each earnings attribute. The change in compensation is regressed on the related variables and control variables. Because of the limitation of data availability, the test uses only data from 2004. The regression runs cross-sectionally for the year 2004. The following is the regression specification:

$$\Delta COMP_{i,t} = \beta_0 + \underset{(+)}{\beta_1 Chgroa_{i,t}} + \underset{(+)}{\beta_2 Return_{i,t}} + \underset{(+/-)}{\beta_3 Prin_{i,t}}$$

$$+ \underset{(+)}{\beta_4 ChgroaPrin_{i,t}} + \underset{(-)}{\beta_5 GOV_{i,t}} + \underset{(+)}{\beta_6 ChgroaPrin_{i,t}*GOV_{i,t}} + \varepsilon_{i,t} \qquad (9)$$

where

(1) salary is defined as the natural log of cash salary in year t divided by cash salary in year t-1,

(2) cash bonus is defined as the natural log of bonus in year t divided by bonus in year t-1,

(3) cash compensation is defined as the natural log of cash salary plus bonus in year t divided by cash salary plus bonus in year t-1,

(4) stock-based compensation is defined as the natural log of the sum of the value of stock options (using S&P's Black Scholes methodology) and the value of restricted stock granted during the year t (#BLK_VALUE + #RSTKGRNT) divided by the sum of the value of stock options and the value of restricted stock granted during year t-1,

(5) total compensation is defined as the natural log of the sum of salary, bonus, other annual, total value of restricted stock granted, total value of stock options granted (using Black-Scholes), long-term incentive payouts, and all other total compensation (#TDC 1) in year t divided by the sum in year t-1;

$Return_{i,t}$ = annual $return_{i,t}$ is firm i, year t common stock return, calculated from monthly $return_i$;

$Prin_{i,t}$ = firm *i*, year *t* the linear combination of *PersistZ, AccrualsZ, PredictZ,* and *nSmoothZ* by using principal component method*;*

$Chgroa_{i,t}$ = firm i, year t-1 to year t change in firm i's return on assets (ROA) ROA is calculated by firm i's operating income after depreciations in year t (#178), divided by the average total assets of year t (#6);

$GOV_{i,j,t}$ = firm i, corporate governance variable j, year t. Corporate governance variables are *EG, Nodual, Share, Size, Resize, Ind, Pnotold,* and *Pnotbusy;*

EG = 24- Gompers Index;

rEG = ascending order rank of 24- Gompers Index;

Nodual = an indicator variable equal to one if the CEO is "not" chairman of the board, and zero otherwise;

Share = the percentage of common equity owned by the CEO

rShare = ascending order rank of the percentage of common equity owned by the CEO;

Size	=	an indicator variable equal to one if firms have 7-12 board of directors members, and zero otherwise;
Resize	=	1/total number of directors on the board;
rResize	=	ascending order rank of 1/total number of directors on the board;
Ind	=	the percentage of outside directors on the board.
rInd	=	ascending order rank of percentage of outside directors on the board;
Pnotold	=	the percentage of the outside directors who are younger than 70 years old;
rPnotold	=	ascending order rank of the percentage of the outside directors who are younger than 70 years old;
Pnotbusy	=	the percentage of outside directors who sit on less three boards*;*
rPnotbusy	=	ascending order rank of the percentage of outside directors who sit on less three boards*;*
$\beta_{k(k = 0,\ldots, 6)}$	=	regression parameters;
ε	=	error term;

The predicted signs of the estimates are displayed in parentheses.

To examine whether corporate governance and accounting-based earnings attributes interact with earnings to explain change in compensation, the coefficient for the interaction term between the change in ROA and the combination of accounting-based earnings attribute (β_6) is the main focus of the part. Under the alternative hypotheses, stronger corporate governance and increases in earnings attributes are expected to

increase the weight assigned to change in earnings in the compensation model. Hence, the estimated coefficient of β_6 is expected to be positive. The other estimated coefficients are expected to have the same sign as explained in section 5.2.1.

CHAPTER 6

RESULTS

This chapter presents the results of this study on the effect of earnings attributes on CEO compensation. Section 6.1 discusses descriptive statistics about compensation and earnings attributes. Section 6.2 provides the Pearson and Spearman-rank correlation matrix between variables in the study. Regression analysis for testing hypotheses 1-4 and hypothesis 5 are presented in Sections 6.3 and 6.4, respectively. Finally, Section 6.5 reports sensitivity tests.

6.1 Descriptive Statistics

This section provides descriptive statistics for CEO compensation, earnings attributes, corporate governance, and control variables. Section 6.1.1 presents descriptive statistics for CEO compensation, earnings attributes, and firm characteristics for 1998-2005. Section 6.1.2 presents descriptive statistics for the pooled data in detail. Section 6.1.3 presents descriptive statistics for corporate governance variables for 2004.

6.1.1 Descriptive Statistics for 1998-2005: CEO Compensation, Earnings Attributes, and Firm Characteristics

Using yearly data from 1998 to 2005, Table 2, Panel A shows that salaries and bonuses increase during the study period, except in 2001. Therefore, cash compensation (the sum of salary and bonus) increases every year except in 2001. The stock option compensation greatly increases from 1998 to 2000 and begins to drop in 2001 due to SFAS 123 (implemented in 2004), which requires firms to record stock option compensation as an expense. The mean of restricted stock awards increases from $372,324 in 2001 to $994,828 in 2005, whereas the mean of stock options decreases from $2,739,200 in 2001 to $1,770,110 in 2005. This evidence shows that firms substitute restricted stock for stock option compensation. Regarding total compensation, the two highest amounts are equal to $5,330,360 and $5,341,100 in 2000 and 2005, respectively.

In terms of earnings attributes, the average value is consistent across the years. The absolute values of the means of persistence, accruals, predictability, and smoothness attributes are 0.519, 0.014, 0.039, and 1.082, respectively. The sample firms have a mean LnAssets equal to 7.405 or $1,644,184. The average Market-to-Book ratio is equal to 2.004. The average of accounting return (ROA) and market return are 10.30% and 14.00%, respectively. The mean of stock ownership by the CEOs is approximately 2.27% of the outstanding equity of their firms.

6.1.2 Descriptive Statistics for Pooled Data: CEO Compensation, Earnings Attributes, and Firm Characteristics

Table 2, Panel B presents descriptive statistics for the pooled data. The table shows that ten percent of sample firms do not provide bonuses or stock options and half of sample firms do not provide restricted stock. During the 1998-2005 period, means (medians) of salary, bonus, and total compensation were $700,377($650,000), $785,404($446,270), and $4,567,150($2,606,479), respectively. Consistent with previous studies (e.g., Core et al. 2003 and Davila and Penalva 2006), CEO compensation has a high standard deviation. Unlike the levels of compensation, changes in compensation do not have high standard deviations. This evidence supports the conclusion that the change in compensation should be used in this study. The average change in salary, bonus, cash, equity, and total compensation is 0.06, 0.114, 0.072, 0.073, and 0.066, respectively. Similar to prior studies (e.g., Davila and Penalva 2006), sample firms have a negative change in ROA with mean (median) equal to -0.003(-0.001). In terms of earnings attributes, no earnings attribute has large variation, especially regarding accruals and predictability.

6.1.3 Descriptive Statistics: Corporate Governance for the Year 2004

The results of Table 2, Panel C show that the median board size is nine and the median of independent directors is seven. The mean (median) percentage of independent directors is about 73 (75) percent. In terms of the effectiveness of independent directors, on an average, each firm has six independent directors who sit on fewer than three boards, and six independent directors who are younger than 70 years. In other words,

about 80 percent of independent directors are neither busy nor old. More than half of the CEOs are chairmen of their boards. On an average, firms use ten types of anti-takeover protection mechanisms.

6.2 Pearson and Spearman-Rank Correlation

Table 3 presents the Pearson correlation coefficients in the upper half and the Spearman-rank correlation coefficients in the lower half of the correlation table. In the following discussion, the Spearman correlation is shown within parentheses after the Pearson correlation.

Table 3, Panel A shows the positive associations between all types of CEO compensation as well as all types of changes in compensation. However, CEO stock ownership is negatively associated with compensation. The positive relationships between compensation and firm size (*Lnassets*) indicate that larger firms pay higher compensation. Accounting returns (ROA) and stock returns have positive correlations to CEO compensation. The correlations between changes in compensation and change in ROA are higher than those between changes in compensation and stock returns. Based on the positive relationship between stock options and *MB*, firms with higher growth opportunity pay higher stock option compensation. These findings are consistent with prior studies.

In terms of earnings attributes, the results in Table 3, Panel B show that most earnings attributes are moderately correlated to each other, except for accruals (*Accrualsz*) and predictability (*PredictZ*) with a correlation of 0.548 (0.564). Smoothness is negatively associated with accruals and predictability. To construct positive

relationships between smoothness and other earnings attributes, smoothness is transformed by multiplying by a negative one. The transformed variable is *nSmoothZ*. After transformation, *nSmoothZ* is moderately positively related to *Accrualsz* and *PredictZ* with Pearson correlations of 0.170 and 0.239, respectively.

Regarding correlations of interaction terms, Table 3, Panel C presents remarkably high correlations among interaction terms, especially interaction terms for rank, ranging from 0.62 to 0.75 (0.88-0.93). The Pearson correlation among interaction terms of standardized earnings attributes ranges from 0.16 to 0.59. To reduce multicollinearity problems, two new variables, *Index* and *PCA*, represent the combination of the four earnings attributes. The details for these two methods are explained in Section 6.3.3. The Pearson (Spearman) correlations for *Index* and four standardized earnings attributes range from 0.38 to 0.67 (0.37 to 0.74). The Pearson (Spearman) correlation for *Prin* and four standardized earnings attributes range from 0.14 to 0.85 (0.16 to 0.85).

Table 3, Panel D reports the Pearson and Spearman correlations among corporate governance variables. The correlations among number of directors, number of independent directors, number of busy directors, and number of old directors are high, ranging from 0.74 to 0.93. In addition, the correlations between *EG* and the other directors variables (e.g., *Ind*) are negative.

6.3 Regression Analysis: Earnings Attributes

This study uses multiple regressions to examine the effect of earnings attributes on CEO compensation. Section 6.3 reports the results of the estimation of hypotheses H1-

H3, which predict that the compensation-earnings relationships are positively related to persistence, accruals, and predictability attributes. However, hypothesis 4 predicts a non-directional effect of earnings smoothness on a compensation-earnings relationship. In other words, the coefficients of the variables, *ChgROAPersist*, *ChgROAAccruals*, and *ChgROAPredict* are expected to be positive and the coefficient of the variable, *ChgROASmooth* is expected to be non-zero. Two types of regression models are used to examine the effect of earnings attributes on each type of CEO compensation. First, the model includes each earnings attribute one at a time, hereafter *individual model*. Second, the model simultaneously includes all four earnings attributes, hereafter *simultaneous model*. The following sections report the results of the multiple regressions.

6.3.1 Regression Analysis: Continuous Value of Earnings Attributes

To compare with prior studies, CEO compensation is regressed on each earnings attribute one at a time *(individual model)*. The results are shown in Table 4, Panel A. Like Baber et al.(1998), the coefficient of the variable *ChgROAPersist* is positively significant in the salary model, 0.177 (with a t-statistic of 1.97). However, this interaction term is not related to other types of CEO compensation. Therefore, hypothesis 1 is weakly supported only when CEO compensation is defined as salary. It means that change in salary increases when change in ROA and persistence increase. Similar to Peng's (2004) findings, the coefficient of the variable *ChgROAAccruals* is positively related to change in cash, 49.85 (with a t-statistic of 6.73). Hypothesis 2 is strongly supported because of positive associations between *ChgROAAccruals* and changes in bonus, cash, equity, and total compensation. Consistent with hypothesis 3, the variable

ChgROAPredict is positively related to all kinds of change in compensation, except for salary. Hence, changes in compensation, except for salary, increase when change in ROA and accruals or predictability increase. Also consistent with hypothesis 4 the variable *ChgROASmooth* is negatively associated with the above-mentioned changes in compensation. This evidence implies that compensation committees prefer smooth earnings, consistent with Francis et al.'s (2004) results that firms with less earnings smoothness bear a higher cost of capital. Overall, hypotheses 2-4 are strongly supported, whereas hypothesis 1 is weakly supported. These results suggest that accruals, predictability, and smoothness attributes are used by compensation committees in making CEO compensation decisions. In contrast, persistence is an important earnings attribute for determining salary. The results also indicate that the use of each earning attribute is not strongly affected by the types of CEO compensation.

Table 4, Panel B reports multiple regressions between CEO compensation and four earnings attributes simultaneously *(simultaneous model)*. Weakly consistent with hypotheses 1, *ChgROAPersist* is positively related only to change in salary. Inconsistent with hypothesis 2, *ChgROAAccruals* is not positively associated with change in salary and bonus. In support of hypothesis 3, *ChgROAPredict* is positively associated with the changes of all types of compensation, excluding salary. In terms of hypothesis 4, *ChgROASmooth* is negatively related to change in equity and total compensation at the conventional level. The different compensation definitions show inconsistent results. In conclusion, the results of the multiple regressions from the *simultaneous model* and the *individual model* are opposite. However, the positive coefficients of *ChgROAPredict* in

both models indicates that predictability always has a positive effect on the use of ROA as a CEO performance measure.

6.3.2 Regression Analysis: Solving the Scaling Issue

Although section 6.3.1 shows that several earnings attributes affect CEO compensation, the most outstanding earnings attributes cannot be detected. To compare the effect of each earnings attribute on CEO compensation, each earnings attribute should be measured on the same scale. There are two methods to solve the issue of differences in the earnings attributes scale: the ranking and the standardizing methods. For the first method, the variables *Persist, Accruals,* and *Predict* are ranked yearly based on continuous values and named *rPersist, rAccruals,* and *rPredict,* respectively. The higher rank, the greater the earnings attribute. In terms of the variable *Smooth,* Table 4, Panel A shows that *ChgROASmooth* is negatively associated with CEO compensation. Thus, *Smooth* is multiplied by a negative one and then ranked in ascending order. The top rank of this transformed variable, *rnSmooth,* has the greatest negative value, which indicates the lowest earnings smoothness.

The regression results from the ranked earnings attributes are quite similar to those from the continuous values of earnings attributes in Table 4. The results of the *individual model* in Table 5, Panel A show a strong positive relation between change in compensation, except for salary, and the following three interaction terms: (1) the interaction term of rank of accruals *(ChgROA rAccruals),* (2) the interaction term of rank of predictability *(ChgROA rPredicts),* and (3) the interaction term of rank of smoothness *(ChgROA rnSmooth)*. Hence, these results support hypotheses 2-4. Individually, the

effects of *ChgROA rAccruals*, *ChgROA rPredicts*, or *ChgROA rnSmooth* are consistent across CEO compensation definitions only in *individual models*. The results of the *simultaneous models* in Table 5, Panel B, report that *ChgROArPersist* and *ChgROA rAccruals* are not positively associated with change in bonus and cash, whereas *ChgROArPredict* is positively related to all changes in compensation, excluding salary. The *ChgROArnSmooth* is positively related only to change in equity. These findings support only hypothesis 3. They also indicate that some earnings attributes influence certain types of CEO compensation. In conclusion, although the ranking method fixes the different scales of earnings attributes, the results from the *individual* and *simultaneous* models are contradictory.

The second method to solve the different scales in earnings attributes is the standardizing method. The original continuous values of earnings attributes are transformed to standardized values, *Z-scores*. To determine *Z-scores*, the continuous values of each earnings attribute are deducted from the mean of that earnings attribute and divided by the standard deviation of that earnings attribute. The variables, *PersistZ, AccrualsZ, PredictZ,* and *nSmoothZ,* measure persistence, accruals, predictability, and smoothness attributes, respectively. Table 6, Panels A and B present the regressions of the *individual models* and the *simultaneous models* without control variables respectively.

In Table 6, Panels C through F report the regressions of the *individual models* with control variables, whereas Panel G reports those of the *simultaneous models* with control variables. The results from the *individual models* with and without control variables show that the coefficients of *ChgROAAccrualsZ, ChgROAPredictZ,* and *ChgROAnSmoothZ,* are positively significant in all types of CEO compensation,

excluding salary. The *ChgROAPersistZ* is a significant factor only for salary. Like the results from the ranking method, the results from the *Z-Scores* method support hypotheses 2-4 and weakly support hypothesis 1. Therefore, accruals, predictability, and smoothness have positive effects on CEO compensation-earnings relationships. Remarkably, the effect of predictability on CEO compensation is outstanding because the coefficient of *ChgROAPredictZ* is higher than those of the other interaction terms. Contradictory to the results from the *individual models*, the results from the *simultaneous model* in Table 6, Panels B and G, show that the coefficient of *ChgROAPersistZ* is positively significant only for salary. The coefficients of *ChgROAAccrualsZ* are not positively significant for all types of compensation. The coefficients of *ChgROAPredictZ* are positive for all types of compensation, except for salary. In addition, the coefficients of *ChgROA nSmoothZ* are positive for equity and total compensation. These results support only hypothesis 3 and weakly support hypothesis 4. This evidence also confirms that different types of earnings attributes are significant in certain definitions of CEO compensation.

In conclusion, although the coefficients of the interaction terms from the standardizing method are comparable, the results from the *individual* and the *simultaneous models* are different. Based on the results of the *individual models*, several earnings attributes may be used for making decisions on CEO compensation. Therefore, all four earnings attributes should be combined before testing the effect on CEO compensation as in Section 6.3.3.

6.3.3 Regression Analysis: Combining Four Earnings Attributes

After solving the scaling issue, the results of the *individual* and *simultaneous models* are still mixed. These contradictory results may come from two sources. First, multicollinearity problems automatically occur in the *simultaneous models* because the four interaction terms (change in ROA with each earnings attribute) are included. Second, based on an econometrics issue, an additional variable may change the coefficients of other variables in a regression model from positive to be negative or vice versa. The reason is that other variables are held constant when the coefficient of an additional variable is interpreted. To resolve the contradictory results, the four earnings attributes should be combined. This study uses two combining methods: Index and Principal Component Analysis (*PCA*).

The first method, the variable *Index* is the average rank values of four earnings attributes, *rPersist, rAccruals, rPredict,* and *rnSmooth*. Table 7 presents the results of the regression of the *Index* model. Table 7, Panels A and B, present the results from the models with and without control variables. The estimated coefficients of *ChgROAIndex* for change in bonus, change in cash, change in equity, and change in total compensation are 0.002, 0.002, 0.001, and 0.001, respectively at a significance level of 0.01. Hence, the change in CEO compensation, excluding salary, increases when ROA and earnings attributes increase. In comparison, there is indifference in terms of explanatory power between models using *Z-scores* and models using *Index* because the adjusted R-squared values of the models in Table 7, Panels A and B are not different from those in Table 6, Panels G and B.

The principal component analysis (*PCA*) is the second method for combining the four earnings attributes (*PersistZ*, *AccrualsZ*, *PredictZ*, and *nSmoothZ*). The standardized values of the four earnings attributes are used to identify principal components. Then, the first principal component (PC1) is chosen because it meets a threshold criterion (Eigenvalue =1). PC1 explains about 42% of the total variation in the four earnings attributes. The principal component score (*Prin*) for each observation is calculated by using PC1 and is used as a representative of the combination of the four earnings attributes. Based on eigenvectors, this PC1 is positively associated with *PersistZ*, *AccrualsZ*, *PredictZ*, and *nSmoothZ*. The elements of the eigenvector of these four attributes are 0.11, 0.63, 0.64 and 0.39 respectively. Table 8 shows the effect of the combination of earnings attributes in *PCA* form on CEO compensation. In Table 8, Panel A, the coefficients of the variable *ChgROAPrin* for bonus, cash, equity, and total compensation are 0.812, 0.669, 0.484, and 0.533 respectively at a significance level of 0.001. Similarly, the models without control variables in Table 8, Panel B show that the coefficients of the variable *ChgROAPrin* for bonus, cash, equity, and total compensation are 1.001, 0.737, 0.488, and 0.599 respectively at a significance level of 0.001. Consistent with the regressions using *Index* in Table 7, the regressions using *Prin* also support the hypothesis that the combination of earnings attributes is positively related to CEO compensation in the models both with and without control variables. However, the adjusted R-square values in Table 8 are marginally higher than those in Table 7.

In conclusion, the results of both combination methods confirm that compensation committees consider earnings attributes as additional information, aside from stock returns and accounting earnings, in designing CEO compensation. Specifically, the

accounting-based earnings attributes of the firms are indicators for the weight ascribed to ROA in a compensation contract. Firms with good earnings attributes put more weight on ROA as a CEO performance measure than do the other firms. This conclusion is consistent for all types of CEO compensation, except for salary. In comparing the two methods, the *PCA* method is more appropriate for combining the four earnings attributes because of its higher explanatory power in regression models. Hence, Section 6.3.4 shows the results of using the *PCA* method is used to test the effect of corporate governance on the use of earnings attributes for setting CEO compensation.

6.3.4 Regression Analysis: Combining Three Earnings Attributes

The tests using *Z-scores* in the *individual models* as shown in Table 6 highlight the positive effects of accruals, predictability, and smoothness on CEO compensation. In addition, the stepwise method, which is a systematic method for adding and removing variables from a multilinear regression model, chooses *Accrualsz, PredictZ,* and *SmoothZ* to explain the CEO compensation model. This section combines these three variables by using *PCA*. The first principal component (PC1) is chosen because it meets the threshold (Eigenvalue =1). PC1 explains about 55% of the total variation of the three earnings attributes. The elements of the eigenvector of *AccrualsZ, PredictZ,* and *nSmoothZ* are 0.64, 0.66 and 0.40, respectively. In Table 9, Panel A, the coefficients of *ChgROAPrin* in the bonus, cash, equity, and total compensation models are positively significant at the 0.01 level (0.827, 0.680, 0.486, and 0.542, respectively). Without the control variables in the models, the coefficients of *ChgROAPrin* in the bonus, cash, equity, and total compensation models are still positively significant at the 0.01 level (1.019, 0.749, 0.491,

and 0.611, respectively). These results also support the conclusion that a high earnings attribute increases the weight on ROA as a CEO performance measure in a CEO compensation contract. Furthermore, this conclusion can be applied to changes in bonus, cash, equity, and total compensation.

6.3.5 Summary

In conclusion, the results from the *individual models,* using both ranking and standardizing methods, indicate that compensation committees use earnings attributes (predictability, accruals, and smoothness) to design CEO compensation, except for salary. In other words, compensation committees in firms with high earnings attributes increase the use of earnings as a CEO performance measure. The results show that the estimated coefficients of *ChgROArPredict* and *ChgROAPredictZ* are higher than the estimated coefficients of other attributes. It can be inferred that compensation committees consider predictability as the most important earnings attribute because high earnings predictability indicates high firm value. There is some evidence to support this conclusion. First, analysts value predictability for setting stock prices (AIMR (1993)). In addition, Lee (1999) discusses predictability as an important element of firm valuation.

Regarding the accruals attribute, the results of this study agree with Peng's (2004) results in that CEOs receive higher compensation when their firms have a higher ROA and higher accruals attribute. Compensation committees value accruals because this attribute is also a desirable attribute for investors. Some capital market studies support this conclusion. For example, Francis et al. (2004) show that a lower accrual attribute increases the cost of capital.

On the other hand, smoothness has a negative relation to CEO compensation. In other words, firms with an increased ROA and a higher earnings smoothness pay their CEOs higher compensation because low earnings smoothness is undesirable for investors. Francis et al. (2004) also show that lower earnings smoothness increases cost of capital.

Like the *individual models,* the *simultaneous models* show that the effect of predictability on an earnings-compensation relationship is consistently positive in all definitions of CEO compensation, except for salary. However, smoothness has a positive effect on the equity compensation-earnings relationship as well as on the total compensation-earnings relationship. In addition, persistence and accruals are negatively associated with the earnings-compensation relationship. Therefore, only hypothesis 3 is strongly supported when *simultaneous models* are used. The results from the *individual models* and the *simultaneous models* are contradictory. Therefore, the four earnings attributes are combined and retested.

This study uses two combination methods: *Index* and *PCA*. After combining all four earnings attributes and then the three earnings attributes (accruals, predictability, and smoothness), the results from both *Index* and *PCA* methods show that earnings attributes have positive effects on the compensation-earnings relationship. It can be inferred that compensation committees combine earnings attributes before using them to set CEO compensation. In other words, firms with good earnings attributes increase the weight on ROA as a CEO performance measure. This conclusion is valid for all types of CEO compensation, excluding salary.

6.4 Regression Analysis: Corporate Governance and Earnings Attributes

This section reports the results of testing hypothesis 5, which predicts that corporate governance has a positive effect on the use of earnings attributes and ROA in a CEO compensation contract. Results reported in Section 6.3 show that several earnings attributes are important factors in determining the use of ROA in CEO compensation. Therefore, earnings attributes should be combined before testing the effect of corporate governance on their use in CEO compensation. Because of its higher explanatory power, the *PCA*, instead of *Index*, method is more appropriate for use in combining the four earnings attributes. To support hypothesis 5, the coefficient of the interaction term of a corporate governance variable, change in ROA, and *PCA* is expected to be positive. Section 6.4.1 shows the results of tests using the individual corporate governance variables and Section 6.4.2 presents the results of tests by using the combination of corporate governance variables.

6.4.1 Regression of Individual Corporate Governance

Table 10 reports the results of testing the effects of individual corporate governance variables. In this study, seven corporate governance variables are used to measure the quality of a firm's corporate governance. A higher value for each variable indicates a higher quality of corporate governance. The ranks of corporate governance variables are also used in this study. A higher rank of a corporate governance variable indicates stronger corporate governance.

In Table 10, Panels B and C show that anti-takeover protection (EG) is not related to CEO compensation. Panel D indicates that the CEO duality does not affect the use of earnings attributes in CEO compensation. However, the change in salary for CEOs who are not chairmen of the board is lower than for CEOs who are chairmen (coefficient of *Nodual* = -0.015 and t-stat -1.98). This finding can imply two opposite conclusions. On one hand, CEOs-Chairmen may use their influence to increase their salary. On the other hand, these CEOs-Chairmen do more work. In terms of CEO ownership, Table10, Panel E reveals that CEOs, owning a larger portion of their firms' shares does not have an influence on CEO compensation.

Table 10, Panels G, H, and I show that board size does not impact the use of earnings attributes in CEO compensation. Regarding the effect of independent directors, Table 10, Panels J and K reveal that the coefficients of the variable, *ChgROAPrin*Ind* are not positively significant. These findings imply that firms with a high percentage of independent directors do not place more weight on ROA in deciding CEO compensation. A possible explanation is that the percentage of independent directors is an inappropriate proxy for the effectiveness of independent directors. Hence, this study includes additional tests for the effectiveness of independent directors on CEO compensation decisions. In Table 10, Panels L and M show that the proportion of young independent directors does not affect CEO compensation. However, in Table 10, Panel N, firms having fewer busy directors use earnings attributes and ROA to increase CEO total compensation (coefficient of *ChgROAPrin*Pnotbusy* = 6.444 and t-stat=1.35). This evidence indicates that the number of less-busy independent directors, instead of only the number of

independent directors, influences the use of earnings attributes in weighting on ROA as a CEO performance measure.

