

## DO KEY AUDIT MATTERS REALLY IMPROVE AUDIT QUALITY? EVIDENCE FROM THAILAND

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### ABSTRACT

Our paper provides the first evidence of the impact of disclosing KAMs on audit quality in Thailand, where KAMs has been implemented in 2016. We observe two years before and after its implementation by analyzing the data of 399 listed companies with 1,316 firm-year observations. Instead of using discretionary accruals as a proxy of audit quality to capture this impact as similar to previous studies, we use type of audit firm, which is representative of input dimension of audit quality, in doing so. We provide evidence that in Thailand the disclosure of KAMs improves audit quality when using a number of KAMs as a test variable.

**Keywords:** 1) Key Audit Matters 2) Audit Quality 3) Audit Firm Type

### 1. Introduction

When an auditor's report was just the standardized pattern with "pass or fail" statement, it was therefore perceived to be less informative (Gutierrez, Minutti-Meza, Tatum, and Vulcheva, 2018). To improve the informative value of the auditor's report, the new audit report has been reformed. These reforms are France's disclosure of justifications of assessments (JOAs) in 2003, the United Kingdom's requirement to disclose the risks of material misstatements (RMMs) in 2013, the international Auditing and Assurance Standards Board's requirement of disclosing key audit matters (KAMs) in 2016, and the Public Company Accounting Oversight Board (PCAOB)'s upcoming requirement of disclosing critical audit matters (CAMs) in the United States of America in 2019.

The new audit report is expected to improve audit quality. It increases auditor's leverage over management and auditor's accountability (Reid, Carcello, Li and Neal, 2017). The more accountability the more audit quality. The auditors are more careful and skeptical in performing their audits because of their concern about their accountability, therefore, they would look for better audit evidence (Bedard, Gonthier-Besacier, and Schatt, 2018). However, after the expanded audit report with JOAs, RMMs, or KAMs has been introduced, previous studies on archival data, e.g., Bedard et al. (2018), Reid, et al. (2017), Gutierrez et al. (2018), Wei, Fargher, and Carson (2017), and Almulla and Bradbury (2018) provide inconclusive evidence of whether the new audit report improves audit quality.

We provide the first insight of the effect of KAMs on audit quality in Thailand where KAMs has also been implemented in 2016. Importantly, unlike the previous studies on the impact of expanded audit report on audit quality (e.g., Almulla and Bradbury, 2018; Bedard,

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et al., 2018; Gutierrez, et al., 2018; Reid, et al., 2017; Wei, et al., 2017) which use discretionary accruals as a proxy for audit quality, we use type of audit firm as the alternative measurement of audit quality. We believe that using this alternative measurement of audit quality would contribute to both theory and practice in understanding how KAMs influence audit quality. As suggested by DeFond and Zhang (2014), using across categories of the measures of audit quality would help researchers have a clear view of how their interested factors influence audit quality. In addition, Almulla and Bradbury (2018) highlight that discretionary accruals are not a good proxy of audit quality.

We observe two years before and two years after its implementation in Thailand by analyzing the data of 399 listed companies with 1,316 firm-year observations. Our analysis provides evidence that in Thailand the disclosure of KAMs improves audit quality when using a number of KAMs as a test variable. This contributes the new evidence to literature on the impact of KAMs on audit quality.

## 2. Literature Review

### 2.1 Audit quality

DeFond and Zhang (2014) define that “higher audit quality is a greater assurance of high financial reporting quality”. From their review extant archival studies pertaining to audit quality, financial reporting quality composes of audit quality, the company’s financial reporting system, the company’s characteristics. They summarize measures of audit quality used by these previous studies and categorize them into output and input measures. Output measures comprise material misstatements (e.g., restatements, AAERs), auditor communication (e.g., GC opinions), financial reporting quality (e.g., DAC, meet/beat, accrual quality, conservatism), perception-base indicator (e.g., marketing reaction, cost of capital, change in market share, PCAOB inspections). On the other hand, input measures refer to auditor characteristics, e.g., Big N, industry specialization. They point to pros and cons of each measure and suggest that using different categories of measures should be useful since there is no completely perfect measure of audit quality. In our study, we select Big N which is representative of input dimension of audit quality as our measure of audit quality.

