# THE EFFECTS OF AUDITORS' REPUTATION AND DEFAULT RISKS ON UNETHICAL USAGE OF EXPENSES IN KOREA

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# ABSTRACT

In this study, we investigate the effects of a peculiar type of expenses in Korea, catering expenses, also known as entertainment costs, which are sometimes used as a barometer of unethical usage of expenses, to make best of illegal loopholes in manipulating taxable income and other discretionary usage in various business activities. We use firm level data for firms listed on and delisted from KOSPI during the period 1991 to 2007.

From the study, we find that (1) the catering expenses, measured as a ratio to sales, do not have any statistically significant relationship with the reputation of auditors, proxied by big 4 auditing firms, which are the biggest in size and primarily associated with global auditing and consulting firms like Ernest Young, that (2) they increase with bad audit opinions, implying firms try hard to improve the results of audit using catering expenses, that (3) the predicted default risks increase the expenditure of the expense while the defaults actually incurred decrease such spending and that (4) the expenses increase with new auditors, implying that firms cater their auditors for better audit opinions. Thus, we can infer that firms in Korea might have used unethically expenses more when in distress financially and accounting audits.

# **1. INTRODUCTION**

Ethical aspects in corporate operations have been a very important area of research in recent years. Some recent research in Korea has shown some interests in these ethical issues and their social responsibility in spending on business activities for better performances. Park and Lee (2003) argue that firms in Korea appropriated before the Asian financial crisis in 1990s under the account name of catering expenses, or entertainment expenses in an improper way to finance external resources, more by high leveraged firms than low leveraged firms. According to the Korean Corporate Tax Law, catering expenses are defined as those among various corporate expenses incurred in connection with marketing and other business activities to enhance corporate performances to cater or entertain outside stakeholders like customers, suppliers, competitors, tax agencies, shareholders, banks, etc.

It is also true that Auditor independence has been a persistent concern across many countries. Even in the United States, the Securities and Exchange Commission (SEC) requested firms to disclose non-audit fees in auxiliary financial statements filed on or after 5 February 2001. Public

concern over auditor independence increased to enact the Sarbanes-Oxley Act (the Act) in July 2002 after the recent financial scandals involving large firms like Enron and Worldcom. Under the Act, the provision of non-audit services by incumbent auditors to their clients is strictly restricted so as to strengthen auditor independence. Lai (2003) espouses that auditors are more likely to issue modified audit opinion to their clients when auditors provide non-audit services to their audit clients. The provision of non-audit services might create threat to the impartiality of the auditors in conducting their audits due to the fact that non-audit revenue has a dominant source of public accounting firms' total revenue.

Lennox (2000) finds that contrary to public expectations, firms usually receive clean audit opinions shortly prior to their failures in the US. According to the study, audit reports in failing firms are affected by auditor dependence or opinion shopping. The study reports that audit fees, auditor size, auditor-client tenures and dominant directors are not significantly associated with going-concern opinions, suggesting that audit reports are not affected by auditor dependence. However, firms are more likely to appoint auditors strategically who are less likely to issue going concern opinions, suggesting that failing firms successfully engage in opinion shopping. However, most of existing studies find audit opinions are not associated with proxies for auditor dependence. However, no significant association is found between non-audit fees and audit opinions in the UK and Australia, where non-audit services are not banned but fees are publicly disclosed (Lennox, 1999a; Craswell, 1999).

It has long been argued that in Korea firms use as in Park and Lee (2003) catering expenses for unethical corporate activities, presumably more by high leveraged firms before the financial crisis. According to Rho (2009), in Korea, such unlawful or at least unethical audits were at issue as well for a long time. Korea adopted a mandatory audit rotation regime in 2003, since a possible collusion resulting from long term auditor-client relationship could affect auditor independence, and therefore audit quality. While mandatory audit rotation had long been an issue among many advanced countries, accounting scandals involving Enron has made it more urgent. The U.S accounting regulators attribute those accounting scandals to a long-term auditor-client relationship between Enron and its auditor Arthur Anderson. Malfunctioning of banking system in Korea before its bailout by IMF(International Monetary Fund) in late 1990s was studied by Alexeev and Kim (2008) using a panel of Korean firms due to pervasive and soft budget constraint or SBC problems in bank lending before the 1997-1998 financial crisis. According to Kim and Kim (2011), the firm can survive financially and perform better with the better usage of expenses like catering expenses, even though the spending itself is in controversy from the ethical view. With over spending of catering expenses deteriorating the profitability of firms, measured by the return on assets, as with the negative perception existent in public in Korea, the usage of such expenses by firms in distress might affect the audit opinions on firms' financial statement and status. Thus, we study the independence of auditors by focusing on the effect of audit changes and their opinions on catering expenses.

This study focuses mostly on failing firms mainly for two reasons. First, auditor dependence may be more apparent in distressed firms, because since managers may fear that going-concern opinions increase the probability of failure (the 'self-fulfilling prophecy' hypothesis). In contrast to the prior studies, high leveraged firms in Korea were known to suffer from pervasively soft budget constraints, or SBC, the phenomenon to expect for bailouts by lenders or others when they are at the risks of failure. Second, we presume that firms in financial distress in Korea with the impending default risks might try to survive by improving their quality of audit and affecting their auditors through various methods, for example, by expenses with discretion catering expenses unethically.

This paper contributes to the literature in two ways. First, it provides evidence that firms in financial distress might make unethical use of expenses with high level of discretion. Second, the

usage of such expenses is in high association with their default risks and/or unacceptable audit opinions. This is not the first study to study the effect of default risks in Korea on catering risks but the first to study the relationship between auditor dependence and opinion shopping and catering expenses in Korea.

