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The Association Between Changes in Key Audit Matters and Earnings Management Behavior in Companies

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Abstract

Auditing Standards No. 58 "Communication on Critical Audit Issues in Auditing Report' in April 12, 2016. These new standards effect and regulate public listed companies to keep step with international auditing standards starting from Year 2016. The purpose of this study is to explore the relationship between the changes in key audit matters and earnings management, and to understand the relationship between the changes in key audits and the degree of corporate earnings management. The results of the study show that after controlling the endogenous nature of earnings management variables through the two-stage method of instrumental variables, the degree of earnings management is significantly negatively correlated with the change in the number of accounting items disclosed in the key audits of the auditor's audit report. That is to say, when the degree of management of earnings management is higher, the possibility that the number of items of key check items increases is lower, When the degree of management of earnings management is higher, the probability of the number of items for key check items is reduced. and the tendency is not to change the disclosure items of key check items.

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1. Introduction

Investors and other stakeholders have begun to demand new forms of audit reports that go beyond the traditional standardized format due to frequent financial statement frauds since the global financial crisis, causing a lack of confidence in financial statements that have traditionally been an important reference for investment decisions, and investors and other stakeholders are requesting more relevant and transparent audit information from accountants to aid in their decision-making, as the previous standardized audit report format no longer meets their needs. The International Auditing and Assurance Standards Board (IAASB) has issued revisions to the international auditing standards "Audit Reports" (ISA700) and (ISA701) through related auditing standards publicly highlighted." In order to align with international standards and enhance international competitiveness, our country promulgated Audit Practice Bulletin No. 57 "Audit Report on Financial Statements" on September 22, 2015, and subsequently issued Audit Practice Bulletin No. 58 "Communication of Key Audit Matters in the Audit Report" on April 12, 2016 to regulate listed and OTC companies will adopt the new auditing report guidelines starting from their 2016 financial reports, in accordance with international standards.

The biggest impact in the new audit report is the requirement for auditors to communicate Key Audit Matters (KAM) in the audit report of the company's financial statements. Due to the frequent financial frauds in recent years, financial reports and audit mechanisms cannot disclose relevant information in advance. In the past, many companies' governance units would manipulate earnings through the discretionary power granted by accounting standards, which would affect the accuracy of financial information. Therefore, the new audit report aims to enhance transparency by communicating key audit matters and providing a clearer presentation of audit risks and professional judgments faced by the auditors Implementing audit reports provides assistance in enhancing their management value and significantly increases communication value, thereby reducing the risk of information asymmetry. The disclosure of key audit matters in an auditor's report is critical to the quality of an enterprise's audit. DeAngelo (1981) defines audit quality as the ability of auditors to detect errors or fraud in financial statements, and their ability to resist client pressure and report truthfully after discovering such errors or fraud. This study aims to investigate how changes in key audit matters affect the level of earnings management in companies. The results of this study are intended to provide valuable information for financial statement users and stakeholders in making investment decisions.

In the last two years, various countries including Taiwan and China have announced and tried out new audit report standards with the ultimate goal of providing financial statement users with the most valuable information through revised audit reports and full disclosure of key audit matters making the most suitable investment decision can reduce information asymmetry and increase investors' confidence in financial statement auditing, thereby reducing corporate governance authorities' manipulation of earnings management. Therefore, this article mainly explores the relationship between changes in key audit matters and earnings management, with the hope of providing insight into whether accountants adapt to disclose more information in response to the new audit report, especially when faced with earnings management by management will there be changes in the disclosure level based on the empirical evidence of implementing the new audit report standards as revealed in this article.

2. Literature review and hypothesis development

The term "key audit matters" refers to items selected by the auditor through professional judgment and communication with the governance unit, which are the most important matters to be audited in the current period financial statements. This matter should be communicated during the auditing process as a matter to be examined by the accountant, with the aim of increasing the transparency of the auditing report and enhancing its communication value. "In France, starting in 2003, accountants were required to provide a justification of assessments (JOA) in their audit reports." "JOA and key audit matters are very similar as they both aim to make it easier for report users to understand the reasons behind the auditor's opinion on the financial statements." In recent years, the Public Company Accounting Oversight Board (PCAOB) and the International Auditing and Assurance Standards Board (IAASB) have required the disclosure of significant audit matters in financial statements, with the PCAOB referring to these as Critical Audit Matters (CAMs), IAASB refers to this matter as Key Audit Matter (KAM), and UK FRC also requires disclosure of significant risks in audits starting from 2013, referred to as Risk of Material Misstatement (RMM). Although these countries may have different names, the disclosure of key audit matters is essentially the most important auditing issue in recent years and has attracted many scholars to discuss related literature.

For example, key audit matters findings disclosure can affect investor decision-making, Sirois, Bedard and Bera(2018) as shown through eye-tracking technology research. Results indicate that additional information disclosed in reports can increase attention and interest in financial statements ; When there are more key audit matters in the audit report, participants will pay less attention to other parts of the report. Therefore, Christensen, Glover and Wolfe (2014) designed a traditional audit report and a report with critical audit matters to investigate their influence on non-professional investors' investment decisions; The research findings showed that the disclosure of critical audit matters in an audit report would affect the investment decisions of non-professional investors, but if the auditor provides additional audit procedures for the identified risk in the audit report, it would mitigate the effect. Lennox, Schmidt, and Thompson (2017) studied the disclosure of key audit matters and the information value generated by the number of key audit matters for investors in the UK. The research found that disclosing key audit matters does not provide more informational value in both short-term and long-term market trading, implying that regulators have already disclosed relevant risks in earlier periods, reducing the information effect of key audit matters. Overall, the above research suggests that disclosing additional key audit matters can enhance the communication value and useful information of the report.

Reid et al. (2019) found that after adopting the new-style audit report in the UK, key audit matters disclosure has an impact on audit quality, the absolute value of abnormal accruals in measuring earnings quality in financial reports and the likelihood of conformity or deviation from analyst predictions have both significantly decreased. In addition, there is a slight increase in audit fees, but the magnitude of the increase is not significant, indicating that the increase in audit fees is not directly related to the new audit report format. Gutierrez et al.(2018) empirically examine the effects of implementing a new audit report format over a two-year period on audit quality, audit fees, and investor reactions. Use absolute value of discretionary accruals, audit fees, cumulative abnormal returns over three days, and trading volume as proxy variables. The research found a slight increase in audit fees, but no significant impact on audit quality and investor reaction. Further examination revealed a positive correlation between the length of the new audit report, disclosure of risk discussion content, the

number of key audit matters and audit fees. "Disclosure of key audit matters is significantly related to audit quality and audit fees based on materiality standards.