### 2.2 Big 4 and audit quality

Big 4 is of higher audit quality than non-big 4 (DeFond and Zhang, 2014) because of its brand name reputation (Choi, Kim, Kim, and Zang, 2010) and wealth (Boone, Khurana, and Raman, 2010). There is also current empirical evidence supporting this. Eshleman and Guo (2014) found that financial statements audited by Big 4 are less likely to be subsequently restated. Lennox, Wu, and Zhang (2014) found that in China financial statements audited by Big 4 are also less likely to be subsequently restated because they have good quality of pre-audit financial statements. Lobo, Paugam, Zhang, and Casta (2017) observe the joint audit among the French sample and found that the joint audit by two Big 4s is less likely to misstate goodwill impairment. However, there is only a small number of evidences which provide the contradictory result. For example, Ke, Lennox, and Xin (2015) found that owing to weak institutional factors in China, Big 4 provides lower audit quality.

### 2.3 Expanded audit report and audit quality

It is debatable whether the new audit report really improves audit quality. Reid et al. (2017) underscore that the new audit report is expected to improve audit quality by increasing auditor’s leverage over management and auditor’s accountability. “Threat of disclosure” increases auditor’s leverage because the management may prefer the auditor not to highlight any specific area, especially a high-risk one, in the audit report. This would in turn lead the management to less engage in aggressive accounting. In addition, adding more information especially about a high-risk area into the audit report also increases

auditor's accountability. The more accountability the more audit quality. As indicated by Bedard et al. (2018), the auditors are more careful and skeptical in performing their audits because of their concern about their accountability. Therefore, they would look for better audit evidence.

Previous studies provide inconsistent results of how expanded audit report affects audit quality. Bedard, et al. (2018) test how JOAs affect audit quality by observing discretionary accruals during the period 2002-2011. JOAs are matters that are important for making users understand financial statements. They found that reporting JOAs and discretionary accruals do not have relation in the first year of the requirement; however, the positive relation between new JOAs and discretionary accruals in the years later indicates that JOAs are a sign of low quality of financial statements and a precursor of bias and error.

Reid, et al. (2017) investigate the impact of disclosing RMMs on audit quality. They found that disclose of RMMs improves audit quality by reducing discretionary accruals and the incidence of meet/beat analyst forecasts. Gutierrez et al. (2018) also investigate the impact of disclosing RMMs on audit quality during 2011-2015 and also use discretionary accruals as a proxy for audit quality. Unlike Reid et al. (2017), they found that disclosure of RMMs does not affect audit quality. Wei, et al. (2017) broaden the evidence to Australia and found that by regressing both absolute value and income-increasing discretionary accruals the disclosure of KAMs does not improve audit quality but increases audit costs. Almulla and Bradbury (2018) broaden evidence to New Zealand and found that KAMs do not impact audit quality.

Even though these previous studies provide inconclusive results of whether disclosing KAMs improves audit quality, we believe that, consistent with the standards setters' expectation, KAMs improve audit quality by providing more contextual information about the audit to improve the transparency and clarity of the audit. Therefore, our hypothesis is

**“H1: Key audit matters improves audit quality.”**

### 3. Research Methodology

#### 3.1 Test procedure

To test our hypothesis, we employ two logistic regressions. Model 1 is used to test the full sample, and Model 2 to test the sample from 2016 and 2017. Model 1 is specified as follows:

$$\begin{aligned}
 Big4_t = & \alpha + \beta_1 KAMsDisclose_t + \beta_2 NumAuditCom_t + \beta_3 ProAuditComActEdu_t \\
 & + \beta_4 AuditComMeeting_t + \beta_5 PerBlockShare_t \\
 & + \beta_6 PerInstituteShare_t + \beta_7 NumYearTrade_t + \beta_8 LogTotalAssets_t \\
 & + \beta_9 ROA_t + \beta_{10} Leverage_t + \beta_{11} Loss_t + \beta_{12} CurrentRatio_t \\
 & + \beta_{13} AssetsTurnover_t + \beta_{14} SalesGrowth_t + \beta_{15} AbDCA_t \\
 & + \beta_{16} LogAuditFee_t + \beta_{17} ChangeAudfirm_t + \beta_{18} ChangeAuditor_t \\
 & + \beta_{19} ChangAudfirm_t * ChangAuditor_t + \beta_{20} TypeOpinion_t \\
 & + \beta_{21} DiscloseEmphasisOthermatter_t + \beta_{22} TypeOpinion_t \\
 & * DiscloseEmphasisOthermater_t + \beta_{23} IndustryFixedeffect + \varepsilon_t \quad (1)
 \end{aligned}$$

where,

$Big4_t$  = 1 if the company was audited by big 4 in year , 0 else  
 $KAMsDisclose_t$  = 1 if the company's audit report disclosed KAMs in year, else 0;  
 $NumAuditCom_t$  = the company's number of audit committee members in year t;