The results will be of a great interest to the regulators and the profession alike. The literature review on unethical use of expenses, specifically catering expenses, audit and default risks will be presented after the introduction followed by hypothesis and models, data and empirical studies, and finally conclusion.

# 2. LITERATURE REVIEW

#### 2.1 Catering Expenses

The Korean Corporate Tax Law Article 25 paragraph 5 states that "Catering expenses shall mean catering expenses and expenses of a similar nature spent by a corporation in connection with its business ...," <Amended by Act No. 6293, Dec. 29, 2000; Act No. 6558, Dec. 31, 2001>. Study on catering expenses were mostly associated with tax law changes, spending levels and over spending above legal allowances for tax deduction of catering expenses. Sohn (1997) claims that the regulation on catering expenses are gook policy in context regardless of their usage in business, the tax authority had better reduce the maximum allowance steadily at least maintain the level and strengthen the qualifications for possible unethical or improper use of the expenses. Oh (2000) examines the effects of tax policy around tax law changes and claims that the reduction of the allowances of catering expenses is more or less desirable in that taxpayers will adopt to changes in the level of the expenses by reducing their spending when the tax rates are higher and spending excessively when the deductions increase. In addition, Oh (2002) reports that firms increase catering expenses by reducing expenditures such as welfare for employees. In sum, catering expenses are studied for their effects on firms' responses toward tax law changes and their other expenses, performances, etc. As mentioned before, Park and Lee (2003) claim that firms can predict corporate bankruptcy by using ethical variables such as catering expenses. The study shows a statistically significant relationship between corporate bankruptcy and catering. Lee (2008) reports that revenue increases have a significantly positive impact on catering expenses. Recently, Kim and Kim (2011) show that through multiple regression panel analysis in the study catering expenses have a positive impact on firms' return on assets. However, there have been no studies as far as we know on the effects of firms' auditor and their opinions on unethical use of expenses like catering expenses.

# 2.2 Audit

Researches on audit can be divided into some major parts: audit independence and audit quality, and the effects of auditors. The first study on auditor independence was done by DeAngelo (1981). He defines the quality of audit services as a likelihood of auditors' discovering and reporting material misstatements in audited financial statements and claims that independent auditors will be more prone to report detected material misstatements while competent auditors are more likely to detect material misstatements. Stice (1991), Lys and Watts (1994) and Krishnan (1994) recognize that the higher audit fee is likely to be a good qualification for evaluating the firms. In other words, the concern about undermining the independence of auditors by audit fees will turn out empirically. Lennox (2000) finds that firms usually receive clean audit opinions shortly prior to their failures. The study reports that audit fees, auditor size, auditor-client tenures and dominant directors are not significantly associated with going-concern opinions,

suggesting that audit reports are not affected by auditor dependence except for audit reports in failing firms. Lai (2003) studies on the audit independence and reports that financial statements after the introduction of the Sarbanes-Oxley Act in 2002 in the US are more likely to be modified and discretionary accruals were lowered by the Act that would severely ban the provision of nonaudit services to their clients by incumbent auditors. Some other researches are on the effect of auditors. Krishnan et al., (1996) find no significant association between audit reports and audit switches. Louwers (1998) finds no significant relationship between auditor-client tenures and audit opinions in the US. However, Lennox (1999a) and Craswell (1999) find no significant association between non-audit fees and audit opinions in the UK and Australia respectively, where non-audit services are not banned. According to Rho (2009), such unlawful or at least unethical audits were at issue as well for a long time in Korea. Korea adopted a mandatory audit rotation regime in 2003, since a possible collusion resulting from long term auditor-client relationship could affect auditor independence and therefore audit quality by avoiding accounting scandals. In this study, we follow Moon et al. (2011) in the classification for high reputation auditors between Big4 and Non-Big4. As mentioned before, this study is the first one to relate audit and audit quality with plausibly unethical spending in Korea through catering expenses.

# 2.3 Default Risks

There are studies on the relationship between corporate defaults and audit. These studies apply default risks prediction models. Slice (1991) uses the Z-Score of Altman (1968) and Lys and Watts (1994) uses the default risks prediction model of Olson (1980). Similarly in Korea, Park and Sohn (1999), and Choe (2007) predict the default risks of firms using the Z-Score of Altman (1968). Alexeev and Kim (2008) used Altman's Z-score in their study of default risks and corporate financing from banks by Korean firms with pervasively soft budget constraint (SBC) problems before the 1997–1998 financial crisis. Alexeev and Kim defines that SBC is present if a firm can borrow from its bank despite being in a very high financial distress, defined by a low Altman's z-score. They find that prior to 1997 many financially distressed firms could borrow even at a very high risk of default impending.

However, according to the recent research by Kim, Park and Jeon (2011), the Z-Score of Altman (1968) and the K-Score of Altman (1995) have serious defects due to endogeneity problems such as soft budget constraints in which firms to be defaulted are bailed out, while others to be bailed out survive due to many reasons like bribery, etc. In this sense, we estimate the default risks of firms in Korea by adopting default risks prediction model developed by Kim, Park and Jeon (2011) They report the default prediction accuracy of the Altman Z-Score and K-Score are 23.9% and 97.0%. In the latter case, however, the actual default prediction for actually defaulted firms is only 0.5%. In other words, due to the firm's high chances of survival, most default model do not accurately predict defaults for on the other hand, Their modified prediction model predicts defaults of firms to a maximum of 92.4%.