Regarding the disclosure of key audit matters affecting the responsibility of accountants, Brown et al. (2014) conducted experiments using juries and law students. Participants are asked to evaluate whether the firm should be held responsible for any financial statement misstatements and the amount of damages to be compensated, in both the presence and absence of an auditor judgment rule and disclosure of key audit matters in the audit report. The "Accountant Judgment Rule" reduces jury judgment of accountant's negligence, but once negligence is proven, accountants may face higher damages. Reduce the jury and law students' judgments of accountants' negligence when key audit issues are exposed in audit reports. Brasel et al. (2016) also noted that while most investors support disclosure of key audit matters, some auditors, academics, and lawyers believe that requiring accountants to disclose key audit matters would make it easier for future plaintiff lawyers to claim that they failed to requesting accountants to disclose key audit matters would make it easier for future plaintiff lawyers to successfully sue them for failing to detect material misstatements during the audit process. The research findings indicate that disclosing important contents related to the audit process can reduce the risk of future lawsuits against accountants. Kachelmeier et al. (2020) conducted an experimental study on auditor disclosure of critical audit matters and their relevance to material misstatements. Users of audit reports interpret the disclosures as disclaimers of liability, which results in less responsibility for the accountants. Overall, disclosing the key auditing matters in an audit report reduces the risk of future lawsuits for accountants.

Schipper (1989) defined earnings management: The company management is allowed to exercise discretion in the preparation of financial statements within the limits and scope of the generally accepted accounting principles（GAAP）, even in situations of economic incentives and information asymmetry. Manage the timing of actual gains and losses to achieve earnings management goals. Only Velte and Issa (2019) have recently conducted an empirical study on the impact of the new reporting requirements on earnings management, using 49 disclosures of key audit matters and examining stakeholder reactions from a stakeholder perspective. The result showed that although critical auditing issues can reduce earnings management behavior, it does not have a significant impact on shareholders. Reid et al. (2019) found that adoption of new audit reports in UK firms reduces abnormal accruals, indicating that communicating key audit matters enhances information value. However, Gutierrez et al. (2016) found in their empirical study using UK companies that the adoption of new audit reports did not show a significant correlation with the materiality of the accounting numbers, and there was also no significant impact on the number of key audit areas and the length of paragraphs. When using a slight profit as a proxy variable for audit quality, the number of critical audit matters exhibits a negative correlation. This result suggests that disclosing more key audit items can help suppress earnings manipulation.

The earliest measure of earnings management was established by Healy (1985). It measures abnormal accrual earnings using accrual items, and distinguishes total accrual items into discretionary accruals and non-discretionary accruals. The non-discretionary accruals are subject to changes due to economic environment, which are difficult to manipulate. Assuming they remain fixed during the observation and estimation periods, the main cause of changes in these accruals is earnings management by management. DeAngelo (1986) relaxes the assumption that non-discretionary accruals remain fixed between the event period and the estimation period, and assumes that there is no motivation for management to manipulate accrual items during the

estimation period. Therefore, the total accruals from the previous period are used as an estimate for the current year's non-discretionary accruals.

Jones (1991) argued that non-discretionary accruals do not remain constant as assumed by the DeAngelo model and are influenced by changes in the external economic environment. The Jones model (1991) controls for these effects on non-discretionary accruals. Dechow et al. (1995) found that the Jones Model (1991) does not accurately consider all changes in accounts receivable as non-discretionary. Jones Model (1991) is unable to detect the manipulation of revenue through the timing of accounts receivable recognition, which can be utilized by management. Therefore, Dechow et al. (1995) assumed that all changes in accounts receivable are discretionary accruals and should be included in the estimation model. Therefore, the modification mode is adopted and the model is called the Modified Jones Model. The estimated value of the judgment accrual items in this study is calculated using this model.

In addition, key audit matters disclosure may affect management behavior. Cade and Hodge (2014) conducted an experiment investigating whether disclosing additional audit procedures and accounting estimate details would impact the level of candid communication between management and auditors. The experiment found that when auditors need to disclose information about accounting estimates in their audit reports, the willingness of management to share information decreases. However, if the disclosure is only related to the audit procedures, communication is less hindered. In addition, Vanstraelen et al. (2012) interviewed auditors and report users to discuss the content and format of the reports. They found that report users do not place much importance on information regarding the audit process, but rather are more interested in understanding the audit process within the report. The key audit risks and the quality of the internal control system discovered may be compromised due to pressure from the management or the desire to reduce personal litigation risks, leading to the concealment of specific disclosure risks or the provision of less relevant information to investors. The literature suggests that the implementation of the new audit report has led to changes in the behavior of management and accountants. This study mainly explores the relationship between changes in key audit items and earnings management. As financial statement quality increases, the likelihood of increasing the number of key audit items increases. Conversely, as financial statement quality decreases, the likelihood of increasing the number of key audit items decreases. When companies manipulate their earnings to a higher degree, auditors are more likely to refrain from disclosing key audit matters. According to Li Yang's (2018) study, as the degree of earnings management by companies increases, the number of key audit matters disclosed decreases. The higher the degree of earnings management in a company, the fewer key audit matters the representative accountant is willing to disclose. Therefore, this article establishes the following three hypotheses:

H1: The higher the degree of profit manipulation by a company, the lower the likelihood of an increase in the number of critical audit items.

H2: The higher the degree of earnings manipulation by a company, the more likely the number of critical audit items will decrease.

H3: The higher the degree of earnings manipulation by a company, the more likely they are to avoid disclosing changes to critical audit items.

3. Research Development

3.1 Empirical Model and Variable Measurement

The sample data for this study were sourced from Taiwan Economic Journal (TEJ) databases, including the Finance, Equity, and Key Audit Items Analysis databases. All listed and OTC companies from 2017 to 2020 were used as test samples. Industries with special features such as finance, insurance, and securities were excluded from the sample selection process, and excluding incomplete data provided by financial statements of sample companies. The final sample size is 5,184 observations.

This study mainly uses a two-stage method to control the endogeneity problem of earnings management variables, in order to investigate the association between the variability of key audit matters disclosed by auditors in audit reports and earnings management. To test the research hypothesis, this study constructs the following empirical model (Probit regression).

$$KAMIC_{it}=\alpha_0+\alpha_1 ABSDA_{it}+\alpha_2 SIZE_{it}+\alpha_3 LEV_{it}+\alpha_4 LOSS_{it}+\alpha_5 INVREC_{it}$$
$$+\alpha_6 INFASSYM_{it}+\alpha_7 CR_{it}+\alpha_8 ROA_{it}+\alpha_9 DE_{it}+\alpha_{10} KPMG_{it}$$
$$+\alpha_{11} PWC_{it}+\alpha_{12} EY_{it}+\alpha_{13} IE_{it}+\alpha_{14} GOODWILL_{it}+\varepsilon_{it} \quad (1)$$

KAMIC： the situation of the change of the key audit matters;

ABSDA：the absolute value of discretionary accruals;

SIZE：client size , measured as the natural logarithm of total assets;

LEV：total debts divided by total assets;

LOSS：dichotomous variable that takes the value 1 if the client incurred losses during the previous year and zero otherwise;

INVERC：account receivables plus inventories divided by total assets;

INFASSYM：Market to book value ratio;

CR：the ratio of total current assets to total current liabilities;

ROA：Return on assets;

DE：one if the company is audited by Deloitte CPA firm, and zero otherwise;

KPMG：one if the company is audited by KPMG CPA firm, and zero otherwise;

PWC：one if the company is audited by Price Waterhouse & Coopers CPA firm, and zero otherwise;

EY：one if the company is audited by Ernst & Young CPA firm, and zero otherwise;

IE：auditor industry specialization, which is obtained as the industry market share based on sales, using a simple proportion;

GOODWILL：measured as the natural logarithm of goodwill;

ε：error term.

