Perks, Auditor Choice, Corporate Governance and R-square: The Case of China

Ferdinand A. Gul*
School of Accounting and Finance
Hong Kong Polytechnic University
Hong Kong
Tel: (852) 2766 7771
Fax: (852) 2365 9303
E-mail address: afgul@inet.polyu.edu.hk

Louis T. W. Cheng
School of Accounting and Finance
Hong Kong Polytechnic University
Hong Kong
Tel: (852) 2766 7140
Fax: (852) 2356 9550
E-mail address: aflcheng@inet.polyu.edu.hk

T. Y. Leung
Department of Accountancy
City University of Hong Kong
Hong Kong
Tel: (852) 2784 4763
Fax: (852) 2788 7944
E-mail address: acyleung@cityu.edu.hk

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* Corresponding author

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Abstract

Recent literature has explored the positive and negative effects of perks for top executives (Yermack 2006; Rajan and Wulf 2006). Using perk data in China, we examine the effects of perks and auditor choice on firm level information through R-square. Employing a two-stage regression model and controlling for corporate governance characteristics, we demonstrate that firms using more well-known auditors and consuming less perks exhibit higher level of firm information. Our results are robust using different proxies of perk variables and models.

JEL: G14; G34; M42
Keyword: auditor choice; perks; corporate governance; R-square

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1. Introduction

In Mainland China where employee compensation is relatively low, the effects of perks in corporations become more significant. Based on a sample of 2,335 event-firms during the 2001-2005 period, the average perk for a PRC firm is US$714,256, which constitutes 0.29% of assets or 0.59% of sales. While comparable figures from the US are not available, we can create an artificial scenario for comparison purpose. Using a large company such as Cathay Pacific Airways in Hong Kong or General Electric in the US, if they were to spend money on perks based on the same perk-to-sales ratio of 0.59%, they will have to spend US$57 million[1] in 2007 for Cathay Pacific Airways or US$1,019 million for General Electric. These figures illustrate that there is a very high level of perk consumption in China. In short, perk consumption is relatively high and its role in corporate China deserves our attention.

Owing to the Enron and Arthur Anderson incident, the effectiveness of auditors serving as an external corporate control function has been challenged. In Asia where listing firms bear the reputation of under severe influence of controlling families and being not transparent, large listed firms tend to hire well-known auditors to signal their effort on corporate governance. Interesting enough, Wang, Wong and Xia (2008) show that both well-known and local auditing firms have their own advantages in serving corporate clients in Mainland China. Their result challenges the traditional wisdom that audit quality is positively related to auditor's size and reputation. This opens up a new research question on auditor choice. It is no longer appropriate to assume that firms choosing less reputable or smaller auditors must have something to hide with poorer corporate governance.

Recently, there is an academic debate about the nature and effects of perks on corporate performance. Yermack (2006) and Rajan and Wulf (2006) provide two different views on the effects of perks. Yermack (2006) demonstrates a negative relation between owning corporate jets and stock market performance. The paper shows that these firms are more likely to take extraordinary accounting write-offs and report quarterly earnings lower than analysts' forecasts. Yermack (2006) conjectures that it is possible for the CEO to delay bad news from going public until they have acquired lucrative benefits such as the purchase of corporate jets.

On the other hand, Rajan and Wulf (2006) conclude that treating perks purely as managerial excess is not appropriate. They present evidence that in certain situations, perks can enhance managerial productivity. While Rajan and Wulf (2006) explore many types of perks[2] and their relations with company characteristics, their findings mainly focus on the use of corporate jets and suggest that they are used as a means to enhance productivity. However, their interpretation of enhancing productivity refers to time-saving and is limited to employee level. There is no explicit evidence on the effect of perks on firm level profitability or market price performance.

Perks, which is often defined as any forms of non-monetary compensation, is an important element of employment contracts and represents a significant portion of compensation to top executives. Typical examples of perks include chauffeur-driven car, luxurious club membership, big office, different sorts of non-wage allowance (travel, entertainment), or even company yacht or jet. It serves as a productivity enhancement tool and a signal. Despite its omnipresent nature in the business and its possible enormous quantity as an expense item in the financial statement, perk is not as transparent as other compensation components such as salary, bonus and stock option. The amount, nature and description of perks are seldom reported and disclosed to shareholders.

There are two competing views on perk consumption in the corporate finance literature. Fama (1980) suggests that perk can be an incentive in an optimal employment contract to motivate employees to work harder. By this perspective, perk consumption may help increase firm value. However, an opposing view argues that perk is a tool for the top managers to misappropriate firm surplus when the firm's governance is weak and hence perks exemplify agency problems (Grossman and Hart 1980; Jensen and Meckling 1976). Jensen (1986) argues that perk consumption is a signal that the firm has a free cash flow problem. According to this perspective, firm value decreases as perk consumption is perceived as the result of poor corporate governance, unethical behavior of management, and a waste of firm resources. Hence, better-governed firms should offer less perks.

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[1] Data as of December 31, 2007 from the 2007 Annual Report of Cathay Pacific Airways Limited, Page 46 and the 2007 Annual Report of General Electric, Page 64.

[2] In the study of Rajan and Wulf (2006), perks include company plane, chauffer service, company car, club memberships (country, lunch and health) and individual financial counseling services (financial planning, tax counseling and preparation and estate planning). They also group these perks into three packages: travel package, club membership package; and financial counseling package.

Yermack (2006) examines the perk consumption, particularly corporate jet, by CEO and finds no significant relation between corporate jet with compensation or ownership, hence providing no support to the argument of Jensen and Meckling (1976) that perk consumption is the result of agency problem. On the contrary, Rajan and Wulf (2006) find evidence to support the view that perks can be used as productivity enhancing and incentive tools. Marino and Zábojník (2008) find that firms in more uncertain production environments and firms with better corporate governance award more perks.

Disclosure of information is rather limited and infrequent in China. Thus, the voluntary disclosure of perk consumption information is of particularly important. In this study, we examine how firm level perk is related to the choice of auditors, and in turn how both of these variables may affect firm level transparency in terms of R-square. According to Morck, Yeung, and Yu (2000), R-square is inversely related to stock price informativeness. Hence, a more transparent firm should have a lower R-square, which means that the market model return variance is explained less by market variance and more by firm-level variance which we assume to be due to level of firm transparency.

In short, little research has been done on the role of perks and auditor choice on the availability of firm level information. Therefore, we believe that it is ideal to use Chinese data to examine how perks and auditor choice may affect firm transparency in the context of corporate governance.

Following this introduction is a brief review of the theoretical background and hypotheses of this study. The data and methodology are described in Section 3. We present empirical results in Section 4 and conclude our study in Section 5.

2. Theoretical Background and Hypothesis

Studying perks has been challenging mainly because of data availability. Fortunately, the effects of perks are deeply related to human nature and should not be country-specific. The unique dataset of perk data at firm level in China allows us to examine the relations of perks in the context of board governance and pricing efficiency. Two distinctive features of our study are worthy of mentioning. First, the theoretical literature (e.g., Fama 1980; Jensen 1986; Yermack 2006) points out that perk affects corporate performance. However, recent empirical studies

focused on perks for top executives. To further examine the overall effects of perk, we need to include perk consumption for all eligible employees. Our perk data reflects consumption of employees at all levels. This allows us to examine an overall relation between perks and performance.