# 3. HYPOTHESIS AND TEST MODEL

#### 3.1 Hypothesis

In many previous studies, auditors' reputation and the quality of audit were measured by the size of auditors as proxy measures like the Big 4 auditors. In the inaugural study, DeAngelo (1981) argues large audit firms have more incentive to avoid reputation-damaging criticism, compared to small audit firms. Lennox (2000) uses the Big Five as a proxy of auditor size to control for reputation and deep pockets theories which predict a positive association between audit firm size

and audit quality. Dye (1993) suggests large audit firms are more likely to disclose problems because they have more wealth at risk from litigation. Dopuch and Simunic (1982) and Palmrose (1989) use the Big 5, Big 8 as represent high quality auditors. Reynolds and Francis (2000) and others use Big 4 auditors because their audit opinion is not likely to change because the shopping activities for better opinions by the firms are less likely to incur. In this context, we follow Moon et al. (2011) in the classification for high reputation auditors between Big4 and Non-Big4 to control for audit quality and hypothesize the following in relation with catering expenses.

Hypothesis 1: Firms audited by Big 4 auditors reduce catering expenses.

Lennox (2000), unlike other previous studies focuses on the quality of audit reports for failing firms and reports that audit reports in failing firms are affected while other factors like audit fees, auditor size, auditor-client tenures and dominant directors are not significantly associated with going-concern opinions. In Korea, Park and Lee (2003) claim that we may use catering expenses to predict corporate bankruptcy, which shows a positive correlation with the expenses. According to Park and Lee, the ratio of allegedly unethical catering expenses, more specifically; the sales and the rate of change in catering expenses between bankrupt firms and non-bankrupt firms were significantly different. Oh (2002) also reports that firms increase catering expenses by reducing expenditures such as welfare expenses for employees. We hypothesize that firms usually try hard to receive clean audit opinions shortly prior to their failures. Thus, we hypothesize the following:

Hypothesis 2: Firms with higher default risks in the previous year will spend more catering expenses.

Similarly, firms with unacceptable audit opinions in the previous year would try harder to shop for better opinions, plausibly with the unethical use of expenses like catering expenses. Thus, we hypothesize the following:

**Hypothesis 3:** Firms with inappropriate audit opinion in the previous year spend more catering expenses.

Williams (1988) argues that firms change auditors when the contracting environment of the corporation alters. This can be circumstances described as when a firm needs to change their current auditor for more effective auditing or even to require different services. Also, a firm attempting to change its public image or to reduce audit fees would be one of many reasons of for this action. Firms that switch auditors following receipt of a bad audit opinion are more likely to choose a non-Big 4 auditor than are those auditor-switching firms receiving unqualified prior audit opinions. Krishnan et al., (1996) find no significant association between auditor-client tenures and audit opinions in the US. In the same context, firms with new auditors whether it is due to the mandate of the government to switch for a new auditor after some years with the incumbent auditor or voluntary shopping for better reputation or better opinions, would try harder to avoid any problems from new auditors plausibly through the unethical use of expenses like catering expenses. Thus, we hypothesize the following:

Hypothesis 4: Firms with new auditors spend more catering expenses in the next year.

As mentioned in Reynolds and Francis (2000), Big 4 auditors are not likely to change their opinions. Dye (1993) suggests large audit firms are more likely to disclose problems because they have more wealth at risk from litigation. In this study, we suppose that firms seeking lower

quality audit from highly known Big 4 auditors have to put more efforts to get more desirable audits, plausibly spending catering expenses. Therefore, we set an additional hypothesis reflecting interactive effects of Big4 auditors and bad audit opinions as follows:

**Hypothesis 5:** Firms with bad audit opinions in the previous year and to be audited by Big4 auditors spend more catering expenses.

As in Lennox (2000), we focus on the effect of audit opinions for the failing firms, especially when they receive bad audit opinions in the previous year. Firms might try hard to shop for an appropriate auditor in such situations and make more efforts to achieve their goals by spending catering expenses. Thus, we set the following hypotheses on the interactive effect of high default risks and bad audit opinions.

**Hypothesis 6:** Firms with bad audit opinions with high default risks in the previous year spend more catering expenses.

Just as in Lennox (2000), we focus on the effect of audit opinions for the failing firms, especially for those actually defaulted during the year, and expect the effect of defaulted firms on catering expense spending to be the same as that of default risks. Thus, we hypothesize the following:

Hypothesis 7: Firms that actually defaulted in the previous year spend more catering expenses.

We also study the joint effect of defaulted firm and bad audit opinions as the following as in the case of predicted default risk hypothesis 6 above.

**Hypothesis 8:** Firms with bad audit opinions for the firms defaulted in the previous year spend more catering expenses.

#### 3.2 Test Model

To test formally hypotheses (1) - (6), we set research model 1 with the predicted default risk are as follows:

$Cater_{i,t} = \beta_0 + \beta_1 BIG4_{i,t} + \beta_2 Pre_D_{i,t-1} + \beta_3 Audit_bad_{i,t-1}$	(1)
+ $\beta_4$ New_audit <sub>i,t</sub> + $\beta_5$ BIG4_bad <sub>i,t-1</sub> + $\beta_6$ Audit_bad_PD <sub>i,t-1</sub>	
+ $\beta_7$ Largest_sh <sub>i,t</sub> + $\beta_8$ List_age <sub>i,t</sub> + $\beta_9$ Turnover <sub>i,t</sub>	
+ $\beta_{10}$ EATR <sub>i,t</sub> + $\beta_{11}$ Ln_asset <sub>i,t</sub> + $u_i$ + $\lambda_t$ + $\varepsilon_{i,t}$	

where i denotes firm i, t denotes year t. Variables are defined as follows.