In the empirical model, KAMIC represents the changes in key audit matters, and measured by NUMKAMI and NUMKAMD, which indicate the increase and decrease in the number of key audit matter items, respectively. This is used to assess the relationship with earnings management. Therefore, the main test variable in the regression equation is earnings management, which is primarily measured by the absolute value of discretionary accruals (ABSDA). However, it has been found from past literature that earnings management can be influenced by other variables. Therefore, to avoid and prevent endogeneity of the ABSDA variable from causing inconsistent or biased regression coefficient estimation, this study adopts a two-stage

approach for estimation. The first stage involves estimating ABSDA using the least squares method (explained in the following paragraph), while the second stage involves estimating the Probit regression equation for changes in key audit items, listed in equation (1). Consistent with the earlier hypothesis, this study expects that companies with lower levels of earnings management will have a higher number of key audit items disclosed by auditors, and the coefficient α_1 in equation (1) is expected to be significantly less than zero.

In addition to the main testing variables mentioned above, this study considers the following control variables based on previous literature: according to previous research, large companies have a lot of negotiating space in terms of audit fees (Casterella et al., 2004; Huang et al., 2007), and we also expect larger companies to exert greater audit pressure on accountants, requiring them to disclose fewer key audit items. Therefore, we anticipate a positive relationship between company size and key audit items, measured by natural logarithm of total assets. INVREC also measures a company's revenue size by dividing accounts receivable and inventory by total assets. In addition, previous literature has found that the higher the debt ratio (LEV), the higher the financial risk of the company. As the financial risk of the company increases, auditors tend to conduct more thorough audits on the company (Nelson et al., 2002). On the other hand, as the debt ratio increases, in order to avoid violating debt contracts, management is more likely to manipulate earnings increases (Defond and Jiambalvo 1994; Warfield et al., 1995) and it may also affect the discretionarily accrued number, so including the debt ratio as a control variable, but its impact direction is unclear. In addition, Laitinen and Laitinen (1998) and Reynolds and Francis (2001) found that when a company is in a loss situation, management is more incentivized to manipulate earnings and is more likely to issue a qualified opinion. Therefore, this study includes a dummy variable representing whether the company was in a state of loss in the current year (LOSS) . In addition, this study calculated the current ratio (CR) by dividing current assets by total current liabilities to control the complexity of auditing (Hay et al., 2006).

To measure information asymmetry, we use the INFASSYM ratio of market value to net worth, where net worth is financial information and market value is the market price and also reflects investor reactions. The larger the deviation, the greater the imbalance between investor and financial reactions, indicating an increase in information asymmetry, the disclosure of key audit matters may also affect the number of accounting items, thus including it as a control variable. In addition, to capture the profitability of the company, this study also uses the return on assets (ROA) for measurement. Finally, previous literature will be included regarding whether the accountant is an industry expert (Neal and Riley, 2004; Francis et al., 2005), as well as the accounting firm as a control variable. Therefore, this article controls for variables of industry expertise (IE) of the four major accounting firms - PwC, KPMG, Deloitte, EY, and the lead auditors. Finally, goodwill is used to address the complexity of companies and is measured using natural logarithms as a control variable.

3.2 Treatment of Endogeneity of Research Variables

Many previous studies have indicated that the decision to engage in earnings management is influenced by certain factors, making it an endogenous variable. Viewing earnings management as an exogenous variable is insufficient and inadequate. To avoid inconsistent or biased estimation of coefficients due to the endogeneity of earnings management variables (ABSDA), a two-stage method should be used for empirical estimation. The estimation formula for the first stage (OLS regression) is shown in equation (2) (the equation in (1) above is for the second stage).

$$ABSDA_{it}=\beta_0+\beta_1 SIZE_{it}+\beta_2 LEV_{it}+\beta_3 LOSS_{it}+\beta_4 INVREC_{it}+\beta_5 INFASSYM_{it}$$
$$+\beta_6 CR_{it}+\beta_7 R0A_{it}+\beta_8 DE_{it}+\beta_9 KPMG_{it}+\beta_{10} PWC_{it}$$
$$+\beta_{11} EY_{it}+\beta_{12} IE_{it}+\beta_{13} GOODWILL_{it}+\beta_{14} OCF_{it}+\beta_{15} PREACC_{it}$$
$$+\beta_{16} ISSUE_{it}+\beta_{17} GROWTH_{it}+\beta_{18} TURNOVER_{it}+\varepsilon_{it} \quad (2)$$

OCF： Cash flows from operating activities deflated by total assets;

PREACC： Lagged total accruals. Total accrual equals net income before extraordinary items + depreciation and amortization charges - operating cash flow) deflated by lagged total assets;

ISSUE： 1 if the annual change in the number of shares exceeds 10%, and 0 otherwise;

GROWTH：Sales growth rate;

TURNOVER：Asset Turnover Ratio;

ε：error term.

When using the two-stage least squares estimator to select instrumental variables, in addition to finding additional exogenous instrumental variables, all exogenous variables that originally existed in the structural equation should be included. In the estimation equation for the first stage, in addition to exogenous variables already contained in the structural equation, this study also includes new instrumental variables (i.e. β_{15} to β_{19}) which are not part of the original structural equation. The newly added exogenous variable refers to operating cash flows, which has been found to potentially affect discretionary accruals in many previous studies. Therefore, it is included in the variables and measured by dividing operating cash flows by the average total assets at the beginning and end of the period. This study also referred to the methods used by Ashbaugh et al. (2003), Jiang and Yang (2005), and Lee and Lin (2005) to control for the previous period's total accruals (PREACC) in the regression model. The larger the accruals, the greater the opportunity for a company to manipulate earnings without being easily detected. PREACC coefficient is expected to be positive in the absolute value sample of discretionary accruals, calculated by subtracting operating cash flow from net profit before prior period extraordinary items and depreciation and amortization expenses, divided by prior period total assets. Finally, to control the company's profitability, we will include the variables of stock issuance, revenue growth rate, and asset turnover as control variables.