Second, past studies employ the US data for analysis. There is no question that the US data is an important and reliable source of data for perk studies. Nevertheless, owing to the lower salary and overall financial compensation in real term for corporate executives and employees in China, the relative importance of perks to employees for the firms in China is indeed greater than those for the US counterparts.

Roll (1988) suggests that a low market model R-square either indicates that there is more firm-specific information being priced in the stock or there is "occasional frenzy" unrelated to firm's fundamental. Morck, Yeung and Yu (2000) and Durnev, Morck, Yeung and Zarowin (2003) later provide support to Roll's proposition that firm with a lower R-square has higher pricing efficiency. On the contrary, Kelly (2007) argues that firms with low R-square have higher information cost and greater impediments to informed trades. Therefore, according to Kelly (2007), firm with a low R-square does not necessarily have higher pricing efficiency.

In the audit literature, owing to the information asymmetry between the principal (absentee shareholders and potential shareholders) and agent (management), there are always conflicts of interests in the agency relation (Jensen and Meckling 1976). As a solution to the agency problem of adverse selection, audit service is needed to add value to the firm by enhancing the credibility and informativeness of financial reports. Following this logic, the higher the audit quality, the more credible and more informative the financial reports should be. Hence the level of transparency of the firm should be higher when the firm hires higher quality auditor.

Many studies on auditing have documented that the value of audit quality to the users of financial statements to improve the credibility and informativeness of financial reports (Teoh and Wong 1993; Becker, DeFond, Jiambalvo and Subramanyan 1998). Jensen and Meckling (1976) suggest that an independent auditor can perform a monitoring role to mitigate agency problems (moral hazard) and lower agency costs due to the information asymmetry between the agent and the principal. Watts and Zimmerman (1986) argue that audit quality refers to the ability whether the auditors can detect contract breach (competence) and whether the auditors would report the

contract breaches if they are unveiled (independence). In addition, Datar, Feltham and Hughes (1991) show that auditors with higher quality can serve as a more credible signal to add value to the firm by enhancing the credibility and informativeness of financial reports.

Conventionally, many auditing studies use Big N auditors as a proxy for higher quality (DeAngelo 1981; Gul and Tsui 1998). Since the audit market in China is just gradually opened to international CPA firms until recently, the Chinese audit market is dominated by the domestic CPA firms. Therefore, some studies on audit quality using Chinese firm data employ the total audited assets of clients to rank auditors (Defond, Wong and Li 2000; Gul, Sun and Tsui 2003). Their methodology suggests that audit firms with the larger total asset values of clients are of higher quality.

Recently, the conclusion from the previous studies that there exists a positive correlation between audit quality and auditor's size has been questioned. Wang, Wong and Xia (2008) argue that both well-known and local auditing firms have their own advantages in serving corporate clients in Mainland China. Their result challenges the traditional wisdom that audit quality is positively related to auditor's size and reputation. This opens up a new research question on auditor choice. It is no longer appropriate to assume that firms choosing less reputable or smaller auditors must have something to hide with poorer corporate governance.

The classical definition of pricing efficiency is based on information efficiency. As long as a firm reflects the latest information in its stock price, we conclude that the firm is priced efficiently. While the traditional literature provides many ways to directly and indirectly measure how information is reflected in the stock prices, a more recent approach is to look at the R-square of a firm. Morck, Yeung, and Yu (2000) and Kelly (2007) show that lower R-square reflects higher firm level information. In other words, on average, firms with a lower R-square contain more firm level information which helps to improve pricing efficiency of these firms. Based on these arguments, we suggest that in order to understand the effects of perks (within the context of board governance), we should look at the relations between the level of perks and firm level information (as proxied by R-square). We hypothesize that there exists a negative relation between perks and firm level information (i.e., a positive relation between perks and R-square). As a firm with excessive perks may tend to disclose less, firm level information would be in scarcity or less accurate, leading to a higher R-square for the firm.

In addition, we argue that auditor serves as an external control mechanism and exerts influence on the level and the consumption of perks. More specifically, we hypothesize that if a firm is willing to use a more reputable auditor, the firm is more concerned about signaling audit quality to the market through the choice of auditor. Thus, the firm would exercise more self control on perk consumption. In other words, we believe that auditor choice moderates the relation between perks and R-square. The negative information effect (i.e., increasing R-square or reducing firm level information) of perks should be weakened if a firm employs a more well-known auditor. In conclusion, two hypotheses are formulated.

H1: Firms hiring more well-known auditors and consuming less perks tend to disclose more firm-level information (i.e., lower R-square).

If the use of well-known auditors in Mainland China can enhance firm-level information, using a well-known auditor can over-shadow the significance of other corporate governance efforts. This implies that traditional corporate governance characteristics may have different relations with firm-level information under the presence of well-known auditors. In other words, firms using well-known auditors do not exhibit a significant relation between traditional corporate governance characteristics and R-square. On the other hand, firm using smaller auditors exhibit significant relations, indicating that the effects of well-known auditors dominate the traditional corporate governance efforts.

H2: Traditional corporate governance characteristics may have different relations with firm-level information under the presence of well-known auditors.

3. Data and Methodology

Our study covers a sample period of five financial years from 2001 to 2005. The sample includes all non-financial firms listed on the two stock exchanges in China, Shanghai Stock Exchange and Shenzhen Stock Exchange. We obtain our data on company returns, market returns, financial statements, auditor information from the China Securities Markets and Accounting Research (CSMAR) database, Taiwan Economic Journal (TEJ) database and Wind. The perk data is manually collected from the annual reports of the firms.

Perk Data

In our data collection process, the most significant component is the identification of perk data. In the annual reports of the Mainland Chinese firms, there exists a particular note of accounts titled "Other Expenses related to Cash Flows". Under this note, we are able to identify eight possible items related to perks consumed by all employees. The eight items are: work-related expense, traveling expense, business entertainment expense, communication expense, overseas training expense, board meeting expense, company car expense and meeting expense. As no detailed description of how these eight items are defined by the companies, we can only go by our subjective determination and taking to executives in selective Mainland firms. There are two items, namely work-related expense and communication expense, that may be too noisy to be used as perks. First, under these item titles, regular business expenses instead of perks can be counted in these accounts. Second, we conduct statistical check on these figures and see if some of these items are unreasonably large.[3] In these cases, a company may misclassify their regular business expenses into some of these items. Consequently, these two items are deleted and our perk data consists of the remaining six items.

It is important to notice that, based on these data, we are not able to differentiate the amount of perks consumed by senior executives from other employees. While it is obvious that some items are more likely to be consumed by senior executives than others, there is no dependable methodology we can use to further sub-divide these data by employee type. Therefore, the six items are aggregated to form the overall perk consumption in dollar terms. Then, three standardized measures (Natural log of perk, Perk to Sales, and Perk to Total compensation) are constructed for analysis.