Cater\_r<sub>i,t</sub>: Corporate catering expenses<sub>t</sub>/ Sales<sub>t</sub>

BIG4<sub>i,t</sub>: Firm with Big 4 auditor (Samil , Samjong, Anjin, Han Young) is 1, and 0 otherwise
Pre\_D<sub>i,t-1</sub>: Predicted default risks

Audit\_bad<sub>i,t-1</sub>: Auditors from the limited, inadequate, declined comment or did not receive audit firms 1, 0 if the proper audit opinion
New\_audit<sub>i,t</sub>: Firm with new auditor is 1, 0 otherwise
BIG4\_bad<sub>i,t-1</sub>: Interactive term of Big 4 and Audit\_bad
Audit\_bad\_PD<sub>i,t-1</sub>: Interactive term of Audit\_bad and Pre\_D
Largest\_sh<sub>i,t</sub>: the shareholdings of the largest shareholder
List\_age<sub>i,t</sub>: the number of years after listing on Korea Stock Exchange
Turnover<sub>i,t</sub>: total asset turnover ratio, Sales<sub>t</sub>/total asset<sub>t-1</sub>
EATR<sub>i,t</sub>: return on assets(ROA), Net income<sub>t</sub>//total assets<sub>t-1</sub>

Ln\_asset<sub>i,t</sub>: firm size, measured in the natural log of total assets

u<sub>i</sub>, : characteristic variable to reflect the firm effect

 $\lambda_t$ : characteristic variable to reflect the year effect

 $\epsilon_{i,t:}$  : error terms

Likewise, to test formally hypotheses (7) - (8), we set research model 2 with dummy variables for the firms actually defaulted as follows :

 $\begin{aligned} Cater\_r_{i,t} &= \beta_0 + \beta_1 BIG4_{i,t} + \beta_2 Default_{i,t-1} + \beta_3 Audit\_bad_{i,t-1} \\ &+ \beta_4 New\_audit_{i,t} + \beta_5 BIG4\_bad_{i,t-1} + \beta_6 Audit\_bad\_D_{i,t-1} \\ &+ \beta_7 Largest\_sh_{i,t} + \beta_8 List\_age_{i,t} + \beta_9 Turnover_{i,t} \\ &+ \beta_{10} EATR_{i,t} + \beta_{11} Ln\_asset_{i,t} + u_i + \lambda_t + \varepsilon_{i,t} \end{aligned}$ (2)

where,  $Default_{i,t-1}$ : 1 if the predicted default risk is greater or equal to 0.5, 0 otherwise. Audit\_bad\_ $D_{i,t-1}$ : Interactive term of Audit\_bad and Default

# 4. DATA AND DESCRITIVE STATISTICS

#### 4.1 Data and Variables

In this study, we use a combined dataset of the database provided by Korea Information Services, called KIS-VALUE for Korean firms and Maegyung Corporate Annual from 1990 to 2007. We use accounting data, the number of employees, the date of establishment, shareholder's ownerships and market values are obtained directly from the former dataset. Other non-numeric data not available in the dataset are obtained from the latter dataset. We exclude observations without all data used in the empirical model and with outliers or seemingly erroneous data for the firms in financial services which adopt different accounting principles and rules from general manufacturing and service firms. All other ratios variables are calculated are based on our definitions in the earlier section. We present the number of firms over the period, classified into two groups: defaulted and non-defaulted. A firm is classified as defaulted when it applies for bankruptcy, bailouts or liquidation, or declares insolvent is rejected for refinancing during the year which are categorized in <Table 1>. The total number of observations used for this study is 9,128 as shown in the table. From this table, we can notice that during the IMF crisis period of 1997-1998, the number of default firms in Korea increased sharply then shrinking again.

Year	Number of firms	Non - defaulted firms	Proportion (%)	Defaulted firms	Proportion (%)
1991	514	514	100.00	0	0.00
1992	518	515	99.42	3	3.02
1993	518	517	99.81	1	1.00
1994	519	519	100.00	0	0.00
1995	528	523	99.05	5	5.05
1996	527	526	99.81	1	1.00
1997	532	517	97.18	15	15.44
1998	528	496	93.94	32	34.06
1999	527	518	98.29	9	9.16
2000	531	525	98.87	6	6.07
2001	542	537	99.08	5	5.05

<Table 1> Number of Firms (Non-defaulted firms and defaulted firms)

2002	552	552	100.00	0	0.00
2003	551	549	99.64	2	2.01
2004	560	560	100.00	0	0.00
2005	561	561	100.00	0	0.00
2006	562	562	100.00	0	0.00
2007	558	557	99.82	1	1.00
Total	9,128	9,048	99.12	80	80.71

Note) A firm is classified as defaulted during the year when it applies for bankruptcy, bailouts, liquidation, or declares insolvent, or rejected for refinancing, whichever comes first over the study period.

<Table 2> shows the distribution of audit opinions (appropriate or inappropriate) each year over the sample period. Inappropriate audit opinion increased during the IMF crisis period from 1997 by 2000, possibly reflecting perilous situation for firms due to outside shocks during the period. Due to the financial crisis, maybe more firms might be in severe distress or audit firms were more cautious in auditing.