Regression equation (3) references literature on earnings quality models, which have shown in previous studies that higher levels of earnings management by companies result in lower quality of reported earnings. Past literature has used discretionary accruals to measure earnings management (Dechow et al.,1995；Kothari et al.,2005). The Modified Jones Model is considered the best estimation model for measuring discretionary accruals (Dechow et al., 1995; Guay, Kothari, and Watts, 1996) in the models that assess judgmental accruals, therefore this paper uses it. Following Kothari et al. (2005), this study computes the discretionary accruals of firms in a cross-sectional industry setting. The estimation period is the five years preceding the sample period for each industry, and an Ordinary Least Square (OLS) regression model is used to estimate Equation (3). Following Kothari et al. (2005), this study computes the discretionary accruals of firms in a cross-sectional industry setting. The estimation period is the five years preceding the sample period for each industry, and an ordinary least square (OLS)

regression model is used to estimate Equation (3) ($\hat{\gamma}_0$ 、$\hat{\gamma}_1$ 、$\hat{\gamma}_2$ 、$\hat{\gamma}_3$ 、$\hat{\gamma}_4$); during the sampling period, the discretionary accruals (DA) for each company were calculated by subtracting the fitted values obtained by multiplying the financial statement values during the sample period with the regression coefficients from Equation (4) from the actual total accruals. The absolute value of DA was used as the experimental variable in this study.

$$TAC_{it}/A_{it-1}=\gamma_0+\gamma_1(1/A_{it})+\gamma_2[(\Delta SALE_{it}-\Delta AR_{it})/A_{it-1}] +\gamma_3(PPE_{it}/A_{it-1})+\gamma_4 ROA_{it-1}+\varepsilon_{it} \quad (3)$$

$$DA_{it}=TAC_{it}/A_{it-1}-[\hat{\gamma}_0+\hat{\gamma}_1(1/A_{it-1}+\hat{\gamma}_2(\Delta SALE_{it}-\Delta AR_{it})/A_{it-1}) +\hat{\gamma}_3(PPE_{it}/A_{it-1})+\hat{\gamma}_4 ROA_{it-1}] \quad (4)$$

TAC_t denotes the total accruals; $\Delta SALE_t$ denotes the change in net sales; ΔAR_t denotes the change in accounts receivable; and PPE_t denotes the gross property, plant, and equipment; ROA_{it-1} denotes the rate of return on assets for the last period; and A_{it-1} is thetotal assets at the beginning of the period.

4. Research Results

4.1 Analysis of Descriptive Statistics and Correlation Coefficient

Table 1 shows the descriptive statistics for each variable in this study, including the mean, median, standard deviation, minimum, and maximum values. According to the table, the average of the main variable "NUMKAMI" is 0.057, indicating that 5.7% of the sampled companies have increased their number of critical audit areas. The average of "NUMKAMD" is 0.159, indicating that some companies have decreased their number of critical audit areas. The average of KAMIC is 0.728, indicating that 72.8% of the sample companies have fluctuation in the items of key audit matters.

Table 2 shows the correlation coefficient matrix of variables in this study, with the Pearson correlation coefficient in the lower left corner. Among the main variables, the number of key audit items in the audit report (NUMKAMI) has a significantly negative correlation of -0.061 (at the 5% level of significance) with the discretionary accruals (ABSDA). The correlation coefficient between the decrease in the number of accounting items in key audit matters (NUMKAMD) and discretionary accruals (ABSDA) in the audit report is 0.043 (reaching a significant level of 10%), which preliminarily confirms the direction of the hypothesis: the higher the degree of earnings management by the company, the fewer key audit matters there are in the report. The correlation coefficient between Key Audit Matters in the audit report and Accounting-Based Significant Disclosures is -0.064 (significant at 5% level) and preliminarily confirms the hypothesis direction.

Table 1: Descriptive statistics

Variables[a]	Mean	Median	Standard Deviation	Minimum	Maximum
NUMKAMI	0.057	0.000	0.232	0	1
NUMKAMD	0.159	0	0.366	0	1
KAMIC	0.728	1	0.445	0	1
ABSDA	0.106	0.065	0.154	0.000	2.089
SIZE	15.343	15.151	1.477	9.830	21.949
LEV	0.410	0.413	0.183	0.010	0.998
LOSS	0.236	0	0.425	0	1
INVREC	0.312	0.303	0.181	0	0.955
INFASSYM	2.042	1.410	5.145	0.094	159.549
CR	2.879	1.639	7.066	0.075	175.203
ROA	0.033	0.043	0.127	-1.841	0.773
DE	0.365	0.000	0.482	0	1
KPMG	0.188	0	0.390	0	1
PWC	0.222	0	0.416	0	1
EY	0.102	0	0.303	0	1
IE	0.014	0.009	0.014	0.002	0.143
GOODWILL	2.752	0	4.920	0	17.997
OCF	0.043	0.046	0.119	-1.947	0.437
PREACC	-0.005	-0.001	0.088	-1.669	0.481
ISSUE	0.121	0	0.326	0	1
GROWTH	0.096	0.022	0.633	-0.971	10.167
TURNOVER	0.808	0.732	0.547	0.000	4.994

a. Variable definition: NUMKAMI: dummy variable for increase in number of key audit matters; NUMKAMD: dummy variable for decrease in number of key audit matters; KAMIC: dummy variable for changes of disclosure item in key audit matters; ABSDA: the absolute value of discretionary accruals; SIZE: client size , measured as the natural logarithm of total assets; LEV: total debts divided by total assets; LOSS: dichotomous variable that takes the value 1 if the client incurred losses during the previous year and zero otherwise; INVERC: account receivables plus inventories divided by total assets; INFASSYM: Market to book value ratio; CR: the ratio of total current assets to total current liabilities; ROA: return on assets; DE: one if the company is audited by Deloitte CPA firm, and zero otherwise; KPMG: one if the company is audited by KPMG CPA firm, and zero otherwise; PWC: one if the company is audited by Price Waterhouse & Coopers CPA firm, and zero otherwise; EY: one if the company is audited by Ernst & Young CPA firm, and zero otherwise; IE: auditor industry specialization, which is obtained as the industry market share based on sales, using a simple proportion; GOODWILL: measured as the natural logarithm of goodwill.

Table 2: Pearson correlation matrix[a]