Regression model

We examine the relations between R-square, audit quality and level of information asymmetry in a two-stage-least-square regression model. In the first stage, the model is:

$$\text{Perk} = \alpha_0 + \beta_1 \text{ Top10D} + \beta_2 \text{ BoardSize} + \beta_3 \text{ IndDirRatio} + \beta_4 \text{ DirHolding\%} + \beta_5 \text{ Non-tradePer}$$

[3] For instance, the two items (namely the work-related expense and communication expense) we discard have an average perk to sales ratio of 1.67%. Obviously, these figures are unreasonable and therefore, we determine these two items are not part of perks but somehow companies misplace these items in the note as other expenses.

$$+ \beta_6 \text{ DirectorMeet} + \beta_7 \text{ AdvisorMeet} + \beta_8 \text{ ShareholderMeet} + \beta_9 \text{ EPS} + \beta_{10} \text{ DA} + \beta_{11} \text{ MB} + \beta_{12} \text{ LnAsset} + \beta_{13} \text{ FirmAge} + \beta_t \sum_t \text{Year}_t + \beta_j \sum_j \text{Industry}_j \quad (1)$$

In our study, we examine how audit reputation and perks are related to firm level information measured by R-square. However, the amount of perk expense can be related to auditor choice. Thus perk as an independent variable may also be endogenously determined. To control for this potential endogeneity problem, we employ a two-stage regression method. We construct equation (1) to estimate the fitted values of the three perk measures. Then the fitted values are to be used for the regression analysis in the second stage (equation (2)). In the second stage, the model is:

$$\begin{aligned}\text{R-square} = {} & \alpha_0 + \beta_1 \text{ Top10D} + \beta_2 \text{ FVPerk} + \beta_3 \text{ BoardSize} + \beta_4 \text{ IndDirRatio} + \beta_5 \text{ DirHolding\%} \\ & + \beta_6 \text{ Non-tradePer} + \beta_7 \text{ DirectorMeet} + \beta_8 \text{ AdvisorMeet} + \beta_9 \text{ ShareholderMeet} \\ & + \beta_{10} \text{ EPS} + \beta_{11} \text{ DA} + \beta_{12} \text{ MB} + \beta_{13} \text{ LnAsset} + \beta_{15} \text{ FirmAge} + \beta_t \sum_t \text{Year}_t \\ & + \beta_j \sum_j \text{Industry}_j \quad (2)\end{aligned}$$

To show that our results are robust across time and industry, we include fixed year and fixed industry effects in the regression model. Also, to mitigate the autocorrelation problem, we adjust our t-statistics using Newey and West (1987) standard error.

Key Variables

R-square

Based on the methodology of Morck, Yeung and Yu (2000) and Jin and Myers (2006), we estimate R-square for each firm in our sample using the following expanded market model:

$$r_{it} = \alpha_i + \beta_1 rm_{jt} + \beta_2 mr_{jt-1} + \beta_3 mr_{jt-2} + \beta_4 mr_{jt+1} + \beta_5 mr_{jt+2} \quad (3)$$

r_{it} is the return of firm i on day t. mr_{jt} is the market return on day t. The R-square value of this expanded market model is our R-square measure. A high R-square implies that there is a high degree of stock price synchronicity between the firm and the market.

To avoid the impacts of any corporate announcements on the measurement of R-square, we measure our R-square in a no-news period. We define the time periods for 20 days before and 59 days after the annual earnings and dividend announcements (in total 80 business days)

and 20 days before and 45 days after the interim earnings and dividend announcements (in total 66 business days) as news period. After blocking these days as news period, we search for a 60-day period in each fiscal year which we assume to be a no-news period to measure our R-square.

Auditor Reputation

We classify the audit firms into Top 10 category (audit firms with higher auditor reputation) and Non-Top 10 category (audit firms with lower auditor reputation). Top10D is a dummy variable coded 1 if the audit firm is in the Top 10 category and 0 otherwise. In the audit literature, audit quality refers to the reputation effects of auditors. Auditor reputation is crucial to auditors as it is one of the factors affecting the value of audit service. Watts and Zimmerman (1986) argue that higher audit quality can be converted into better audit ability to detect (competence) and to report (independence) contract breach and DeAngelo (1981) suggests that firms with higher audit quality (which are usually larger in size) have more reputation capital at stake to resist management pressure more not to report contract breach.

Conventionally, the total asset size of clients is the usual proxy for audit quality or reputation. Since the international Big N CPA firms occupy the largest market share in the global market, the Big N CPA firms are always classified as high quality auditors (Gul and Tsui 1998). However, owing to the fact that the Chinese audit market is just gradually opened to international CPA firms, the Chinese audit market is still dominated by the government-affiliated and domestic CPA firms. Therefore, in terms of the client firm size, the international Big N firms may not necessarily be the biggest in China, particularly in the early years. In our study, we follow the methodology of Defond, Wong and Li (2000) by using the market share of an audit firm as a proxy of auditor reputation. We rank the total asset values of auditees to measure market share of the audit firms. For each year of the five years during our sample period, we categorize the CPA firms according to the total asset values of their auditees. The ten biggest CPA firms in terms of the total asset values of their auditees are included in the Top 10 category, the remaining CPA firms are classified in the Non-Top 10 category. We have different top 10 audit firms for each year in our sample period.

Yermack (2006) finds that the clients of certain accounting firms (particularly those of KPMG) have unusually high frequency of perk disclosure. Therefore, we include Top10D in equation (1) to examine if there is relation between perk disclosure and auditor reputation. As a

solution to the agency problem of adverse selection and moral hazard in the agency relation between the management and the shareholders, audit service can help to enhance the credibility and informativeness of financial reports. We hypothesize that the higher the auditor reputation, the more credible and more informative the financial reports should be. Consequently, the level of transparency should be higher for those firms with auditors with higher reputation. Therefore, we include Top10D in equation (2) and expect a negative relation between auditor reputation and R-square.

Perks

Perk is perk-related expenses which include traveling expenses, business entertainment expenses, overseas training expenses, board meeting expenses, conference expenses and driver expenses. There are three versions of perk measure: LnPerk which is a log value of the dollar amount of perk; Perk%Sales which is the ratio of perk expenses to sales; and Perk%TComp which is the ratio of perk expenses to total compensation. Since in China, the disclosure of perk consumption information of the directors is not mandatory, we use the voluntary disclosure of perk information in the annual report as proxy of level of information asymmetry. FV Perk is the fitted value of the Perk measures generated from the equation (1).

Control Variables

Corporate Governance Factors

Perks consumption and firm transparency are related to corporate governance. Rajan and Wulf (2006) argue that perks is a form of private benefit and hence firms with better governance should pay less perks. There is a higher tendency for better-governed firms to release more information to the market. In this study, we have two groups of corporate governance factors: board governance characteristics and board activity characteristics.

Board Governance Characteristics

Board size and percentage of independent directors are important determinants of corporate governance. The board of directors should be effective monitors as they have their reputation at stake in the director labor market (Fama 1980). Larger board and larger representation of outside directors perform better monitoring function on the management (Xie,

Davidson and DaDalt 2003). BoardSize is the number of directors on board. IndDirRatio is the ratio of number of independent directors to total directors on board. We include board size and percentage of independent directors in the models as proxies for strength of governance and board monitoring mechanism to constrain perk consumption and to determine firm transparency.