	<table 2=""> Distribution of Audit Opinions</table>						
Year	Number of Appropriate audit P firms opinion		Proportion (%)	Inadequate audit opinion	Proportion (%)		
1991	514	466	90.66	48	9.34		
1992	518	489	94.40	29	5.60		
1993	518	492	94.98	26	5.02		
1994	519	498	95.95	21	4.05		
1995	528	500	94.70	28	5.30		
1996	527	507	96.20	20	3.80		
1997	532	483	90.79	49	9.21		
1998	528	485	91.86	43	8.14		
1999	527	498	94.50	29	5.50		
2000	531	496	93.41	35	6.59		
2001	542	524	96.68	18	3.32		
2002	552	538	97.46	14	2.54		
2003	551	541	98.19	10	1.81		
2004	560	556	99.29	4	0.71		
2005	561	558	99.47	3	0.53		
2006	562	559	99.47	3	0.53		
2007	558	552	98.92	6	1.08		
Total	9,128	8,742	95.77	386	4.23		

<Table 3> shows the predicted default risks and catering expense ratio to sales by year. Except for 1991, from 1992 to 1998 the default risks of firms had decreased gradually over the period sharply right after the IMF period of 1997 – 1998. This is consistent with known facts that firms in Korea went through severe restructuring in their business portfolio, capital structure, etc.

Table 3	3>Г	)efault	Risks	and	Catering	Expenses
	/~ L	<i>c</i> raun	<b>I</b> (15K)	ana	Catering	LAPCHSCS

vear	Number of firms	Predicted default risks	Catering expenses to sales	
Jour		i realetea aeruart risks	expenses	
1991	514	0.7450	0.0047	
1992	518	0.7284	0.0042	
1993	518	0.6657	0.0039	
1994	519	0.6505	0.0041	
1995	528	0.6563	0.0043	
1996	527	0.6356	0.0041	
1997	532	0.7242	0.0034	

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1998	528	0.7250	0.0023
1999	527	0.5624	0.0025
2000	531	0.4800	0.0025
2001	542	0.4081	0.0024
2002	552	0.4081	0.0026
2003	551	0.2555	0.0025
2004	560	0.2218	0.0021
2005	561	0.1909	0.0023
2006	562	0.1954	0.0022
2007	558	0.1974	0.0022
Total	9,128	0.4847	0.0031

#### 4.2 Descriptive Statistics and Correlation Analysis

<Table 4> provides the summary statistics for major variables used in this study. The dependent variable catering expenses measured as ratios to sales (Cater\_r) has a mean of 0.31%, a median of 0.18% and with a relatively large standard deviation of 0.43%, possibly implying that the level of catering spending is widely different across firms with some outliers. Among independent variables, the mean of the largest shareholder ownership (Largest\_sh) is about 0.23 while its median is 0.20. The length of firms' listed period (List age) is about 12.1 years on average compared with the median of 11.0 years. The mean of turnover ratio (Turnover), sales to total assets is about 1.03 with the median of 0.93.

			Descriptive 3	latistics		
Variable	Observations	Mean	Median	Standard deviation	Minimum	Maximum
Cater_r	9,128	0.0031	0.0018	0.0043	0.0000	0.0847
Largest_sh	9,128	0.2293	0.2000	0.1526	0.0001	0.7000
List_age	9,128	12.0909	11.0000	11.2393	0	51
Turnover	9,128	1.0258	0.9300	0.5639	0.0100	5.9933
EATR	9,128	0.0616	0.0598	0.0788	-0.9591	0.7452
Ln_asset	9,128	25.8447	25.6721	1.4559	21.0702	31.8153

Table 1 Descriptive Statistics

Note 1) Descriptive statistics are for the predicted default risks. Instead, we report its details separately in <Table 3>.

Note 2) Descriptive statistics for dummy variables used in the study are omitted.

The profitability measure used in this study, ROA (EATR) or return on assets is on average 6.16%, a little larger than its median of 5.98%. The firm size measured is scaled by taking natural logarithm of the total asset (Ln\_asset) in 25.8 on average with the median of 25.7. From the table, we can cautiously argue that variables used in this study are distributed more or less normally except for the catering expenses, which is somewhat severely right tailed.

<table 5=""> Pea</table>	rson Correlati	ion Coefficient
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Variable	Cater_r	Largest_sh	List_age	Turnover	EATR	Ln_asset
Cater_r	1					
Largest_sh	-0.0034*	1				
List_age	-0.1979***	-0.215	1			
Turnover	$0.1428^{***}$	$0.0671^{***}$	-0.1911***	1		
EATR	$0.195^{***}$	0.0743***	-0.2295***	$0.2894^{***}$	1	
Ln_asset	-0.4069***	-0.0748***	$0.3697^{***}$	-0.1491***	$0.0062^{*}$	1

Note 1) \* and \*\*\* denote the significance level of 1%, and 10% respectively in two-tailed tests.

In <Table 5>, Pearson correlation coefficients for the key variables are provided with their significance level. The dependent variable, catering expense to sales ratio (Cater\_r) has negative and significant relationships with largest shareholder's holdings (Largest\_sh) and firm size (Ln\_asset) at 1% significance level and listed period (List\_age) at 10% level. The relationships with the total asset turnover ratio (Turnover) and ROA (EATR) are positive and significant at 1% significance level. We can see that most relationships are significant at 1% significance level which is possible causes of multicollinearity problems among variables. Therefore, we will perform VIF (variance inflation factor) test for the existence of multicollinearity.