In conclusion, the results of tests show that hypothesis 5 is weakly supported. Only one corporate governance variable affects the use of earnings attributes in total compensation. In particular, the proportion of less-busy independent directors has a positive effect on the use of earnings attributes in total compensation. One possible explanation for the weak relationship between corporate governance variables and the use of earnings attributes is that each variable measures only one aspect of corporate governance. Therefore, corporate governance variables should be combined to include several corporate governance aspects. Section 6.4.2 reports the results using combined corporate governance variables.

6.4.2 Regression of the Combination of Corporate Governance Variables

Prior studies do not provide clear evidence as to which corporate governance variable is the best proxy for the quality of corporate governance. Therefore, this study combines several aspects of corporate governance variables using two combination methods: Index and PCA.

The first method creates a new variable, *CIndex*, which is the average rank of six corporate governance variables: *EG, Share, Resize, Ind, Pnotold,* and *Pnotbusy*. *Nodual* is not included because it is a dummy variable and cannot be ranked. The results in Table 11, Panels A and B, show that the coefficients of *ChgroaPrinCindex* are not positively significant. It means that the combination of corporate governance variables does not

have a positive effect on the use of earnings attributes in CEO compensation. Therefore, hypothesis 5 is not supported.

The second combination method is the principal component method, PCA. Before combining, corporate governance variables are standardized to be presented in the same scale. The transformed variables for *EG*, *Share*, *Resize*, and *Pnotbusy* are *EGZ*, *ShareZ*, *ResizeZ*, and *PnotbusyZ*, respectively. Only these four variables are combined because they have positive correlations among them. The first principal component (PC1) is chosen to create the principal component score for each observation because its eigenvalue equal to 1. PC1 explains 35.88% of the total variation of the original four variables. In PC1, the element of eigenvector for *EGZ*, *ShareZ*, *ResizeZ*, and *PnotbusyZ* are 0.578, 0.342, 0.613, and 0.414, respectively. The principal component score, named *Corp*, is the combination of these four variables. In Table 12, Panels A and B report that *Corp* does not affect the use of earnings attributes in CEO compensation in either model with or without control variables. Consistent with the conclusion of the tests using *CIndex*, hypothesis 5 is not supported by the tests using *Corp*. This evidence also confirms that corporate governance does not have an effect on CEO compensation.

6.4.3 Summary

Corporate governance does not have an effect on the use of earnings attributes in CEO compensation. One possible explanation is that compensation committees in strong corporate governance firms may use subjective performance measures to evaluate CEO performance. Accounting ratios calculated from earnings (e.g., ROA) are classified as objective performance measures. Hence, these ratios and earnings attributes are not

significant factors to explain CEO compensation contracts for strong corporate governance firms that use subjective performance measures.

6.5 Sensitivity Tests on the Combination of Earnings Attributes

Section 6.3 shows that each earnings attribute can explain CEO compensation. However, the conclusion is not consistent when all four earnings attributes are included in a model. Therefore, it is interesting to explore whether the effects of earnings attributes on CEO compensation show up when using two and three earnings attributes at a time. To reduce the effect of the difference in scales, the standardized earnings attributes, *PersistZ, AccrualsZ, PredictZ,* and *nSmoothZ,* are used to set two and three combinations of earnings attributes. Because of the insignificance of control variables, the regression model without control variables is used. Section 6.5.1 discusses the results of simultaneous models that include three earnings attributes at a time. Section 6.5.2 discusses the results of simultaneous models that include two earnings attributes at a time. Finally, section 6.5.3 presents the results of model selection for each CEO compensation definition.

6.5.1 Sensitivity Tests on Three Earnings Attributes

There are four combinations for the models including three earnings attributes: (1) *AccrualsZ, PredictZ,* and *nSmoothZ* , (2) *PersistZ, PredictZ,* and *nSmoothZ* , (3) *PersistZ, AccrualsZ,* and *nSmoothZ,* (4) *PersistZ, AccrualsZ,* and *PredictZ.* The results show that predictability is an outstanding earnings attribute in explaining all types of CEO compensation, excluding salary. In Table 13, Panels A, B, and D, the coefficients of *PredictZ* are strongly positively significant and higher than the coefficients of the other

earnings attributes. In contrast, based on Table 13, Panels B, C, and D, the persistence attribute is not a significant explanatory variable in CEO compensation, except for salary. Remarkably, the coefficient of neither *PersistZ* nor *AccrualsZ* is positively significant when the model includes *PredictZ.* This finding may be caused by a multicollinearity problem or an additional variable.

6.5.2 Sensitivity Tests on Two Earnings Attributes

There are six combinations for the models including two earnings attributes: (1) *PersistZ* and *AccrualsZ,* (2) *PersistZ* and *PredictZ,* (3) *PersistZ* and *nSmoothZ,* (4) *AccrualsZ* and *PredictZ,* (5) *AccrualsZ* and *nSmoothZ* , and (6) *PredictZ* and *nSmoothZ.* The results from these models are quite similar to those of the three-earnings attributes models. Table 14 shows that predictability is the most outstanding earnings-attribute to explain change in bonus, whereas the persistence attribute is a significant only in explaning change in salary. However, the coefficients of *PersistZ* and *AccrualsZ* are not significantly positive when the models include *PredictZ.* These unexpected results may occur from multicollinearity or an additional variable.

6.5.3 Sensitivity Tests on Model Selection

Sections 6.5.1 and 6.5.2 above present the results of several models. This evidence implies that some sets of earnings attributes are more appropriate to explain certain types of compensation, whereas others are not significant for explaining CEO compensation. For example, Table 14, Panel F shows that the model including predictability and smoothness simultaneously is appropriate for equity compensation, but

not for salary. This evidence motivates a search for the appropriate set of earnings attributes for each type of CEO compensation, *model selection*.

Although the objective of the study is not to choose the best set of earnings attributes to explain each type of CEO compensation, the findings are interesting and useful for future research. Therefore, this section extends the study by exploring the appropriate set of earnings attributes for each CEO compensation model.

The compensation model that includes four earnings attributes at a time, the *Full model*, is compared with the ones that include three, two, one, and no earnings attributes at a time, the *Reduced models*. Table 15 summarizes the results of comparing the *Reduced model* to the *Full model* for each type of compensation.

Table 15, Panel D shows no statistically significant difference between the *Full models* and no earnings attributes in the salary model. This means that the change in salary compensation model can omit all earnings attributes. This result is not surprising because the exploratory powers of the salary models including an earnings attribute are very low (e.g., Tables 4, 5, and 6). In terms of bonus, Table 15 indicates that predictability is the most important earnings attribute. Table 6, Panel A also supports this conclusion. It shows that the bonus model including predictability has a higher explanatory power than those including other earnings attributes, and the estimated coefficient of *ChgROApredictZ* is higher than the others. Similarly to bonus compensation, the cash compensation model has predictability as the most important earnings attribute. The reason is that bonus compensation is a part of cash compensation. Regarding equity compensation, both persistence and predictability are important earnings attributes for this type of compensation. However, in Table 14, Panel A shows

that only the interaction terms of change in ROA and predictability are positively significant. In terms of total compensation, two combinations of earnings attributes should be included in the compensation model. They are (1) Accruals, Predictability, and Smoothness and (2) Persistsance, Predictability, and Smoothness. However, Table 13, Panels A and B reveal that the interaction terms of change in ROA and Predictability as well as change in ROA and Smoothness are positively significant. Overall, the results show that different types of CEO compensation are explained by different sets of earnings attributes. However, predictability is an important earnings attribute in all compensation models, excluding salary. Compensation committees of firms with good earnings attributes set more weight on ROA as CEO performance measure for a CEO compensation.

6.5.4 Summary

Overall, the results from the sensitivity tests are consistent with the main results in section 6.3. First, they show that earnings attributes are significant factors for CEO compensation models. Earnings attributes have positive effects on compensation-ROA relationships. However, the four earnings attributes are not used simultaneously. Second, the results from the sensitivity tests also show that the most outstanding earnings attribute is predictability because it is included in all compensation models, except salary. Third, the results from the model selection support the conclusion that compensation committees use different types of earnings attributes to weight different types of compensation. Finally, based on the model selection results, none of the earnings attributes is an important factor in explaining change in salary.

CHAPTER 7

SUMMARY

7.1 Summary and Conclusion

This study explores how four accounting-based earnings attributes (persistence, accruals, predictability, and smoothness) affect the relationship between accounting rate of return and CEO compensation. It hypothesizes that in firms with good earnings attributes, more weight is placed on an accounting return (ROA) as a CEO performance measure. Specifically, the following questions are examined (1) whether the four accounting-based earnings attributes are used simultaneously in a compensation model, (2) whether firms' corporate governance affects the use of earnings attributes in CEO compensation contracts, and (3) whether the relationships between CEO compensation and earnings attributes are affected by alternative measures of CEO compensation.

This study uses multiple linear regressions to test the hypotheses. In addition, several measures of the earnings attributes are used: continuous value, rank, standardized value, index, and principal component score. The results suggest that the four earnings attributes are not used simultaneously for setting all types of CEO compensation. They also show that different groups of earnings attributes are used to set different types of compensation.

Results from testing earnings attributes individually determine that accruals, predictability, and smoothness have positive effects on the compensation- earnings relationship. In other words, firms with high accruals quality, predictability, or smoothness place more weight on accounting earnings (ROA) as a CEO performance measure in bonus, cash, equity, and total compensation models. Based on the estimated coefficients, predictability is the most outstanding earnings attribute in CEO compensation models, except for salary. In terms of CEO salary, only persistence is a significant attribute for weighting ROA. Therefore, compensation committees use different earnings attributes to set different types of compensation.

The results from testing earnings attributes simultaneously show that only predictability has a positive effect on the relationships between accounting rate of return and all types of CEO compensation, except for salary. In addition, smoothness has a positive effect on the relationship only in the equity and total compensation models. These findings support the conclusion that all four earnings attributes are not simply used simultaneously. Compensation committees may use just some earnings attributes or combine them in a certain way.

Furthermore, the results from the individual earnings attributes test and high correlation coefficients suggest that the interaction terms of ROA and earnings attributes should be combined. Because how compensation committees combine earnings attributes is unknown, this study uses two methods to combine the four earnings attributes: *Index* and *PCA. Index* is the average rank of the four earnings attributes. *PCA* is a principal component score which is calculated from the first principal component. The results from both methods indicate that the combination of earnings attributes is a significant factor

for setting CEO compensation. This evidence implies that compensation committees do not simply use an individual earnings attribute, but instead combine earnings attributes. They increase the weight on ROA as a CEO performance measure in paying bonus, cash, equity, and total compensation when overall earnings attributes increase.

This study also tests the effect of corporate governance on the use of earnings attributes in CEO compensation. I hypothesize that compensation committees of firms with strong corporate governance use earnings attributes for setting CEO compensation. Corporate governance is classified into two aspects: external mechanisms (takeover protection) and an internal mechanism (board independence, CEO duality, board size, outside director effectiveness, outside director blockholder, and CEO shareholdings). The results show that neither individual corporate governance variables nor the combination of corporate governance variables affect the use of earnings attributes in CEO compensation models. One possible explanation is that firms with strong corporate governance may use subjective CEO performance measures (e.g., ROA). Therefore, compensation committees in such firms may not use earnings attributes for setting CEO compensation.

Sensitivity tests also confirm that earnings attributes are significant factors in CEO compensation models. Different types of compensation are explained by different types of earnings attributes. For example, predictability is the only earnings attribute that explains the bonus and cash models. Regarding equity compensation, persistence and predictability are significant variables.

In conclusion, the four earnings attributes are not used in compensation models simultaneously. The use of earnings attributes depends on the type of compensation.

Overall, predictability tends to increase the weight on ROA in CEO compensation, except for salary and corporate governance does not affect the use of earnings attributes in compensation models.

7.2 Limitations and Future Research

Although this study supports the finding that earnings attributes have positive effects on the use of ROA in CEO compensation contracts, it has some limitations. First, this study assumes that all sample firms evaluate CEO performance using objective performance measures such as ROA and stock returns. The study can be improved by creating a compensation model that includes an indicator variable for subjective and objective performance measures. Then, the study could test the interaction terms of the indicator variable, change in ROA, and earnings attributes. If the coefficient of this interaction term is significant, it implies that subjective and objective performance measures influence the use of earnings attributes. Second, 15 % of the sample in this study is wholesale and retail firms. The results may be dominated by this industry. Third, due to the limitation of data availability, this study uses data only from 2004 for testing the effect of corporate governance on CEO compensation. The conclusions may be more reliable if the sample covers several years. Finally, this study may have an endogeneity problem because it assumes that stock returns, accounting earnings, and earnings attributes determine CEO compensation. However, types of compensation or compensation mixes may change CEOs' choices of accounting policy. This situation may affect accounting earnings and earnings attributes. For example, CEO compensation that

is dominated by equity compensation may motivate CEOs to choose accounting policies that will smooth earnings in order to increase stock prices.

This study can be extended in several ways. First, future researchers could examine whether firms where there is a strong relationship between CEO compensation and earnings attributes perform better in other aspects (e.g., product innovation, firm growth, and customer satisfaction) than firms with a weak relationship between CEO compensation and earnings attributes. Second, future work could investigate whether the compensation committee's characteristics affect the use of earnings attributes in CEO compensation contracts. Although this study considers board characteristics, the compensation committee's characteristics (e.g., independence, experience, and educational background) are ignored. Third, future studies could explore the appropriate CEO compensation model for each type of compensation. Although, the objective of this study is not to select the most appropriate model for each type of CEO compensation, the sensitivity tests find that certain earnings attributes are significant factors in some types of CEO compensation. Thus, it would be interesting to explore the appropriate CEO compensation model for each type of compensation. Finally, several tests in this study show that predictability is an outstanding earnings attribute in CEO compensation contracts. Hence, a fruitful area for future research may be related to predictability and CEO compensation. For example, future researchers could examine whether firms whose predictability has a positive effect on CEO compensation and accounting earnings perform better than firms whose predictability has no effect on CEO compensation in several aspects (e.g., stock prices, product innovation, firm growth, and customer satisfaction).

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APPENDICES

APPENDIX A

COMPENSATION DEFINITIONS

These compensation definitions are based on ExecuComp database.

1. Total compensation (ExecuComp #TDC1)

Total compensation consists of the following: salary, bonus, other annual, total value of restricted stock granted, total value of stock options granted (using Black-Scholes model), long-term incentive payouts, and all other total compensation.

2. Salary

Salary is the dollar value of the base salary earned by the named executive officer during the fiscal year.

3. Bonus

Bonus is the dollar value of a bonus earned by the named executive officer during the fiscal year.

4. Other annual compensation

Other annual compensation is an annual compensation that cannot be properly categorized as salary or bonus. This includes items such as: perquisites, other personal benefits, tax reimbursements, etc.

5. Restricted stock

This is the value of restricted stock granted during the year (determined as of the date of the grant).

6. Long-term incentive payouts

It is equal to the amount paid out to the executive under the company's long-term incentive plan. These plans measure company performance over a period of more than one year (generally three years).

8. All other total compensation

It is compensation that can not be classified as the above categories. It includes items such as debt forgiveness, payment for unused vacation, tax reimbursements, etc.

7. Options granted

It is measured as the aggregate value of stock options granted to the executive during the year as valued using S&P's Black Scholes methodology.

APPENDIX B

VARIABLES

Change in Compensation$_{i,t}$	=	firm *i*, year *t-1* to year *t* change in CEO compensation measured in four types: salary, bonus, cash, equity, and total compensation.
Change in Salary$_{i,t}$	=	firm *i*, year *t-1* to year *t* change in CEO salary
	=	the natural log of (salary$_t$/ salary$_{t-1}$)
Change in Bonus$_{i,t}$	=	firm *i*, year *t-1* to year *t* change in CEO bonus
	=	the natural log of (bonus$_t$/ bonus$_{t-1}$)
Change in Cash$_{i,t}$	=	firm *i*, year *t-1* to year *t* change in CEO cash compensation defined as the natural log of the sum of salary plus bonus
	=	the natural log of (cash$_t$/ cash$_{t-1}$)
Change is Equity$_{i,t}$	=	firm *i*, year *t-1* to year *t* change in equity compensation defined as the natural log of the sum of value of stock options(using S&P's Black Scholes methodology) and the value of restricted stock granted during the year (#BLK_VALUE + #RSTKGRNT)
	=	the natural log of (equity$_t$/ equity$_{t-1}$)

Change in Total$_{i,t}$	=	firm *i*, year *t-1* to year *t* change in total compensation defined as the natural log of the sum of salary, bonus, other annual, total value of restricted stock granted, total value of stock options granted (using Black-Scholes), long-term incentive payouts, and all other total compensation (#TDC 1);
	=	the natural log of (total$_t$/ total$_{t-1}$)
Return$_{i,t}$	=	firm *i*, year *t* common stock return, calculated from monthly return;
Chgroa$_{i,t}$	=	firm *i*, year *t-1* to year *t* change in firm *i*'s return on assets *(ROA)*. *ROA* is calculated by firm *i*'s operating income after depreciations in year *t* (#178), divided by the average total assets of year *t* (#6);
Persist$_{i,t}$	=	firm *i*, year *t* earnings persistence estimated as ($\phi_{1,j}$) from equation (5) using *ROA*;
PersistZ$_{i,t}$	=	firm *i*, year *t* standardized value of *Persist*;
rPersist$_{i,t}$	=	firm *i*, year *t* ascending rank of *Persist*;
Accruals $_{i,t}$ =	=	firm *i*, year *t* earnings accruals estimated as $-\sigma(\hat{v}_{j,t})$ from equation (6) rolling ten-year windows using *ROA*;
AccrualsZ $_{i,t}$ =	=	firm *i*, year *t* standardized value of *Accruals*;
rAccruals $_{i,t}$ =	=	firm *i*, year *t* ascending rank of *Accruals*;

$Predict_{i,t}$	=	firm *i*, year *t* earnings predictability estimated as $-\sigma(\tilde{v}_{j,t})$ from equation (5) rolling ten-year windows using *ROA*;
$PredictZ_{i,t}$	=	firm *i*, year *t* standardized value of *Predict*;
$rPredict_{i,t}$	=	firm *i*, year *t* ascending rank of *Predict*;
$Smooth_{i,t}$	=	firm *i*, year *t* earnings smoothness estimated as equation (7) rolling ten-year windows;
$nSmooth_{i,t}$	=	negative value of $Smooth_{i,t}$;
$nSmoothZ_{i,t}$	=	firm *i*, year *t* standardized value of n*Smooth* ;
$rnSmoothZ_{i,t}$	=	firm *i*, year *t* ascending rank of *nSmooth* ;
$Index_{i,t}$	=	firm *i*, year *t* the average rank of *Persist*, *Accruals*, *Predict*, and *nSmooth;*
$Prin_{i,t}$	=	firm *i*, year *t* the linear combination of *PersistZ*, *AccrualsZ, PredictZ,* and *nSmoothZ* by using principal component method*;*
$MB_{i,t}$	=	firm *i*, year *t* the ratio of market value to book value of assets measured at the beginning of the period. The market value of assets equals the market value of equity plus the book value of total liabilities. The ratio is market value of assets [(#6 – #60) + (#199 x #25)]/ book value of assets (#6);
$Share_{i,t}$	=	firm *i*, year *t* the percentage of shares owned by the CEO;

$LnAssets_{i,t}$	=	firm *i*, year *t* the natural logarithm of average total assets (#6);
$ChgroaPersist_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *Persist*;
$ChgroaPersistZ_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *PersistZ*;
$ChgroarPersist_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and r*Persist*;
$ChgroaAccruals_{i,t}$ =	=	firm *i*, year *t* the interaction term of *Chgroa* and *Accruals*;
$ChgroaAccrualsZ_{i,t}$ =	=	firm *i*, year *t* the interaction term of *Chgroa* and *AccrualsZ*;
$ChgroarAccruals_{i,t}$ =	=	firm *i*, year *t* the interaction term of *Chgroa* and *rAccruals*;
$ChgroaPredict_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *Predict*;
$ChgroaPredictZ_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *PredictZ*;
$ChgroarPredict_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *rPredict*;
$ChgroaSmooth_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *Smooth*;
$ChgroanSmooth_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and n*Smooth*;

$ChgroanSmoothZ_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and n*SmoothZ*;
$ChgroarnSmooth_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *rnSmooth*;
$ChgroaIndex_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *Index;*
$ChgroaPrin_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *Prin;*
$ChgroaShare_{i,t}$	=	firm *i*, year *t* the interaction term of *Chgroa* and *Share;*
$ReturnShare_{i,t}$	=	firm *i*, year *t* the interaction term of *Return* and *Share;*
EG	=	24- Gompers Index;
rEG	=	ascending rank of 24- Gompers Index;
Nodual	=	an indicator variable equal to one if the CEO is “not” chairman of the board, and zero otherwise;
Share	=	the percentage of common equity owned by the CEO
rShare	=	ascending rank of the percentage of common equity owned by the CEO;
Size	=	an indicator variable equal to one if firms have 7-12 board of directors members, and zero otherwise;
Resize	=	1/total number of directors on the board;
rResize	=	ascending rank of 1/total number of directors on the board;
Ind	=	the percentage of outside directors on the board.
rInd	=	ascending rank of percentage of outside directors on the board;

Pnotold	=	the percentage of the outside directors who are younger than 70 years old;
rPnotold	=	ascending rank of the percentage of the outside directors who are younger than 70 years old;
$Pnotbusy_i$	=	firm *i*, the percentage of outside directors who sit less three boards*;*
$rPnotbusy_i$	=	firm *i*, the ascending rank of the percentage of outside directors who sit on less three boards*;*
$CIndex_i$	=	firm *i*, the average ascending rank of *EG, Share, Resize, Ind, Pnotold,* and *Pnotbusy*;
$Corp_i$	=	firm *i*, the linear combination of *EGZ, ShareZ, ResizeZ,* and *PnotbusyZ* by using principal component method;
$ChgroaPrinCIndex_{i,}$	=	firm *i*, the interaction term of *Chgroa*, *Prin,* and *CIndex;*
$ChgroaPrinCorp_i$	=	firm *i*, the interaction term of *Chgroa*, *Prin* and *Corp;*
G_j	=	group of industry *j* for firm *i*
G_1	=	Agriculture and food group which is firm in two-digit SIC equal to 1-9, 20, and 21;
G_2	=	Mining and construction group which is firm in two-digit SIC equal to 10-19;
G_3	=	Manufacturing industry group which is firm in two-digit SIC equal to 22-25;

G_4	=	Paper and printing industry group which is firm in two-digit SIC equal to 26-27;
G_5	=	Chemical industry group which is firm in two-digit SIC equal to 28;
G_6	=	Material industry group which is firm in two-digit SIC equal to 30-34;
G_7	=	Machinery industry group which is firm in two-digit SIC equal to 35;
G_8	=	Electrical equipment group which is firm in two-digit SIC equal to 36;
G_9	=	Transportation equipment group which is firm in two-digit SIC equal to 37 and 39;
G_{10}	=	Instruments industry group which is firm in two-digit SIC equal to 38;
G_{11}	=	Transportation and communications group which is firm in two-digit SIC equal to 40-48;
G_{12}	=	Utility industry group which is firm in two-digit SIC equal to 49;
G_{13}	=	Wholesale and retail trade industry group which is firm in two-digit SIC equal to 50-59;
G_{14}	=	Advertising and computer service industry group which is firm in two-digit SIC equal to 73;

G_{15}	=	Services industry group which is firm in two-digit SIC equal to 70-89 except 73;
D_t	=	Indicators for year *t;*
D_{98}	=	Indicators for year 1998;
D_{99}	=	Indicators for year 1999;
D_{00}	=	Indicators for year 2000;
D_{01}	=	Indicators for year 2001;
D_{02}	=	Indicators for year 2002;
D_{03}	=	Indicators for year 2003;
D_{04}	=	Indicators for year 2004;
D_{05}	=	Indicators for year 2005;
$\varepsilon_{i,t}$	=	error term;

APPENDIX C

TABLES

Table 1 Sample: Firm-Year Observations

Panel A Firm-Year Observation by Industry

Two-Digits SIC Code	No. of Obs.	Two-Digits SIC Code	No. of Obs.	Two-Digits SIC Code	No. of Obs.	Two-Digits SIC Code	No. of Obs.
1	7	25	68	39	45	55	39
7	1	26	139	40	29	56	137
10	25	27	158	41	1	57	53
12	5	28	543	42	72	58	162
13	226	29	77	44	35	59	107
14	21	30	60	45	50	70	10
15	26	31	35	47	24	72	35
16	34	32	47	48	101	73	487
17	11	33	166	49	493	75	16
20	194	34	128	50	206	78	13
21	12	35	392	51	79	79	44
22	51	36	504	52	22	80	100
23	88	37	240	53	95	82	18
24	37	38	363	54	32	83	5
						87	57

Table 1 Sample: Firm-Year Observations
Panel B Firm-Year Observation by Group

Group	Industry	Two-Digits SIC Code	No. of Obs.	Percent
1	Agriculture and food	1-9, 20, and 21	214	3.44
2	Mining and construction industry	10-19	348	5.59
3	Manufacturing industry	22-25	244	3.92
4	Paper and printing industry	26-27	374	6.01
5	Chemical industry	28	543	8.72
6	Material industry	30-34	436	7.00
7	Machinery industry	35	392	6.30
8	Electrical equipment	36	504	8.10
9	Transportation equipment	37 and 39	285	4.58
10	Instruments industry	38	363	5.83
11	Transportation and communications	40-48	312	5.01
12	Utility industry	49	493	7.92
13	Wholesale and retail trade industry	50-59	932	14.97
14	Service industry	73	487	7.82
15	Advertising and computer service industry	70-89 except 73	298	4.79
	Total		6225	100

Table 2 Descriptive Statistics for compensation, earnings attributes and control variables
Panel A Mean and Median for pooled data and 1998-2005

	Panel Data			1998			1999			2000			2001		
	No. Obs.	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median
Salary	6225	700.377	650.000	665	626.548	587.500	676	651.965	615.000	748	659.701	600.092	725	688.664	632.885
Bonus	6225	785.404	446.270	665	552.336	366.124	676	664.961	407.678	748	705.461	425.228	725	579.444	296.287
Cash	6225	1485.780	1092.044	665	1178.880	950.231	676	1316.930	1000.506	748	1365.160	1032.415	725	1268.110	900.000
Res. Stock	6225	505.039	0.000	665	259.388	0.000	676	212.859	0.000	748	323.896	0.000	725	372.324	0.000
Options	6185	2112.900	760.786	662	1471.950	570.344	673	2093.400	710.557	747	3145.200	784.656	719	2739.200	911.669
Equity	6185	2616.660	1039.589	662	1732.520	667.000	673	2307.200	884.688	747	3469.530	946.168	719	3109.970	1075.844
Total	6185	4567.150	2606.479	662	3287.160	1965.035	673	4037.850	2317.904	747	5330.360	2493.169	719	4724.200	2387.278
Chgsalary	6181	0.060	0.049	660	0.073	0.061	673	0.033	0.041	743	0.073	0.057	720	0.070	0.060
Chgbonus	4445	0.114	0.103	511	-0.002	0.048	488	0.154	0.114	553	0.120	0.105	462	-0.022	0.028
Chgcash	6195	0.072	0.065	662	0.013	0.037	674	0.070	0.056	745	0.087	0.079	721	-0.037	0.000
Chgequity	4471	0.073	0.074	458	0.235	0.204	476	0.290	0.255	530	0.088	0.109	539	0.118	0.132
Chgtotal	6141	0.066	0.067	658	0.091	0.092	670	0.146	0.118	743	0.132	0.096	713	0.000	0.023
Share	6225	2.278	0.090	665	2.345	0.010	676	2.436	0.010	748	2.888	0.095	725	2.375	0.080
Return	6225	0.140	0.082	665	0.009	-0.016	676	0.114	-0.031	748	0.181	0.075	725	0.124	0.080
ROA	6225	0.103	0.096	665	0.113	0.111	676	0.112	0.104	748	0.121	0.110	725	0.091	0.088
Chgroa	6225	-0.003	-0.001	665	-0.009	-0.003	676	-0.003	-0.002	748	-0.002	-0.002	725	-0.026	-0.017
LnAssets	6225	7.405	7.254	665	7.261	7.147	676	7.411	7.256	748	7.330	7.172	725	7.389	7.232
MB	6225	2.004	1.554	665	2.087	1.722	676	2.036	1.516	748	2.290	1.515	725	2.069	1.465
ChgroaShare	6225	-0.012	0.000	665	-0.016	0.000	676	-0.011	0.000	748	-0.017	0.000	725	-0.075	0.000
Return*Share	6225	0.292	0.002	665	-0.049	0.000	676	0.045	-0.001	748	0.337	0.002	725	0.543	0.001
Persist	6225	0.519	0.552	665	0.498	0.538	676	0.498	0.521	748	0.506	0.539	725	0.526	0.559
Accrual	6225	-0.014	-0.011	665	-0.012	-0.010	676	-0.012	-0.010	748	-0.013	-0.010	725	-0.014	-0.011
Predict	6225	-0.039	-0.028	665	-0.033	-0.026	676	-0.032	-0.025	748	-0.038	-0.028	725	-0.039	-0.029
Smooth	6225	1.082	0.646	665	0.961	0.609	676	0.936	0.591	748	1.001	0.640	725	1.016	0.670

Table 2 Descriptive Statistics for compensation, earnings attributes and control variables
Panel A Mean and Median for pooled data and 1998-2005 (Cont.)