Variables [b]	NUMKAMI	NUMKAMD	KAMIC	ABSDA	SIZE	LEV	LOSS	INVREC	INFASSYM	CR	ROA	DE	KPMG	PWC	EY	IE	GOODWILL	OCF	PREACC	ISSUE	GROWTH	TURNOVER
NUMKAMI	1.000																					
NUMKAMD	-0.107***	1.000																				
KAMIC	0.053*	0.181***	1.000																			
ABSDA	-0.061**	0.043*	-0.064**	1.000																		
SIZE	0.013	0.048*	-0.010	0.052*	1.000																	
LEV	0.033	-0.001	-0.053*	0.048*	0.308***	1.000																
LOSS	0.028	0.027	-0.048*	0.001	-0.306***	0.049*	1.000															
INVREC	-0.067**	-0.018	0.095***	-0.047*	0.021	0.333***	-0.137***	1.000														
INFASSYM	-0.017	-0.005	-0.010	-0.045	-0.128***	0.109***	0.060**	0.036	1.000													
CR	-0.005	-0.015	-0.026	-0.023	-0.158***	-0.305***	0.090***	-0.169***	-0.009	1.000												
ROA	-0.010	-0.078***	0.036	0.001	0.287***	-0.149***	-0.612***	0.040	-0.140***	-0.072***	1.000											
DE	0.007	-0.040	-0.058**	0.012	0.050*	-0.009	-0.029	-0.007	-0.033	0.006	0.041	1.000										
KPMG	-0.024	0.224***	0.054*	0.014	0.063**	0.063**	-0.034	0.039	-0.019	-0.026	0.043	-0.364***	1.000									
PWC	-0.020	-0.024	0.106***	0.023	-0.030	-0.097***	0.004	-0.041	-0.004	0.025	-0.012	-0.405***	-0.257***	1.000								
EY	-0.017	-0.098***	-0.040	-0.017	0.018	-0.021	-0.013	-0.014	-0.019	0.013	0.015	-0.255***	-0.162***	-0.180***	1.000							
IE	-0.052*	0.023	-0.068**	0.050*	0.194***	0.020	-0.012	-0.007	-0.042	0.034	0.009	-0.016	0.034	0.077***	-0.063**	1.000						
GOODWILL	0.078***	0.036	-0.005	-0.051*	0.358***	0.121***	-0.101***	0.023	-0.014	-0.066**	0.092***	0.091***	0.012	-0.023	-0.013	0.021	1.000					
OCF	-0.030	-0.030	0.015	-0.003	0.212***	-0.158***	-0.329***	-0.167***	-0.048*	-0.069**	0.441***	0.038	-0.005	0.042	0.047*	-0.034	0.096***	1.000				
PREACC	-0.015	-0.028	-0.037	0.003	0.081***	-0.022	-0.126***	0.073***	-0.065**	0.033	0.118***	0.037	-0.018	0.021	-0.029	0.022	-0.034	0.046*	1.000			
ISSUE	0.000	0.039	0.057**	0.002	-0.060**	0.066**	0.078***	0.032	0.031	-0.026	-0.087***	0.013	-0.021	-0.005	0.016	-0.018	0.051*	-0.082***	-0.089***	1.000		
GROWTH	0.044	-0.031	-0.030	0.073***	0.005	0.022	-0.037	0.109***	-0.005	0.099***	0.057**	-0.010	0.010	0.003	0.014	0.074***	0.047*	-0.105***	0.142***	0.051*	1.000	
TURNOVER	-0.060**	-0.001	0.096***	-0.028	0.033	0.208***	-0.217***	0.486***	0.023	-0.150***	0.187***	-0.001	0.063**	-0.003	-0.034	-0.004	0.122***	0.007	0.066**	-0.005	0.032	1.000

a.Pearson correlation coefficient, *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.
b. See Table 1 for all variable definitions.

4.2 Analysis of Empirical Results

Table 3 shows the empirical results of the regression analysis in this study. The increase in the number of key audit matters in the audit report (NUMKAMI) is negatively correlated with the discretionary accruals (ABSDA), with an estimated coefficient of -4.968, which is statistically significant at the 1% level. This result is consistent with the expected sign of the hypothesis. Higher earnings manipulation by the company is associated with a lower likelihood of an increase in the number of key audit items, supporting Hypothesis 1 of this study. In terms of control variables, the coefficient of company size (SIZE) is negative but not significant, indicating that as the company size increases, the operation becomes more complex and the difficulty of auditing also increases, making auditors less likely to give an unqualified opinion when signing off on audit opinions. The debt ratio (LEV), accounts receivable (INVREC), and information asymmetry (INFASSYM) have not reached significance despite their expected signs; while industry expertise of the lead auditor (IE) coefficient is consistent with the expected sign and reaches a significant level of 5%.

Table 4 shows a positive correlation between the decrease in the number of key audit items (NUMKAMD) and the judgmental accruals (ABSDA), with an estimated coefficient of 4.836 and a significance level of 5%. The result is consistent with the expected hypothesis. The higher the degree of earnings manipulation by a company, the likelihood of a decrease in the number of critical audit items supports hypothesis 2 in this study. In terms of controlling variables, the coefficient of firm size (SIZE) is positive and reaches a significant level of 5%. The coefficients of accounts receivable (INVREC), information asymmetry (INFASSYM), and industry expertise of the lead auditor (IE) all have expected signs but are not significant.

Table 5 shows a negative correlation between disclosure of changes in key audit matters (KAMIC) and discretionary accruals (ABSDA), with an estimated coefficient of -6.372 and a significance level of 1%. The result is consistent with the hypothesized sign. This result supports Hypothesis 3 that as the degree of earnings management by a firm increases, it is more likely to avoid changing the disclosure items related to key audit matters. In terms of controlling variables, the variables including company size (SIZE), debt ratio (LEV), accounts receivables (INVREC), and industry expertise of the lead auditor (IE) are in line with the expected signs, but not significant. Only the coefficient of information asymmetry (INFASSYM) is negative and significant.

Table 3: Empirical results of the relationship between the increase in the item number of key audit matters and earnings

first stage						second stage				
Variables	Predicted sign	ABSDA				Predicted sign	NUMKAMI			
		Coefficient	Standard error	t-value	p-value		Coefficient	Standard error	z-value	p-value
CONS		0.023	0.055	0.410	0.680		-0.444	0.568	-0.782	0.434
ABSDA						–	-4.968	1.230	-4.038	0.000***
SIZE	?	0.004	0.004	1.168	0.243	–	-0.040	0.038	-1.069	0.143
LEV	?	0.079	0.035	2.272	0.023**	–	-0.254	0.370	-0.688	0.246
LOSS	?	0.000	0.013	0.026	0.979	?	0.010	0.136	0.070	0.944
INVREC	?	-0.067	0.028	-2.340	0.019**	–	-0.327	0.398	-0.822	0.206
INFASSYM	?	-0.001	0.001	-1.481	0.139	–	-0.046	0.039	-1.196	0.116
CR	?	-0.001	0.001	-0.893	0.372	?	0.002	0.007	0.246	0.806
ROA	?	1.518	1.420	1.069	0.285	?	-23.654	13.039	-1.814	0.07*
DE	?	0.024	0.014	1.704	0.088*	?	-0.270	0.134	-2.018	0.044**
KPMG	?	0.023	0.016	1.449	0.147	?	-0.326	0.159	-2.048	0.041**
PWC	?	0.028	0.015	1.790	0.074*	?	-0.310	0.149	-2.083	0.037**
EY	?	0.012	0.018	0.682	0.495	?	-0.314	0.191	-1.640	0.101
IE	?	0.309	0.321	0.963	0.335	–	-8.487	4.384	-1.936	0.027**
GOODWILL	?	-0.003	0.001	-2.785	0.005***	?	0.035	0.010	3.403	0.001***
OCF	?	-0.024	0.035	-0.691	0.490					
PREACC	+	-0.017	0.041	-0.410	0.682					
ISSUE	+	0.000	0.011	-0.040	0.968					
GROWTH	?	0.019	0.007	2.590	0.009***					
TURNOVER	?	-0.005	0.008	-0.650	0.514					
N		5184				N	5184			
Adjusted R^2		0.0131				Pseudo R^2	0.0545			
F-value		4.95***				LR χ^2-value	73.88***			

All variables are defined in Table 1. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level.