# 4.3 Group Mean Tests

<Table 4> reports the test results for differences in means between two groups: defaulted and non-defaulted with unequal variances between the groups assumed. From the table, defaulted firms are 0.1% lower in spending catering expenses (Cater\_r) on average. Less likely to take audits from the well known big 4 auditors(BIG4), more likely to change auditors(New\_audit) listed longer (List\_age), worse in profitability(EATR) and turnover ratio(Turnover) at 1% level relative to non-defaulted firms. However, the difference in means for the ownership by the largest shareholders (Largest\_sh) of firms in two groups is not significant at 10% level or lower.

<Table 6> Group Mean Test between Defaulted and Non-defaulted Firms

Description of the variables are as follows: where i denotes firm i, t denotes year t. Cater\_r: Corporate catering expenses to sales ratio, BIG4: 1 if the Big 4(Samil , Samjong, Anjin, Han Young) auditors, and 0 otherwise, Pre\_D: Predicted default risk of firms, Audit\_bad: 1 if audit opinion is inappropriate, limited, declined comment or did not receive audit, 0 otherwise, New\_audit: 1 if the auditor changed, 0 otherwise, Largest\_sh: largest shareholder's holdings, List\_age: listed period in years, Turnover<sub>i,t</sub>: total asset turnover ratio to total assets, [salest/ total assetst-1,], EATR: Return on assets(ROA), [net income\_t/ total assets.

Variables	Non-Defaulted(A)	Defaulted(B)	Difference(A-B)	t Statistic
Cater_r	0.003	0.002	0.001	8.922***
BIG4	0.554	0.544	0.011	9.445***
Audit_bad	0.036	0.112	-0.077	-26.405***
New_audit	0.240	0.388	-0.148	-9.346***
Largest_sh	0.228	0.244	-0.016	-0.716
List_age	11.524	17.976	-6.452	-39.224***
Turnover	1.034	0.935	0.099	5.407***
EATR	0.067	0.009	0.057	16.349***
Ln_asset	25.838	25.913	-0.075	-2.901***

Note 1) \* and \*\*\* denote the significance level of 1%, and 10% respectively in two-tailed tests. Note 2) The group mean tests are performed under the assumption of unequal variances between groups.

# 5. REGRESSION ANALYSIS

# 5.1 The Effect of Audit and Default Risks

In this section, we test hypotheses (1) - (6) using regression model 1, as mentioned in the earlier section. We run three types of regressions: ordinary least squares model (OLS), random effects model (REM), fixed effects panel model (FEM) and present the results of the regressions in

<Table 7>. We implemented formal tests for the best fit model using Breusch and Pagan Lagrange multiplier test and Hausman test which both of them were statistically significant at the level of 1% or less. The former test leads us to select the random effects model in panel model over ordinary least square model while the latter does for the fixed effects model over the random effects model among panel models. Based on relatively high adjusted R<sup>2</sup> values: 0.2103, 0.1959, and 0.1743, respectively for the three models and statistically significant F or Chi-square statistics at 1% level, we adopt all of them. Using the OLS model, we find relatively small variance inflation factor (VIF) test statistics in a range of 1.01 - 1.86. We have dismissed the problems of multicollinearity among independent variables.

From the selected fixed effects panel model's (FEM) result shown in the table below, we find the effect of Big 4 auditors (BIG4), inappropriate audit opinions (Audit bad) in the previous year are not statistically significant at 10% or higher from which lead to the rejection of hypotheses (1) and (3) for any reputation effect of auditors and that of audit opinions on corporate catering expenses to sales (Cater\_r). On the other hand, the effect of default risks (Pre\_D) in the previous year on catering spending is positive and significant at a level of 5%, which implies that firms in financial distress plausibly put more efforts by increasing spending of catering expenses. Thus, hypothesis (2) is supported. The effect of new auditors on catering expenses is positive, significant at a level of 10%, implying that firms with new auditors spend more catering expenses. This strongly supports hypothesis (4). The joint effect of big 4 auditors (Big 4) and inappropriate audit opinions (Audit bad) or the interactive term of BIG4 bad on catering expenses is not significant. Thus, hypothesis (5) is rejected while the effects of inappropriate audit opinions (Audit\_bad) in the previous year and predicted default risks (Pre\_D) or the interactive term of Audit\_bad\_PD on the expenses are negative, significant at a level of 1%. This implies that firms in financial distress, together with inappropriate audit opinions in the previous year increase catering spending. This result supports hypothesis (6).

#### <Table 7> The Effect of Audit and Default Risks on Catering Expenses

 $\begin{array}{l} Model \ (1): Cater\_r_{i,t} = \beta_0 + \beta_1 BIG4_{i,t} + \beta_2 Pre\_D_{i,t} + \beta_3 Audit\_bad_{i,t} + \beta_4 New\_audit_{i,t} \\ \qquad + \beta_5 BIG4\_bad_{i,t} + \beta_6 Audit\_bad\_D_{i,t} + \beta_7 Largest\_sh_{i,t} + \beta_8 List\_age_{i,t} \\ \qquad + \beta_9 Turnover_{i,t} + \beta_{10} EATR_{i,t} + \beta_{11} Ln\_asset_{i,t} + u_i + \lambda_t + \epsilon_{i,t} \end{array}$ 

Description of the variables are as follows: where i denotes firm i, t denotes year t. Cater\_r: Corporate catering expenses to sales ratio, BIG4: 1 if the Big 4(Samil , Samjong, Anjin, Han Young) auditors, and 0 otherwise, Pre\_D: predicted default risks, Audit\_bad: 1 if audit opinion is inappropriate, limited, declined comment or did not receive audit, 0 otherwise, BIG4\_bad: the interactive term of BIG4 and Audit\_bad, New\_audit: 1 if the auditor changed, 0 otherwise, Audit\_bad\_PD: the interactive term of Audit\_bad and Default, Largest\_sh: largest shareholder's holdings, List\_age: listed period in years, Turnover<sub>i,t</sub>: total asset turnover ratio to total assets, [sales<sub>k</sub>/ total assets<sub>t-1</sub>,], EATR: Return on assets(ROA), [net income<sub>t</sub>/ total assets<sub>t-1</sub>,], Ln\_asset: firm size, measured by the natural logarithm of total assets.