	2002			2003			2004			2005		
	No. Obs.	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median
Salary	794	700.368	650.000	858	719.376	675.000	889	756.309	700.000	870	763.274	723.614
Bonus	794	702.057	381.011	858	786.579	462.900	889	1041.860	592.620	870	1110.360	651.864
Cash	794	1402.430	1063.270	858	1505.950	1106.277	889	1798.170	1286.311	870	1873.630	1360.278
Res. Stock	794	420.024	0.000	858	530.779	0.000	889	743.379	0.000	870	994.828	0.000
Options	786	2127.080	904.719	853	1755.590	708.770	882	1892.330	862.732	863	1770.110	683.326
Equity	786	2542.190	1062.546	853	2285.350	1049.625	882	2627.400	1292.625	863	2771.260	1310.906
Total	786	4331.720	2669.906	853	4246.730	2509.770	882	4919.750	3175.792	863	5341.100	3247.187
Chgsalary	789	0.054	0.040	850	0.062	0.043	883	0.055	0.042	863	0.062	0.043
Chgbonus	503	0.184	0.140	601	0.111	0.077	655	0.237	0.201	672	0.092	0.095
Chgcash	792	0.127	0.088	853	0.087	0.064	884	0.143	0.116	864	0.062	0.065
Chgequity	577	-0.077	-0.032	618	-0.093	-0.056	635	0.144	0.139	638	-0.033	-0.018
Chgtotal	779	0.007	0.032	848	-0.012	0.008	876	0.143	0.145	854	0.037	0.046
Share	794	2.196	0.075	858	2.112	0.140	889	2.163	0.120	870	1.857	0.160
Return	794	-0.104	-0.090	858	0.441	0.318	889	0.182	0.161	870	0.122	0.074
ROA	794	0.088	0.082	858	0.089	0.084	889	0.101	0.093	870	0.109	0.101
Chgroa	794	-0.005	0.000	858	0.002	0.000	889	0.008	0.006	870	0.002	0.003
LnAssets	794	7.395	7.238	858	7.384	7.213	889	7.483	7.288	870	7.543	7.394
MB	794	1.965	1.534	858	1.679	1.397	889	1.957	1.627	870	2.017	1.657
ChgroaShare	794	-0.003	0.000	858	0.000	0.000	889	0.012	0.000	870	0.004	0.000
ReturnShare	794	-0.098	-0.002	858	0.866	0.014	889	0.404	0.003	870	0.170	0.001
Persist	794	0.527	0.552	858	0.534	0.560	889	0.516	0.561	870	0.538	0.573
Accrual	794	-0.014	-0.011	858	-0.015	-0.012	889	-0.015	-0.011	870	-0.015	-0.012
Predict	794	-0.040	-0.029	858	-0.042	-0.031	889	-0.042	-0.031	870	-0.042	-0.030
Smooth	794	1.051	0.644	858	1.152	0.646	889	1.235	0.646	870	1.214	0.711

Table 2 Descriptive Statistics for compensation, earnings attributes and control variables
Panel B Mean and Median for pooled data and 1998-2005 (Cont.)

	Panel Data			1998			1999			2000			2001		
	No. Obs.	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median
Salary	6225	700.377	650.000	665	626.548	587.500	676	651.965	615.000	748	659.701	600.092	725	688.664	632.885
Bonus	6225	785.404	446.270	665	552.336	366.124	676	664.961	407.678	748	705.461	425.228	725	579.444	296.287
Cash	6225	1485.780	1092.044	665	1178.880	950.231	676	1316.930	1000.506	748	1365.160	1032.415	725	1268.110	900.000
Res. Stock	6225	505.039	0.000	665	259.388	0.000	676	212.859	0.000	748	323.896	0.000	725	372.324	0.000
Options	6185	2112.900	760.786	662	1471.950	570.344	673	2093.400	710.557	747	3145.200	784.656	719	2739.200	911.669
Equity	6185	2616.660	1039.589	662	1732.520	667.000	673	2307.200	884.688	747	3469.530	946.168	719	3109.970	1075.844
Total	6185	4567.150	2606.479	662	3287.160	1965.035	673	4037.850	2317.904	747	5330.360	2493.169	719	4724.200	2387.278

Table 2 Descriptive Statistics for compensation
Panel C Mean and Median for the year 1998-2005 adjusted by inflation rate and has the same buying power as 2005

	1998		1999		2000		2001		2002		2003		2004		2005	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
Salary	750.7	703.92	764.28	720.95	748.2	680.59	759.44	697.92	760.32	705.64	763.56	716.45	781.93	723.72	763.274	723.614
Bonus	661.79	438.67	779.51	477.91	800.1	482.27	638.99	326.74	762.16	413.63	834.89	491.33	1077.16	612.7	1110.36	651.864
Cash	1412.49	1138.53	1543.8	1172.87	1548.29	1170.92	1398.43	992.49	1522.48	1154.29	1598.43	1174.22	1859.09	1329.89	1873.63	1360.278
Res. Stock	310.79	0	249.53	0	367.35	0	410.59	0	455.98	0	563.38	0	768.56	0	994.828	0
Options	1763.69	683.36	2454.03	832.96	3567.12	889.91	3020.7	1005.36	2309.16	982.17	1863.41	752.3	1956.44	891.96	1770.11	683.326
Equity	2075.84	799.17	2704.66	1037.09	3934.95	1073.09	3429.57	1186.4	2759.81	1153.51	2425.7	1114.09	2716.42	1336.42	2771.26	1310.906
Total	3938.54	2354.43	4733.45	2717.2	6045.41	2827.62	5209.69	2632.61	4702.53	2898.46	4507.53	2663.9	5086.43	3283.39	5341.1	3247.187

Table 2 Descriptive Statistics for compensation, earnings attributes and control variables
Panel D Percentile, Quartile, Mean, Median and Standard Deviation for Pooled Data from 1998-2005

Variable	No. of Obs.	Min	10 percentile	25 percentile	Mean	Median	75 percentile	90 percentile	Max	Std. Dev.
Salary	6225	0	343.846	460.385	700.377	650.000	885.375	1081.138	4973.070	353.758
Bonus	6225	0	0.000	114.000	785.404	446.270	1000.000	1862.500	31000.000	1319.510
Cash	6225	0	436.500	670.016	1485.780	1092.044	1844.069	2878.333	32016.670	1528.220
Res. Stock	6225	0	0.000	0.000	505.039	0.000	123.000	1270.210	47880.000	1856.620
Options	6185	0	0.000	18.314	2112.900	760.786	2291.313	5293.842	114653.800	4642.470
Equity	6185	0	0.000	211.125	2616.660	1039.589	2910.953	6757.998	114653.800	5188.930
Total	6185	0	709.513	1256.651	4567.150	2606.479	5336.863	10327.480	117669.120	6338.520
Chgsalary	6181	-1.397	0.000	0.000	0.060	0.049	0.095	0.168	1.542	0.116
Chgbonus	4445	-2.824	-0.583	-0.163	0.114	0.103	0.405	0.792	2.386	0.574
Chgcash	6195	-1.673	-0.347	-0.077	0.072	0.065	0.238	0.487	2.043	0.361
Chgequity	4471	-2.637	-0.790	-0.310	0.073	0.074	0.461	0.929	2.920	0.695
Chgtotal	6141	-2.240	-0.593	-0.203	0.066	0.067	0.356	0.701	3.327	0.560
Share	6225	0.003	0.010	0.010	2.278	0.090	1.220	6.720	64.200	5.986
Return	6225	-0.933	-0.349	-0.146	0.140	0.082	0.328	0.648	4.546	0.474
ROA	6225	-1.188	0.020	0.057	0.103	0.096	0.147	0.204	0.866	0.090
Chgroa	6225	-0.474	-0.049	-0.020	-0.003	-0.001	0.016	0.039	0.338	0.048
LnAssets	6225	3.166	5.631	6.318	7.405	7.254	8.346	9.557	13.077	1.495
MB	6225	0.404	1.028	1.197	2.004	1.554	2.250	3.472	23.077	1.418
ChgroaShare	6225	-4.710	-0.048	-0.002	-0.012	0.000	0.001	0.035	6.494	0.255
ReturnShare	6225	-18.372	-0.262	-0.003	0.292	0.002	0.061	0.876	40.940	2.322
Persist	6225	-0.381	0.108	0.325	0.519	0.552	0.735	0.872	1.516	0.299
Predict	6225	-0.216	-0.081	-0.049	-0.039	-0.028	-0.017	-0.011	-0.004	0.031
Accrual	6225	-0.070	-0.027	-0.018	-0.014	-0.011	-0.007	-0.005	-0.001	0.010
Smooth	6225	0.013	0.125	0.289	1.082	0.646	1.288	2.332	14.979	1.428

Table 2 Descriptive Statistics for compensation, earnings attributes and control variables
Panel E Percentile, Quartile, Mean, Median and Standard Deviation for Corporate Governance Variables in 2004

Variables	N	Minimum	10 percentile	25 percentile	Mean	Median	75 percentile	90 percentile	Std	Maximum
No. of directors	440	5.00	7.00	8.00	9.61	9.00	11.00	12.00	16.00	2.16
No. of independent directors	440	2.00	4.00	5.00	7.03	7.00	9.00	10.00	14.00	2.15
No. of not busy directors	440	2.00	4.00	5.00	6.63	6.50	8.00	9.00	13.00	2.05
No. of not old directors	440	1.00	4.00	5.00	6.34	6.00	8.00	9.00	13.00	2.28
No. of directors owning 5% shares	440	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dummy No Duality CEO	404	0.00	0.00	0.00	0.71	1.00	1.00	1.00	1.00	0.46
Share	495	0.01	0.01	0.01	1.04	0.01	0.71	2.20	31.89	2.86
EG	457	6.00	11.00	12.00	14.18	14.00	16.00	17.00	21.00	2.54
Percentage of independent director	440	0.29	0.56	0.64	0.73	0.75	0.83	0.89	0.93	0.13
Dummy Size 7-12	440	0.00	0.00	1.00	0.85	1.00	1.00	1.00	1.00	0.36
Resize	440	0.06	0.08	0.09	0.11	0.11	0.13	0.14	0.20	0.03
Percentage of independent directors younger than 70 years	440	0.25	0.71	0.81	0.89	1.00	1.00	1.00	1.00	0.14
Percentage of not busy independent directors	440	0.50	0.80	0.90	0.95	1.00	1.00	1.00	1.00	0.10
First Principal Component Score of 4 corp. gov. var.	434	-3.64	-1.40	-0.84	0.00	-0.12	0.76	1.58	4.60	1.20

Table 3 Correlations

Panel A Correlation between Compensation and Firms Characteristics

	Salary	Bonus	Cash	Total	Res. Stock	Options	Equity
Salary	1	0.503 ***	0.665 ***	0.517 ***	0.291 ***	0.275 ***	0.351 ***
Bonus	0.558 ***	1	0.980 ***	0.538 ***	0.238 ***	0.241 ***	0.301 ***
Cash	0.813 ***	0.919 ***	1	0.584 ***	0.273 ***	0.271 ***	0.341 ***
Total	0.714 ***	0.670 ***	0.783 ***	1	0.469 ***	0.856 ***	0.934 ***
Res. Stock	0.225 ***	0.217 ***	0.247 ***	0.313 ***	1	0.111 ***	0.458 ***
Options	0.401 ***	0.324 ***	0.401 ***	0.754 ***	0.055 ***	1	0.934 ***
Equity	0.487 ***	0.412 ***	0.499 ***	0.858 ***	0.355 ***	0.902 ***	1
Share	-0.276 ***	-0.207 ***	-0.259 ***	-0.286 ***	-0.131 ***	-0.228 ***	-0.257 ***
Return	0.034 ***	0.266 ***	0.197 ***	0.102 ***	0.072 ***	0.007	0.043 ***
ROA	0.095 ***	0.321 ***	0.268 ***	0.201 ***	0.019	0.128 ***	0.141 ***
Chgroa	0.027 **	0.300 ***	0.215 ***	0.107 ***	0.064 ***	0.017	0.043 ***
LnAssets	0.724 ***	0.489 ***	0.654 ***	0.653 ***	0.232 ***	0.399 ***	0.484 ***
MB	0.023 *	0.153 ***	0.118 ***	0.236 ***	-0.058 ***	0.279 ***	0.259 ***

	Share	Return	ROA	Chgroa	LnAssets	MB
Salary	-0.119 ***	-0.024 *	0.098 ***	0.026 **	0.680 ***	-0.007
Bonus	-0.060 ***	0.095 ***	0.171 ***	0.137 ***	0.411 ***	0.048 ***
Cash	-0.079 ***	0.077 ***	0.170 ***	0.124 ***	0.512 ***	0.039 ***
Total	-0.119 ***	0.054 ***	0.148 ***	0.054 ***	0.492 ***	0.266 ***
Res. Stock	-0.063 ***	0.024 *	0.081 ***	0.060 ***	0.249 ***	0.037 ***
Options	-0.093 ***	0.030 **	0.095 ***	-0.003	0.312 ***	0.335 ***
Equity	-0.105 ***	0.035 ***	0.114 ***	0.019	0.369 ***	0.313 ***
Share	1	-0.010	0.042 ***	-0.014	-0.186 ***	0.012
Return	0.010	1	0.122 ***	0.312 ***	-0.038 ***	-0.060 ***
ROA	0.026 **	0.184 ***	1	0.238 ***	0.032 **	0.457 ***
Chgroa	-0.027 **	0.334 ***	0.224 ***	1	0.034 ***	-0.006
LnAssets	-0.430 ***	0.017	-0.013	0.019	1	-0.039 **
MB	0.012	-0.096 ***	0.627 ***	0.006	-0.046 ***	1

Note:

1. The Pearson correlation coefficients are presented in the upper half and the Spearman-rank correlation coefficients are presented in the lower half.
2. Statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.

Table 3 Correlation
Panel A Correlation between Compensation and Firms Characteristics (Cont.)

	Chgsalary	Chgbonus	Chgcash	Chgequity	Chgtotal	Share
Chgsalary	1	0.068 ***	0.260 ***	0.016	0.064 ***	-0.046 ***
Chgbonus	0.057 ***	1	0.913 ***	0.066 ***	0.287 ***	-0.021
Chgcash	0.209 ***	0.955 ***	1	0.051 ***	0.329 ***	-0.029 **
Chgequity	0.054 ***	0.082 ***	0.070 ***	1	0.811 ***	-0.013
Chgtotal	0.082 ***	0.340 ***	0.372 ***	0.812 ***	1	0.000
Share	-0.114 ***	-0.043 ***	-0.042 ***	-0.031 **	-0.034 ***	1
Return	0.033 ***	0.284 ***	0.326 ***	0.105 ***	0.200 ***	0.010
ROA	0.130 ***	0.063 ***	0.110 ***	0.107 ***	0.104 ***	0.025 **
Chgroa	0.012	0.385 ***	0.422 ***	0.128 ***	0.242 ***	-0.027 **
LnAssets	0.029 **	0.046 ***	0.065 ***	0.022	0.054 ***	-0.430 ***
MB	0.100 ***	-0.049 ***	-0.030 **	0.016	-0.008	0.011

	Return	ROA	Chgroa	LnAssets	MB
Chgsalary	0.048 ***	0.071 ***	0.031 **	0.007	0.063 ***
Chgbonus	0.275 ***	0.060 ***	0.351 ***	0.044 ***	-0.027 *
Chgcash	0.284 ***	0.080 ***	0.371 ***	0.041 ***	-0.027 **
Chgequity	0.107 ***	0.092 ***	0.112 ***	0.020	0.025 *
Chgtotal	0.179 ***	0.081 ***	0.190 ***	0.044 ***	0.008
Share	-0.009	0.042 ***	-0.014	-0.186 ***	0.011
Return	1	0.121 ***	0.311 ***	-0.038 ***	-0.060 ***
ROA	0.184 ***	1	0.238 ***	0.031 **	0.456 ***
Chgroa	0.333 ***	0.223 ***	1	0.034 ***	-0.005
LnAssets	0.017	-0.013	0.019	1	-0.039 ***
MB	-0.096 ***	0.627 ***	0.005	-0.046 ***	1

Note:
1. The Pearson correlation coefficients are presented in the upper half and the Spearman-rank correlation coefficients are presented in the lower half.
2. Statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.

Table 3 Correlation
Panel B Correlation between Earnings Attributes

	Accrual	Smooth	Persist	Predict	PersistZ	Accrualsz	PredictZ
Accrual	1	-0.170 ***	0.015	0.548 ***	0.015	1.000 ***	0.548 ***
Smooth	-0.246 ***	1	0.005	-0.239 ***	0.005	-0.170 ***	-0.239 ***
Persist	-0.002	0.078 ***	1	0.101 ***	1.000 ***	0.015	0.101 ***
Predict	0.564 ***	-0.392 ***	0.088 ***	1	0.101 ***	0.548 ***	1.000 ***
PersistZ	-0.002	0.078 ***	1.000 ***	0.088 ***	1	0.015	0.101 ***
Accrualsz	1.000 ***	-0.246 ***	-0.002	0.564 ***	-0.002	1	0.548 ***
PredictZ	0.564 ***	-0.392 ***	0.088 ***	1.000 ***	0.088 ***	0.564 ***	1
rPersist	-0.013	0.080 ***	0.987 ***	0.074 ***	0.987 ***	-0.013	0.074 ***
rAccrual	0.960 ***	-0.232 ***	0.010	0.532 ***	0.010	0.960 ***	0.532 ***
rPredict	0.531 ***	-0.378 ***	0.101 ***	0.959 ***	0.101 ***	0.531 ***	0.959 ***
rSmooth	-0.253 ***	0.990 ***	0.083 ***	-0.403 ***	0.083 ***	-0.253 ***	-0.403 ***
rnSmooth	0.223 ***	-0.974 ***	-0.065 ***	0.362 ***	-0.065 ***	0.223 ***	0.362 ***
Indexn	0.654 ***	-0.572 ***	0.379 ***	0.744 ***	0.379 ***	0.654 ***	0.744 ***
nSmoothz	0.246 ***	-1.000 ***	-0.078 ***	0.392 ***	-0.078 ***	0.246 ***	0.392 ***
Prin	0.805 ***	-0.550 ***	0.155 ***	0.851 ***	0.155 ***	0.805 ***	0.851 ***

Note:
1. The Pearson correlation coefficients are presented in the upper half and the Spearman-rank correlation coefficients are presented in the lower half.
2. Statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.

Table 3 Correlation
Panel B Correlation between Earnings Attributes (Cont.)

	rPersist	rAccrual	rPredict	rSmooth	rnSmooth	Indexn	nSmoothz	Prin
Accrual	0.006	0.857 ***	0.514 ***	-0.244 ***	0.217 ***	0.613 ***	0.170 ***	0.819 ***
Smooth	0.011	-0.148 ***	-0.211 ***	0.725 ***	-0.699 ***	-0.403 ***	-1.000 ***	-0.504 ***
Persist	0.957 ***	0.010	0.096 ***	0.079 ***	-0.066 ***	0.383 ***	-0.005	0.142 ***
Predict	0.090 ***	0.474 ***	0.835 ***	-0.384 ***	0.345 ***	0.670 ***	0.239 ***	0.857 ***
PersistZ	0.957 ***	0.010	0.096 ***	0.079 ***	-0.066 ***	0.383 ***	-0.005	0.142 ***
Accrualsz	0.006	0.857 ***	0.514 ***	-0.244 ***	0.217 ***	0.613 ***	0.170 ***	0.819 ***
PredictZ	0.090 ***	0.473 ***	0.835 ***	-0.384 ***	0.345 ***	0.670 ***	0.239 ***	0.857 ***
rPersist	1	0.035 ***	0.128 ***	0.103 ***	-0.041 ***	0.432 ***	-0.011	0.127 ***
rAccrual	0.030 **	1	0.575 ***	-0.208 ***	0.271 ***	0.723 ***	0.149 ***	0.705 ***
rPredict	0.121 ***	0.573 ***	1	-0.352 ***	0.414 ***	0.814 ***	0.211 ***	0.748 ***
rSmooth	0.101 ***	-0.211 ***	-0.360 ***	1	-0.938 ***	-0.536 ***	-0.725 ***	-0.526 ***
rnSmooth	-0.041 ***	0.264 ***	0.406 ***	-0.942 ***	1	0.632 ***	0.699 ***	0.485 ***
Indexn	0.408 ***	0.719 ***	0.813 ***	-0.535 ***	0.621 ***	1	0.403 ***	0.794 ***
nSmoothz	-0.080 ***	0.232 ***	0.378 ***	-0.990 ***	0.974 ***	0.572 ***	1	0.504 ***
Prin	0.139 ***	0.768 ***	0.814 ***	-0.552 ***	0.520 ***	0.864 ***	0.550 ***	1

Note:
1. The Pearson correlation coefficients are presented in the upper half and the Spearman-rank correlation coefficients are presented in the lower half.
2. Statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.

Table 3 Correlation
Panel C Correlation between Interaction Terms of Change in ROA Earnings Attributes

	Chgroa PersistZ	Chgroa Accrualsz	Chgroa PredictZ	Chgroa SmoothZ	Chgroa rpersist	Chgroa rPredict	Chgroa rAccrual	Chgroa rSmooth
ChgroaPersistZ	1.000	0.161 ***	0.347 ***	-0.078 ***	0.283 ***	-0.115 ***	-0.241 ***	-0.298 ***
ChgroaAccrualsz	-0.007	1.000	0.591 ***	-0.240 ***	-0.367 ***	-0.066 ***	0.111 ***	-0.498 ***
ChgroaPredictZ	0.082 ***	0.472 ***	1.000	-0.308 ***	-0.503 ***	-0.076 ***	-0.369 ***	-0.758 ***
ChgroaSmoothZ	0.041 ***	-0.194 ***	-0.231 ***	1.000	0.178 ***	0.012	0.087 ***	0.466 ***
ChgroarPersist	0.285 ***	0.017	-0.046 ***	-0.232 ***	1.000	0.625 ***	0.625 ***	0.750 ***
ChgroarPredict	0.038 ***	0.196 ***	0.250 ***	-0.345 ***	0.885 ***	1.000	0.751 ***	0.547 ***
ChgroarAccrual	0.013	0.320 ***	0.093 ***	-0.309 ***	0.889 ***	0.937 ***	1.000	0.681 ***
ChgroarSmooth	0.033 **	-0.025 **	-0.149 ***	-0.077 ***	0.923 ***	0.864 ***	0.889 ***	1.000
ChgroarnSmooth	-0.006	0.079 ***	0.016	-0.525 ***	0.892 ***	0.914 ***	0.911 ***	0.849 ***
indexn	-0.008	-0.014	-0.006	0.003	-0.002	-0.004	-0.006	0.007
Chgroaindexn	0.081 ***	0.124 ***	0.025 **	-0.350 ***	0.950 ***	0.955 ***	0.960 ***	0.920 ***
Prin	0.005	-0.043 ***	-0.013	0.010	-0.026 **	-0.037 ***	-0.041 ***	-0.020
ChgroaPrin	0.133 ***	0.750 ***	0.796 ***	-0.402 ***	-0.035 ***	0.198 ***	0.170 ***	-0.178 ***
Chgroansmoothz	-0.041 ***	0.194 ***	0.231 ***	-1.000 ***	0.232 ***	0.345 ***	0.309 ***	0.077 ***

Note:
1. The Pearson correlation coefficients are presented in the upper half and the Spearman-rank correlation coefficients are presented in the lower half.
2. Statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.

Table 3 Correlation
Panel C Correlation between Interaction Terms of Change in ROA Earnings Attributes (Cont.)

	Chgroa rnSmooth		Indexn		Chgroa Indexn		Prin		Chgroa Prin		Chgroa nsmoothz	
ChgroaPersistZ	-0.275	***	-0.039	***	-0.081	***	-0.021	*	0.353	***	0.078	***
ChgroaAccrualsz	-0.293	***	-0.065	***	-0.199	***	-0.105	***	0.823	***	0.240	***
ChgroaPredictZ	-0.445	***	-0.039	***	-0.437	***	-0.058	***	0.919	***	0.308	***
ChgroaSmoothZ	-0.207	***	0.000		0.024	*	-0.020		-0.477	***	-1.000	***
ChgroarPersist	0.661	***	0.016		0.857	***	0.010		-0.466	***	-0.178	***
ChgroarPredict	0.736	***	-0.001		0.860	***	-0.036	***	-0.082	***	-0.012	
ChgroarAccrual	0.715	***	-0.005		0.878	***	-0.040	***	-0.204	***	-0.087	***
ChgroarSmooth	0.576	***	0.034	***	0.745	***	0.017		-0.764	***	-0.466	***
ChgroarnSmooth	1.000		0.023	*	0.894	***	0.010		-0.364	***	0.207	***
indexn	-0.001		1.000		0.011		0.794	***	-0.053	***	0.000	
Chgroaindexn	0.962	***	0.001		1.000		-0.012		-0.351	***	-0.024	*
Prin	-0.027	**	0.864	***	-0.030	**	1.000		-0.076	***	0.020	
ChgroaPrin	0.067	***	-0.008		0.048	***	-0.022	*	1.000		0.477	***
Chgroansmoothz	0.525	***	-0.003		0.350	***	-0.010		0.402	***	1.000	

Note:
1. The Pearson correlation coefficients are presented in the upper half and the Spearman-rank correlation coefficients are presented in the lower half.
2. Statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.