DirHolding% is the total shareholding percentage of directors on board. Jensen and Meckling (1976) model a negative relation between perk consumption and fractional ownership of CEO. However, Marino and Zábojník (2008) find that the agency problems lead to less equilibrium perk consumption and greater fractional ownership held by CEO. They conclude that firms with better corporate governance award more perks to managers because these firms assume the managers would use the perk to enhance firm values instead of personal consumption. Therefore, we include directors' shareholding (DirHolding%) as a control variable in equation (1). In China, the percentage of directors' holding is very low in state-owned firms (Firth, Fung and Rui 2006). La Porta, Lopez-De-Silanes, and Shleifer (1999) and La Porta, Lopez-de-Silanes, Shleifer and Vishny (2002) find that firms with large family ownership allow the family-shareholders to have more discretion to manage the firms in secrecy. Consequently, the information asymmetry between the insiders and outsiders is greater and the standard of corporate governance of these firms is lower. Therefore, we expect the percentage of directors' holding to affect the quality and quantity of informativeness and hence the level of R-square. Firm with a high percentage of directors' shareholding (DirHolding%) is expected to have a high level of R-square.

In this study, we propose that the percentage on non-tradable shares in a firm affects the corporate governance behavior. We use NonTradePer, which is the ratio of non-tradable shares to total shares, to reflect this characteristic. The economic reforms have been launched in China for several decades and a lot of state-owned enterprises (SOEs) have been carved out and become listed. However, in many of these listed SOEs, there is still a substantial percentage of ownership being held by the controlling shareholders of the state, regional and local governments (Qiang 2003). The ownership, management and compensation structures are different between the state-owned firms and privately-owned firms. Furthermore, the ownership of non-tradable shares by the state and its agencies exercise strong influence to governance behavior of a firm. Therefore, we use NonTradePer as a control variable under board governance characteristics in our regression model.

Board Activity Characteristics

How active the board members are to perform the monitoring function on the management can be proxied by the frequency of the number of meetings (directors' meeting or advisors' meetings) (Xie, Davidson and DaDalt 2003). We use the number of meetings as proxies of board activity characteristics. DirectorMeet is the number of directors' meetings during the year. AdvisorMeet is the number of advisors' meetings during the year. In addition, how active the firms are to disclose information to the shareholders can be proxied by the number of shareholders' meeting. ShareholderMeet is the number of shareholders' meetings during the year. In this study, we use these three measures to examine if the level of firm transparency (R-square) is related to the meeting frequency of the board members (DirectorMeet), advisors (AdvisorMeet) and shareholders (ShareholderMeet).

Firm Characteristics

We have five firm characteristics, EPS, DA, MB, LnAsset and FirmAge, as control variables. EPS is earnings per share which is a measure of profitability. Perk consumption should be higher when the firms are more profitable. DA is debt to asset ratio which is a measure of leverage. Yermack (2006) argues that leverage may be related to perk consumption as leverage can create performance pressure to reduce agency cost and perk consumption. MB is ratio of market value to book value of equity which is a measure of growth opportunities. Jensen (1986) points out that perk consumption is negatively related to growth prospects. Rajan and Wulf (2006) argue that growth prospects have a positive impact on perk provision.

LnAsset is log of total assets which is a measure of firm size. Firm size is related to perk consumption and level of transparency. Montgomery and Shaw (1997) document that larger firms provide more non-wage compensation than smaller firms do. Perk consumption is positively related to firm size as perks is one of the indicators of status or positional good which reinforces and conveys one's standing in an organization (Hirsch 1976; Ranjan and Wulf 2006). In addition, firm size can also be a measure of the strength of information environment of the firm as information asymmetry is greater for smaller firms rather than for larger firms. FirmAge is the number of listing years of the firm.

4. Empirical Results

Table 1 shows the means, medians, maximums, minimums, and standard deviations of the variables in our study. The average R-square is 0.4436. Morck, Yeung and Yu (2000) show that China is one of the countries with high average R-squares with a R-square level of 0.453, indicating low pricing efficiency. Of our total 2,335 firm-year events, 628 observations are firms audited by Top 10 auditors (more well-known) and 1707 observations are firms audited by non-Top 10 auditors (less well-known). The average perk consumption by the firms in our sample is USD714,256. This shows that the perk consumption in Mainland China is quite high. It may be due to the fact that the executive and employee compensation in Mainland China is low. The percentage of director holding is low (0.64%) while the percentage of non-tradable shares is high (59.79%). This low percentage of shareholding in the hands of directors in Mainland Chinese firms is also found in Xu, Chan and Firth (2004). The correlation matrix is shown in Table 2.

Table 3 reports the results for the first-stage-least-square regression (Equation (1)). In this model, perk, the dependent variable, is measured in three forms: LnPerk, Perk%Sales and Perk%Tcomp. The independent variables are divided into key factors and control factors. One of the key variables is Top10D. We expect that auditors can be used as an external control mechanism to monitor whether the management has misused corporate resources in the form of excessive perk consumption. Therefore, we hypothesize a negative relation between Top10D and perk consumption. Consistent with our expectation, the coefficients on Top10D are negatively significant for all three measures of perks. In Table 3, none of the coefficients of the board governance and board activity measures are significant.

We have four financial characteristics, EPS, DA, MB and LnAsset, as control variables in Equation (1). When the firm is profitable, the consumption can be higher. We find that EPS and MB are significantly and positively related to LnPerk and to Perk%Sales, respectively. DA is negatively related to Perk%Sales, indicating that a firm with lower leverage consumes more perks. Montgomery and Shaw (1997) and Ranjan and Wulf (2006) suggest that there should be a positive relation between perk consumption and firm size as larger firms can provide more non-wage compensation. However, In Table 3, the coefficients on LnAsset are negatively related to Perk%Sales and Perk%Tcomp. Our finding of a different relation between firms size and perk consumption from that of Ranjan and Wulf (2006) may be due to the fact that the perk data used by Ranjan and Wulf (2006) are primarily executive service (e.g., company plane, chauffer

service and financial counseling). In addition, Ranjan and Wulf (2006) define perk as a dummy variable to evaluate the marginal effects on the probability that the firm provides perk while we measure perk as a continuous variable and normalize the perk value by log, total compensation and sales.

The overall result in Table 3 supports our conjecture that auditor's reputation is negatively related to perks. Firms using more well-known auditors consume less perks. This result is robust across all three proxies of perks with the control of corporate governance factors and firm characteristics.

Table 4 shows the results of the second-stage-least-square regression (Equation (2)). The objective of this regression is to examine how firm level information (proxied by R-square) is related to auditor choice and perks. As our first stage regression shows that there is a negative relation between perks and auditor choice, we employ the fitted values of perks for all three proxies (FVLnPerk, FVPerk%Sales and FVPerk%Tcomp) as the independent variables to avoid endogeneity problem.