	OL	S	REM		FEM	
Variables	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
BIG4	-0.0001	-1.19	0.0000	0.20	0.00001	0.30
Pre_D	0.0006	4.96***	0.0005	3.92***	0.0003	$2.06^{**}$
Audit_bad	-0.00001	-0.06	0.0003	1.42	0.0003	1.53
New_audit	0.00001	0.15	0.0001	$1.76^{*}$	0.0001	$1.84^{*}$
BIG4_bad	-0.0002	-1.16	-0.0002	-1.21	-0.0002	-0.93
Audit_bad_PD	-0.0003	-0.59	-0.0011	-3.07***	-0.0011	-3.09***
Largest_sh	-0.0011	-4.00***	-0.0007	-2.69***	-0.0006	-2.38**

List_age	0.00001	1.89*	-0.00001	-4.13***	-0.0001	-5.98***	
Turnover	0.0003	3.44***	0.0013	13.75***	0.0016	15.20***	
EATR	0.0105	18.93***	0.0029	5.84***	0.0016	3.14**	
Ln_asset	-0.0012	-38.50***	-0.0013	-23.42***	-0.0012	-17.93***	
Constant term	0.0326	41.20***	0.0349	24.87***	0.0341	19.50***	
Observations	9,128						
Adjusted R2	0.2103		0.1959		0.1743		
F /χ2 statistic	220.74***		2048.42***		178.56***		
VIF	1.01~1.86 (average : 1.27)						

Note 1) \*, \*\*, and \*\*\* indicate significant at 10%, 5%, and 1% level, respectively in two tailed tests. Note 2) Adjusted  $R^2$  values are calculated using the ordinary square models.

Note 3) F statistics are for the OLS model and the FEM model, while  $\chi^2$  statistic is for the REM model.

Note 4) From the Breusch Pagan Lagrange multiplier test,  $\chi^2$  statistic is 15,740.23. Thus,  $H_0:\sigma_u^2 = 0$  is rejected, significant at 1% or less. In other words, OLS is not suitable for the panel data. In addition, From the Hausman test,  $\chi^2$  statistic 114.44 is significant at 1% or less. Therefore, the best fit model selected is the FEM among the three regression models.

The effects of control variables on catering expenses are as follows: the largest shareholders' holdings(Largest\_sh) were negative and significant at 5% level, the listed period (List\_age) was negative and significant at 1% level, turnover or sales to total assets (Turnover) and profitability (EATR) were both positive and significant at 1% level and firm size (Ln\_Asset). All the results for the control variables are consistent with Kim and Kim (2011). From these results, we can conclude that firms in Korea do not spend more catering expenses.

# 5.2 The Effect of Audit and Defaults

In this section, we test hypotheses (7) - (8) using regression model 2 with a new variable Default for firms which actually defaulted instead of predicted default risks (Pre\_D). This is to study the effects of audits, defaults and both combined for joint effects on catering expenses and show the results of three regressions in <Table 8>. Just as in the previous section, we select FEM as the best fit regression through Breusch and Pagan Lagrange multiplier test and Hausman test. With the relatively high adjusted  $R^2$  values: 0.2094, 0.2120 and 0.1940 respectively for the three regressions, all of them with statistically significant F Chi-square statistics at 1% significance level which lead us to adopt all of them. From the OLS model, we have relatively low variance inflation factor (VIF) test statistics within a range of 1.01 - 1.86. We may neglect the existence of multicollinearity problems among independent variables.

Regarding to the effect of defaults (Default) actually occurred in the previous year on catering expenses, we find that it is negative and significant at a level of 10% which implies that firms in default spend less catering expenses. This rejects our hypothesis (7) which fails our prior expectation. The joint effect of inappropriate audit opinions (Audit\_bad) in the previous year and firms' default (Default) is studied using the interactive term of Audit\_bad\_D which conveyed negative expense and significant at a level of 1%, rejecting hypothesis (8). This implies that defaulted firms with inappropriate audit opinions in the previous year decrease their catering spending. All others results are same with minor differences not enough to change our earlier conclusions regarding hypotheses, as in the regressions with predicted default risks before. Thus both hypotheses regarding the effects of defaults are rejected with their negative effect on catering expenses.

From the selected fixed effects panel model (FEM) results, we find the effect of Big 4 auditors (BIG4) is not statistically significant at 10% or higher from which lead to reject the hypotheses. While inappropriate audit opinions (Audit\_bad) in the previous year is statistically significant at 5% or higher in their effects on catering expenses (Cater\_r) from which we accept hypotheses (3), the

latter result inconsistent with the one in the previous section. This might be due to multicollinearity plausibly existing between actual default and audits in the selection of auditors and audit opinions.