Table 3 Correlation
Panel D Correlation between Corporate Governance Variables

	Share	No.Dir	No. of ind	Not busy	Not old	No Dual	EG
Share	1	-0.080 *	-0.172 ***	-0.167 ***	-0.175 ***	0.063	0.124 ***
No.Dir	-0.356 ***	1	0.816 ***	0.740 ***	0.744 ***	0.063	-0.239 ***
No. of ind	-0.390 ***	0.811 ***	1	0.936 ***	0.924 ***	0.211 ***	-0.279 ***
Not busy	-0.344 ***	0.740 ***	0.934 ***	1	0.891 ***	0.192 ***	-0.248 ***
Not old	-0.376 ***	0.733 ***	0.923 ***	0.883 ***	1	0.206 ***	-0.239 ***
No Dual	0.013	0.088 *	0.227 ***	0.207 ***	0.214 ***	1	-0.130 ***
EG	0.161 ***	-0.269 ***	-0.311 ***	-0.283 ***	-0.277 ***	-0.128 **	1
Ind	-0.229 ***	0.172 ***	0.684 ***	0.666 ***	0.653 ***	0.280 ***	-0.188 ***
Size 7-12	0.100 **	-0.159 **	-0.106 **	-0.069	-0.115 **	0.102 **	-0.037
Pnot old	-0.132 ***	0.088 *	0.145 ***	0.163 ***	0.475 ***	0.044	-0.036
Pnot busy	0.185 ***	-0.261 ***	-0.248 ***	0.067	-0.208 ***	-0.051	0.103 **
Resize	0.356 ***	-1.000 ***	-0.811 ***	-0.740 ***	-0.733 ***	-0.088 *	0.269 ***
Cindex	0.308 ***	-0.437 ***	-0.125 **	0.022	0.018	0.410 ***	0.418 ***
Corp1	0.451 ***	-0.734 ***	-0.679 ***	-0.513 ***	-0.611 ***	-0.112 **	0.701 ***

Note:
1. The Pearson correlation coefficients are presented in the upper half and the Spearman-rank correlation coefficients are presented in the lower half.
2. Statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.

Table 3 Correlation
Panel D Correlation between Corporate Governance Variables (Cont.)

	Ind	Size 7-12	Pnot old	Pnot busy	Resize	Cindex	Corp1
Share	-0.180 ***	0.025	-0.078	0.026	0.079 *	0.384 ***	0.410 ***
No.Dir	0.166 ***	-0.237 ***	0.123 ***	-0.214 ***	-0.958 ***	-0.412 ***	-0.701 ***
Ind	0.691 ***	-0.144 ***	0.183 ***	-0.185 ***	-0.793 ***	-0.114 **	-0.652 ***
Not busy	0.674 ***	-0.102 **	0.214 ***	0.161 ***	-0.727 ***	0.046	-0.481 ***
Not old	0.649 ***	-0.162 ***	0.522 ***	-0.115 **	-0.722 ***	0.063	-0.572 ***
No Dual	0.268 ***	0.102 **	0.091 *	-0.065	-0.092 *	0.413 ***	-0.114 **
EG	-0.194 ***	-0.030	-0.040	0.080 *	0.268 ***	0.420 ***	0.694 ***
Ind	1	0.074	0.154 ***	-0.066	-0.191 ***	0.303 ***	-0.260 ***
Size 7-12	0.066	1	-0.086 *	0.060	-0.006	0.060	0.008
Pnot old	0.116 **	-0.103 **	1	0.056	-0.125 **	0.399 ***	-0.088 *
Pnot busy	-0.094 **	0.088 *	-0.034	1	0.207 ***	0.454 ***	0.497 ***
Resize	-0.172 ***	0.159 ***	-0.088 *	0.261 ***	1	0.417 ***	0.734 ***
Cindex	0.342 ***	0.039	0.307 ***	0.415 ***	0.437 ***	1	0.677 ***
Corp1	-0.248 ***	0.042	-0.087 *	0.520 ***	0.734 ***	0.648 ***	1

Note:
1. The Pearson correlation coefficients are presented in the upper half and the Spearman-rank correlation coefficients are presented in the lower half.
2. Statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.

Table 4 Regression: Continuous Value of Earnings Attributes
Panel A Each Earnings Attribute

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.061	20.13	0.000		0.066	4.06	0.000		0.061	7.12	0.000		0.097	4.55	0.000		0.067	4.72	0.000	
Chgroa	-0.024	-0.50	0.615		4.045	13.94	0.000	***	2.365	17.45	0.000	***	1.148	3.63	0.000	***	1.796	7.96	0.000	***
Return	0.010	3.05	0.002	***	0.248	13.51	0.000	***	0.142	15.23	0.000	***	0.117	5.08	0.000	***	0.156	10.08	0.000	***
Persist	-0.003	-0.70	0.485		0.000	0.02	0.987		0.000	-0.03	0.973		-0.070	-1.98	0.048	##	-0.033	-1.40	0.162	
ChgroaPersist	0.177	1.97	0.049	**	-0.004	-0.01	0.994		0.006	0.02	0.981		0.306	0.50	0.618		-0.116	-0.27	0.784	
Adj R-Squared	0.003				0.157				0.168				0.019				0.052			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.058	22.38	0.000		0.096	6.95	0.000		0.072	9.80	0.000		0.121	6.71	0.000		0.099	8.13	0.000	
Chgroa	-0.003	-0.05	0.962		5.149	13.93	0.000	***	3.364	19.20	0.000	***	1.908	4.39	0.000	***	2.555	8.68	0.000	***
Return	0.010	3.17	0.002	***	0.248	13.50	0.000	***	0.140	15.13	0.000	***	0.121	5.25	0.000	***	0.157	10.19	0.000	***
Accruals	-0.063	-0.42	0.678		2.293	2.75	0.006	###	0.779	1.83	0.067	#	4.463	4.21	0.000	###	3.531	4.98	0.000	###
ChgroaAccruals	-2.424	-0.92	0.355		57.317	3.55	0.000	***	49.854	6.73	0.000	***	35.675	1.88	0.061	**	41.727	3.35	0.001	***
Adj R-Squared	0.002				0.161				0.174				0.022				0.057			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.061	25.47	0.000		0.094	7.54	0.000		0.078	11.66	0.000		0.127	7.70	0.000		0.101	8.99	0.000	
Chgroa	0.105	1.48	0.138	*	7.735	19.40	0.000	***	4.972	25.35	0.000	***	2.523	5.20	0.000	***	3.577	10.85	0.000	***
Return	0.010	3.14	0.002	***	0.243	13.32	0.000	***	0.133	14.44	0.000	***	0.121	5.26	0.000	***	0.153	9.94	0.000	***
Predict	0.060	1.27	0.205		0.721	2.77	0.006	###	0.323	2.44	0.015	##	1.697	5.21	0.000	###	1.239	5.55	0.000	###
ChgroaPredict	0.763	0.98	0.328		46.686	10.52	0.000	***	32.594	15.02	0.000	***	16.038	3.05	0.002	***	23.039	6.35	0.000	***
Adj R-Squared	0.002				0.179				0.198				0.025				0.062			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	30.31	0.000		0.073	6.93	0.000		0.065	11.97	0.000		0.081	6.05	0.000		0.070	7.69	0.000	
Chgroa	0.069	1.55	0.122	*	4.670	17.79	0.000	***	2.692	21.22	0.000	***	1.785	5.83	0.000	***	2.265	10.73	0.000	***
Return	0.010	3.18	0.002	***	0.250	13.60	0.000	***	0.142	15.31	0.000	***	0.120	5.19	0.000	***	0.156	10.13	0.000	***
Smooth	0.000	0.31	0.758		-0.006	-1.05	0.294		-0.004	-1.32	0.186		-0.018	-2.57	0.010	###	-0.017	-3.54	0.000	###
ChgroaSmooth	-0.018	-0.79	0.428		-0.476	-3.50	0.000	###	-0.233	-3.70	0.000	###	-0.362	-2.43	0.015	##	-0.362	-3.45	0.001	###
Adj R-Squared	0.002				0.160				0.170				0.021				0.055			
No. of Obs.	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Persist}_{it} + \beta_7 \text{Chgroa}_{it} * \text{Persist}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_4 \text{Accruals}_{it} + \beta_8 \text{Chgroa}_{it} * \text{Accruals}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_5 \text{Predict}_{it} + \beta_9 \text{Chgroa}_{it} * \text{Predict}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_6 \text{Smooth}_{it} + \beta_{10} \text{Chgroa}_{it} * \text{Smooth}_{it} + \varepsilon_{it}$$

Note:

1. Using one-tailed test, statistical significant greater than zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 4 Regression: Continuous Value of Earnings Attributes
Panel B Four Earnings Attributes

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.062	15.87	0.000		0.111	5.42	0.000		0.083	7.65	0.000		0.199	7.23	0.000		0.144	7.91	0.000	
Chgroa	-0.004	-0.05	0.964		8.050	15.66	0.000	***	5.344	21.53	0.000	***	2.884	4.67	0.000	***	4.089	9.76	0.000	***
Return	0.010	3.11	0.002	***	0.244	13.36	0.000	***	0.133	14.45	0.000	***	0.119	5.17	0.000	***	0.153	9.90	0.000	***
Persist	-0.005	-0.95	0.341		-0.007	-0.26	0.796		-0.002	-0.16	0.872		-0.093	-2.61	0.009	###	-0.042	-1.79	0.073	#
Accruals	-0.221	-1.23	0.218		1.771	1.80	0.072	#	0.307	0.61	0.540		1.737	1.37	0.170		1.812	2.15	0.031	##
Predict	0.103	1.77	0.077	#	0.352	1.11	0.266		0.255	1.57	0.116		1.389	3.47	0.001	###	0.842	3.09	0.002	###
Smooth	0.001	0.60	0.547		-0.003	-0.52	0.604		-0.002	-0.83	0.404		-0.010	-1.39	0.164		-0.011	-2.20	0.028	##
ChgroaPersist	0.156	1.70	0.088	**	-1.129	-1.95	0.051		-0.648	-2.54	0.011		-0.113	-0.18	0.856		-0.574	-1.34	0.180	
ChgroaAccruals	-3.866	-1.33	0.183		-35.014	-1.89	0.058		3.877	0.48	0.632		12.880	0.62	0.536		9.013	0.66	0.510	
ChgroaPredict	0.850	0.96	0.339		51.916	9.86	0.000	***	32.999	13.36	0.000	***	12.254	2.06	0.040	**	20.951	5.09	0.000	***
ChgroaSmooth	-0.016	-0.71	0.477		-0.136	-0.96	0.336		-0.008	-0.12	0.906		-0.274	-1.79	0.074	#	-0.205	-1.90	0.058	#
Adj R-Squared	0.003				0.180				0.198				0.027				0.064			
No. of Obs.	6181				4445				6195				4471				6141			

Change in Compensation $_{it}$ = $\alpha + \beta_1 Chgroa_{it} + \beta_2 Return_{it} + \beta_3 Persist_{it} + \beta_4 Accruals_{it} + \beta_5 Predict_{it} + \beta_6 Smooth_{it} + \beta_7 Chgroa_{it} * Persist_{it} + \beta_8 Chgroa_{it} * Accruals_{it} + \beta_9 Chgroa_{it} * Predict_{it} + \beta_{10} Chgroa_{it} * Smooth_{it} + \varepsilon_{it}$

Note:
1. Using one-tailed test, statistical significant greater than zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 5 Regression: Rank of Earnings Attributes

Panel A Each Earnings Attribute

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.061	20.62	0.000		0.065	4.05	0.000		0.059	7.05	0.000		0.117	5.62	0.000		0.074	5.27	0.000	
Chgroa	-0.017	-0.33	0.738		4.152	13.48	0.000	***	2.361	16.14	0.000	***	1.163	3.37	0.001	***	1.807	7.41	0.000	***
Return	0.010	3.07	0.002	***	0.249	13.52	0.000	***	0.142	15.24	0.000	***	0.117	5.06	0.000	***	0.156	10.09	0.000	***
rPersist	0.000	-0.87	0.384		0.000	0.11	0.914		0.000	0.20	0.842		0.000	-3.17	0.002	###	0.000	-1.96	0.049	##
ChgroarPersist	0.000	1.56	0.119	*	0.000	-0.45	0.650		0.000	0.06	0.955		0.000	0.38	0.701		0.000	-0.29	0.772	
Adj R-Squared	0.003				0.157				0.168				0.020				0.052			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.058	19.60	0.000		0.016	0.98	0.329		0.044	5.22	0.000		0.036	1.74	0.082		0.011	0.81	0.419	
Chgroa	0.086	1.74	0.082	**	3.447	11.47	0.000	***	1.739	12.37	0.000	***	0.701	2.03	0.043	**	1.115	4.77	0.000	***
Return	0.011	3.20	0.001	***	0.247	13.47	0.000	***	0.140	15.05	0.000	***	0.118	5.11	0.000	***	0.154	10.00	0.000	***
rAccruals	0.000	0.26	0.794		0.000	3.53	0.000	###	0.000	2.35	0.019	##	0.000	1.32	0.187		0.000	3.27	0.001	###
ChgroarAccruals	0.000	-1.12	0.264		0.002	2.51	0.012	***	0.002	5.83	0.000	***	0.002	2.06	0.040	**	0.002	3.46	0.001	***
Adj R-Squared	0.002				0.161				0.173				0.019				0.055			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.055	18.64	0.000		0.021	1.31	0.191		0.044	5.36	0.000		0.028	1.32	0.186		0.007	0.53	0.595	
Chgroa	0.020	0.46	0.645		2.132	8.30	0.000	***	1.048	8.67	0.000	***	0.597	2.03	0.042	**	0.864	4.23	0.000	***
Return	0.010	3.11	0.002	***	0.239	13.18	0.000	***	0.130	14.18	0.000	***	0.114	4.91	0.000	***	0.149	9.66	0.000	***
rPredict	0.000	1.41	0.160		0.000	3.33	0.001	###	0.000	3.12	0.002	###	0.000	2.00	0.045	##	0.000	3.91	0.000	###
ChgroarPredict	0.000	0.80	0.426		0.012	11.21	0.000	***	0.009	16.42	0.000	***	0.005	3.37	0.001	***	0.006	6.41	0.000	***
Adj R-Squared	0.002				0.182				0.203				0.021				0.060			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	20.05	0.000	`	0.048	2.99	0.003	`	0.050	5.96	0.000	`	0.051	2.49	0.013	`	0.031	2.26	0.024	`
Chgroa	0.035	0.62	0.538		2.774	7.98	0.000	***	1.627	10.18	0.000	***	0.417	1.07	0.285		0.890	3.34	0.001	***
Return	0.010	3.15	0.002	***	0.248	13.49	0.000	***	0.141	15.15	0.000	***	0.119	5.16	0.000	***	0.155	10.02	0.000	***
rnSmooth	0.000	-0.09	0.925		0.000	1.30	0.195		0.000	1.64	0.101		0.000	0.60	0.546		0.000	1.67	0.095	#
ChgroarnSmooth	0.000	0.23	0.821		0.004	4.42	0.000	###	0.003	5.68	0.000	###	0.003	2.65	0.008	###	0.003	3.97	0.000	###
Adj R-Squared	0.002				0.161				0.173				0.019				0.054			
No. of Obs.	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{rPersist}_{it} + \beta_4 \text{Chgroa}_{it} * \text{rPersist}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{rAccruals}_{it} + \beta_4 \text{Chgroa}_{it} * \text{rAccruals}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{rPredict}_{it} + \beta_4 \text{Chgroa}_{it} * \text{rPredict}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{rSmooth}_{it} + \beta_4 \text{Chgroa}_{it} * \text{rnSmooth}_{it} + \varepsilon_{it}$$

Note:

1. Using one-tailed test, statistical significant greater than zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 5 Regression: Rank of Earnings Attributes
Panel B Four Earnings Attributes

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.061	13.94	0.000		0.013	0.57	0.567		0.041	3.41	0.001		0.089	2.94	0.003		0.027	1.33	0.183	
Chgroa	0.018	0.24	0.811		3.358	7.65	0.000	***	1.670	8.06	0.000	***	0.226	0.45	0.654		0.817	2.33	0.020	**
Return	0.010	3.10	0.002	***	0.240	13.24	0.000	***	0.130	14.20	0.000	***	0.113	4.88	0.000	***	0.149	9.66	0.000	***
rPersist	0.000	-1.21	0.226		0.000	-0.39	0.695		0.000	-0.15	0.878		0.000	-3.59	0.000	###	0.000	-2.45	0.014	##
rAccruals	0.000	-0.59	0.555		0.000	2.55	0.011	##	0.000	1.04	0.297		0.000	-0.05	0.964		0.000	1.19	0.233	
rPredict	0.000	1.73	0.084	#	0.000	1.23	0.219		0.000	1.81	0.071	#	0.000	2.18	0.029	##	0.000	2.74	0.006	###
rnSmooth	0.000	-0.85	0.393		0.000	-0.26	0.793		0.000	0.07	0.946		0.000	-0.61	0.543		0.000	-0.34	0.735	
ChgroarPersist	0.000	1.28	0.202		-0.003	-3.11	0.002		-0.001	-3.32	0.001		0.000	-0.39	0.697		-0.001	-1.47	0.142	
ChgroarAccruals	0.000	-1.54	0.123		-0.004	-3.57	0.000		-0.001	-2.17	0.030		0.001	0.50	0.614		0.000	0.46	0.643	
ChgroarPredict	0.000	1.11	0.268		0.015	11.15	0.000	***	0.010	15.13	0.000	***	0.004	2.04	0.041	**	0.005	4.68	0.000	***
ChgroarnSmooth	0.000	-0.02	0.986		0.000	-0.11	0.911		-0.001	-1.31	0.190		0.002	1.36	0.175		0.001	1.27	0.205	
Adj R-Squared	0.003				0.186				0.205				0.023				0.061			
No. of Obs.	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{rPersist}_{it} + \beta_4 \text{rAccruals}_{it} + \beta_5 \text{rPredict}_{it} + \beta_6 \text{rSmooth}_{it} + \beta_7 \text{Chgroa}_{it} * \text{rPersist}_{it} + \beta_8 \text{Chgroa}_{it} * \text{rAccruals}_{it} + \beta_9 \text{Chgroa}_{it} * \text{rPredict}_{it} + \beta_{10} \text{Chgroa}_{it} * \text{rnSmooth}_{it} + \varepsilon_{it}$$

Note:
1. Using one-tailed test, statistical significant greater than zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 6 Regression: Z-Scores of Individual Earnings Attributes

Panel A Individual Earnings Attributes without Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.74	0.000		0.066	7.75	0.000		0.061	13.69	0.000		0.061	5.59	0.000		0.050	6.82	0.000	
Chgroa	0.068	1.96	0.050	**	4.043	19.15	0.000	***	2.368	24.05	0.000	***	1.307	5.37	0.000	***	1.735	10.60	0.000	***
Return	0.010	3.05	0.002	***	0.248	13.51	0.000	***	0.142	15.23	0.000	***	0.117	5.08	0.000	***	0.156	10.08	0.000	***
Persistz	-0.001	-0.70	0.485		0.000	0.02	0.987		0.000	-0.03	0.973		-0.021	-1.98	0.048	##	-0.010	-1.40	0.162	
ChgroaPersistz	0.053	1.97	0.049	**	-0.001	-0.01	0.994		0.002	0.02	0.981		0.092	0.50	0.618		-0.035	-0.27	0.784	
Adj R-Squared	0.003				0.157				0.168				0.019				0.052			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.66	0.000		0.064	7.52	0.000		0.061	13.81	0.000		0.059	5.42	0.000		0.050	6.81	0.000	
Chgroa	0.031	0.84	0.403		4.355	20.33	0.000	***	2.674	25.87	0.000	***	1.414	5.67	0.000	***	1.977	11.44	0.000	***
Return	0.010	3.17	0.002	***	0.248	13.50	0.000	***	0.140	15.13	0.000	***	0.121	5.25	0.000	***	0.157	10.19	0.000	***
Accrualsz	-0.001	-0.42	0.678		0.023	2.75	0.006	###	0.008	1.83	0.067	#	0.044	4.21	0.000	###	0.035	4.98	0.000	###
ChgroaAccrualsz	-0.024	-0.92	0.355		0.566	3.55	0.000	***	0.492	6.73	0.000	***	0.352	1.88	0.061	**	0.412	3.35	0.001	***
Adj R-Squared	0.002				0.161				0.174				0.022				0.057			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.61	0.000		0.066	7.82	0.000		0.066	15.02	0.000		0.061	5.62	0.000		0.053	7.23	0.000	
Chgroa	0.075	1.64	0.102	*	5.923	22.68	0.000	***	3.706	29.04	0.000	***	1.900	5.98	0.000	***	2.682	12.47	0.000	***
Return	0.010	3.14	0.002	***	0.243	13.32	0.000	***	0.133	14.44	0.000	***	0.121	5.26	0.000	***	0.153	9.94	0.000	***
Predictz	0.002	1.27	0.205		0.022	2.77	0.006	###	0.010	2.44	0.015	##	0.053	5.21	0.000	###	0.039	5.55	0.000	###
ChgroaPredictz	0.024	0.98	0.328		1.454	10.52	0.000	***	1.015	15.02	0.000	***	0.500	3.05	0.002	***	0.718	6.35	0.000	***
Adj R-Squared	0.002				0.179				0.198				0.025				0.062			
No. of Obs.	6181				4445				6195				4471				6141			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.67	0.000		0.066	7.73	0.000		0.061	13.83	0.000		0.062	5.67	0.000		0.051	6.96	0.000	
Chgroa	0.050	1.51	0.132	*	4.155	21.17	0.000	***	2.439	25.85	0.000	***	1.393	6.09	0.000	***	1.873	11.93	0.000	***
Return	0.010	3.18	0.002	***	0.250	13.60	0.000	***	0.142	15.31	0.000	***	0.120	5.19	0.000	***	0.156	10.13	0.000	***
nSmoothz	0.000	-0.31	0.758		0.009	1.05	0.294		0.006	1.32	0.186		0.026	2.57	0.010	##	0.025	3.54	0.000	###
ChgroanSmoothz	0.025	0.79	0.428		0.680	3.50	0.000	###	0.333	3.70	0.000	###	0.517	2.43	0.015	##	0.518	3.45	0.001	###
Adj R-Squared	0.002				0.160				0.170				0.021				0.055			
No. of Obs.	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{PersistZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{PersistZ}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{AccrulsZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{AccrulsZ}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{PredictZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{PredictZ}_{it} + \varepsilon_{it}$$

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{nSmoothZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{nSmoothZ}_{it} + \varepsilon_{it}$$

Note:
1. Using one-tailed test, statistical significant greater than zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 6 Regression: Z-Scores of Earnings Attributes
Panel B Four Earnings Attributes without Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.68	0.000		0.066	7.78	0.000		0.065	14.88	0.000		0.062	5.65	0.000		0.053	7.19	0.000	
Chgroa	0.080	1.72	0.086	**	5.786	21.61	0.000	***	3.665	28.32	0.000	***	1.875	5.80	0.000	***	2.631	12.06	0.000	***
Return	0.010	3.11	0.002	***	0.244	13.36	0.000	***	0.133	14.45	0.000	***	0.119	5.17	0.000	***	0.153	9.90	0.000	***
PersistZ	-0.001	-0.95	0.341		-0.002	-0.26	0.796		-0.001	-0.16	0.872		-0.028	-2.61	0.009	###	-0.013	-1.79	0.073	#
AccrualsZ	-0.002	-1.23	0.218		0.017	1.80	0.072	#	0.003	0.61	0.540		0.017	1.37	0.170		0.018	2.15	0.031	##
PredictZ	0.003	1.77	0.077	#	0.011	1.11	0.266		0.008	1.57	0.116		0.043	3.47	0.001	###	0.026	3.09	0.002	###
nSmoothZ	-0.001	-0.60	0.547		0.005	0.52	0.604		0.004	0.83	0.404		0.014	1.39	0.164	*	0.016	2.20	0.028	**
ChgroaPersistZ	0.047	1.70	0.088	**	-0.338	-1.95	0.051		-0.194	-2.54	0.011		-0.034	-0.18	0.856		-0.172	-1.34	0.180	
ChgroaAccrualsZ	-0.038	-1.33	0.183		-0.346	-1.89	0.058		0.038	0.48	0.632		0.127	0.62	0.536		0.089	0.66	0.510	
ChgroaPredictZ	0.026	0.96	0.339		1.617	9.86	0.000	***	1.028	13.36	0.000	***	0.382	2.06	0.040	**	0.653	5.09	0.000	***
ChgroanSmoothZ	0.023	0.71	0.477		0.194	0.96	0.336		0.011	0.12	0.906		0.391	1.79	0.074	#	0.293	1.90	0.058	#
Adj R-Squared	0.003				0.180				0.198				0.027				0.064			
No. of Obs.	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{PersistZ}_{it} + \beta_4 \text{AccrualsZ}_{it} + \beta_5 \text{PredictZ}_{it} + \beta_6 \text{nSmoothZ}_{it} + \beta_7 \text{Chgroa}_{it} * \text{PersistZ}_{it} + \beta_8 \text{Chgroa}_{it} * \text{AccrualsZ}_{it} + \beta_9 \text{Chgroa}_{it} * \text{PredictZ}_{it} + \beta_{10} \text{Chgroa}_{it} * \text{nSmoothZ}_{it} + \varepsilon_{it}$$

Note:
1. Using one-tailed test, statistical significant greater than zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 6 Regression: Z-Scores of Individual Earnings Attributes
Panel C PersistZ

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.064	5.91	0.000		-0.095	-1.65	0.098		0.002	0.06	0.956		-0.014	-0.18	0.861		-0.021	-0.41	0.685	
Chgroa	0.097	1.67	0.095	**	5.038	14.44	0.000	***	2.749	16.78	0.000	***	2.231	5.57	0.000	***	2.330	8.54	0.000	***
Return	0.007	1.33	0.182	*	0.309	10.46	0.000	***	0.181	11.93	0.000	***	0.049	1.29	0.198	*	0.154	6.12	0.000	***
Persistz	-0.001	-0.70	0.481		0.007	0.92	0.359		0.004	0.93	0.352		-0.012	-1.13	0.258		-0.002	-0.34	0.735	
ChgroaPersistz	0.051	1.87	0.061	**	0.116	0.67	0.502		0.026	0.34	0.731		0.153	0.84	0.399		0.025	0.20	0.845	
ChgroaMB	-0.012	-0.71	0.480		-0.510	-5.56	0.000	***	-0.232	-4.71	0.000	***	-0.358	-3.13	0.002	***	-0.307	-3.75	0.000	***
ReturnMB	0.002	0.90	0.370		-0.009	-0.95	0.344		-0.005	-0.91	0.362		0.044	3.61	0.000	***	0.016	1.79	0.074	**
ChgroaShare	0.015	2.25	0.025	##	0.177	3.75	0.000	###	0.021	1.08	0.279		0.130	1.87	0.062	#	0.037	1.19	0.235	
ReturnShare	-0.001	-1.43	0.153		-0.007	-1.61	0.108		-0.004	-2.20	0.028	##	-0.001	-0.13	0.900		-0.001	-0.45	0.651	
lnasset	0.000	0.32	0.752		0.015	2.72	0.007	***	0.007	2.25	0.024	**	-0.001	-0.13	0.900		0.009	1.91	0.057	**
G1	0.000	-0.01	0.990		0.038	0.71	0.481		0.023	0.79	0.432		-0.023	-0.30	0.762		-0.007	-0.15	0.881	
G2	-0.009	-1.01	0.313		0.019	0.39	0.697		0.006	0.24	0.808		-0.008	-0.12	0.905		-0.014	-0.33	0.742	
G3	-0.008	-0.76	0.449		-0.007	-0.13	0.894		-0.018	-0.63	0.526		-0.067	-0.90	0.367		-0.063	-1.33	0.185	
G4	-0.016	-1.78	0.076	#	0.009	0.18	0.861		-0.011	-0.44	0.660		-0.011	-0.17	0.863		-0.008	-0.18	0.854	
G5	-0.003	-0.40	0.690		0.044	1.00	0.317		-0.014	-0.61	0.545		-0.072	-1.20	0.231		-0.053	-1.34	0.179	
G6	-0.015	-1.74	0.082	#	-0.012	-0.26	0.797		-0.018	-0.71	0.477		-0.046	-0.73	0.466		-0.047	-1.14	0.253	
G7	-0.008	-0.85	0.397		0.000	0.01	0.994		-0.016	-0.64	0.520		-0.005	-0.08	0.936		-0.038	-0.90	0.369	
G8	-0.007	-0.83	0.409		0.031	0.67	0.503		-0.020	-0.81	0.416		-0.112	-1.81	0.070	#	-0.081	-2.01	0.045	##
G9	0.001	0.08	0.933		-0.061	-1.23	0.219		-0.030	-1.10	0.272		0.023	0.34	0.730		-0.027	-0.60	0.550	
G10	0.000	0.03	0.974		0.004	0.09	0.927		0.007	0.26	0.798		-0.062	-0.95	0.344		-0.067	-1.56	0.118	
G11	-0.014	-1.51	0.131		-0.014	-0.28	0.779		-0.038	-1.41	0.158		0.037	0.54	0.591		-0.011	-0.24	0.814	
G12	0.002	0.28	0.780		0.079	1.75	0.081	#	0.017	0.70	0.486		0.113	1.76	0.078	#	0.044	1.07	0.284	
G13	-0.003	-0.33	0.738		-0.064	-1.55	0.121		-0.033	-1.49	0.137		-0.052	-0.90	0.369		-0.050	-1.37	0.170	
G14	-0.015	-1.71	0.087	#	-0.040	-0.87	0.386		-0.041	-1.69	0.090	#	-0.095	-1.50	0.135		-0.087	-2.15	0.032	##
D98	0.012	2.03	0.042	##	-0.014	-0.46	0.642		-0.003	-0.18	0.857		0.295	7.09	0.000	###	0.091	3.23	0.001	###
D99	-0.028	-4.75	0.000	###	0.091	2.92	0.003	###	0.021	1.26	0.209		0.319	7.78	0.000	###	0.115	4.12	0.000	###
D00	0.012	2.01	0.044	##	0.018	0.62	0.537		0.026	1.62	0.106		0.109	2.75	0.006	###	0.089	3.27	0.001	###
D01	0.011	1.90	0.057	#	-0.019	-0.60	0.549		-0.034	-2.03	0.042	##	0.201	5.00	0.000	###	0.014	0.50	0.616	
D02	-0.005	-0.90	0.371		0.187	6.05	0.000	###	0.118	7.30	0.000	###	0.002	0.04	0.967		0.023	0.86	0.392	
D03	-0.001	-0.26	0.793		-0.043	-1.46	0.145		-0.028	-1.72	0.085	#	-0.094	-2.42	0.015	##	-0.103	-3.86	0.000	###
D04	-0.008	-1.38	0.167		0.116	4.08	0.000	###	0.059	3.80	0.000	###	0.166	4.40	0.000	###	0.086	3.31	0.001	###
Adj.R Square	0.013				0.186				0.189				0.065				0.071			
No. Obs	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{PersistZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{PersistZ}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{Control variables}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA*CEO shares, Return*CEO shares, Ln Assets, Industry Group 1-15, and Year 98-05.