One solution to solve the agency problems of adverse selection and moral hazard between the shareholders and the management (Jensen and Meckling 1976) is the appointment of auditors. Audit service can be used to add value to the firm by enhancing the credibility and informativeness of financial reports. Therefore, we expect a positive relation between auditor with high reputation and level of transparency. In Table 4, we find a significantly negative association between Top10D and R-square. In this study, we hypothesize a negative relation between perk consumption and firm level information (i.e., a positive relation between perk consumption and R-square). Consistent with our expectation, the coefficients of FVLnPerk, FVPerk%Sales and FVPerk%Tcomp are all significantly positive, indicating that firms with excessive perks disclose less information to market, which makes the level of R-square to be higher.

Among the control variables, DirHolding%, Non-Trade, MB and FirmAge are significant. The variable, DirHolding%, reflects the aggregate share ownership percentage of directors. Based on the agency theory, a high director ownership can bond the director to the firms by tying the directors' wealth to the performance of firms. Thus, the higher the director shareholding percentage, the lower the possibility of entrenchment and the higher the probability of better

governance, leading to an expected negative relation between DirHolding% and R-square or an expected positive relation between DirHolding% and firm level information.

The ownership structure of the Chinese firms is unique in a way that there is certain percentage of shares to be held by the controlling shareholders of the state, regional and local governments (Qiang 2003). These shares are called non-tradable shares. To examine if the level of firm transparency may be different between state-owned firms and privately-owned firms, we include NonTradePer (that is the percentage of non-tradable shares (owned by government-related units) to total shares) in equation (2). We argue that this is a proxy of the extent of government control on a firm (just like the party members' influence reflecting government's policy). The coefficient on NonTradePer is significantly and positively related to R-square. This result suggests that firms with higher percentage of non-tradable shares have higher level of R-square, implying that firms with more non-tradable shares are less transparent.

MB is our measure of growth potential. In Table 4, we report a significantly negative relation between MB and R-square. This negative association shows that firms with low growth opportunities tend to have higher R-square, indicating that firms with high growth potential provide more firm information to the market making the level of R-square to be lower.

In Table 4, the coefficients on FirmAge are also positively and significantly related to R-square. Firms with longer history of establishment are also more mature firm. Through time, these firms have already released a lot of information to the market. Therefore, these firms may be less likely to release information to the market very often. Since there is less information, R-square for older firms should be higher. Comparatively, since the younger firms have been in the market for shorter period of time, the market may not have much information about the younger firms. These younger firms are more likely and more willing to release firm information to the market and the investors than the older firms. Therefore, the R-square for younger firms should be lower.

In short, for the results of our second-stage-least square regression, Top10D remains negatively significant while the perk proxies are positively significant. We can conclude that firms choosing more well-known auditors exhibit lower level of R-square (i.e., higher level of firm information). In addition, firms consuming higher level of perks have higher R-square and therefore, lower firm level information.

Based on Hypothesis 2, the use of well-known auditors in Mainland China can enhance firm-level information. However, using a well-known auditor can over-shadow the significance of other corporate governance efforts. Next, we divide our sample into Top10 and Non-Top10 sub-samples to examine Hypothesis 2 in Table 5. If our argument that auditor type (well-known versus not well-known) can exercise influence on the level of perk consumption of a firm, then we should expect firms using well-known auditors would consume perks in a different way from firms using less well-known auditors. More importantly, there should be a difference in the firm level information available to the market for firms using well-known and less well-known auditors.

The literature suggests that well-known auditors exercise more restrictive control on their client firms. Auditors play a more crucial role in corporate governance in countries with weak rather than strong legal institutions (Choi and Wong 2007). In addition, firms want to signal better audit quality would choose well-known auditors (Wang, Wong and Xia 2008). Consequently, firms employing well-known auditors are expected to be audited more vigorously. In this case, these firms would exercise higher level of self-control in perk consumption. In other words, firms audited by well-known auditors are expected to consume less excessive perks and are more willing to disclose firm level information. On the contrary, firms consuming excessive perks would not want to disclose this behavior and exhibit less firm level information to the market. Based on this argument, we suggest that the relation between perks and R-square for the firms audited by more well-known auditors is less positive than the relation between perks and R-square for firms audited by less well-known auditors.

To examine this issue, we divide our sample into two groups using our dummy variable Top10D: firms audited by Top 10 auditors and firms audited by Non-Top 10 auditors. We report our results for the second-stage regression of the two-stage-least-square model in Panel A (Observations using Top 10 Auditors) and Panel B (Observations using non-Top 10 Auditors) of Table 5. Our key variables, the coefficients on the fitted values of perks (FVLnPerk, FVPerk%Sales and FVPerk%Tcomp) are all insignificant for the firms using Top 10 auditors, but are all positively significant for the firms using non-Top 10 auditors. This finding provides some preliminary evidence that the well-known auditors exercise more restrictive control on perk consumption on their client firms than the less well-known auditors do.

To test the statement whether the firms using non-Top 10 auditors exhibit a significantly more positive relation between perks and R-square, we add an interactive variable for Top10D and Perk in the second-stage-least-square regression (equation (2)) in Table 6. The three interactive variables are Top10D * FVLnPerk (an interactive term of Top10D and FVLnPerk), Top10D * FVPerk%Sales (an interactive term of Top10D and FVPerk%Sales) and Top10D * FVPerk%Tcomp (an interactive term of Top10D and FVPerk%Tcomp). The interactive term is a more restrictive test of the difference whether the firms using non-Top 10 auditors exhibit a significantly more positive relation between perk and R-square than the firms using Top 10 auditors. If the interactive variables are significant, it implies that the relation between perks and R-square is less significantly positive for firms using Top 10 auditors. We report the result in Table 6.

We find that two interactive variables Top10D * FVPerk%Sales and Top10D * FVPerk%Tcomp are negatively significant. This result supports our conjecture that the relation between perks and R-square for the firms audited by less well-known auditors is more positive than the relation between perks and R-square for firms audited by more well-known auditors. The more well-known auditors can exercise significant influence on the level of excessive perk consumption of their client firms and exert signaling effect to the market.

5. Conclusion

Recent finance literature has documented both positive and negative effects of perks for top executives (Yermack 2006; Rajan and Wulf 2006). On the other hand, Wang, Wong and Xia (2008) show that both well-known and local auditing firms have their own advantages in serving corporate clients in Mainland China. This opens up a new research question on auditor choice and challenges the traditional wisdom that audit quality is positively related to auditor's reputation. In this study, we use a two-stage-least-square regression model and control for corporate governance characteristics to examine the effects of perks and auditor choice on firm level information. We demonstrate that firms using more well-known auditors and consuming less perks exhibit higher level of firm information. Our results are robust using different proxies of perk variables and models.

In addition, we show that using a well-known auditor can over-shadow the significance of other corporate governance efforts. Under the presence of well-known auditors, traditional

corporate governance characteristics have different relations with firm-level information. Firms using well-known auditors do not exhibit a significant relation between traditional corporate governance characteristics and R-square. On the other hand, firm using smaller auditors exhibit significant relations, indicating that the effects of well-known auditors dominate the traditional corporate governance efforts.