<table 8=""></table>	The Effect	of Audit an	d Defaults o	n Catering	Expenses
	The Liteet	or Auun an	lu Defaults 0	n Catering	LAPCHSCS

Description of the variables are as follows: where i denotes firm i, t denotes year t. Cater\_r: Corporate catering expenses to sales ratio, BIG4: 1 if the Big 4(Samil, Samjong, Anjin, Han Young) auditors, and 0 otherwise, Default: 1 if predicted default risk is greater than 0.5, 0 otherwise, Audit\_bad: 1 if audit opinion is inappropriate, limited, declined comment or did not receive audit, 0 otherwise, BIG4\_bad: the interactive term of BIG4 and Audit\_bad, New\_audit: 1 if the auditor changed, 0 otherwise, Audit\_bad\_PD: the interactive term of Audit\_bad and Default, Largest\_sh: largest shareholder's holdings, List\_age: listed period in years, Turnover<sub>i,t</sub>: total asset turnover ratio to total assets, [sales<sub>t</sub>/ total assets<sub>t-1</sub>], EATR: Return on assets(ROA), [net income<sub>t</sub>/ total assets<sub>t-1</sub>], Ln\_asset: firm size, measured by the natural logarithm of total assets.

	OLS		REM		FEM	
Variables	Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
BIG4	-0.0001	0.30	-0.00001	-0.37	-0.00001	-0.11
Default	0.0006	$2.06^{**}$	-0.0003	-1.66*	-0.0002	$-1.74^{*}$
Audit_bad	0.00001	1.53	0.0005	$2.49^{**}$	0.0005	$2.51^{**}$
New_audit	0.00001	$1.84^{*}$	0.0001	$1.77^{*}$	0.0001	$1.74^*$
BIG4_bad	-0.0002	-0.93	-0.00001	-0.09	-0.00001	-0.12
Audit_bad_D	-0.0003	-3.09***	-0.0011	-2.85***	-0.0011	-3.08***
Largest_sh	-0.0011	-2.38**	-0.0008	-3.51***	-0.0007	-2.73***
List_age	0.00001	-5.98***	-0.0001	$-7.70^{***}$	-0.0001	-8.67***
Turnover	0.0003	$15.20^{***}$	0.0013	13.96***	0.0016	15.27***
EATR	0.0105	3.14***	0.0025	$5.02^{***}$	0.0013	$2.59^{***}$
Ln_asset	-0.0012	-17.93***	-0.0013	-23.84***	-0.0013	-18.46***
Constant term	0.0326	19.50***	0.0365	$25.70^{***}$	0.0359	20.08***
Number of observations	9,128					
Adjusted R <sup>2</sup>	0.2094		0.2120		0.1940	
F $/\chi^2$ statistic	220.74***		2118.63***		183.97***	
VIF value	1.01~1.86 (average 1.27)					

Note 1) \*, \*\*, and \*\*\* indicate significant at 10%, 5%, and 1% level, respectively in two tailed tests. Note 2) Adjusted  $R^2$  values are calculated using the ordinary square models.

Note 3) F statistics are for the OLS model and the FEM model, while  $\chi^2$  statistic is for the REM model. Note 4) From the Breusch Pagan Lagrange multiplier test,  $\chi^2$  statistic is 15,515.88. Thus,  $H_0:\sigma_u^2 = 0$  is rejected, significant at 1% or less. In other words, OLS is not suitable for the panel data. In addition, From the Hausman test,  $\chi^2$  statistic 116.22 is significant at 1% or less. Therefore, the best fit model selected is the FEM among the three regression models.

# 6. CONCLUSION

In this study, we investigate the effects of a peculiar type of expenses in Korea, catering expenses,

also known as entertainment costs, which are sometimes used as a barometer of unethical usage of expenses, using firm level data for firms listed on and delisted from Korea Stock Exchange during the period 1991 to 2007. These firm level data are obtained from two databases combined of KIS-Value provided by Korea Information Services and Maegyung Corporate Annal. Specifically, we focus on the level of expenditure with respect to default risks of firms over time and their defaults after controlling many firm specific financial and non-financial factors, including ROA, firm size, the length of listing period, turnover and the shareholding of the primary owner. For this, we developed default risk prediction models using Korean firm level data and actual defaults to estimate the default risks of firms over the period, in our study of usage of catering expenses.

We summarize the main results of our study as follows. First, firms audited by Big 4 auditors do not reduce catering expenses in Korea. Second, firms with higher default risks in the previous year spend more catering expenses. Third, firms with inappropriate audit opinion in the previous year spend more catering expenses. Fourth, firms with new auditors spend more catering expenses in the next year. Fifth, firms with bad audit opinions in the previous year and to be audited by Big4 auditors spend more catering expenses. Sixth, firms with bad audit opinions with high default risks in the previous year spend more catering expenses. Seventh, firms that actually defaulted in the previous year spend more catering expenses. Lastly, firms with bad audit opinions for the firms defaulted in the previous year spend more catering expenses. From the study, it is safe to claim that the catering expenses are not affected by the reputation of auditors, proxied by big 4 auditing firms in Korea, i.e. Ernest Young, KPMG, PwC and Deloitte and those firms expecting bad audit opinions in the previous year and higher default risks increase such expenses. This implies firms try hard to improve the results of audit using catering expenses and that the apparent defaults actually incurred affect negatively such spending. Thus, we infer that catering expenses might have been used to influence accounting audit in Korea, especially with new auditors, high default risks, or bad audit opinions in the previous year without any different effects for big 4 auditors compared with non-big 4 auditors to improve possibly bad audit reports. Thus, firms in Korea might have used more the catering expenses for unethical purposes in the past when they are in stress financially or non-financially.

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