Table 4: Empirical results of the relationship between the decrease in the item number of key audit matters and earnings management

Variables	first stage Predicted sign	ABSDA Coefficient	Standard error	t-value	p-value	second stage Predicted sign	NUMKAMD Coefficient	Standard error	z-value	p-value
CONS		0.024	0.055	0.446	0.656		-1.431	1.040	-1.377	0.169
ABSDA						+	4.836	2.291	2.111	0.018**
SIZE	?	0.004	0.004	1.092	0.275	+	0.070	0.036	1.923	0.028**
LEV	?	0.079	0.035	2.273	0.023**	+	0.048	0.489	0.098	0.461
LOSS	?	0.002	0.013	0.133	0.894	?	-0.006	0.110	-0.053	0.958
INVREC	?	-0.068	0.028	-2.393	0.017**	_	-0.394	0.248	-1.588	0.056
INFASSYM	?	-0.001	0.001	-1.491	0.136	_	-0.007	0.010	-0.731	0.465
CR	?	-0.001	0.001	-0.853	0.394	?	-0.008	0.008	-0.920	0.358
ROA	?	1.378	1.423	0.969	0.333	?	4.717	13.303	0.355	0.723
DE	?	0.023	0.014	1.643	0.100	?	0.346	0.157	2.205	0.027**
KPMG	?	0.022	0.016	1.399	0.162	?	0.782	0.368	2.126	0.033**
PWC	?	0.026	0.015	1.713	0.087	?	0.353	0.159	2.217	0.027**
EY	?	0.012	0.018	0.641	0.522	?	-0.070	0.209	-0.336	0.737
IE	?	0.321	0.321	1.000	0.317	+	1.584	2.802	0.565	0.286
GOODWILL	?	-0.003	0.001	-2.784	0.005***	?	-0.008	0.011	-0.712	0.476
OCF	?	0.004	0.036	0.105	0.916					
PREACC	+	0.001	0.040	0.017	0.234					
ISSUE	+	-0.007	0.012	-0.600	0.549					
GROWTH	?	0.020	0.008	2.562	0.01**					
TURNOVER	?	-0.002	0.008	-0.282	0.778					
N		5184				N	5184			
Adjusted R^2		0.0131				Pseudo R^2	0.0780			
F 值(Prob)		4.95***				LR χ^2 值(Prob)	125.87***			

All variables are defined in Table 1. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level.

Table 5 Empirical results of the relationship between disclosure of changes in key audit matters (KAMIC) and discretionary

first stage						second stage				
Variables	Predicted sign	ABSDA				Predicted sign	KAMIC			
		Coefficient	Standard error	t-value	p-value		Coefficient	Standard error	z-value	p-value
CONS		0.033	0.055	0.591	0.554		0.183	0.368	0.497	0.619
ABSDA						–	-6.372	0.589	-10.826	0.000***
SIZE	?	0.003	0.004	0.924	0.356	+	0.032	0.026	1.258	0.104
LEV	?	0.081	0.035	2.336	0.019**	+	0.244	0.446	0.547	0.293
LOSS	?	0.001	0.013	0.112	0.911	?	-0.011	0.094	-0.116	0.908
INVREC	?	-0.057	0.027	-2.128	0.033**	–	-0.130	0.420	-0.311	0.378
INFASSYM	?	-0.001	0.001	-1.456	0.145	–	-0.008	0.006	-1.363	0.087*
CR	?	0.000	0.001	-0.632	0.527	?	-0.004	0.005	-0.761	0.447
ROA	?	1.243	1.417	0.877	0.380	?	4.357	11.327	0.385	0.701
DE	?	0.024	0.014	1.659	0.097*	?	0.192	0.105	1.825	0.068
KPMG	?	0.023	0.016	1.450	0.147	?	0.265	0.179	1.476	0.140
PWC	?	0.027	0.015	1.757	0.079*	?	0.331	0.218	1.515	0.130
EY	?	0.013	0.018	0.707	0.479	?	0.100	0.124	0.806	0.420
IE	?	0.377	0.322	1.172	0.241	+	0.212	3.786	0.056	0.478
GOODWILL	?	-0.002	0.001	-2.566	0.01**	?	-0.017	0.006	-2.643	0.008***
OCF	?	0.001	0.016	0.039	0.969					
PREACC	+	0.025	0.027	0.929	0.177					
ISSUE	+	-0.010	0.010	-0.966	0.334					
GROWTH	?	0.005	0.009	0.537	0.591					
TURNOVER	?	-0.006	0.007	-0.865	0.387					
N		5184				N	5184			
Adjusted R^2		0.0131				Pseudo R^2	0.0393			
F 值(Prob)		4.95***				LR χ^2 值(Prob)	99.37***			

All variables are defined in Table 1. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% level.

4.3 Additional analyses

To enhance the robustness of the empirical findings, two additional sensitivity tests are included.

4.3.1 The dummy variable whose disclosure word count increases is the dependent variable

When the degree of earnings management by companies is higher, there is a lower likelihood of an increase in the number of items for key audit matters, as tested by the Accrual-based discretionary accruals (ABSDA) and Key Audit Matters disclosure word count (KAM-WORDI). The relevant regression model is as follows in equation (5).

$$\begin{aligned} WORDI_{it}=&\omega_0+\omega_1 ABSDA_{it}+\omega_2 SIZE_{it}+\omega_3 LEV_{it}+\omega_4 LOSS_{it}+\omega_5 INVREC_{it} \\ &+\omega_6 INFASSYM_{it}+\omega_7 CR_{it}+\omega_8 ROA_{it}+\omega_9 DE_{it}+\omega_{10} KPMG_{it} \\ &+\omega_{11} PWC_{it}+\omega_{12} EY_{it}+\omega_{13} IE_{it}+\omega_{14} GOODWILL_{it}+\varepsilon_{it} \end{aligned} \quad (5)$$

The empirical results of using the increased number of disclosed key audit matters (WORDI) as the dependent variable in equation (5) are presented in Table 6. The results show a negative correlation between the discretionary accruals (ABSDA) and the increased number of disclosed key audit matters (WORDI), which is consistent with the findings in Table 3. The estimated coefficient is -4.806 and significant at the 1% level. The result is consistent with the expected sign of the hypothesis, indicating that the higher the degree of earnings management by the firm, the less likely the number of key audit matters will increase. This result supports Hypothesis 1 of this study.

4.3.2 The dummy variable whose disclosure word count decreases is the dependent variable

When corporate earnings management is more prevalent, there is a higher likelihood of a reduced number of items in the key audit matters, as measured by ABSDA and KAM-WORDD. The relevant regression model is as follows Equation (6):

$$\begin{aligned} WORDD_{it}=&\lambda_0+\lambda_1 ABSDA_{it}+\lambda_2 SIZE_{it}+\lambda_3 LEV_{it}+\lambda_4 LOSS_{it}+\lambda_5 INVREC_{it} \\ &+\lambda_6 INFASSYM_{it}+\lambda_7 CR_{it}+\lambda_8 ROA_{it}+\lambda_9 DE_{it}+\lambda_{10} KPMG_{it} \\ &+\lambda_{11} PWC_{it}+\lambda_{12} EY_{it}+\lambda_{13} IE_{it}+\lambda_{14} GOODWILL_{it}+\varepsilon_{it} \end{aligned} \quad (6)$$

The empirical results of using the reduction of disclosed words on key audit matters as the dependent variable (WORDD) in equation (6) are presented in Table 7. The results show a positive correlation between the discretionary accruals (ABSDA) and the reduction of disclosed words on key audit matters (WORDD), which is consistent with the findings in Table 4. The estimated coefficient is 3.249, significant at 10% level, and the result is consistent with the expected sign of the hypothesis. This suggests that as the level of earnings management increases, there is a higher possibility of a decrease in the number of key audit matters. This result still supports hypothesis 2 of this study.