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Table 1

Descriptive Statistics

R-square is estimated using an expanded market model over 60 days in a no-news period.

$$R_{it} = \alpha_i + \beta_1 rm_{jt} + \beta_2 rm_{jt-1} + \beta_3 rm_{jt-2} + \beta_4 rm_{jt+1} + \beta_5 rm_{jt+2}$$

Top10D is a dummy variable coded 1 if the audit firm is in the Top 10 category and 0 otherwise. Perk is the dollar amount of perk expenses in USD. LnPerk is the log value of the dollar amount of perk. Perk%Sales is the ratio of perk expenses to sales. Perk%Tcomp is the ratio of perk expenses to total compensation. BoardSize is the number of directors on board. IndDirRatio is the ratio of number of independent directors to total directors on board. DirHolding% is the total shareholding percentage of directors on board. Non-TradePer is the percentage of non-tradable shares to total shares. DirectorMeet is the number of directors' meetings during the year. AdvisorMeet is the number of advisors' meetings during the year. ShareholderMeet is the number of shareholders' meetings during the year. EPS is earnings per share. DA is debt to asset ratio. MB is ratio of market value to book value of equity. LnAsset is log of total assets. FirmAge is the number of listing years of the firm.

	Dummy Code = 1	Dummy Code = 0	Mean	Median	Maximum	Minimum	Standard Deviation
R-square			0.4436	0.4083	0.9124	0.0117	0.2021
Top10D	628	1707					
Perk (USD)			714,256	120,177	15,064,730	0.0000	1,560,475
LnPerk			8.1039	13.6184	18.4496	0.0000	7.7448
Perk%TComp			0.07869	0.01768	1.4397	0.0000	0.1378
Perk%Sale			0.0059	0.0011	0.1249	0.0000	0.0120
BoardSize			9.8090	9.0000	19.0000	5.0000	2.2022
IndDirRatio			0.2838	0.3333	0.6000	0.0000	0.1177
DirHolding%			0.0064	0.0001	0.9163	0.0000	0.0517
Non-TradePer			0.5979	0.6138	0.9132	0.0000	0.1223
DirectorMeet			7.4355	7.0000	32.0000	2.0000	3.0181
AdvisorMeet			3.5062	3.0000	16.0000	1.0000	1.6600
ShareholderMeet			2.0737	2.0000	9.0000	1.0000	1.0315
EPS			0.1642	0.1488	1.5613	-3.1101	0.3097
DA			0.4699	0.4776	0.9338	0.0081	0.1733
MB			2.8731	2.3461	10.9984	0.5651	1.8316
LnAsset			21.2354	21.1409	26.9782	18.6019	0.9007
FirmAge			6.5559	6.0000	21.0000	1.0000	3.7368

Table 2

Correlation Matrix

Top10D is a dummy variable coded 1 if the audit firm is in the Top 10 category and 0 otherwise. LnPerk is the log value of the dollar amount of perk. Perk%Sales is the ratio of perk expenses to sales. Perk%TComp is the ratio of perk expenses to total compensation. BoardSize is the number of directors on board. IndDirRatio is the ratio of number of independent directors to total directors on board. DirHolding% is the total shareholding percentage of directors on board. Non-TradePer is the percentage of non-tradable shares to total shares. DirectorMeet is the number of directors' meetings during the year. AdvisorMeet is the number of advisors' meetings during the year. ShareholderMeet is the number of shareholders' meetings during the year. EPS is earnings per share. DA is debt to asset ratio. MB is ratio of market value to book value of equity. LnAsset is log of total assets. FirmAge is the number of listing years of the firm.

	Top10D	LnPerk	Perk%Sales	Perk%Tcomp	BoardSize	IndDirRatio	DirHolding%	Non-TradePer	DirectorMeet	AdvisorMeet	ShareholderMeet	EPS	DA	MB	LnAsset
Top10D	1.0000	-0.0990	-0.0903	-0.0828	0.0741	0.0317	0.0331	0.0456	0.0142	0.0368	-0.0354	0.1071	-0.0210	0.0488	0.2479
LnPerk	-0.0868	1.0000	0.4949	0.5781	-0.0326	0.0198	0.0198	0.0263	-0.0282	-0.0230	0.0253	0.0487	-0.0373	-0.0216	-0.0624
Perk%Sales	-0.0856	0.4949	1.0000	0.7737	-0.0652	0.0276	0.0506	0.0175	0.0212	-0.0258	0.0104	-0.0828	-0.0645	0.0770	-0.2197
Perk%Tcomp	-0.0771	0.5781	0.7737	1.0000	-0.0646	-0.0005	0.0550	0.0020	0.0442	-0.0070	0.0517	-0.0119	-0.0059	0.0502	-0.1572
BoardSize	0.0728	-0.0326	-0.0652	-0.0646	1.0000	-0.0649	-0.0045	0.0404	-0.0066	0.0308	0.0447	0.0249	0.0260	-0.0504	0.2078
IndDirRatio	0.0401	0.0198	0.0276	-0.0005	-0.0649	1.0000	0.0864	-0.0499	0.1334	-0.0132	-0.0011	0.0121	0.1156	-0.4033	0.0975
DirHolding%	0.0341	0.0198	0.0506	0.0550	-0.0045	0.0864	1.0000	0.0382	-0.0009	-0.0641	0.0160	0.0767	-0.0347	-0.0409	-0.0617
Non-TradePer	0.0461	0.0263	0.0175	0.0020	0.0404	-0.0499	0.0382	1.0000	-0.0770	0.0113	0.0640	0.0842	-0.0830	0.1345	-0.0295
DirectorMeet	0.0098	-0.0282	0.0212	0.0442	-0.0066	0.1334	-0.0009	-0.0770	1.0000	0.2315	0.2892	-0.0846	0.1323	0.0046	0.0470
AdvisorMeet	0.0326	-0.0230	-0.0258	-0.0070	0.0308	-0.0132	-0.0641	0.0113	0.2315	1.0000	0.1594	-0.0193	-0.0297	0.0721	0.0294
ShareholderMeet	-0.0283	0.0253	0.0104	0.0517	0.0447	-0.0011	0.0160	0.0640	0.2892	0.1594	1.0000	0.0692	0.0622	0.0694	-0.0081
EPS	0.1034	0.0487	-0.0828	-0.0119	0.0249	0.0121	0.0767	0.0842	-0.0846	-0.0193	0.0692	1.0000	-0.1727	-0.0530	0.2473
DA	-0.0134	-0.0373	-0.0645	-0.0059	0.0260	0.1156	-0.0347	-0.0830	0.1323	-0.0297	0.0622	-0.1727	1.0000	0.1335	0.1938
MB	0.0475	-0.0216	0.0770	0.0502	-0.0504	-0.4033	-0.0409	0.1345	0.0046	0.0721	0.0694	-0.0530	0.1335	1.0000	-0.3507
LnAsset	0.2336	-0.0624	-0.2197	-0.1572	0.2078	0.0975	-0.0617	-0.0295	0.0470	0.0294	-0.0081	0.2473	0.1938	-0.3507	1.0000
FirmAge	0.0600	-0.0632	-0.0004	-0.0155	-0.0249	0.1534	-0.1493	-0.3645	0.0941	0.0668	-0.1410	-0.1503	0.2375	0.0869	0.0225

Table 3

Two-stage Least Square Regression Analysis

First-stage Regression

LnPerk is the log value of the dollar amount of perk. Perk%Sales is the ratio of perk expenses to sales. Perk%TComp is the ratio of perk expenses to total compensation. Top10D is a dummy variable coded 1 if the audit firm is in the Top 10 category and 0 otherwise. BoardSize is the number of directors on board. IndDirRatio is the ratio of number of independent directors to total directors on board. DirHolding% is the total shareholding percentage of directors on board. Non-TradePer is the percentage of non-tradable shares to total shares. DirectorMeet is the number of directors' meetings during the year. AdvisorMeet is the number of advisors' meetings during the year. ShareholderMeet is the number of shareholders' meetings during the year. EPS is earnings per share. DA is debt to asset ratio. MB is ratio of market value to book value of equity. LnAsset is log of total assets. FirmAge is the number of listing years of the firm. t-values are adjusted for heteroskedasticity using Newey and West (1987) procedure.