Note:

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 6 Regression: Z-Scores of Individual Earnings Attributes
Panel D AccrualsZ

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.062	5.58	0.000		-0.077	-1.30	0.193		0.000	0.00	0.998		0.017	0.22	0.828		0.003	0.06	0.954	
Chgroa	0.053	0.94	0.345		5.011	15.41	0.000	***	2.910	18.42	0.000	***	2.210	5.83	0.000	***	2.463	9.33	0.000	***
Return	0.008	1.51	0.131	*	0.306	10.39	0.000	***	0.179	11.83	0.000	***	0.051	1.34	0.179	*	0.154	6.11	0.000	***
AccrualsZ	-0.001	-0.84	0.400		0.013	1.45	0.147		0.002	0.53	0.597		0.024	2.08	0.037	##	0.020	2.54	0.011	##
ChgroaAccrualsz	-0.026	-0.99	0.324		0.334	2.05	0.041	**	0.426	5.81	0.000	***	0.366	1.93	0.053	**	0.345	2.80	0.005	***
ChgroaMB	-0.011	-0.63	0.530		-0.453	-4.85	0.000	***	-0.188	-3.81	0.000	***	-0.309	-2.65	0.008	***	-0.278	-3.39	0.001	***
ReturnMB	0.001	0.78	0.433		-0.008	-0.80	0.422		-0.004	-0.79	0.427		0.045	3.63	0.000	***	0.016	1.82	0.068	**
ChgroaShare	0.017	2.49	0.013	##	0.181	3.82	0.000	###	0.018	0.95	0.340		0.142	2.05	0.040	##	0.036	1.14	0.253	
ReturnShare	-0.001	-1.41	0.158		-0.007	-1.65	0.099	#	-0.004	-2.14	0.033	##	-0.001	-0.18	0.859		-0.002	-0.48	0.630	
lnasset	0.001	0.51	0.613		0.013	2.29	0.022	**	0.007	2.18	0.030	**	-0.005	-0.71	0.475		0.006	1.19	0.233	
G1	0.001	0.07	0.948		0.031	0.57	0.571		0.024	0.82	0.413		-0.028	-0.38	0.706		-0.013	-0.26	0.798	
G2	-0.008	-0.89	0.372		0.004	0.08	0.935		0.001	0.04	0.965		-0.008	-0.12	0.901		-0.019	-0.44	0.660	
G3	-0.007	-0.70	0.484		-0.013	-0.25	0.801		-0.018	-0.64	0.523		-0.068	-0.92	0.359		-0.066	-1.39	0.165	
G4	-0.016	-1.71	0.088	#	0.003	0.05	0.956		-0.011	-0.44	0.661		-0.008	-0.12	0.903		-0.007	-0.17	0.863	
G5	-0.004	-0.43	0.669		0.044	0.99	0.321		-0.013	-0.55	0.582		-0.067	-1.12	0.262		-0.049	-1.23	0.220	
G6	-0.015	-1.75	0.079	#	-0.015	-0.32	0.747		-0.016	-0.64	0.523		-0.048	-0.76	0.447		-0.048	-1.16	0.247	
G7	-0.008	-0.88	0.380		0.001	0.02	0.982		-0.015	-0.61	0.542		0.005	0.08	0.940		-0.030	-0.72	0.473	
G8	-0.007	-0.80	0.423		0.030	0.64	0.522		-0.020	-0.83	0.406		-0.101	-1.63	0.104		-0.074	-1.83	0.067	#
G9	0.001	0.06	0.951		-0.059	-1.20	0.230		-0.028	-1.04	0.298		0.033	0.48	0.629		-0.021	-0.46	0.647	
G10	0.000	0.04	0.965		0.005	0.10	0.923		0.007	0.26	0.791		-0.055	-0.83	0.405		-0.062	-1.45	0.146	
G11	-0.014	-1.45	0.147		-0.021	-0.41	0.678		-0.038	-1.41	0.157		0.031	0.44	0.657		-0.017	-0.38	0.708	
G12	0.004	0.44	0.661		0.067	1.47	0.141		0.015	0.62	0.533		0.105	1.63	0.102		0.035	0.86	0.391	
G13	-0.002	-0.30	0.762		-0.068	-1.64	0.101		-0.031	-1.43	0.152		-0.057	-0.99	0.324		-0.053	-1.45	0.148	
G14	-0.015	-1.74	0.082	#	-0.036	-0.78	0.434		-0.040	-1.65	0.099	#	-0.083	-1.30	0.194		-0.078	-1.93	0.053	#
D98	0.013	2.11	0.035	##	-0.015	-0.50	0.615		0.000	0.00	0.997		0.294	7.08	0.000	###	0.090	3.20	0.001	###
D99	-0.028	-4.71	0.000	###	0.088	2.83	0.005	###	0.023	1.35	0.176		0.316	7.70	0.000	###	0.113	4.04	0.000	###
D00	0.011	1.96	0.050	#	0.015	0.51	0.608		0.026	1.62	0.105		0.106	2.68	0.007	###	0.087	3.20	0.001	###
D01	0.011	1.84	0.066	#	-0.018	-0.56	0.577		-0.029	-1.77	0.077	#	0.203	5.07	0.000	###	0.017	0.60	0.550	
D02	-0.005	-0.87	0.382		0.188	6.09	0.000	###	0.120	7.45	0.000	###	0.004	0.10	0.920		0.024	0.89	0.373	
D03	-0.002	-0.33	0.741		-0.043	-1.45	0.146		-0.026	-1.62	0.106		-0.095	-2.45	0.014	##	-0.103	-3.86	0.000	###
D04	-0.008	-1.39	0.164		0.115	4.04	0.000	###	0.060	3.85	0.000	###	0.167	4.42	0.000	###	0.086	3.32	0.001	###
Adj.R Square	0.013				0.187				0.193				0.066				0.073			
No. Obs	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{AccrualsZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{AccrualsZ}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{ Control variables}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.

Note:

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 6 Regression: Z-Scores of Individual Earnings Attributes
Panel E PredictZ

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.066	5.88	0.000		-0.082	-1.41	0.160		0.001	0.03	0.975		0.074	0.89	0.374		0.006	0.11	0.911	
Chgroa	0.088	1.43	0.153	*	6.085	17.55	0.000	***	3.740	21.96	0.000	***	2.659	6.37	0.000	***	3.004	10.44	0.000	***
Return	0.008	1.43	0.153	*	0.295	10.08	0.000	***	0.166	11.08	0.000	***	0.044	1.17	0.244		0.145	5.76	0.000	***
PredictZ	0.001	0.76	0.447		0.017	1.89	0.059	#	0.006	1.21	0.225		1.120	2.99	0.003	###	0.024	3.03	0.002	###
ChgroaPredictz	0.023	0.91	0.362		1.235	8.64	0.000	***	0.934	13.54	0.000	***	0.491	2.98	0.003	***	0.635	5.50	0.000	***
ChgroaMB	-0.006	-0.34	0.732		-0.301	-3.25	0.001	***	-0.109	-2.22	0.026	**	-0.290	-2.51	0.012	***	-0.227	-2.76	0.006	***
ReturnMB	0.002	0.84	0.401		-0.005	-0.52	0.604		-0.003	-0.51	0.613		0.046	3.77	0.000	***	0.017	1.98	0.048	**
ChgroaShare	0.016	2.37	0.018	##	0.138	2.94	0.003	###	-0.004	-0.23	0.818		0.118	1.70	0.088	#	0.022	0.71	0.480	
ReturnShare	-0.001	-1.43	0.152		-0.007	-1.72	0.085	#	-0.004	-1.99	0.047	##	-0.002	-0.23	0.819		-0.002	-0.46	0.646	
lnasset	0.000	0.07	0.941		0.013	2.20	0.028	**	0.007	2.14	0.032	**	-0.008	-1.02	0.308		0.005	1.00	0.320	
G1	0.000	-0.01	0.994		0.032	0.59	0.554		0.021	0.71	0.477		-0.029	-0.39	0.696		-0.012	-0.25	0.802	
G2	-0.008	-0.85	0.397		0.025	0.53	0.594		0.007	0.28	0.777		0.025	0.37	0.709		0.004	0.10	0.921	
G3	-0.007	-0.73	0.463		-0.009	-0.17	0.861		-0.018	-0.65	0.516		-0.064	-0.87	0.386		-0.063	-1.33	0.184	
G4	-0.015	-1.70	0.090	#	0.006	0.12	0.906		-0.013	-0.50	0.619		-0.001	-0.01	0.992		-0.003	-0.07	0.944	
G5	-0.003	-0.35	0.727		0.035	0.80	0.423		-0.019	-0.81	0.419		-0.062	-1.02	0.307		-0.048	-1.20	0.232	
G6	-0.015	-1.75	0.080	#	-0.010	-0.23	0.820		-0.014	-0.58	0.565		-0.045	-0.71	0.480		-0.043	-1.05	0.292	
G7	-0.007	-0.76	0.448		0.004	0.09	0.928		-0.017	-0.66	0.507		0.014	0.21	0.833		-0.026	-0.63	0.531	
G8	-0.005	-0.63	0.529		0.037	0.79	0.430		-0.019	-0.80	0.425		-0.076	-1.21	0.226		-0.060	-1.47	0.142	
G9	0.001	0.11	0.909		-0.062	-1.26	0.209		-0.030	-1.11	0.266		0.029	0.42	0.672		-0.024	-0.52	0.603	
G10	0.001	0.11	0.916		0.005	0.11	0.914		0.007	0.29	0.772		-0.052	-0.78	0.434		-0.061	-1.42	0.156	
G11	-0.014	-1.52	0.130		-0.021	-0.42	0.672		-0.043	-1.65	0.100		0.038	0.55	0.582		-0.013	-0.29	0.771	
G12	0.003	0.31	0.760		0.069	1.53	0.126		0.012	0.49	0.625		0.106	1.67	0.096	#	0.037	0.90	0.367	
G13	-0.003	-0.36	0.723		-0.072	-1.76	0.079	#	-0.034	-1.56	0.119		-0.057	-0.99	0.320		-0.053	-1.44	0.149	
G14	-0.014	-1.57	0.117		-0.029	-0.63	0.529		-0.035	-1.45	0.148		-0.072	-1.12	0.261		-0.068	-1.68	0.093	#
D98	0.013	2.08	0.038	##	-0.005	-0.17	0.867		0.006	0.35	0.729		0.292	7.02	0.000	###	0.092	3.28	0.001	###
D99	-0.028	-4.76	0.000	###	0.096	3.11	0.002	###	0.027	1.65	0.098	#	0.313	7.61	0.000	###	0.114	4.08	0.000	###
D00	0.011	1.94	0.052	#	0.027	0.90	0.366		0.034	2.12	0.034	##	0.107	2.70	0.007	###	0.092	3.39	0.001	###
D01	0.011	1.92	0.055	#	0.000	0.00	1.000		-0.018	-1.08	0.278		0.207	5.15	0.000	###	0.024	0.85	0.397	
D02	-0.005	-0.87	0.383		0.190	6.19	0.000	###	0.117	7.34	0.000	###	0.000	0.01	0.996		0.021	0.79	0.430	
D03	-0.002	-0.27	0.789		-0.027	-0.91	0.363		-0.015	-0.92	0.358		-0.090	-2.33	0.020	##	-0.095	-3.55	0.000	###
D04	-0.008	-1.37	0.170		0.122	4.32	0.000	###	0.061	4.00	0.000	###	0.166	4.41	0.000	###	0.088	3.40	0.001	###
Adj.R Square	0.013				0.200				0.212				0.068				0.077			
No. Obs	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{PredictsZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{PredictsZ}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{ Control variables}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.

Note:

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 6 Regression: Z-Scores of Individual Earnings Attributes
Panel F SmoothZ

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.064	5.87	0.000		-0.095	-1.66	0.097		0.003	0.10	0.919		-0.011	-0.14	0.885		-0.018	-0.36	0.721	
Chgroa	0.069	1.24	0.216		5.044	15.54	0.000	***	2.810	17.92	0.000	***	2.259	5.94	0.000	***	2.449	9.37	0.000	***
Return	0.008	1.49	0.135	*	0.309	10.51	0.000	***	0.181	11.95	0.000	***	0.053	1.42	0.156	*	0.155	6.17	0.000	***
nSmoothZ	-0.001	-0.74	0.459		0.013	1.45	0.148		0.005	1.23	0.220		0.016	1.56	0.119		0.019	2.64	0.008	###
ChgroanSmoothZ	0.021	0.65	0.514		0.606	3.15	0.002	###	0.312	3.50	0.000	###	0.471	2.26	0.024	##	0.493	3.31	0.001	###
ChgroaMB	-0.009	-0.52	0.600		-0.494	-5.47	0.000	***	-0.233	-4.77	0.000	***	-0.356	-3.13	0.002	***	-0.313	-3.86	0.000	***
ReturnMB	0.002	0.82	0.410		-0.009	-0.93	0.351		-0.005	-0.91	0.364		0.043	3.52	0.000	***	0.015	1.72	0.086	**
ChgroaShare	0.016	2.40	0.016	##	0.172	3.64	0.000	###	0.018	0.98	0.327		0.130	1.87	0.062	#	0.035	1.12	0.263	
ReturnShare	-0.001	-1.41	0.159		-0.007	-1.64	0.101		-0.004	-2.18	0.029	##	-0.001	-0.20	0.845		-0.002	-0.47	0.637	
lnasset	0.000	0.30	0.761		0.016	2.79	0.005	***	0.007	2.27	0.023	**	-0.002	-0.22	0.828		0.009	1.88	0.060	**
G1	0.001	0.05	0.962		0.034	0.63	0.528		0.021	0.73	0.468		-0.022	-0.30	0.768		-0.011	-0.23	0.821	
G2	-0.009	-0.96	0.338		0.019	0.41	0.683		0.006	0.23	0.817		0.009	0.13	0.897		-0.007	-0.16	0.873	
G3	-0.007	-0.72	0.474		-0.011	-0.21	0.830		-0.020	-0.69	0.489		-0.064	-0.86	0.388		-0.065	-1.37	0.170	
G4	-0.016	-1.73	0.084	#	0.006	0.13	0.900		-0.013	-0.50	0.619		-0.003	-0.04	0.967		-0.005	-0.13	0.899	
G5	-0.004	-0.43	0.667		0.044	1.00	0.315		-0.014	-0.58	0.560		-0.067	-1.11	0.267		-0.050	-1.25	0.211	
G6	-0.016	-1.78	0.074	#	-0.009	-0.20	0.843		-0.016	-0.66	0.509		-0.042	-0.66	0.508		-0.043	-1.05	0.292	
G7	-0.008	-0.87	0.385		0.003	0.06	0.954		-0.016	-0.62	0.533		0.003	0.05	0.960		-0.032	-0.76	0.446	
G8	-0.007	-0.79	0.428		0.030	0.65	0.516		-0.019	-0.80	0.424		-0.103	-1.66	0.097	#	-0.075	-1.87	0.061	#
G9	0.001	0.12	0.904		-0.063	-1.28	0.202		-0.031	-1.13	0.259		0.024	0.36	0.720		-0.029	-0.63	0.528	
G10	0.000	0.05	0.958		0.005	0.10	0.924		0.007	0.26	0.793		-0.058	-0.87	0.382		-0.065	-1.52	0.129	
G11	-0.014	-1.50	0.134		-0.016	-0.33	0.740		-0.039	-1.44	0.149		0.038	0.56	0.577		-0.013	-0.29	0.773	
G12	0.004	0.40	0.686		0.071	1.57	0.116		0.014	0.55	0.580		0.113	1.77	0.076	#	0.039	0.94	0.347	
G13	-0.002	-0.30	0.762		-0.067	-1.64	0.102		-0.033	-1.52	0.128		-0.053	-0.93	0.355		-0.054	-1.47	0.141	
G14	-0.015	-1.70	0.090	#	-0.038	-0.84	0.403		-0.039	-1.60	0.111		-0.089	-1.40	0.162		-0.081	-2.00	0.045	##
D98	0.013	2.13	0.033	##	-0.017	-0.57	0.571		-0.005	-0.27	0.790		0.294	7.07	0.000	###	0.088	3.14	0.002	###
D99	-0.028	-4.72	0.000	###	0.088	2.84	0.005	###	0.019	1.15	0.249		0.316	7.71	0.000	###	0.112	4.00	0.000	###
D00	0.011	1.95	0.051	#	0.014	0.46	0.648		0.024	1.49	0.137		0.106	2.66	0.008	###	0.085	3.14	0.002	###
D01	0.011	1.90	0.058	#	-0.020	-0.62	0.536		-0.035	-2.07	0.038	##	0.200	4.97	0.000	###	0.012	0.45	0.656	
D02	-0.005	-0.84	0.398		0.185	6.01	0.000	###	0.116	7.19	0.000	###	-0.001	-0.04	0.971		0.019	0.70	0.481	
D03	-0.002	-0.31	0.759		-0.043	-1.47	0.142		-0.027	-1.70	0.089	#	-0.095	-2.45	0.015	##	-0.103	-3.87	0.000	###
D04	-0.008	-1.39	0.164		0.116	4.06	0.000	###	0.059	3.78	0.000	###	0.166	4.41	0.000	###	0.086	3.32	0.001	###
Adj.R Square	0.013				0.188				0.190				0.066				0.074			
No. Obs	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{nSmoothZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{nSmoothZ}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{Control variable}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.

Note:

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 6 Regression: Z-Scores of Earnings Attributes
Panel G Four Earnings Attributes with Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.065	5.75	0.000		-0.081	-1.37	0.171		-0.002	-0.07	0.947		0.039	0.48	0.629		0.012	0.22	0.824	
Chgroa	0.108	1.71	0.087	**	6.019	16.58	0.000	***	3.665	20.96	0.000	***	2.669	6.21	0.000	***	2.971	10.07	0.000	***
Return	0.007	1.30	0.192	*	0.299	10.22	0.000	***	0.168	11.21	0.000	***	0.041	1.09	0.275		0.146	5.79	0.000	***
Persistz	-0.001	-0.86	0.388		0.005	0.64	0.525		0.003	0.76	0.448		-0.017	-1.55	0.120		-0.005	-0.66	0.512	
Accrualz	-0.002	-1.21	0.227		0.008	0.83	0.406		0.000	-0.08	0.935		0.009	0.71	0.477		0.011	1.23	0.220	
Predictz	0.003	1.31	0.192		0.009	0.87	0.382		0.005	0.92	0.358		0.030	2.30	0.022	##	0.017	1.84	0.066	#
nSmoothz	-0.001	-0.88	0.378		0.010	1.10	0.273		0.004	0.99	0.321		0.011	1.04	0.296		0.015	2.04	0.041	##
ChgroaPersistz	0.046	1.65	0.100	*	-0.238	-1.35	0.177		-0.167	-2.16	0.031		0.029	0.16	0.877		-0.101	-0.78	0.438	
ChgroaAccrualz	-0.039	-1.38	0.169		-0.394	-2.14	0.032		0.033	0.41	0.678		0.157	0.76	0.446		0.071	0.53	0.599	
ChgroaPredictz	0.026	0.91	0.361		1.390	8.32	0.000	***	0.946	12.11	0.000	***	0.364	1.96	0.050	**	0.565	4.35	0.000	***
ChgroanSmoothz	0.020	0.62	0.534		0.229	1.14	0.253		0.017	0.19	0.852		0.339	1.57	0.116		0.303	1.97	0.049	##
ChgroaMB	-0.012	-0.67	0.501		-0.314	-3.26	0.001	***	-0.093	-1.86	0.063	**	-0.291	-2.45	0.014	***	-0.227	-2.71	0.007	***
ReturnMB	0.002	0.94	0.345		-0.007	-0.70	0.481		-0.003	-0.63	0.529		0.047	3.81	0.000	***	0.017	1.91	0.056	**
ChgroaShare	0.015	2.16	0.031	##	0.132	2.80	0.005	###	0.000	-0.01	0.993		0.119	1.70	0.090	#	0.024	0.77	0.442	
ReturnShare	-0.001	-1.43	0.153		-0.007	-1.74	0.081	#	-0.004	-1.98	0.048	##	-0.002	-0.22	0.824		-0.002	-0.46	0.644	
lnasset	0.000	0.20	0.845		0.013	2.22	0.027	**	0.007	2.19	0.028	**	-0.008	-1.05	0.294		0.005	0.94	0.350	
G1	0.000	0.02	0.983		0.025	0.47	0.639		0.021	0.74	0.461		-0.036	-0.48	0.630		-0.019	-0.38	0.705	
G2	-0.007	-0.77	0.442		0.024	0.49	0.622		0.010	0.36	0.716		0.011	0.17	0.864		-0.004	-0.08	0.937	
G3	-0.007	-0.71	0.475		-0.012	-0.24	0.812		-0.018	-0.63	0.532		-0.071	-0.96	0.335		-0.067	-1.43	0.154	
G4	-0.016	-1.75	0.079	#	0.005	0.10	0.922		-0.010	-0.40	0.688		-0.009	-0.14	0.890		-0.006	-0.14	0.892	
G5	-0.003	-0.41	0.684		0.032	0.74	0.459		-0.018	-0.77	0.442		-0.058	-0.96	0.338		-0.045	-1.13	0.257	
G6	-0.015	-1.73	0.083	#	-0.011	-0.25	0.803		-0.014	-0.56	0.577		-0.042	-0.66	0.507		-0.042	-1.03	0.305	
G7	-0.008	-0.85	0.396		0.005	0.11	0.912		-0.015	-0.60	0.548		0.015	0.24	0.812		-0.023	-0.54	0.590	
G8	-0.006	-0.69	0.488		0.035	0.75	0.450		-0.017	-0.71	0.476		-0.079	-1.26	0.208		-0.060	-1.47	0.142	
G9	0.001	0.07	0.948		-0.063	-1.28	0.200		-0.030	-1.11	0.265		0.028	0.42	0.677		-0.024	-0.53	0.596	
G10	0.000	0.02	0.984		0.007	0.15	0.879		0.009	0.35	0.725		-0.051	-0.77	0.439		-0.059	-1.38	0.169	
G11	-0.014	-1.42	0.155		-0.027	-0.55	0.583		-0.044	-1.64	0.100		0.035	0.51	0.611		-0.018	-0.41	0.684	
G12	0.003	0.36	0.718		0.063	1.37	0.169		0.013	0.53	0.595		0.092	1.44	0.151		0.026	0.63	0.526	
G13	-0.002	-0.29	0.775		-0.078	-1.90	0.058	#	-0.034	-1.58	0.115		-0.060	-1.03	0.301		-0.057	-1.54	0.123	
G14	-0.014	-1.62	0.106		-0.030	-0.66	0.512		-0.034	-1.40	0.161		-0.069	-1.07	0.283		-0.065	-1.59	0.111	
D98	0.012	2.01	0.044	##	-0.007	-0.23	0.822		0.007	0.43	0.667		0.287	6.88	0.000	###	0.089	3.16	0.002	###
D99	-0.028	-4.74	0.000	###	0.094	3.05	0.002	###	0.028	1.65	0.098	#	0.308	7.48	0.000	###	0.110	3.93	0.000	###
D00	0.012	2.03	0.042	##	0.025	0.85	0.397		0.032	2.01	0.045	##	0.103	2.59	0.010	##	0.087	3.19	0.001	###
D01	0.011	1.91	0.057	#	0.001	0.02	0.986		-0.018	-1.10	0.272		0.205	5.10	0.000	###	0.021	0.77	0.443	
D02	-0.005	-0.92	0.359		0.188	6.14	0.000	###	0.117	7.35	0.000	###	-0.002	-0.06	0.956		0.019	0.69	0.489	
D03	-0.001	-0.21	0.835		-0.028	-0.95	0.343		-0.015	-0.97	0.332		-0.091	-2.33	0.020	##	-0.097	-3.62	0.000	###
D04	-0.008	-1.38	0.167		0.122	4.32	0.000	###	0.062	4.01	0.000	###	0.165	4.38	0.000	###	0.087	3.37	0.001	###