5. Conclusion

One common indicator for assessing a company's financial performance is its financial statements. However, companies often use earnings management within legal limits for specific purposes, which can obscure their operational condition and achieve special

intentions. Whether increasing or decreasing earnings, this can make it difficult for financial statement users to understand the company. However, with increasing impact on financial statement users, financial reporting requires more detailed and transparent information under global auditing standards, leading accountants to face new requirements for disclosure in audit reports. This article mainly studies the relationship between changes in key audit matters and earnings management, in order to enhance the transparency of information and help financial statement users understand significant judgments made by management.

The research results indicate a negative correlation between the number of key audit matters changes and discretionary accruals in accounting items in audit reports, consistent with the hypothesis. This suggests that the implementation of new audit reports with key audit matters may reduce the likelihood of an increase in the number of key audit items when earnings management is higher in a company. The higher the likelihood of a decrease in the number of key audit items, the more likely it is that the disclosure items of key audit items will not be changed. This result supports the hypothesis of this study.

Up to now, we can only conduct such research based on information disclosed in the Taiwan Economic Journal database. Currently, the database only reveals the implementation of key audit matters for the past five years and the changes observed during the previous four years. It is still debatable whether the findings of this study can be extrapolated to future years. It is recommended that future researchers wait a few more years for key factors to be revealed before conducting further studies, which would generate more informative results.

Table 6: Empirical Results on the Relationship between Increased Key Audit Matters Word Count and Earnings Management

first stage						second stage				
Variables	Predicted sign	ABSDA				Predicted sign	WORDI			
		Coefficient	Standard error	t-value	p-value		Coefficient	Standard error	z-value	p-value
CONS		0.013	0.055	0.233	0.816		-1.057	0.488	-2.165	0.030
ABSDA						–	-4.806	1.301	-3.694	0.000***
SIZE	?	0.005	0.004	1.311	0.190	+	0.031	0.034	0.912	0.181
LEV	?	0.078	0.035	2.251	0.024**	–	-0.242	0.298	-0.811	0.209
LOSS	?	0.001	0.013	0.054	0.957	?	-0.028	0.098	-0.288	0.774
INVREC	?	-0.073	0.028	-2.620	0.009***	+	0.211	0.224	0.943	0.173
INFASSYM	?	-0.001	0.001	-1.511	0.131	–	-0.001	0.010	-0.078	0.469
CR	?	-0.001	0.001	-0.811	0.417	?	0.004	0.005	0.800	0.424
ROA	?	1.697	1.417	1.197	0.231	?	-16.794	10.771	-1.559	0.119
DE	?	0.024	0.014	1.666	0.096*	?	-0.176	0.107	-1.643	0.100
KPMG	?	0.022	0.016	1.408	0.159	?	0.151	0.161	0.939	0.348
PWC	?	0.027	0.015	1.749	0.08*	?	0.347	0.216	1.609	0.108
EY	?	0.012	0.018	0.650	0.516	?	-0.068	0.136	-0.503	0.615
IE	?	0.310	0.321	0.966	0.334	–	-5.572	2.478	-2.249	0.013**
GOODWILL	?	-0.003	0.001	-2.944	0.003***	?	0.013	0.008	1.752	0.08*
OCF	?	-0.026	0.032	-0.802	0.422					
PREACC	+	-0.028	0.038	-0.723	0.235					
ISSUE	+	0.013	0.010	1.247	0.212					
GROWTH	?	0.018	0.007	2.347	0.019**					
TURNOVER	?	0.000	0.007	-0.028	0.978					
N		5184				N	5184			
Adjusted R^2		0.0131				Pseudo R^2	0.0517			
F-value		4.95***				LR χ^2-value	135.30***			

*, **, and *** indicate statistical significance at the 10%, 5%, and 1% level.

1 if the disclosure word count of key audit matters is increased, otherwise 0. All other variables are defined in Table 1.

Table 7: Empirical Results on the Relationship between Decreased Key Audit Matters Word Count and Earnings Management

	first stage					second stage				
Variables	Predicted sign	ABSDA				Predicted sign	WORDD			
		Coefficient	Standard error	t-value	p-value		Coefficient	Standard error	z-value	p-value
CONS		0.014	0.055	0.263	0.792		1.242	0.492	2.524	0.012**
ABSDA						+	3.249	2.348	1.383	0.083*
SIZE	?	0.005	0.004	1.269	0.205	–	-0.076	0.042	-1.814	0.035**
LEV	?	0.079	0.035	2.262	0.024**	+	0.242	0.337	0.719	0.236
LOSS	?	0.001	0.013	0.080	0.936	?	0.036	0.105	0.343	0.731
INVREC	?	-0.072	0.029	-2.523	0.012**	–	-0.303	0.244	-1.241	0.107
INFASSYM	?	-0.001	0.001	-1.514	0.130	+	0.006	0.011	0.529	0.298
CR	?	-0.001	0.001	-0.826	0.409	?	-0.003	0.005	-0.679	0.497
ROA	?	1.666	1.421	1.172	0.241	?	12.838	11.556	1.111	0.267
DE	?	0.023	0.014	1.645	0.100	?	0.447	0.117	3.809	0.000***
KPMG	?	0.022	0.016	1.395	0.163	?	0.048	0.138	0.351	0.726
PWC	?	0.026	0.015	1.722	0.085*	?	-0.187	0.175	-1.068	0.286
EY	?	0.011	0.018	0.629	0.530	?	0.326	0.148	2.194	0.028**
IE	?	0.311	0.321	0.967	0.334	+	3.680	2.574	1.430	0.076*
GOODWILL	?	-0.003	0.001	-2.932	0.003***	?	-0.010	0.009	-1.113	0.266
OCF	?	-0.015	0.039	-0.380	0.704					
PREACC	+	-0.022	0.046	-0.473	0.318					
ISSUE	+	0.011	0.013	0.840	0.401					
GROWTH	?	0.019	0.008	2.503	0.012**					
TURNOVER	?	0.000	0.008	-0.053	0.958					
N		5184				N	5184			
Adjusted R^2		0.0131				Pseudo R^2	0.0463			
F-value		4.95***				LR χ^2-value	120.90***			

*, **, and *** indicate statistical significance at the 10%, 5%, and 1% level.

1 if the disclosure word count of key audit matters is decreased, otherwise 0. All other variables are defined in Table 1.

References

[1] Ashbaugh, H., LaFond, R., and Mayhew, B., (2003). Do Nonaudit Services Compromise Auditor Independence? Further Evidence. The Accounting Review, Vol.78, No.3, pp. 611 - 639.

[2] Brasel, K., M. Doxey, J. Grenier, and A. Reffett. (2016). Risk disclosure preceding negative outcomes: The effects of reporting critical audit matters on judgments of auditor liability. Current Issues in Auditing, 10 (2), pp. 1 - 10.