	LnPerk		Perk%Sales		Perk%TComp	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	14.8201	2.09	0.0401	4.96	0.4069	4.44
Top10D	-1.4407	-2.61**	-0.0015	-2.15*	-0.0201	-2.40*
BoardSize	-0.1101	-1.09	-0.0002	-1.32	-0.0023	-1.38
IndDirRatio	-5.1457	-1.80	-0.0003	-0.08	-0.0405	-0.79
DirHolding%	0.6173	0.15	0.0073	0.87	0.0999	1.13
Non-TradePer	0.7164	0.33	0.0023	0.89	0.0242	0.79
DirectorMeet	-0.0809	-1.10	0.0000	0.55	0.0011	0.93
AdvisorMeet	-0.0049	-0.04	-0.0001	-0.68	-0.0004	-0.21
ShareholderMeet	0.2718	1.50	0.0002	0.65	0.0065	1.73
EPS	1.4296	2.15*	-0.0019	-1.55	0.0117	0.96
DA	-0.8006	-0.51	-0.0051	-2.29*	-0.0027	-0.10
MB	0.0415	0.26	0.0005	1.99*	0.0000	-0.02
LnAsset	-0.2395	-0.73	-0.0017	-4.26**	-0.0153	-3.23**
FirmAge	-0.0587	-0.74	0.0000	0.24	-0.0003	-0.23
Year and Industry dummies included						
Adjusted R^2	0.0395		0.0928		0.0773	
F-statistics	3.6681		7.6322		6.4273	
p-value	0.00		0.00		0.00	
N	2335		2335		2334	

* significant at 0.05 level
** significant at 0.01 level

Table 4

Two-stage Least Square Regression Analysis

Second-stage Regression

R-square is estimated using an expanded market model over 60 days in a no-news period.

$$r_{it} = \alpha_i + \beta_1 rm_{jt} + \beta_2 rm_{jt-1} + \beta_3 rm_{jt-2} + \beta_4 rm_{jt+1} + \beta_5 rm_{jt+2}$$

Top10D is a dummy variable coded 1 if the audit firm is in the Top 10 category and 0 otherwise. FVLnPerk is the fitted value of the log value of the dollar amount of perk calculated using equation (1). FVPerk%Sales is the fitted value of the ratio of perk expenses to sales calculated using equation (1). FVPerk%TComp is the fitted value of the ratio of perk expenses to total compensation calculated using equation (1). BoardSize is the number of directors on board. IndDirRatio is the ratio of number of independent directors to total directors on board. DirHolding% is the total shareholding percentage of directors on board. Non-TradePer is the percentage of non-tradable shares to total shares. DirectorMeet is the number of directors' meetings during the year. AdvisorMeet is the number of advisors' meetings during the year. ShareholderMeet is the number of shareholders' meetings during the year. EPS is earnings per share. DA is debt to asset ratio. MB is ratio of market value to book value of equity. LnAsset is log of total assets. FirmAge is the number of listing years of the firm. t-values are adjusted for heteroskedasticity using Newey and West (1987) procedure.

	R-square		R-square		R-square	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	0.8620	7.25	0.8645	8.00	0.8817	8.91
Top10D	-0.0169	-2.20*	-0.0158	-2.04*	-0.0169	-2.19*
FVLnPerk	0.0011	2.62**				
FVPerk%Sales			0.7123	2.30*		
FVPerk%TComp					0.0710	2.83**
BoardSize	-0.0007	-0.50	-0.0008	-0.57	-0.0007	-0.47
IndDirRatio	-0.0317	-0.64	-0.0340	-0.69	-0.0343	-0.69
DirHolding%	-0.1142	-1.99*	-0.1134	-1.96*	-0.1169	-2.07*
Non-TradePer	0.1045	3.65**	0.1026	3.56**	0.1056	3.71**
DirectorMeet	-0.0021	-1.65	-0.0022	-1.70	-0.0021	-1.65
AdvisorMeet	0.0008	0.42	0.0011	0.56	0.0009	0.46
ShareholderMeet	-0.0050	-1.72	-0.0052	-1.78	-0.0056	-1.93
EPS	0.0106	0.91	0.0131	1.12	0.0116	1.01
DA	-0.0052	-0.23	-0.0018	-0.08	-0.0091	-0.41
MB	-0.0352	-11.76**	-0.0356	-12.11**	-0.0352	-12.09**
LnAsset	-0.0031	-0.54	-0.0037	-0.70	-0.0041	-0.86
FirmAge	0.0030	2.70**	0.0030	2.70**	0.0031	2.74**
Year dummies included						
Industry dummies included						
Adjusted R^2	0.5481		0.5488		0.5504	
F-statistics	81.8831		77.7296		82.6085	
p-value	0.00		0.00		0.00	
N	2335		2335		2334	

* significant at 0.05 level
** significant at 0.01 level

Table 5

Two-stage Least Square Regression Analysis

Second-stage Regression with separate panel for Top10 and Non-Top10 data

R-square is estimated using an expanded market model over 60 days in a no-news period.

$$r_{it} = \alpha_i + \beta_1 rm_{jt} + \beta_2 rm_{jt-1} + \beta_3 rm_{jt-2} + \beta_4 rm_{jt+1} + \beta_5 rm_{jt+2}$$

FVLnPerk is the fitted value of the log value of the dollar amount of perk calculated using equation (1). FVPerk%Sales is the fitted value of the ratio of perk expenses to sales calculated using equation (1). FVPerk%TComp is the fitted value of the ratio of perk expenses to total compensation calculated using equation (1). BoardSize is the number of directors on board. IndDirRatio is the ratio of number of independent directors to total directors on board. DirHolding% is the total shareholding percentage of directors on board. Non-TradePer is the percentage of non-tradable shares to total shares. DirectorMeet is the number of directors' meetings during the year. AdvisorMeet is the number of advisors' meetings during the year. ShareholderMeet is the number of shareholders' meetings during the year. EPS is earnings per share. DA is debt to asset ratio. MB is ratio of market value to book value of equity. LnAsset is log of total assets. FirmAge is the number of listing years of the firm. t-values are adjusted for heteroskedasticity using Newey and West (1987) procedure.