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Adj.R Square	0.013				0.201				0.212				0.068				0.078			
No. Obs	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{PersistZ}_{it} + \beta_4 \text{AccrualsZ}_{it} + \beta_5 \text{PredictZ}_{it} + \beta_6 \text{nSmoothZ}_{it} + \beta_7 \text{Chgroa}_{it} * \text{PersistZ}_{it} + \beta_8 \text{Chgroa}_{it} * \text{AccrualsZ}_{it} + \beta_9 \text{Chgroa}_{it} * \text{PredictZ}_{it} + \beta_{10} \text{Chgroa}_{it} * \text{nSmoothZ}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{ Control variables}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 7 Regression: The Index of Earnings Attributes

Panel A Index of Earnings Attributes with Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t	
Intercept	0.066	5.78	0.000		-0.140	-2.34	0.019		-0.009	-0.27	0.785		-0.051	-0.63	0.528		-0.055	-1.04	0.301	
Chgroa	0.026	0.31	0.757		3.102	6.15	0.000	***	1.189	5.06	0.000	***	0.806	1.41	0.159	*	1.008	2.57	0.010	***
Return	0.008	1.43	0.154	*	0.302	10.26	0.000	***	0.172	11.36	0.000	***	0.046	1.22	0.224		0.148	5.88	0.000	***
Index	0.000	-0.52	0.604		0.000	2.54	0.011	##	0.000	1.34	0.181		0.000	1.72	0.086	#	0.000	2.32	0.021	##
ChgroaIndex	0.000	0.59	0.552		0.002	4.85	0.000	***	0.002	8.69	0.000	***	0.001	3.09	0.002	***	0.001	4.45	0.000	***
ChgroaMB	-0.008	-0.45	0.653		-0.449	-4.94	0.000	***	-0.196	-4.02	0.000	***	-0.314	-2.75	0.006	***	-0.282	-3.47	0.001	***
ReturnMB	0.002	0.83	0.404		-0.007	-0.73	0.466		-0.003	-0.60	0.549		0.045	3.65	0.000	***	0.016	1.89	0.059	**
ChgroaShare	0.016	2.38	0.017	##	0.166	3.53	0.000	###	0.005	0.26	0.798		0.126	1.82	0.070	#	0.025	0.79	0.427	
ReturnShare	-0.001	-1.40	0.162		-0.007	-1.73	0.084	#	-0.004	-2.24	0.025	##	-0.002	-0.24	0.814		-0.002	-0.54	0.587	
lnasset	0.000	0.43	0.665		0.012	2.04	0.042	**	0.006	1.87	0.062	**	-0.005	-0.63	0.528		0.006	1.22	0.223	
G1	0.001	0.06	0.956		0.026	0.49	0.626		0.020	0.68	0.499		-0.029	-0.38	0.702		-0.014	-0.28	0.778	
G2	-0.009	-1.01	0.310		0.021	0.44	0.659		0.001	0.04	0.971		0.009	0.13	0.895		-0.007	-0.16	0.870	
G3	-0.007	-0.72	0.469		-0.013	-0.25	0.801		-0.020	-0.72	0.474		-0.064	-0.88	0.381		-0.064	-1.35	0.176	
G4	-0.016	-1.75	0.080	#	0.012	0.25	0.801		-0.013	-0.52	0.606		0.000	0.00	0.998		-0.002	-0.04	0.966	
G5	-0.004	-0.44	0.661		0.047	1.06	0.287		-0.015	-0.65	0.517		-0.067	-1.11	0.269		-0.049	-1.23	0.220	
G6	-0.016	-1.78	0.075	#	-0.011	-0.24	0.811		-0.017	-0.69	0.491		-0.043	-0.68	0.498		-0.044	-1.07	0.284	
G7	-0.008	-0.89	0.374		0.005	0.11	0.910		-0.018	-0.72	0.473		0.004	0.07	0.947		-0.031	-0.74	0.461	
G8	-0.007	-0.84	0.398		0.038	0.82	0.410		-0.022	-0.92	0.359		-0.096	-1.54	0.123		-0.071	-1.74	0.081	#
G9	0.001	0.08	0.934		-0.058	-1.17	0.242		-0.029	-1.07	0.285		0.030	0.44	0.663		-0.022	-0.49	0.622	
G10	0.000	0.03	0.979		0.004	0.09	0.926		0.004	0.14	0.889		-0.056	-0.85	0.393		-0.064	-1.49	0.137	
G11	-0.014	-1.50	0.134		-0.024	-0.48	0.631		-0.043	-1.63	0.104		0.035	0.51	0.611		-0.017	-0.39	0.700	
G12	0.004	0.42	0.677		0.062	1.37	0.172		0.011	0.46	0.646		0.105	1.64	0.101		0.034	0.82	0.412	
G13	-0.002	-0.30	0.761		-0.074	-1.80	0.072	#	-0.034	-1.58	0.114		-0.057	-0.99	0.322		-0.055	-1.50	0.133	
G14	-0.015	-1.74	0.083	#	-0.032	-0.69	0.491		-0.040	-1.67	0.095	#	-0.084	-1.32	0.188		-0.079	-1.94	0.053	#
D98	0.012	1.96	0.050	#	0.005	0.17	0.862		0.001	0.06	0.952		0.311	7.34	0.000	###	0.105	3.65	0.000	###
D99	-0.029	-4.74	0.000	###	0.113	3.59	0.000	###	0.029	1.69	0.091	#	0.336	8.06	0.000	###	0.132	4.63	0.000	###
D00	0.011	1.88	0.060	#	0.035	1.17	0.242		0.035	2.13	0.034	##	0.123	3.06	0.002	###	0.102	3.73	0.000	###
D01	0.011	1.80	0.071	#	0.001	0.04	0.967		-0.024	-1.42	0.155		0.217	5.34	0.000	###	0.030	1.06	0.291	
D02	-0.005	-0.90	0.368		0.194	6.29	0.000	###	0.119	7.38	0.000	###	0.007	0.17	0.864		0.027	1.00	0.317	
D03	-0.002	-0.29	0.774		-0.035	-1.18	0.237		-0.020	-1.25	0.212		-0.090	-2.31	0.021	##	-0.097	-3.63	0.000	###
D04	-0.008	-1.38	0.168		0.113	3.96	0.000	###	0.058	3.71	0.000	###	0.163	4.32	0.000	###	0.084	3.22	0.001	###
Adj.R Square	0.013				0.191				0.199				0.067				0.075			
No. Obs	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{IndexZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Index}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{Control variables}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.

Note:

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 7 Regression: The Index of Earnings Attributes
Panel B Index of Earnings Attributes without Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.058	13.88	0.000		-0.003	-0.12	0.903		0.032	2.71	0.007		0.054	1.87	0.061		0.003	0.17	0.862	
Chgroa	0.006	0.08	0.935		1.831	4.47	0.000	***	0.683	3.50	0.000	***	-0.030	-0.06	0.949		0.323	0.99	0.321	
Return	0.010	3.11	0.002	***	0.245	13.37	0.000	***	0.136	14.70	0.000	***	0.115	4.97	0.000	***	0.152	9.81	0.000	***
Index	0.000	0.24	0.809		0.000	3.25	0.001	###	0.000	2.86	0.004	###	0.000	0.30	0.765		0.000	2.68	0.007	###
ChgroaIndex	0.000	0.64	0.520		0.002	6.14	0.000	***	0.002	9.74	0.000	***	0.001	3.17	0.002	***	0.001	4.93	0.000	***
Adj R-Squared	0.002				0.166				0.181				0.020				0.056			
No. of Obs.	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{IndexZ}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Index}_{it} + \varepsilon_{it}$$

Note:
1. Using one-tailed test, statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 8 Regression: The Principal Component Analysis Combination of Earnings Attributes
Panel A PCA with Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t	
Intercept	0.063	5.64	0.000		-0.070	-1.20	0.231		0.004	0.13	0.894		0.033	0.42	0.675		0.016	0.30	0.761	
Chgroa	0.072	1.20	0.232		5.664	16.72	0.000	***	3.505	20.87	0.000	***	2.642	6.52	0.000	***	2.939	10.40	0.000	***
Return	0.008	1.47	0.143	*	0.299	10.20	0.000	***	0.171	11.39	0.000	***	0.045	1.20	0.229		0.148	5.88	0.000	***
Prin	0.000	-0.33	0.738		0.018	2.45	0.014	##	0.006	1.52	0.128		0.028	3.08	0.002	###	0.024	3.82	0.000	###
ChgroaPrin	0.007	0.32	0.746		0.812	6.69	0.000	***	0.669	11.46	0.000	***	0.484	3.36	0.001	***	0.533	5.43	0.000	***
ChgroaMB	-0.008	-0.45	0.654		-0.348	-3.75	0.000	***	-0.141	-2.87	0.004	***	-0.283	-2.44	0.015	***	-0.242	-2.96	0.003	***
ReturnMB	0.002	0.81	0.417		-0.005	-0.56	0.578		-0.003	-0.59	0.558		0.046	3.72	0.000	***	0.017	1.92	0.055	**
ChgroaShare	0.016	2.41	0.016	##	0.158	3.35	0.001	###	0.002	0.08	0.933		0.128	1.85	0.064	#	0.025	0.78	0.433	
ReturnShare	-0.001	-1.40	0.161		-0.008	-1.75	0.080	#	-0.004	-2.06	0.040	##	-0.002	-0.24	0.814		-0.002	-0.50	0.618	
lnasset	0.000	0.40	0.689		0.012	2.01	0.045	**	0.006	1.97	0.049	**	-0.008	-1.04	0.300		0.004	0.78	0.437	
G1	0.000	0.05	0.963		0.029	0.54	0.591		0.022	0.76	0.448		-0.032	-0.43	0.670		-0.016	-0.33	0.744	
G2	-0.009	-0.97	0.334		0.019	0.40	0.690		0.006	0.23	0.818		0.014	0.21	0.831		-0.002	-0.05	0.961	
G3	-0.007	-0.72	0.474		-0.013	-0.25	0.800		-0.019	-0.66	0.508		-0.067	-0.91	0.364		-0.066	-1.39	0.163	
G4	-0.016	-1.72	0.086	#	0.007	0.15	0.884		-0.011	-0.43	0.667		-0.001	-0.02	0.982		-0.003	-0.06	0.951	
G5	-0.004	-0.42	0.675		0.043	0.98	0.327		-0.015	-0.62	0.538		-0.060	-0.99	0.320		-0.044	-1.10	0.273	
G6	-0.015	-1.76	0.079	#	-0.010	-0.23	0.820		-0.013	-0.54	0.588		-0.042	-0.66	0.506		-0.043	-1.04	0.298	
G7	-0.008	-0.86	0.392		0.008	0.17	0.866		-0.014	-0.57	0.570		0.016	0.26	0.798		-0.022	-0.51	0.610	
G8	-0.007	-0.80	0.425		0.036	0.77	0.441		-0.018	-0.75	0.454		-0.082	-1.31	0.191		-0.059	-1.46	0.143	
G9	0.001	0.10	0.923		-0.058	-1.18	0.239		-0.028	-1.02	0.307		0.033	0.48	0.629		-0.020	-0.45	0.651	
G10	0.001	0.06	0.955		0.006	0.12	0.901		0.008	0.30	0.767		-0.049	-0.75	0.452		-0.059	-1.37	0.171	
G11	-0.014	-1.50	0.135		-0.023	-0.46	0.644		-0.042	-1.57	0.116		0.034	0.49	0.623		-0.018	-0.39	0.694	
G12	0.003	0.39	0.697		0.065	1.42	0.156		0.012	0.50	0.616		0.100	1.56	0.118		0.030	0.74	0.459	
G13	-0.002	-0.31	0.754		-0.072	-1.77	0.077	#	-0.033	-1.51	0.131		-0.060	-1.04	0.299		-0.056	-1.52	0.129	
G14	-0.015	-1.71	0.088	#	-0.027	-0.60	0.552		-0.035	-1.44	0.150		-0.071	-1.12	0.265		-0.066	-1.63	0.103	
D98	0.013	2.14	0.033	##	-0.012	-0.38	0.707		0.003	0.17	0.864		0.292	7.01	0.000	###	0.090	3.17	0.002	###
D99	-0.028	-4.69	0.000	###	0.091	2.93	0.003	###	0.025	1.50	0.133		0.312	7.61	0.000	###	0.111	3.98	0.000	###
D00	0.011	1.96	0.050	#	0.019	0.62	0.533		0.030	1.85	0.064	#	0.106	2.66	0.008	###	0.088	3.25	0.001	###
D01	0.011	1.90	0.057	#	-0.008	-0.26	0.792		-0.022	-1.32	0.188		0.206	5.14	0.000	###	0.021	0.77	0.442	
D02	-0.005	-0.85	0.395		0.189	6.15	0.000	###	0.118	7.39	0.000	###	0.000	0.01	0.995		0.021	0.78	0.437	
D03	-0.002	-0.30	0.764		-0.035	-1.18	0.240		-0.019	-1.19	0.233		-0.091	-2.36	0.018	##	-0.098	-3.67	0.000	###
D04	-0.008	-1.38	0.167		0.118	4.17	0.000	###	0.061	3.97	0.000	###	0.167	4.42	0.000	###	0.088	3.39	0.001	###
Adj.R Square	0.012				0.195				0.206				0.068				0.077			
No. Obs	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{ Control variables}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.

Note:

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 8 Regression: The Principal Component Analysis Combination of Earnings Attributes
Panel B PCA without Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.62	0.000		0.064	7.58	0.000		0.064	14.59	0.000		0.061	5.62	0.000		0.052	7.13	0.000	
Chgroa	0.058	1.32	0.186	*	5.376	21.69	0.000	***	3.397	27.81	0.000	***	1.908	6.31	0.000	***	2.568	12.49	0.000	***
Return	0.010	3.14	0.002	***	0.246	13.44	0.000	***	0.136	14.78	0.000	***	0.120	5.22	0.000	***	0.155	10.04	0.000	***
Prin	0.000	0.33	0.744		0.021	3.35	0.001	###	0.009	2.73	0.006	###	0.043	5.42	0.000	###	0.034	6.35	0.000	###
ChgroaPrin	0.009	0.45	0.653		1.001	8.49	0.000	***	0.737	12.79	0.000	***	0.488	3.41	0.001	***	0.599	6.20	0.000	***
Adj R-Squared	0.002				0.172				0.190				0.026				0.063			
No. of Obs.	6181				4445				6195				4471				6141			

Change in Compensation $_{it}$ = $\alpha + \beta_1 Chgroa_{it} + \beta_2 Return_{it} + \beta_3 Prin_{it} + \beta_4 Chgroa_{it} * Prin_{it} + \varepsilon_{it}$

Note:
1. Using one-tailed test, statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 9 Regression: The Principal Component Analysis Combination of Accruals, Predictability and Smoothness
Panel A PCA with Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t		Coef.	t	P>t	
Intercept	0.063	5.66	0.000		-0.071	-1.21	0.227		0.003	0.10	0.922		0.036	0.46	0.649		0.017	0.32	0.749	
Chgroa	0.068	1.13	0.256		5.609	16.68	0.000	***	3.470	20.84	0.000	***	2.606	6.49	0.000	***	2.909	10.38	0.000	***
Return	0.008	1.48	0.139	*	0.299	10.20	0.000	***	0.172	11.43	0.000	***	0.045	1.20	0.230		0.148	5.88	0.000	***
Prin	0.000	-0.26	0.794		0.017	2.37	0.018	##	0.005	1.43	0.152		0.030	3.24	0.001	###	0.024	3.89	0.000	###
ChgroaPrin	0.003	0.16	0.873		0.827	6.73	0.000	***	0.680	11.56	0.000	***	0.486	3.34	0.001	***	0.542	5.48	0.000	***
ChgroaMB	-0.008	-0.47	0.636		-0.336	-3.60	0.000	***	-0.133	-2.72	0.007	***	-0.278	-2.39	0.017	***	-0.236	-2.87	0.004	***
ReturnMB	0.002	0.81	0.420		-0.005	-0.56	0.577		-0.003	-0.61	0.543		0.046	3.73	0.000	***	0.017	1.92	0.055	**
ChgroaShare	0.016	2.43	0.015	##	0.158	3.36	0.001	###	0.003	0.17	0.869		0.129	1.87	0.062	#	0.026	0.83	0.409	
ReturnShare	-0.001	-1.41	0.159		-0.008	-1.74	0.081	#	-0.004	-2.04	0.041	##	-0.002	-0.24	0.814		-0.002	-0.49	0.622	
lnasset	0.000	0.37	0.708		0.012	2.03	0.042	**	0.006	2.01	0.044	**	-0.008	-1.08	0.282		0.004	0.77	0.443	
G1	0.000	0.04	0.966		0.029	0.54	0.593		0.022	0.77	0.443		-0.033	-0.45	0.655		-0.017	-0.34	0.733	
G2	-0.009	-0.96	0.337		0.016	0.35	0.728		0.005	0.20	0.841		0.012	0.18	0.856		-0.004	-0.09	0.927	
G3	-0.007	-0.72	0.473		-0.014	-0.26	0.795		-0.019	-0.66	0.509		-0.068	-0.92	0.356		-0.066	-1.41	0.160	
G4	-0.016	-1.72	0.086	#	0.006	0.13	0.899		-0.011	-0.43	0.665		-0.003	-0.05	0.964		-0.004	-0.08	0.933	
G5	-0.003	-0.41	0.681		0.042	0.97	0.334		-0.015	-0.62	0.534		-0.059	-0.98	0.326		-0.043	-1.09	0.276	
G6	-0.015	-1.76	0.078	#	-0.011	-0.23	0.816		-0.013	-0.55	0.583		-0.043	-0.67	0.502		-0.043	-1.04	0.297	
G7	-0.008	-0.85	0.396		0.008	0.16	0.871		-0.014	-0.58	0.564		0.017	0.26	0.791		-0.021	-0.51	0.613	
G8	-0.007	-0.79	0.432		0.035	0.76	0.447		-0.018	-0.75	0.454		-0.081	-1.30	0.195		-0.059	-1.46	0.145	
G9	0.001	0.10	0.923		-0.058	-1.18	0.237		-0.028	-1.02	0.307		0.033	0.48	0.632		-0.021	-0.46	0.649	
G10	0.001	0.06	0.951		0.006	0.13	0.899		0.008	0.30	0.761		-0.049	-0.75	0.456		-0.058	-1.36	0.173	
G11	-0.014	-1.50	0.135		-0.023	-0.46	0.643		-0.042	-1.57	0.117		0.033	0.48	0.631		-0.018	-0.40	0.692	
G12	0.003	0.38	0.701		0.064	1.40	0.161		0.012	0.51	0.613		0.097	1.52	0.128		0.029	0.70	0.484	
G13	-0.002	-0.32	0.750		-0.072	-1.76	0.079	#	-0.033	-1.50	0.134		-0.061	-1.05	0.293		-0.056	-1.52	0.129	
G14	-0.015	-1.70	0.089	#	-0.027	-0.60	0.549		-0.035	-1.43	0.152		-0.070	-1.10	0.272		-0.065	-1.61	0.107	
D98	0.013	2.12	0.034	##	-0.011	-0.37	0.713		0.003	0.21	0.836		0.291	6.99	0.000	###	0.089	3.17	0.002	###
D99	-0.028	-4.70	0.000	###	0.091	2.92	0.003	###	0.025	1.50	0.133		0.311	7.58	0.000	###	0.111	3.96	0.000	###
D00	0.011	1.95	0.051	#	0.018	0.59	0.552		0.029	1.81	0.071	#	0.104	2.63	0.009	###	0.087	3.21	0.001	###
D01	0.011	1.89	0.059	#	-0.008	-0.26	0.791		-0.022	-1.32	0.189		0.206	5.14	0.000	###	0.021	0.76	0.445	
D02	-0.005	-0.85	0.394		0.189	6.16	0.000	###	0.119	7.41	0.000	###	0.000	0.00	0.997		0.021	0.78	0.438	
D03	-0.002	-0.31	0.757		-0.035	-1.18	0.237		-0.019	-1.21	0.228		-0.092	-2.36	0.018	##	-0.098	-3.68	0.000	###
D04	-0.008	-1.39	0.166		0.118	4.17	0.000	###	0.061	3.96	0.000	###	0.166	4.42	0.000	###	0.088	3.38	0.001	###
Adj.R Square	0.012				0.195				0.206				0.069				0.078			
No. Obs	6181				4445				6195				4471				6141			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{ Control variables}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.

Note:

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 9 Regression: The Principal Component Analysis Combination of Accruals, Predictability and Smoothness
Panel B PCA without Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.62	0.000		0.064	7.57	0.000		0.064	14.55	0.000		0.061	5.61	0.000		0.052	7.11	0.000	
Chgroa	0.053	1.22	0.224		5.349	21.84	0.000	***	3.381	27.98	0.000	***	1.884	6.31	0.000	***	2.556	12.56	0.000	***
Return	0.010	3.15	0.002	***	0.245	13.43	0.000	***	0.136	14.81	0.000	***	0.120	5.22	0.000	***	0.155	10.04	0.000	***
Prin	0.000	0.39	0.695		0.021	3.35	0.001	###	0.009	2.74	0.006	###	0.045	5.64	0.000	###	0.035	6.52	0.000	###
ChgroaPrin	0.006	0.28	0.780		1.019	8.57	0.000	***	0.749	12.91	0.000	***	0.491	3.40	0.001	***	0.611	6.27	0.000	***
Adj R-Squared	0.002				0.173				0.190				0.027				0.063			
No. of Obs.	6181				4445				6195				4471				6141			

Change in Compensation $_{it}$ = $\alpha + \beta_1 Chgroa_{it} + \beta_2 Return_{it} + \beta_3 Prin_{it} + \beta_4 Chgroa_{it} * Prin_{it} + \varepsilon_{it}$
Note:
1. Using one-tailed test, statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 10 Regression: Corporate Governance

Panel A Original Model

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.056	13.43	0.000		0.113	4.26	0.000		0.091	7.31	0.000		0.065	2.16	0.031		0.082	4.19	0.000	
Chgroa	-0.206	-1.66	0.098	**	5.319	6.71	0.000	***	2.438	6.53	0.000	***	0.774	0.86	0.390		2.043	3.50	0.001	***
Return	0.030	2.42	0.016	***	0.361	4.55	0.000	***	0.180	4.81	0.000	***	0.291	3.23	0.001	***	0.217	3.72	0.000	***
Prin	-0.006	-2.05	0.041	##	0.010	0.52	0.605		0.003	0.36	0.716		-0.004	-0.16	0.870		0.008	0.52	0.601	
ChgroaPrin	-0.070	-0.97	0.333		1.350	2.93	0.003	***	0.535	2.47	0.014	***	-0.341	-0.65	0.514		0.163	0.48	0.631	
Adj R-Squared	0.013				0.184				0.189				0.032				0.088			
No. of Obs.	495				495				495				495				495			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \varepsilon_{it}$$

Panel B EG Index

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.049	2.55	0.011		0.201	1.53	0.126		0.121	1.94	0.052		0.035	0.24	0.813		0.156	1.63	0.105	
Chgroa	-0.311	-2.51	0.012	***	5.003	5.96	0.000	***	2.333	5.87	0.000	***	0.374	0.39	0.694		1.830	2.98	0.003	***
Return	0.035	2.81	0.005	***	0.329	3.89	0.000	***	0.180	4.51	0.000	***	0.316	3.31	0.001	***	0.223	3.61	0.000	***
Prin	-0.004	-1.16	0.247		0.010	0.48	0.633		0.005	0.46	0.644		-0.010	-0.41	0.680		0.002	0.10	0.921	
ChgroaPrin	0.014	0.03	0.978		0.439	0.13	0.895		1.126	0.71	0.476		0.434	0.11	0.909		0.408	0.17	0.867	
EG	0.000	0.23	0.819		-0.006	-0.64	0.521		-0.002	-0.50	0.619		0.003	0.25	0.801		-0.005	-0.78	0.434	
ChgroaPrinEG	-0.008	-0.27	0.791		0.041	0.20	0.843		-0.042	-0.43	0.670		-0.046	-0.20	0.844		-0.014	-0.09	0.926	
Adj R-Squared	0.012				0.157				0.175				0.025				0.076			
No. of Obs.	457				457				457				457				457			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{EG}_{it} + \beta_6 \text{Chgroa}_{it} * \text{EG}_{it} + \varepsilon_{it}$$

Table 10 Regression: Corporate Governance

Panel C Rank EG Index

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.054	7.41	0.000		0.156	3.18	0.002		0.105	4.50	0.000		0.078	1.39	0.165		0.122	3.40	0.001	
Chgroa	-0.307	-2.49	0.013	***	4.988	5.96	0.000	***	2.333	5.88	0.000	***	0.390	0.41	0.681		1.830	2.98	0.003	***
Return	0.035	2.79	0.006	***	0.329	3.90	0.000	***	0.180	4.51	0.000	***	0.314	3.29	0.001	***	0.222	3.60	0.000	***
Prin	-0.004	-1.17	0.241		0.009	0.41	0.679		0.004	0.41	0.686		-0.011	-0.47	0.642		0.000	0.00	0.999	
ChgroaPrin	-0.115	-0.60	0.549		1.034	0.79	0.429		0.776	1.26	0.210		-0.124	-0.08	0.933		0.309	0.32	0.747	
rEG	0.000	-0.03	0.980		0.000	-0.92	0.359		0.000	-0.73	0.467		0.000	-0.12	0.902		0.000	-1.33	0.185	*
ChgroaPrinrEG	0.000	0.00	1.000		0.000	0.04	0.965		-0.001	-0.55	0.582		-0.001	-0.13	0.898		0.000	-0.14	0.885	
Adj R-Squared	0.012				0.158				0.175				0.025				0.078			
No. of Obs.	457				457				457				457				457			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_{5r} \text{EG}_{it} + \beta_6 \text{Chgroa}_{it} * \text{rEG}_{it} + \varepsilon_{it}$$

Panel D CEO no Duality (Dummy Variable)

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.065	10.00	0.000		0.101	2.20	0.028		0.075	3.41	0.001		0.095	1.79	0.075		0.080	2.34	0.020	
Chgroa	-0.275	-2.05	0.041	**	4.941	5.24	0.000	***	2.311	5.14	0.000	***	1.737	1.59	0.113	*	2.407	3.43	0.001	***
Return	0.024	1.79	0.075	**	0.345	3.66	0.000	***	0.188	4.19	0.000	***	0.181	1.66	0.097	**	0.197	2.82	0.005	***
Prin	-0.003	-0.99	0.324		0.006	0.29	0.771		0.003	0.26	0.794		-0.001	-0.05	0.963		0.011	0.66	0.509	
ChgroaPrin	-0.096	-0.92	0.360		0.811	1.10	0.270		0.399	1.14	0.256		0.289	0.34	0.734		0.479	0.88	0.382	
Nodual	-0.015	-1.98	0.049	**	0.032	0.61	0.540		0.027	1.06	0.288		-0.004	-0.06	0.949		0.010	0.25	0.804	
ChgroaPrinno dual	-0.165	-1.23	0.218		0.622	0.66	0.509		0.081	0.18	0.856		0.454	0.42	0.678		0.092	0.13	0.896	
Adj R-Squared	0.016				0.164				0.178				0.012				0.079			
No. of Obs.	404				404				404				404				404			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{Nodual}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Nodual}_{it} + \varepsilon_{it}$$