[3] Brown, T., T. Majors, and M. Peecher. (2014). The impact of a higher intent standard on auditors' legal exposure and the moderating role of jurors' legal knowledge. Available at SSRN: http://papers.ssrn.com/so13/papers.cfm?abstract_id=2483221

[4] Cade, N., and F. D. Hodge. (2014). The effect of expanding the audit report on managers' communication openness. Working paper, Available at SSRN http://ssrn.com/abstract=2433641

[5] Casterella, J. R., Francis, J. R., Lewis, B. L., and Walker, P. L. (2004). Auditor industry specialization, client bargaining power, and audit pricing. Auditing: A Journal of Practice and Theory, 23 (11), pp. 123 - 140.

[6] Christensen, B. E., Glover, S. M., and Wolfe, C. J. (2014). Do critical audit matter paragraphs in the audit report change nonprofessional investors' decision to invest? Auditing: A Journal of Practice and Theory, 33 (4), pp. 71 - 93.

[7] DeAngelo, L. E. (1981). Auditor size and audit quality. Journal of Accounting and Economics, 3 (3), pp. 183 - 199.

[8] DeAngelo, L. E. (1986). Accounting numbers as market valuation substitutes: A study of management buyouts of public stockholders. The Accounting Review, 61 (July), pp. 400 - 420.

[9] Dechow, P.M., Sloan, R.G., & Sweeney, A.P. (1995). Detecting earnings management. The Accounting Review, 70(2), pp. 193 - 225.

[10] DeFond, M., and Jiambalvo, J. (1994). Debt covenant violation and manipulation of accruals. Journal of accounting & economics, 17 (1), pp. 145 - 176.

[11] Francis, J. R., Reichelt, K., & Wang, D. (2005). The Pricing of National and City-specific Reputations for Industry Expertise in the US Audit Market. The Accounting Review, 80(1), pp. 113 - 136.

[12] Guay, W. R., Kothari, S., & Watts, R. L., (1996). A market-based evaluation of discretionary accrual models. Journal of accounting research, 34, pp. 83 - 105.

[13] Gutierrez, E., M. Minutti-Meza, K. W. Tatum, and M. Vulcheva. (2016). Consequences of changing the auditor's report: Evidence from the UK. Available at SSRN: http://papers.ssrn.com/so13/papers.cfm?abstract_id= 2741174

[14] Gutierrez, E., M. Minutti-Meza, K. W. Tatum, and M. Vulcheva. (2018). Consequences of adopting an expanded auditor's report in the United Kingdom. Review of Accounting Studies, 23 (4), pp. 1543 - 1587.

[15] Hay, D., Knechel, B., and Li, V. (2006). Non-audit service and auditor independence: New Zealand Evidence. Journal of Business Finance & Accounting, 33, pp. 715 - 734.

[16] Healy, P. (1985). The effect of bonus schemes on accounting decisions. Journal of Accounting and Economics, 7, pp. 85 - 107.

[17] Huang, H. W., L. L. Liu, K. Raghunandan, and D. V. Rama. (2007). Auditor Industry Specialization, Client Bargaining Power, and Audit Fees: Further Evidence. Auditing: A Journal of Practice & Theory, 26 (1), pp. 147 - 158.

[18] Jiang, J. X., and Yang, Y. W., (2005). The Effects of Audit Firms' Industry Specialization and Auditor Tenure on Earnings Quality. Journal of

Contemporary Accounting, Vol.6, No.1, pp. 23 - 60. Available at https://www.airitilibrary.com/Publication/alPublicationJournal?PublicationID=16093895&IssueYear=2005

[19] Jones, J. J. (1991). Earnings management during import relief investigations. Journal of Accounting Research, 29 (2), pp. 193 - 228. http://dx.doi.org/10.2307/2491047

[20] Kachelmeier, S. J., D. Rimkus, J. J. Schmidt, and K. Valentine. (2020). The forewarning effect of critical audit matter disclosures involving measurement uncertainty. Contemporary Accounting Research, 37 (4), pp. 2186 - 2212.

[21] Kothari, S. P., Leone, A. J. and Wasley, C. E., (2005). Performance Matched Discretionary Accrual Measures, Journal of Accounting and Economics, Vol. 39, No.1, pp. 163 - 197.

[22] Laitinen, E. K. and Laitinen, T. (1998). Cash Management Behavior and Failure Prediction. Journal of Business Finance and Accounting, Vol. 13, pp. 323 - 45.

[23] Lee, J. Z., and Lin, S. F., (2005). The Relations between Auditor Tenure and Abnormal Accruals. Management Review, Vol.24, No.4, pp. 103 - 126. Available at https://www.airitilibrary.com/Publication/alDetailedMesh?docid=10219447-200510-24-4-103-126-a

[24] Lennox, C. S., J. J. Schmidt, and A. Thompson. (2017). Is the expanded model of audit reporting informative to investors? Evidence from the UK. Available at SSRN: https：//ssrn.com/abstract=2619785

[25] Li, Y., (2018). The Relationship between Key Audit Matters and Earnings Management. Unpublished Master's thesis, Chung Yuan Christian University, Taoyuang.

[26] Mark W. Nelson John A. Elliott, and Robin L. Tarpley, (2002). Evidence from Auditors about Managers' and Auditors' Earnings Management Decisions. The Accounting Review, Vol.77, pp. 175 - 202.

[27] Neal, T. L., and R. R. Riley, Jr. (2004). Auditor industry specialist research design. Auditing: A Journal of Practice and Theory, 23, pp. 169 - 177.

[28] Reid, L. C., J. V. Carcello, C. Li, T. L. Neal, and J. R. Francis. (2019). Impact of auditor report changes on financial reporting quality and audit costs: Evidence from the United Kingdom. Contemporary Accounting Research, 36 (3), pp. 1501 - 1539.

[29] Reynolds, J.K. and Francis, J.R. (2001). Does size matter? the influence of large clients on office-level auditor reporting decisions. Journal of Accounting and Economics, 30(3), pp. 375 - 400.

[30] Schipper, K. (1989). Commentary on earning management. Accounting Horizon, 3(4), pp. 91 - 102.

[31] Sirois, L., Be´dard, J., and Bera, P. (2018). The informational value of key audit matters in the auditor's report: Evidence from an eye-tracking study. Accounting Horizons, 30 (2), pp. 141 - 162.

[32] Vanstraelen, A., C. Schelleman, R, Meuwissen, and I. Hofmann. (2012). The audit reporting debate: Seemingly intractable problems and feasible solutions. European Accounting Review, 21(2), pp. 193 - 215.

[33] Velte, P., and J. Issa. (2019). The impact of key audit matter (KAM) disclosure in audit reports on stakeholders' reactions: a literature review. Problems and Perspectives in Management, 17 (3), pp. 323.

[34] Warfield, T. D., J. J. Wild, and K. L. Wild. (1995). Managerial ownership, accounting choices, and informativeness of earnings. Journal of Accounting and Economics, 20 (1), pp. 61 - 91.