Panel A: Observations using Top 10 Auditors

	R-square		R-square		R-square	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	0.5058	2.57	0.7018	4.55	0.6695	4.51
FVLnPerk	0.0009	1.10				
FVPerk%Sales			0.2642	0.52		
FVPerk%TComp					0.0731	1.42
BoardSize	-0.0035	-1.32	-0.0035	-1.33	-0.0032	-1.21
IndDirRatio	-0.1586	-1.53	-0.1561	-1.47	-0.1583	-1.52
DirHolding%	0.0521	0.40	0.0463	0.35	0.0332	0.26
Non-TradePer	0.0733	1.36	0.0695	1.29	0.0686	1.32
DirectorMeet	0.0001	0.02	-0.0002	-0.09	-0.0003	-0.10
AdvisorMeet	0.0014	0.37	0.0018	0.47	0.0016	0.40
ShareholderMeet	0.0043	0.69	0.0050	0.83	0.0044	0.75
EPS	-0.0265	-1.47	-0.0219	-1.24	-0.0207	-1.18
DA	-0.0231	-0.65	-0.0089	-0.25	-0.0149	-0.42
MB	-0.0336	-8.17**	-0.0353	-9.00**	-0.0349	-8.79**
LnAsset	0.0146	1.52	0.0060	0.80	0.0074	1.05
FirmAge	0.0046	2.16*	0.0049	2.32*	0.0048	2.33*
Year dummies included						
Industry dummies included						
Adjusted R^2	0.5694		0.5732		0.5749	
F-statistics	25.3852		24.3862		25.9035	
p-value	0.00		0.00		0.00	
N	628		628		627	

Table 5 (continued)

Two-stage Least Square Regression Analysis

Second-stage Regression

Panel B: Observations using non-Top 10 Auditors

	R-square		R-square		R-square	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	1.1330	8.19	1.0883	7.89	1.0916	7.97
FVLnPerk	0.0012	2.55*				
FVPerk%Sales			0.8433	2.44*		
FVPerk%TComp					0.0679	2.38*
BoardSize	0.0005	0.30	0.0003	0.19	0.0004	0.26
IndDirRatio	-0.0044	-0.08	-0.0038	-0.07	-0.0059	-0.11
DirHolding%	-0.1778	-3.64**	-0.1789	-3.54**	-0.1761	-3.55**
Non-TradePer	0.1179	3.80**	0.1174	3.70**	0.1232	3.92**
DirectorMeet	-0.0028	-1.83	-0.0028	-1.85	-0.0027	-1.76
AdvisorMeet	0.0017	0.76	0.0021	0.94	0.0019	0.86
ShareholderMeet	-0.0086	-2.56**	-0.0091	-2.71**	-0.0093	-2.75**
EPS	0.0306	2.08*	0.0340	2.28*	0.0290	2.00*
DA	0.0124	0.44	0.0113	0.41	0.0008	0.03
MB	-0.0382	-10.51**	-0.0383	-10.55**	-0.0375	-10.31**
LnAsset	-0.0167	-2.55*	-0.0155	-2.36*	-0.0149	-2.30*
FirmAge	0.0024	1.89	0.0024	1.84	0.0024	1.87
Year dummies included						
Industry dummies included						
Adjusted R^2	0.5444		0.5455		0.5448	
F-statistics	60.9644		57.8711		61.0560	
p-value	0.00		0.00		0.00	
N	1707		1707		1707	

* significant at 0.05 level
** significant at 0.01 level

Table 6

Two-stage Least Square Regression Analysis

Second-stage Regression with Interactive Terms

R-square is estimated using an expanded market model over 60 days in a no-news period.

$$r_{it} = \alpha_i + \beta_1 rm_{jt} + \beta_2 rm_{jt-1} + \beta_3 rm_{jt-2} + \beta_4 rm_{jt+1} + \beta_5 rm_{jt+2}$$

Top10D is a dummy variable coded 1 if the audit firm is in the Top 10 category and 0 otherwise. FVLnPerk is the fitted value of the log value of the dollar amount of perk calculated using equation (1). FVPerk%Sales is the fitted value of the ratio of perk expenses to sales calculated using equation (1). FVPerk%TComp is the fitted value of the ratio of perk expenses to total compensation calculated using equation (1). Top10D * FVLnPerk is an interactive term of Top10D and FVLnPerk. Top10D * FVPerk%Sales is an interactive term of Top10D and FVPerk%Sales. Top10D * FVPerk%TComp is an interactive term of Top10D and FVPerk%TComp. BoardSize is the number of directors on board. IndDirRatio is the ratio of number of independent directors to total directors on board. DirHolding% is the total shareholding percentage of directors on board. Non-TradePer is the percentage of non-tradable shares to total shares. DirectorMeet is the number of directors' meetings during the year. AdvisorMeet is the number of advisors' meetings during the year. ShareholderMeet is the number of shareholders' meetings during the year. EPS is earnings per share. DA is debt to asset ratio. MB is ratio of market value to book value of equity. LnAsset is log of total assets. FirmAge is the number of listing years of the firm. t-values are adjusted for heteroskedasticity using Newey and West (1987) procedure.

	R-square		R-square		R-square	
	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Intercept	0.7478	5.40	0.5638	2.78	0.8342	6.25
Top10D	0.0455	1.30	0.0179	1.24	0.0166	1.10
FVLnPerk	0.0140	2.55*				
FVPerk%Sales			10.2146	2.50*		
FVPerk%TComp					0.4767	2.09*
Top10D * FVLnPerk	-0.0060	-1.38				
Top10D * FVPerk%Sales			-4.1595	-2.11*		
Top10D * FVPerk%TComp					-0.3482	-2.03*
BoardSize	0.0005	0.30	0.0004	0.28	0.0001	0.06
IndDirRatio	0.0291	0.51	-0.0328	-0.66	-0.0156	-0.31
DirHolding%	-0.1147	-1.99*	-0.1694	-2.61**	-0.1458	-2.40*
Non-TradePer	0.0971	3.43**	0.0812	2.78**	0.0890	3.10**
DirectorMeet	-0.0011	-0.83	-0.0027	-2.09*	-0.0026	-2.01*
AdvisorMeet	0.0010	0.50	0.0023	1.10	0.0011	0.57
ShareholderMeet	-0.0084	-2.56**	-0.0067	-2.26*	-0.0081	-2.43*
EPS	-0.0053	-0.37	0.0297	2.17*	0.0085	0.72
DA	0.0056	0.25	0.0466	1.53	0.0004	0.02
MB	-0.0360	-12.14**	-0.0400	-10.90**	-0.0360	-12.24**
LnAsset	-0.0027	-0.49	0.0089	1.04	-0.0029	-0.49
FirmAge	0.0038	3.24**	0.0028	2.41*	0.0031	2.70**
Year dummies included						
Industry dummies included						
Adjusted R^2	0.5477		0.5484		0.5491	
F-statistics	77.3807		79.7366		87.0834	
p-value	0.00		0.00		0.00	
N	2335		2335		2334	

* significant at 0.05 level

** significant at 0.01 level