Table 10 Regression: Corporate Governance

Panel E CEO Shares

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.053	12.52	0.000		0.116	4.25	0.000		0.090	6.98	0.000		0.061	1.97	0.050		0.079	3.91	0.000	
Chgroa	-0.197	-1.59	0.114	*	5.342	6.70	0.000	***	2.448	6.52	0.000	***	0.897	0.99	0.321		2.099	3.58	0.000	***
Return	0.027	2.21	0.028	**	0.365	4.57	0.000	***	0.178	4.75	0.000	***	0.286	3.17	0.002	***	0.214	3.64	0.000	***
Prin	-0.006	-2.11	0.036	##	0.010	0.52	0.600		0.003	0.35	0.725		-0.004	-0.19	0.853		0.007	0.50	0.616	
ChgroaPrin	-0.054	-0.69	0.488		1.429	2.84	0.005	***	0.557	2.35	0.019	***	-0.016	-0.03	0.978		0.305	0.82	0.410	
Share	0.003	2.49	0.013		-0.003	-0.45	0.652		0.002	0.49	0.628		0.006	0.74	0.460		0.004	0.79	0.428	
ChgroaPrinShare	-0.030	-0.71	0.475		-0.096	-0.35	0.725		-0.035	-0.27	0.784		-0.457	-1.49	0.138		-0.205	-1.02	0.307	
Adj R-Squared	0.021				0.182				0.186				0.033				0.087			
No. of Obs.	495				495				495				495				495			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{Share}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Share}_{it} + \varepsilon_{it}$$

Panel F Rank CEO Shares

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.054	7.18	0.000		0.134	2.81	0.005		0.085	3.77	0.000		-0.007	-0.10	0.895		0.006	0.18	0.861	
Chgroa	-0.180	-1.40	0.167	*	5.355	6.45	0.000	***	2.397	6.13	0.000	***	0.905	0.96	0.336		2.117	3.49	0.001	***
Return	0.028	2.22	0.027	**	0.365	4.49	0.000	***	0.180	4.72	0.000	***	0.267	2.90	0.004	***	0.195	3.29	0.001	***
Prin	-0.006	-1.90	0.053	#	0.009	0.45	0.652		0.004	0.39	0.699		0.002	0.08	0.940		0.013	0.89	0.375	
ChgroaPrin	0.039	0.21	0.837		1.613	1.33	0.185	*	0.316	0.55	0.568		-0.074	-0.10	0.957		0.150	0.17	0.866	
rShare	0.000	0.38	0.701		0.000	-0.50	0.609		0.000	0.34	0.731		0.000	1.63	0.104		0.000	2.63	0.009	
ChgroaPrinrShare	0.000	-0.60	0.534		-0.001	-0.20	0.818		0.001	0.41	0.681		-0.001	-0.20	0.824		0.000	-0.12	0.996	
Adj R-Squared	0.010				0.182				0.186				0.034				0.097			
No. of Obs.	495				495				495				495				495			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{Share}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Share}_{it} + \varepsilon_{it}$$

Table 10 Regression: Corporate Governance

Panel G Board Size (Dummy Variable =1 if 7-12 members, 0 otherwise)

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.060	6.51	0.000		0.127	2.04	0.042		0.093	3.15	0.002		-0.051	-0.71	0.475		0.037	0.79	0.430	
Chgroa	-0.358	-2.76	0.006	***	4.947	5.64	0.000	***	2.301	5.53	0.000	***	1.400	1.39	0.167	*	2.193	3.35	0.001	***
Return	0.035	2.60	0.010	***	0.339	3.78	0.000	***	0.190	4.45	0.000	***	0.209	2.02	0.044	**	0.216	3.22	0.001	***
Prin	-0.003	-1.02	0.310		0.008	0.40	0.692		0.004	0.44	0.663		-0.005	-0.20	0.840		0.012	0.76	0.450	
ChgroaPrin	-0.111	-0.73	0.466		1.417	1.37	0.170	*	0.577	1.18	0.239		0.367	0.31	0.758		0.775	1.01	0.314	
Size	-0.007	-0.78	0.438		-0.004	-0.06	0.955		-0.002	-0.06	0.955		0.151	2.01	0.045		0.044	0.90	0.368	
ChgroaPrinSize	-0.094	-0.60	0.552		-0.377	-0.35	0.725		-0.204	-0.40	0.688		-0.168	-0.14	0.892		-0.453	-0.57	0.571	
Adj R-Squared	0.013				0.160				0.179				0.022				0.081			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{Size}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Size}_{it} + \varepsilon_{it}$$

Panel H Board Numbers of Directors Members (1/No. of Directors)

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.036	2.20	0.028		0.177	1.62	0.107		0.079	1.53	0.127		0.019	0.15	0.884		0.047	0.57	0.569	
Chgroa	-0.354	-2.69	0.007	***	4.837	5.44	0.000	***	2.254	5.34	0.000	***	1.493	1.45	0.148	*	2.262	3.41	0.001	***
Return	0.033	2.44	0.015	***	0.347	3.84	0.000	***	0.190	4.43	0.000	***	0.211	2.01	0.045	**	0.215	3.19	0.002	***
Prin	-0.002	-0.51	0.614		0.006	0.27	0.785		0.006	0.59	0.555		0.002	0.07	0.946		0.015	0.93	0.354	
ChgroaPrin	-0.116	-0.32	0.752		2.514	1.01	0.311		1.168	0.99	0.321		-2.839	-0.99	0.323		-1.261	-0.68	0.496	
Resize	0.161	1.12	0.263		-0.509	-0.52	0.601		0.100	0.22	0.828		0.534	0.47	0.635		0.242	0.33	0.739	
ChgroaPrinResize	-0.513	-0.18	0.854		-11.013	-0.59	0.558		-5.801	-0.65	0.515		24.661	1.13	0.257		13.297	0.95	0.344	
Adj R-Squared	0.015				0.161				0.180				0.015				0.079			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{Resize}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Resize}_{it} + \varepsilon_{it}$$

Table 10 Regression: Corporate Governance

Panel I Rank Board Numbers of Directors Members (1/No. of Directors)

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.048	6.41	0.000		0.151	2.98	0.003		0.094	3.92	0.000		0.051	0.86	0.388		0.064	1.70	0.089	
Chgroa	-0.356	-2.68	0.008	***	4.803	5.34	0.000	***	2.258	5.29	0.000	***	1.438	1.38	0.169	*	2.209	3.28	0.001	***
Return	0.033	2.46	0.014	***	0.349	3.86	0.000	***	0.191	4.46	0.000	***	0.212	2.03	0.043	**	0.217	3.22	0.001	***
Prin	-0.002	-0.63	0.527		0.004	0.19	0.847		0.004	0.42	0.678		0.004	0.14	0.887		0.016	0.95	0.341	
ChgroaPrin	-0.126	-0.51	0.613		1.937	1.15	0.251		0.696	0.87	0.385		-0.704	-0.36	0.719		0.037	0.03	0.976	
rResize	0.000	0.87	0.386		0.000	-0.67	0.503		0.000	-0.16	0.876		0.000	0.50	0.620		0.000	0.24	0.809	
ChgroaPrinrResize	0.000	-0.25	0.803		-0.003	-0.53	0.595		-0.001	-0.38	0.707		0.003	0.57	0.572		0.001	0.35	0.729	
Adj R-Squared	0.014				0.161				0.179				0.013				0.078			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_{5r} \text{Resize}_{it} + \beta_6 \text{Chgroa}_{it} * \text{rResize}_{it} + \varepsilon_{it}$$

Panel J Percentage of Independent Directors

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.071	5.98	0.000		0.090	1.12	0.264		0.098	2.58	0.010		0.036	0.39	0.695		0.053	0.89	0.374	
Chgroa	-0.338	-2.59	0.010	***	5.084	5.76	0.000	***	2.356	5.62	0.000	***	0.979	0.96	0.338		2.000	3.03	0.003	***
Return	0.033	2.49	0.013	***	0.339	3.78	0.000	***	0.189	4.43	0.000	***	0.228	2.20	0.029	**	0.224	3.34	0.001	***
Prin	-0.002	-0.51	0.614		0.010	0.47	0.635		0.007	0.64	0.521		-0.009	-0.37	0.715		0.010	0.64	0.522	
ChgroaPrin	-0.315	-0.81	0.420		-2.185	-0.83	0.408		-0.681	-0.54	0.587		5.946	1.95	0.052	**	3.233	1.64	0.102	*
Ind	-0.003	-1.60	0.111	*	0.004	0.40	0.691		-0.001	-0.23	0.815		0.006	0.49	0.622		0.003	0.37	0.711	
ChgroaPrinInd	0.197	0.36	0.722		4.787	1.28	0.202		1.603	0.90	0.368		-8.237	-1.90	0.058		-4.082	-1.46	0.145	
Adj R-Squared	0.018				0.163				0.181				0.021				0.082			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{Ind}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Ind}_{it} + \varepsilon_{it}$$

Table 10 Regression: Corporate Governance

Panel K Rank Percentage of Independent Directors

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.062	8.86	0.000		0.140	2.96	0.003		0.105	4.69	0.000		-0.002	-0.03	0.974		0.046	1.30	0.195	
Chgroa	-0.350	-2.69	0.008	***	5.067	5.74	0.000	***	2.328	5.56	0.000	***	1.028	1.01	0.313		2.030	3.08	0.002	***
Return	0.035	2.65	0.008	***	0.340	3.79	0.000	***	0.191	4.49	0.000	***	0.215	2.08	0.038	**	0.219	3.27	0.001	***
Prin	-0.003	-0.92	0.360		0.012	0.56	0.578		0.006	0.57	0.568		-0.006	-0.24	0.808		0.012	0.78	0.434	
ChgroaPrin	-0.177	-1.38	0.170	*	0.523	0.60	0.549		0.311	0.75	0.452		1.328	1.32	0.187	*	0.963	1.48	0.140	*
rInd	0.000	-1.51	0.133		0.000	-0.50	0.619		0.000	-0.80	0.424		0.000	1.82	0.069	#	0.000	0.98	0.328	
ChgroaPrinrInd	0.000	-0.05	0.957		0.004	0.94	0.346		0.001	0.38	0.707		-0.006	-1.44	0.150		-0.003	-1.12	0.262	
Adj R-Squared	0.017				0.162				0.181				0.025				0.083			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{rInd}_{it} + \beta_6 \text{Chgroa}_{it} * \text{rInd}_{it} + \varepsilon_{it}$$

Panel L Percentage of Independent Directors Who Are Younger Than 70 Years Old

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.048	2.20	0.028		0.101	0.68	0.494		0.072	1.02	0.307		0.215	1.26	0.208		0.188	1.71	0.088	
Chgroa	-0.354	-2.73	0.007	***	4.974	5.68	0.000	***	2.311	5.56	0.000	***	1.254	1.24	0.217		2.129	3.26	0.001	***
Return	0.035	2.59	0.010	***	0.333	3.71	0.000	***	0.188	4.41	0.000	***	0.214	2.06	0.040	**	0.215	3.20	0.001	***
Prin	-0.003	-1.01	0.314		0.012	0.57	0.572		0.006	0.57	0.569		0.001	0.04	0.969		0.016	1.02	0.307	
ChgroaPrin	-0.247	-0.72	0.472		3.716	1.60	0.110	*	1.251	1.14	0.257		1.436	0.53	0.594		1.463	0.84	0.399	
Pnotold	0.006	0.24	0.807		0.023	0.14	0.888		0.021	0.28	0.781		-0.157	-0.84	0.402		-0.130	-1.08	0.282	
ChgroaPrinPnotold	0.069	0.18	0.858		-2.997	-1.15	0.250		-0.959	-0.78	0.437		-1.350	-0.45	0.654		-1.225	-0.63	0.529	
Adj R-Squared	0.012				0.162				0.180				0.014				0.081			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{Pnotold}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Pnotold}_{it} + \varepsilon_{it}$$

Table 10 Regression: Corporate Governance

Panel M Rank of Percentage of Independent Directors Who Are Younger Than 70 Years Old

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.053	7.08	0.000		0.136	2.67	0.008		0.093	3.85	0.000		0.107	1.81	0.071		0.105	2.76	0.006	
Chgroa	-0.354	-2.73	0.007	***	4.914	5.62	0.000	***	2.291	5.52	0.000	***	1.243	1.23	0.221		2.114	3.24	0.001	***
Return	0.034	2.59	0.010	***	0.334	3.72	0.000	***	0.188	4.42	0.000	***	0.215	2.07	0.039	**	0.216	3.22	0.001	***
Prin	-0.003	-1.01	0.315		0.012	0.55	0.582		0.006	0.57	0.572		0.001	0.02	0.983		0.015	0.98	0.326	
ChgroaPrin	-0.219	-1.69	0.092	**	1.928	2.21	0.028	**	0.674	1.62	0.105	*	0.819	0.81	0.420		0.757	1.16	0.247	
rPnotold	0.000	-0.01	0.995		0.000	-0.33	0.739		0.000	-0.11	0.912		0.000	-0.66	0.509		0.000	-1.04	0.297	
ChgroaPrinrPnotold	0.000	0.30	0.763		-0.004	-1.25	0.211		-0.001	-0.84	0.404		-0.003	-0.70	0.484		-0.002	-0.71	0.481	
Adj R-Squared	0.012				0.163				0.180				0.013				0.081			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{rPnotold}_{it} + \beta_6 \text{Chgroa}_{it} * \text{rPnotold}_{it} + \varepsilon_{it}$$

Panel N Percentage of Independent Directors Who Sit Less Than Three Boards

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.013	0.41	0.684		-0.120	-0.54	0.590		-0.062	-0.59	0.555		-0.134	-0.52	0.603		-0.087	-0.52	0.601	
Chgroa	-0.342	-2.63	0.009	***	4.889	5.56	0.000	***	2.281	5.47	0.000	***	1.205	1.18	0.238		2.043	3.11	0.002	***
Return	0.034	2.55	0.011	***	0.340	3.80	0.000	***	0.190	4.47	0.000	***	0.221	2.13	0.034	**	0.222	3.32	0.001	***
Prin	-0.003	-0.82	0.414		0.011	0.50	0.616		0.006	0.59	0.554		-0.001	-0.02	0.983		0.014	0.89	0.375	
ChgroaPrin	0.520	0.57	0.572		-2.011	-0.32	0.747		-0.620	-0.21	0.834		-4.194	-0.58	0.562		-5.795	-1.25	0.213	
Pnotbusy	0.042	1.21	0.226		0.257	1.10	0.272		0.162	1.47	0.143		0.222	0.82	0.412		0.169	0.97	0.331	
ChgroaPrinPnotbusy	-0.730	-0.77	0.440		3.241	0.51	0.613		1.075	0.35	0.723		4.664	0.63	0.530		6.444	1.35	0.178	*
Adj R-Squared	0.016				0.162				0.183				0.014				0.084			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{Pnotbusy}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Pnotbusy}_{it} + \varepsilon_{it}$$

Table 10 Regression: Corporate Governance

Panel O Rank Percentage of Independent Directors Who Sit Less Than Three Boards

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.044	5.33	0.000		0.062	1.10	0.272		0.054	2.01	0.045		0.037	0.57	0.569		0.036	0.87	0.386	
Chgroa	-0.340	-2.60	0.010	***	4.887	5.54	0.000	***	2.275	5.44	0.000	***	1.141	1.12	0.265		2.006	3.05	0.002	***
Return	0.034	2.54	0.011	***	0.340	3.80	0.000	***	0.190	4.47	0.000	***	0.223	2.15	0.032	**	0.223	3.33	0.001	***
Prin	-0.002	-0.78	0.437		0.011	0.54	0.588		0.006	0.64	0.526		-0.001	-0.05	0.956		0.014	0.88	0.379	
ChgroaPrin	-0.053	-0.28	0.777		0.680	0.54	0.593		0.242	0.40	0.687		-0.902	-0.61	0.540		-0.810	-0.86	0.393	
rPnotbusy	0.000	1.22	0.225		0.000	1.25	0.213		0.000	1.62	0.105		0.000	0.69	0.489		0.000	1.02	0.308	
ChgroaPrinrPnotbusy	-0.001	-0.81	0.418		0.002	0.39	0.695		0.001	0.33	0.744		0.005	0.93	0.352		0.005	1.49	0.137	*
Adj R-Squared	0.017				0.163				0.184				0.014				0.084			
No. of Obs.	440				440				440				440				440			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{rPnotbusy}_{it} + \beta_6 \text{Chgroa}_{it} * \text{rPnotbusy}_{it} + \varepsilon_{it}$$

Table11 Regression: Index of Six Corporate Governance Variables

Panel A Averaged Rank of Corporate Governance Variables with Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.087	2.52	0.012		0.027	0.12	0.908		0.032	0.28	0.777		0.556	2.10	0.037		0.492	2.86	0.004	
Chgroa	-0.561	-2.38	0.018	***	6.559	4.12	0.000	***	2.578	3.39	0.001	***	1.811	1.00	0.316		3.380	2.89	0.004	***
Return	-0.018	-0.69	0.491		0.459	2.64	0.009	***	0.178	2.14	0.033	**	0.558	2.83	0.005	***	0.376	2.94	0.003	***
Prin	-0.005	-1.31	0.189		0.026	1.05	0.294		0.011	0.89	0.374		0.034	1.19	0.236		0.034	1.87	0.062	#
ChgroaPrin	0.526	1.18	0.237		0.514	0.17	0.864		0.763	0.53	0.595		0.161	0.05	0.962		-0.372	-0.17	0.866	
Cindex	0.000	-0.52	0.600		0.000	-0.34	0.737		0.000	0.09	0.928		0.000	0.86	0.392		0.000	0.06	0.952	
ChgroaPrinCindex	-0.003	-1.59	0.113		0.001	0.05	0.959		-0.002	-0.35	0.730		-0.001	-0.05	0.957		0.002	0.22	0.825	
ChgroaMB	0.130	1.46	0.146	*	-1.090	-1.81	0.071	**	-0.240	-0.83	0.405		-0.632	-0.92	0.356		-0.848	-1.91	0.056	**
ReturnMB	0.018	1.83	0.068	**	-0.036	-0.54	0.590		0.011	0.35	0.726		-0.121	-1.62	0.106	*	-0.062	-1.27	0.204	
ChgroaShare	-0.089	-1.34	0.182		0.623	1.39	0.166		0.201	0.94	0.349		0.497	0.98	0.330		0.504	1.53	0.127	
ReturnShare	0.008	2.54	0.012	##	-0.021	-0.98	0.329		-0.005	-0.47	0.635		-0.042	-1.71	0.088	#	-0.025	-1.58	0.116	
lnasset	-0.001	-0.35	0.725		0.013	0.74	0.462		0.008	0.92	0.357		-0.044	-2.18	0.030	**	-0.034	-2.62	0.009	***
G1	-0.013	-0.53	0.597		-0.086	-0.50	0.617		-0.059	-0.72	0.474		-0.237	-1.22	0.222		-0.161	-1.28	0.202	
G2	-0.004	-0.18	0.859		0.110	0.74	0.461		0.044	0.62	0.536		-0.364	-2.15	0.033	##	-0.194	-1.76	0.079	#
G3	0.004	0.17	0.868		-0.039	-0.24	0.813		-0.012	-0.15	0.882		-0.197	-1.04	0.297		-0.154	-1.26	0.209	
G4	-0.013	-0.61	0.542		0.222	1.52	0.129		0.080	1.14	0.255		-0.333	-2.01	0.045	##	-0.157	-1.46	0.144	
G5	-0.017	-0.85	0.397		0.090	0.67	0.500		0.017	0.27	0.787		-0.218	-1.44	0.151		-0.138	-1.41	0.160	
G6	-0.016	-0.70	0.485		-0.037	-0.24	0.810		-0.031	-0.43	0.670		-0.197	-1.13	0.258		-0.129	-1.15	0.252	
G7	-0.010	-0.46	0.648		0.024	0.17	0.869		-0.012	-0.17	0.869		-0.133	-0.80	0.421		-0.017	-0.16	0.873	
G8	-0.028	-1.29	0.198		0.097	0.66	0.510		0.023	0.33	0.743		-0.243	-1.47	0.144		-0.138	-1.28	0.202	
G9	-0.034	-1.50	0.134		-0.068	-0.45	0.652		-0.034	-0.47	0.639		-0.160	-0.94	0.350		-0.143	-1.29	0.199	
G10	-0.009	-0.42	0.677		0.118	0.81	0.418		0.021	0.31	0.758		-0.400	-2.42	0.016	##	-0.258	-2.41	0.016	##
G11	-0.021	-0.91	0.365		-0.112	-0.71	0.476		-0.075	-1.00	0.319		-0.268	-1.51	0.131		-0.188	-1.63	0.103	
G12	-0.020	-0.95	0.343		-0.044	-0.30	0.763		-0.033	-0.47	0.638		-0.338	-2.05	0.041	##	-0.179	-1.67	0.095	#
G13	-0.011	-0.57	0.570		-0.100	-0.77	0.441		-0.055	-0.89	0.375		-0.352	-2.39	0.017	##	-0.239	-2.50	0.013	##
G14	-0.036	-1.73	0.085	#	0.034	0.24	0.811		-0.026	-0.39	0.694		-0.116	-0.72	0.469		-0.124	-1.20	0.230	
Adj.R Square	0.020				0.172				0.177				0.042				0.105			
No. Obs	434				434				434				434				434			

$$\text{Change in Compensation}_{it} = \alpha + \beta_1 \text{Chgroa}_{it} + \beta_2 \text{Return}_{it} + \beta_3 \text{Prin}_{it} + \beta_4 \text{Chgroa}_{it} * \text{Prin}_{it} + \beta_5 \text{CIndex}_{it} + \beta_6 \text{Chgroa}_{it} * \text{Prin}_{it} * \text{CIndex}_{it} + \Sigma^{25}_{j=1} \gamma_j \text{Control variables}_{jit} + \varepsilon_{it}$$

Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.

Note:

1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table11 Regression: Index of Six Corporate Governance Variables
Panel B Averaged Rank of Corporate Governance Variables without Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.051	3.36	0.001		0.205	1.99	0.047		0.103	2.11	0.036		-0.110	-0.94	0.350		0.005	0.07	0.943	
Chgroa	-0.374	-2.84	0.005	***	4.950	5.58	0.000	***	2.313	5.49	0.000	***	0.881	0.87	0.385		1.927	2.92	0.004	***
Return	0.033	2.45	0.015	***	0.351	3.82	0.000	***	0.190	4.36	0.000	***	0.246	2.34	0.020	**	0.238	3.48	0.001	***
Prin	-0.003	-0.93	0.353		0.007	0.31	0.755		0.006	0.54	0.587		0.003	0.14	0.892		0.014	0.85	0.398	
ChgroaPrin	0.232	0.56	0.578		1.419	0.50	0.615		0.818	0.61	0.540		1.772	0.55	0.582		0.926	0.44	0.658	
CIndex	0.000	0.15	0.879		0.000	-0.87	0.387		0.000	-0.28	0.782		0.001	1.65	0.100		0.000	0.92	0.358	
ChgroaPrinCIndex	-0.002	-1.04	0.301		-0.001	-0.13	0.899		-0.002	-0.32	0.748		-0.006	-0.47	0.636		-0.002	-0.24	0.807	
Adj R-Squared	0.014				0.165				0.183				0.020				0.079			
No. of Obs.	434				434				434				434				434			

Change in Compensation $_{it}$ = $\alpha + \beta_1 Chgroa_{it} + \beta_2 Return_{it} + \beta_3 Prin_{it} + \beta_4 Chgroa_{it} * Prin_{it} + \beta_5 CIndex_{it} + \beta_6 Chgroa_{it} * Prin_{it} * CIndex_{it} + \varepsilon_{it}$
Note:
1. Using one-tailed test, statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 12 Regression: PCA of Four Corporate Governance Variables
Panel A PCA with Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.071	2.62	0.009		-0.063	-0.34	0.731		0.008	0.09	0.931		0.687	3.33	0.001		0.511	3.82	0.000	
Chgroa	-0.465	-2.04	0.042	**	6.508	4.25	0.000	***	2.626	3.60	0.000	***	1.833	1.06	0.292		3.321	2.95	0.003	***
Return	-0.018	-0.71	0.476		0.476	2.74	0.006	***	0.186	2.24	0.025	**	0.552	2.80	0.005	***	0.373	2.92	0.004	***
Prin	-0.004	-1.05	0.295		0.030	1.21	0.229		0.013	1.08	0.279		0.032	1.12	0.265		0.033	1.81	0.072	#
ChgroaPrin	-0.087	-0.77	0.439		0.815	1.08	0.283		0.453	1.25	0.211		-0.465	-0.54	0.589		-0.119	-0.21	0.831	
Corp	0.002	0.58	0.564		0.013	0.56	0.577		0.011	1.04	0.297		0.012	0.46	0.643		-0.004	-0.22	0.829	
ChgroaPrinCorp	-0.091	-1.10	0.273		-0.157	-0.28	0.780		-0.198	-0.74	0.458		0.536	0.84	0.399		0.268	0.65	0.515	
ChgroaMB	0.085	0.98	0.327		-1.093	-1.87	0.063	**	-0.287	-1.03	0.305		-0.599	-0.90	0.368		-0.796	-1.85	0.066	**
ReturnMB	0.019	1.94	0.053	**	-0.041	-0.63	0.531		0.010	0.32	0.752		-0.116	-1.57	0.117	*	-0.061	-1.28	0.201	
ChgroaShare	-0.094	-1.42	0.156		0.621	1.39	0.165		0.206	0.97	0.334		0.523	1.03	0.303		0.503	1.53	0.126	
ReturnShare	0.008	2.28	0.023	##	-0.024	-1.08	0.281		-0.007	-0.66	0.512		-0.046	-1.79	0.075	#	-0.025	-1.51	0.131	
lnasset	0.000	-0.03	0.978		0.019	1.04	0.297		0.011	1.27	0.207		-0.047	-2.31	0.021	**	-0.036	-2.70	0.007	***
G1	-0.013	-0.50	0.617		-0.081	-0.47	0.636		-0.056	-0.69	0.491		-0.232	-1.19	0.234		-0.160	-1.27	0.205	
G2	-0.004	-0.19	0.848		0.113	0.76	0.450		0.043	0.60	0.547		-0.371	-2.19	0.029	##	-0.193	-1.76	0.080	#
G3	0.004	0.18	0.861		-0.031	-0.19	0.852		-0.008	-0.10	0.919		-0.202	-1.07	0.284		-0.156	-1.27	0.203	
G4	-0.011	-0.52	0.604		0.236	1.61	0.108		0.089	1.26	0.207		-0.337	-2.02	0.044	##	-0.162	-1.50	0.135	
G5	-0.015	-0.75	0.454		0.101	0.75	0.452		0.024	0.37	0.711		-0.220	-1.45	0.147		-0.141	-1.43	0.153	
G6	-0.015	-0.64	0.524		-0.027	-0.17	0.863		-0.025	-0.35	0.729		-0.199	-1.14	0.255		-0.132	-1.17	0.244	
G7	-0.010	-0.44	0.658		0.028	0.19	0.847		-0.008	-0.12	0.906		-0.124	-0.75	0.456		-0.017	-0.15	0.877	
G8	-0.027	-1.22	0.222		0.105	0.72	0.475		0.026	0.38	0.706		-0.253	-1.52	0.128		-0.140	-1.30	0.193	
G9	-0.032	-1.42	0.157		-0.067	-0.44	0.660		-0.033	-0.45	0.652		-0.143	-0.83	0.407		-0.139	-1.25	0.212	
G10	-0.008	-0.38	0.707		0.123	0.84	0.399		0.024	0.34	0.733		-0.395	-2.39	0.017	##	-0.257	-2.40	0.017	##
G11	-0.019	-0.82	0.414		-0.102	-0.65	0.514		-0.072	-0.97	0.334		-0.277	-1.57	0.117		-0.188	-1.65	0.100	
G12	-0.019	-0.87	0.384		-0.037	-0.25	0.800		-0.028	-0.41	0.682		-0.341	-2.07	0.039	##	-0.181	-1.69	0.091	#
G13	-0.010	-0.53	0.596		-0.093	-0.72	0.472		-0.052	-0.84	0.401		-0.354	-2.40	0.017	##	-0.240	-2.51	0.012	##
G14	-0.035	-1.66	0.097	#	0.041	0.29	0.769		-0.022	-0.33	0.740		-0.118	-0.74	0.462		-0.126	-1.22	0.225	
Adj.R Square	0.018				0.173				0.180				0.042				0.106			
No. Obs	434				434				434				434				434			

Change in Compensation $_{it}$ = $\alpha + \beta_1 Chgroa_{it} + \beta_2 Return_{it} + \beta_3 Prin_{it} + \beta_4 Chgroa_{it} * Prin_{it} + \beta_5 Corp_{it} + \beta_6 Chgroa_{it} * Prin_{it} * Corp_{it} + \Sigma^{25}_{j=1} \gamma_j$ Control variables $_{jit} + \varepsilon_{it}$
Where control variables are the followings: Market-to-Book ratio, Change in ROA CEO shares, Return*CEO shares, Ln Assets, Industry group 1-15, and year 98-05.
Note:
1. Using one-tailed test, statistical significant greater than zero and statistical significant less than zero for *chgMB* indicated by ***, **, and * for 1%, 5%, and 10% and
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 12 Regression: PCA of Four Corporate Governance Variables
Panel B PCA without Control Variables

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.053	12.78	0.000		0.120	4.26	0.000		0.089	6.71	0.000		0.077	2.39	0.017		0.074	3.53	0.000	
Chgroa	-0.377	-2.86	0.004	***	4.991	5.59	0.000	***	2.297	5.43	0.000	***	0.947	0.93	0.355		1.983	2.99	0.003	***
Return	0.033	2.45	0.015	***	0.346	3.76	0.000	***	0.190	4.35	0.000	***	0.253	2.40	0.017	***	0.239	3.51	0.001	***
Prin	-0.002	-0.50	0.614		0.010	0.45	0.651		0.008	0.74	0.460		-0.002	-0.09	0.929		0.011	0.65	0.517	
ChgroaPrin	-0.130	-1.19	0.236		1.057	1.42	0.155	*	0.524	1.49	0.137	*	-0.046	-0.05	0.957		0.172	0.31	0.755	
Corp	0.004	1.53	0.126		-0.007	-0.33	0.739		0.003	0.35	0.725		0.020	0.89	0.372		0.005	0.31	0.755	
ChgroaPrinCorp	-0.065	-0.82	0.411		0.021	0.04	0.969		-0.141	-0.55	0.583		0.371	0.60	0.549		0.290	0.72	0.470	
Adj R-Squared	0.019				0.164				0.183				0.015				0.078			
No. of Obs.	434				434				434				434				434			

Change in Compensation $_{it}$ = $\alpha + \beta_1 Chgroa_{it} + \beta_2 Return_{it} + \beta_3 Prin_{it} + \beta_4 Chgroa_{it} * Prin_{it} + \beta_5 Corp_{it} + \beta_6 Chgroa_{it} * Prin_{it} * Corp_{it} + \varepsilon_{it}$
Note:
1. Using one-tailed test, statistical significant difference from zero indicated by ***, **, and * for 1%, 5%, and 10%.
2. Using two-tailed test, statistical significant difference from zero indicated by ###, ##, and # for 1%, 5%, and 10%.

Table 13 Regression: Three Earnings Attributes

Panel A: AccrualsZ, PredictZ, and nSmoothZ

	Change in Salary				Change in Bonus				Change in Cash				Change in Equity				Change in Total			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.63	0.000		0.066	7.80	0.000		0.065	15.01	0.000		0.061	5.63	0.000		0.053	7.25	0.000	
Chgroa	0.070	1.52	0.127	*	5.894	22.49	0.000	***	3.712	28.98	0.000	***	1.902	5.97	0.000	***	2.683	12.43	0.000	***
Return	0.011	3.18	0.001	***	0.244	13.37	0.000	***	0.132	14.40	0.000	***	0.122	5.26	0.000	***	0.153	9.93	0.000	***
Accrualsz	-0.002	-1.21	0.226		0.018	1.89	0.059	#	0.003	0.66	0.511		0.019	1.55	0.122		0.019	2.26	0.024	##
Predictz	0.003	1.71	0.088	#	0.010	1.05	0.295		0.008	1.51	0.130		0.039	3.15	0.002	###	0.024	2.89	0.004	###
nSmoothz	-0.001	-0.56	0.574		0.005	0.54	0.589		0.004	0.83	0.408		0.014	1.39	0.166		0.016	2.23	0.026	##
ChgroaAccrualsz	-0.041	-1.43	0.152		-0.318	-1.75	0.081		0.053	0.66	0.507		0.146	0.71	0.475		0.107	0.79	0.429	
ChgroaPredictz	0.036	1.32	0.188	*	1.567	9.67	0.000	***	0.991	13.11	0.000	***	0.380	2.09	0.037	**	0.624	4.95	0.000	***
ChgroanSmoothz	0.021	0.65	0.518		0.157	0.78	0.435		0.017	0.18	0.854		0.374	1.71	0.087	#	0.293	1.90	0.057	#
Adj R-Squared	0.002					0.18			0.197				0.026				0.063			
No.Obs.	6181					4445			6195				4471				6141			

Panel B: PersistZ, PredictZ, and nSmoothZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.66	0.000		0.066	7.78	0.000		0.065	14.90	0.000		0.062	5.70	0.000		0.053	7.21	0.000	
Chgroa	0.084	1.82	0.069	**	5.808	21.70	0.000	***	3.661	28.40	0.000	***	1.870	5.80	0.000	***	2.626	12.09	0.000	***
Return	0.010	3.11	0.002	***	0.242	13.28	0.000	***	0.133	14.46	0.000	***	0.119	5.17	0.000	***	0.153	9.89	0.000	***
Persistz	-0.001	-0.85	0.394		-0.002	-0.29	0.772		-0.001	-0.21	0.837		-0.029	-2.73	0.006	###	-0.014	-1.92	0.055	#
Predictz	0.002	1.40	0.161		0.022	2.58	0.010	##	0.009	2.20	0.028	##	0.052	4.95	0.000	###	0.036	4.93	0.000	###
nSmoothz	-0.001	-0.66	0.509		0.005	0.63	0.527		0.004	0.87	0.387		0.015	1.45	0.147		0.016	2.30	0.021	##
ChgroaPersistz	0.050	1.83	0.068	**	-0.326	-1.89	0.059		-0.197	-2.59	0.010		-0.046	-0.25	0.805		-0.182	-1.42	0.155	
ChgroaPredictz	0.012	0.48	0.634		1.466	10.09	0.000	***	1.042	14.76	0.000	***	0.427	2.49	0.013	***	0.684	5.80	0.000	***
ChgroanSmoothz	0.020	0.62	0.533		0.156	0.78	0.437		0.014	0.15	0.882		0.395	1.81	0.070	#	0.297	1.93	0.054	#
Adj R-Squared	0.003				0.179				0.198				0.027				0.063			
No.Obs.	6181				4445				6195				4471				6141			

Table 13 Regression: Three Earnings Attributes

Panel C: PersistZ, AccrualsZ, and nSmoothZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.73	0.000		0.064	7.51	0.000		0.061	13.86	0.000		0.061	5.59	0.000		0.051	6.89	0.000	
Chgroa	0.056	1.45	0.147	*	4.364	19.06	0.000	***	2.706	24.80	0.000	***	1.519	5.69	0.000	***	2.018	11.09	0.000	***
Return	0.010	3.10	0.002	***	0.250	13.57	0.000	***	0.141	15.14	0.000	***	0.119	5.15	0.000	***	0.156	10.13	0.000	***
Persistz	-0.001	-0.75	0.455		0.001	0.12	0.905		0.001	0.13	0.896		-0.022	-2.13	0.033	##	-0.010	-1.41	0.158	
Accrualsz	-0.001	-0.36	0.717		0.021	2.56	0.011	##	0.007	1.55	0.121		0.040	3.82	0.000	###	0.031	4.40	0.000	###
nSmoothz	0.000	-0.29	0.774		0.006	0.69	0.490		0.005	1.15	0.248		0.020	1.99	0.046	##	0.020	2.81	0.005	###
ChgroaPersistz	0.053	1.96	0.050	**	-0.064	-0.37	0.711		-0.002	-0.02	0.983		0.059	0.32	0.746		-0.044	-0.35	0.729	
ChgroaAccrualsz	-0.029	-1.11	0.267		0.471	2.89	0.004	***	0.460	6.19	0.000	***	0.270	1.42	0.156	*	0.342	2.75	0.006	***
ChgroanSmoothz	0.031	0.96	0.338		0.574	2.87	0.004	###	0.239	2.62	0.009	###	0.488	2.27	0.023	##	0.451	2.96	0.003	###
Adj R-Squared	0.002				0.162				0.175				0.024				0.059			
No.Obs.	6181				4445				6195				4471				6141			

Panel D: PersistZ, AccrualsZ, and PredictZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.69	0.000		0.066	7.79	0.000		0.065	14.88	0.000		0.061	5.59	0.000		0.052	7.14	0.000	
Chgroa	0.081	1.74	0.082	**	5.809	21.81	0.000	***	3.664	28.32	0.000	***	1.879	5.82	0.000	***	2.635	12.08	0.000	***
Return	0.010	3.07	0.002	***	0.244	13.37	0.000	***	0.133	14.50	0.000	***	0.119	5.15	0.000	***	0.153	9.91	0.000	***
Persistz	-0.001	-0.93	0.354		-0.002	-0.25	0.799		-0.001	-0.18	0.856		-0.027	-2.55	0.011	##	-0.013	-1.82	0.069	#
Accrualsz	-0.002	-1.27	0.205		0.018	1.83	0.067	#	0.003	0.65	0.513		0.018	1.42	0.157		0.019	2.24	0.025	##
Predictz	0.003	1.72	0.085	#	0.012	1.24	0.214		0.009	1.76	0.079	#	0.047	3.84	0.000	###	0.030	3.63	0.000	###
ChgroaPersistz	0.046	1.69	0.092	**	-0.323	-1.87	0.062		-0.194	-2.54	0.011		-0.027	-0.15	0.884		-0.176	-1.38	0.169	
ChgroaAccrualsz	-0.037	-1.28	0.200		-0.329	-1.81	0.070		0.039	0.49	0.622		0.153	0.75	0.456		0.111	0.83	0.408	
ChgroaPredictz	0.030	1.10	0.271		1.648	10.23	0.000	***	1.031	13.63	0.000	***	0.444	2.43	0.015	***	0.701	5.56	0.000	***
Adj R-Squared	0.003				0.180				0.198				0.026				0.063			
No.Obs.	6181				4445				6195				4471				6141			

Table 14 Regression: Two Earnings Attributes

Panel A: PersistZ and AccrualsZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.73	0.000		0.064	7.52	0.000		0.061	13.78	0.000		0.060	5.47	0.000		0.050	6.79	0.000	
Chgroa	0.053	1.37	0.171	*	4.357	19.02	0.000	***	2.675	24.62	0.000	***	1.446	5.44	0.000	***	1.955	10.78	0.000	***
Return	0.010	3.07	0.002	***	0.248	13.50	0.000	***	0.140	15.11	0.000	***	0.118	5.14	0.000	***	0.157	10.14	0.000	***
Persistz	-0.001	-0.73	0.468		0.001	0.18	0.861		0.001	0.17	0.863		-0.021	-1.98	0.048	##	-0.010	-1.35	0.176	
Accrualsz	-0.001	-0.40	0.690		0.023	2.75	0.006	###	0.008	1.83	0.067	#	0.044	4.24	0.000	###	0.035	4.99	0.000	###
ChgroaPersistz	0.053	1.97	0.049	**	0.001	0.00	0.997		0.001	0.02	0.986		0.087	0.47	0.636		-0.035	-0.28	0.779	
ChgroaAccrualsz	-0.025	-0.96	0.336		0.567	3.55	0.000	***	0.493	6.73	0.000	***	0.335	1.78	0.075	**	0.406	3.31	0.001	***
Adj R-Squared	0.003				0.161				0.174				0.023				0.057			
No.Obs.	6181				4445				6195				4471				6141			

Panel B: PersistZ and PredictZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.66	0.000		0.066	7.79	0.000		0.065	14.89	0.000		0.061	5.63	0.000		0.053	7.17	0.000	
Chgroa	0.085	1.84	0.066	**	5.826	21.87	0.000	***	3.660	28.40	0.000	***	1.871	5.81	0.000	***	2.627	12.09	0.000	***
Return	0.010	3.07	0.002	***	0.242	13.30	0.000	***	0.133	14.50	0.000	***	0.119	5.16	0.000	***	0.153	9.91	0.000	***
Persistz	-0.001	-0.83	0.409		-0.002	-0.29	0.770		-0.001	-0.23	0.819		-0.028	-2.68	0.007	###	-0.014	-1.96	0.051	#
Predictz	0.002	1.31	0.191		0.023	2.81	0.005	###	0.010	2.50	0.013	##	0.056	5.51	0.000	###	0.040	5.74	0.000	###
ChgroaPersistz	0.049	1.81	0.071	**	-0.315	-1.83	0.067		-0.198	-2.60	0.009		-0.041	-0.22	0.827		-0.188	-1.47	0.141	
ChgroaPredictz	0.016	0.63	0.527		1.497	10.68	0.000	***	1.046	15.25	0.000	***	0.499	2.99	0.003	***	0.742	6.47	0.000	***
Adj R-Squared	0.003				0.179				0.198				0.026				0.062			
No.Obs.	6181				4445				6195				4471				6141			

Table 14 Regression: Two Earnings Attributes
Panel C: PersistZ and nSmoothZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.74	0.000		0.066	7.72	0.000		0.061	13.80	0.000		0.062	5.72	0.000		0.051	6.94	0.000	
Chgroa	0.073	2.06	0.039	**	4.117	19.45	0.000	***	2.438	24.37	0.000	***	1.423	5.76	0.000	***	1.851	11.13	0.000	***
Return	0.010	3.07	0.002	***	0.250	13.59	0.000	***	0.142	15.28	0.000	***	0.117	5.08	0.000	***	0.156	10.08	0.000	***
Persistz	-0.001	-0.71	0.477		0.000	-0.02	0.983		0.000	-0.08	0.939		-0.023	-2.14	0.032	##	-0.010	-1.45	0.147	
nSmoothz	0.000	-0.33	0.741		0.009	1.04	0.296		0.006	1.32	0.186		0.026	2.62	0.009	###	0.025	3.54	0.000	###
ChgroaPersistz	0.053	1.96	0.049	**	-0.081	-0.47	0.640		-0.002	-0.03	0.977		0.059	0.32	0.748		-0.045	-0.35	0.723	
ChgroanSmoothz	0.025	0.78	0.433		0.692	3.53	0.000	###	0.333	3.70	0.000	###	0.526	2.47	0.014	##	0.521	3.47	0.001	###
Adj R-Squared	0.003				0.160				0.170				0.021				0.055			
No.Obs.	6181				4445				6195				4471				6141			

Panel D: AccrualsZ and PredictZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.64	0.000		0.066	7.81	0.000		0.065	15.00	0.000		0.061	5.56	0.000		0.053	7.20	0.000	
Chgroa	0.071	1.55	0.121	*	5.909	22.63	0.000	***	3.711	28.99	0.000	***	1.904	5.97	0.000	***	2.688	12.45	0.000	***
Return	0.010	3.14	0.002	***	0.244	13.39	0.000	***	0.133	14.44	0.000	***	0.121	5.25	0.000	***	0.154	9.94	0.000	***
Accrualsz	-0.002	-1.25	0.213		0.019	1.92	0.055	#	0.003	0.70	0.485		0.020	1.59	0.112		0.019	2.35	0.019	##
Predictz	0.003	1.66	0.096	#	0.011	1.18	0.240		0.008	1.70	0.089	#	0.043	3.52	0.000	###	0.028	3.43	0.001	###
ChgroaAccrualsz	-0.039	-1.39	0.166		-0.305	-1.68	0.092		0.054	0.68	0.494		0.170	0.83	0.405		0.129	0.96	0.336	
ChgroaPredictz	0.039	1.45	0.147	*	1.594	10.05	0.000	***	0.995	13.38	0.000	***	0.441	2.46	0.014	***	0.671	5.42	0.000	***
Adj R-Squared	0.003				0.180				0.197				0.025				0.062			
No.Obs.	6181				4445				6195				4471				6141			

Table 14 Regression: Two Earnings Attributes

Panel E: AccrualsZ and nSmoothZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.67	0.000		0.064	7.52	0.000		0.061	13.88	0.000		0.060	5.54	0.000		0.051	6.91	0.000	
Chgroa	0.034	0.93	0.355		4.392	20.48	0.000	***	2.706	26.04	0.000	***	1.499	5.97	0.000	***	2.043	11.77	0.000	***
Return	0.011	3.20	0.001	***	0.250	13.58	0.000	***	0.141	15.15	0.000	***	0.121	5.26	0.000	***	0.157	10.18	0.000	***
Accrualsz	-0.001	-0.38	0.701		0.021	2.57	0.010	##	0.007	1.55	0.120		0.040	3.80	0.000	###	0.031	4.39	0.000	###
nSmoothz	0.000	-0.26	0.795		0.006	0.69	0.487		0.005	1.15	0.249		0.020	1.95	0.052	#	0.020	2.81	0.005	###
ChgroaAccrualsz	-0.028	-1.07	0.284		0.470	2.89	0.004	***	0.459	6.19	0.000	***	0.289	1.52	0.129	*	0.349	2.80	0.005	***
ChgroanSmothz	0.031	0.96	0.337		0.565	2.85	0.004	###	0.239	2.63	0.009	###	0.476	2.22	0.027	##	0.446	2.94	0.003	###
Adj R-Squared	0.002				0.162				0.175				0.024				0.059			
No.Obs.	6181				4445				6195				4471				6141			

Panel F: PredictZ and nSmoothZ

	Chgsalary				Chgbonus				Chgcash				Chgequity				Chgtotal			
	Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|		Coef.	t	P>|t|	
Intercept	0.059	37.60	0.000		0.066	7.81	0.000		0.066	15.03	0.000		0.062	5.68	0.000		0.053	7.28	0.000	
Chgroa	0.074	1.62	0.106	*	5.912	22.56	0.000	***	3.707	29.03	0.000	***	1.901	5.98	0.000	***	2.680	12.46	0.000	***
Return	0.011	3.18	0.001	***	0.243	13.30	0.000	***	0.132	14.40	0.000	***	0.122	5.27	0.000	***	0.153	9.92	0.000	***
Predictz	0.002	1.35	0.176		0.021	2.54	0.011	##	0.009	2.14	0.032	##	0.049	4.65	0.000	###	0.034	4.74	0.000	###
nSmoothz	-0.001	-0.62	0.534		0.006	0.66	0.511		0.004	0.86	0.389		0.015	1.45	0.147		0.017	2.34	0.019	##
ChgroaPredictz	0.021	0.83	0.406		1.429	9.93	0.000	***	1.010	14.53	0.000	***	0.430	2.55	0.011	***	0.661	5.68	0.000	***
ChgroanSmoothz	0.018	0.55	0.584		0.123	0.61	0.540		0.021	0.23	0.818		0.378	1.73	0.083	#	0.299	1.94	0.052	#
Adj R-Squared	0.002				0.179				0.197				0.026				0.063			
No.Obs.	6181				4445				6195				4471				6141			

Table 15 Summary Results for Testing Reduced Model
Panel A

Model Includes	**Salary**	**Bonus**	**Cash**	**Equity**	**Total**
AccrualsZ, PredictZ, and nSmoothZ	Reduce	Reduce	Not Reduce	Not Reduce	Reduce***
P-value	*0.112*	*0.146*	*0.039*	*0.032*	*0.1097*
PersistZ, PredictZ, and nSmoothZ	Reduce	Not Reduce	Reduce	Reduce	Reduce***
P-value	*0.215*	*0.038*	*0.753*	*0.345*	*0.086*
PersistZ, AccrualsZ, and nSmoothZ	Reduce	Not Reduce	Not Reduce	Not Reduce	Not Reduce
P-value	*0.144*	*<0.0001*	*<0.0001*	*0.0004*	*<0.0001*
PersistZ, AccrualsZ, and PredictZ	Reduce	Reduce	Reduce	Not Reduce	Not Reduce
P-value	*0.655*	*0.523*	*0.699*	*0.068*	*0.013*

Panel B

	Salary	**Bonus**	**Cash**	**Equity**	**Total**
PersistZ and AccrualsZ	Reduce	Not Reduce	Not Reduce	Not Reduce	Not Reduce
P-value	*0.303*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*
PersistZ and PredictZ	Reduce	Reduce	Reduce	Reduce***	Not Reduce
P-value	*0.424*	*0.104*	*0.854*	*0.101*	*0.0071*
PersistZ and nSmoothZ	Reduce	Not Reduce	Not Reduce	Not Reduce	Not Reduce
P-value	*0.2711*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*
AccrualsZ and PredictZ	Reduce	Reduce	Reduce	Not Reduce	Not Reduce
P-value	*0.279*	*0.306*	*0.125*	*0.0177*	*0.0106*
AccrualsZ and nSmoothZ	Reduce	Not Reduce	Not Reduce	Not Reduce	Not Reduce
P-value	*0.067*	*<0.0001*	*<0.0001*	*0.0004*	*<0.0001*
PredictZ and nSmoothZ	Reduce	Not Reduce	Reduce	Not Reduce	Not Reduce
P-value	*0.105*	*0.038*	*0.1207*	*0.0474*	*0.0413*

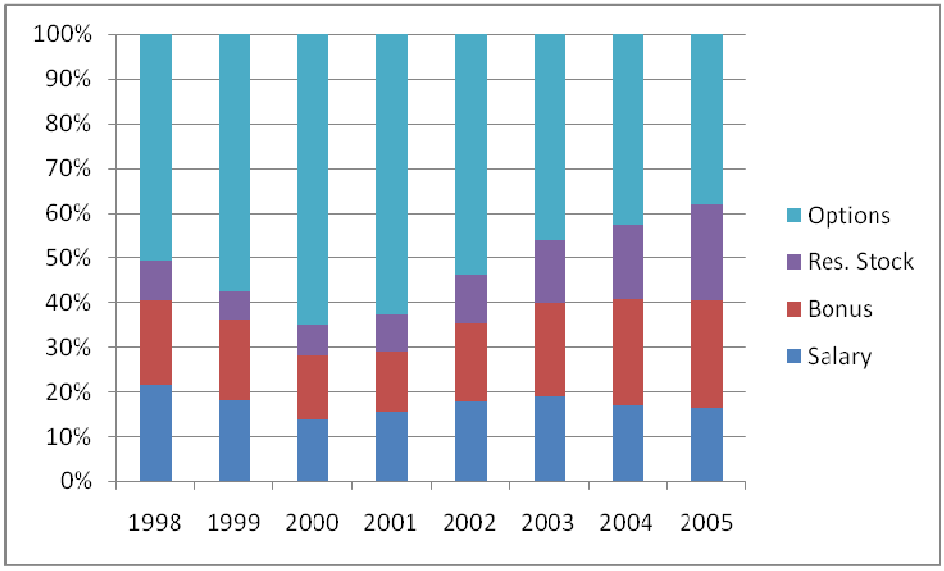
Table 15 Summary Results for Testing Reduced Model
Panel C

	Salary	**Bonus**	**Cash**	**Equity**	**Total**
Only PersistZ	Reduce	Not Reduce	Not Reduce	Not Reduce	Not Reduce
P-value	*0.438*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*
Only AccrualsZ	Reduce	Not Reduce	Not Reduce	Not Reduce	Not Reduce
P-value	*0.1348*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*
Only PredictZ	Reduce	Reduce**	Reduce**	Not Reduce	Not Reduce
P-value	*0.2151*	*0.0864*	*0.2306*	*0.0205*	*0.0036*
Only nSmoothZ	Reduce	Not Reduce	Not Reduce	Not Reduce	Not Reduce
P-value	*0.1239*	*<0.0001*	*<0.0001*	*<0.0001*	*<0.0001*

Panel D

	Salary	**Bonus**	**Cash**	**Equity**	**Total**
No Earnings Attribute	Reduce**	Not Reduce	Not Reduce	Not Reduce	Not Reduce
P-value	*0.2178*	*<.0001*	*<.0001*	*<.0001*	*<.0001*

Figure1. The proportion of CEO compensation for the year 1998-2005



VITA

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Education: Graduated with a Bachelor of Business Administration (Accounting) from Chulalongkorn University, Bangkok, Thailand in March 1998; received Master of Accountancy degree from Chulalongkorn University, Bangkok, Thailand in March 2000. Completed the requirements for the Doctor of Philosophy degree with a major in Business Administration -Accounting at Oklahoma State University in December 2008.

Experience: Work at Ernst and Young, Bangkok, Thailand from 1998-2000. Accounting Lecturer, Faculty of Commerce and Accountancy, Chulalongkorn University, Thailand, 2000 to present.

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Name: Prapaporn Kiattikulwattana Date of Degree: December, 2008

Institution: Oklahoma State University Location: Stillwater, Oklahoma

Title of Study: THE EFFECT OF ACCOUNTING-BASED EARNINGS ATTRIBUTES ON CEO COMPENSATION

Pages in Study: 163 Candidate for the Degree of Philosophy

Major Field: Accounting

Scope and Method of Study: This study explores how four accounting-based earnings attributes (persistence, accruals, predictability, and smoothness) affect the relationship between accounting rate of return (ROA) and CEO compensation. In addition, it examines the effect of corporate governance on the use of the four earnings attributes. Earnings attributes are measured in continuous, rank, and standardized values. CEO compensation is defined as salary, bonus, cash, equity, and total compensation. The sample is S&P 1500 firms from 1998-2005. Two types of multiple linear regressions are used. First, each earnings attribute is included into the compensation models one at a time, *Individual models*. Second, the four earnings attributes are included into the models simultaneously, *Simultaneous models*.

Findings and Conclusions: The results from the *Individual models* illustrate that each earnings attribute, except for persistence, is a significant factor in CEO compensation, excluding salary. It can be implied that different types of compensation use different earnings attributes. Unlike the *Individual models*, the results from the *Simultaneous models* find that only predictability increases the relationships between change in ROA and compensation. Thus, compensation committees do not simply use four earning attributes simultaneously but they may combine them in certain ways before using them. This study uses two methods to combine earnings attributes: Index and PCA. The results for Index and PCA show that compensation committees increase the weight on ROA as a CEO performance measure when overall earnings attributes increase. However, this study cannot find any effect of corporate governance on the use of earnings attributes in CEO compensation.

ADVISER'S APPROVAL: Dr. Don R. Hansen