**Control variables:**

- ProAuditComActEdu<sub>t</sub>* = the proportion of audit committee members with an accounting degree to total number of members in year *t*;
- AuditComMeeting<sub>t</sub>* = the number of audit committee meeting in year *t*;
- PerBlockShare<sub>t</sub>* = percentage of shares held by block holders in year *t*;
- PerInstituteShare<sub>t</sub>* = percentage of shares held by institutional holders in year *t*;
- NumYearTrade<sub>t</sub>* = the number of years at year *t* the company has been traded on the stock market;
- LogTotalAssets<sub>t</sub>* = the natural logarithm of total assets in year *t*;
- ROA<sub>t</sub>* = net income divided by lagged total assets in year *t*;
- Leverage<sub>t</sub>* = total debt divided by lagged total assets in year *t*;
- Loss<sub>t</sub>* = 1 if the company reported loss in year *t*, 0 else;
- CurrentRatio<sub>t</sub>* = current ratio in year *t* computed as current assets divided by current liabilities;
- AssetsTurnover<sub>t</sub>* = assets turn over in year *t* computed as net income divided by lagged total assets; and
- SalesGrowth<sub>t</sub>* = year *t*'s change in sales divided by lagged total assets;
- AbDCA<sub>t</sub>* = the absolute value of discretionary accruals in year *t*<sup>1</sup>;
- ;
- LogAudit Fee<sub>t</sub>* = the natural logarithm of audit fee in year *t*;
- ChangeAudFirm<sub>t+1</sub>* = 1 if the company subsequently switched an audit firm in year *t+1*, 0 else;
- ChangeAudor<sub>t+1</sub>* = 1 if the company subsequently switched an auditor in year *t+1*, 0 else;
- TypeOpinion<sub>t</sub>* = 1 if the auditor's opinion in year *t* is qualified; 0 else;
- DiscloseEmphasisOthermatter<sub>t</sub>* = 1 if the auditor disclosed matter of emphasis and/or other matter in year *t*; 0 else; and
- IndustryFixedeffect* = dummy variables of industry's fixed effects.

We predict that *KAMsDisclose* should have a positive impact on *Big 4*. We further explore how the number of disclosed KAMs impacts audit quality using a logistic regression on the sample from 2016 and 2017. Thus, Model 2 is specified as follows:

$$Big4_t = \alpha + \beta_1 NumberKAMs_t + \beta_{2-22} ControlVariables_t + \beta_{23} IndustryFixedeffect + \varepsilon_t \quad (2)$$

where,

*NumberKAMs<sub>t</sub>* = the number of KAMs which were disclosed in year *t*.

<sup>1</sup> Similar to Aobdia, Lin, and Petacchi (2015), we use the cross-sectional modified Jones model adding by return on assets to estimated discretionary accruals. The estimation model is as follows:

$$\frac{TA_t}{TotalAssets_{t-1}} = \beta_1 \left( \frac{1}{TotalAssets_{t-1}} \right) + \beta_2 \left( \frac{\Delta Sales_t - \Delta Ar_t}{TotalAssets_{t-1}} \right) + \beta_3 \left( \frac{PPE_t}{TotalAssets_{t-1}} \right) + \beta_4 ROA_{t-1} + \varepsilon_t$$

where *TA*= net income less cash flow from operations, *Sales*=net sales, and *PPE*=gross property, plant, and equipment.

### 3.2 Control variables

To provide a more robust test of our hypothesis, we include (1) client's corporate governance; the number of audit committee members, the number of audit committee members with accounting degree, the frequency of audit committee meetings, the proportion of shares held by block shareholders (Cao, Myers, and Omer, 2012), and the proportion of shares held by institutional shareholders (Raghunandan, Read, and Whisenant, 2003), (2) client characteristics; the length of trading period (Eshleman and Guo, 2014), total assets, return on assets, leverage, loss, current ratio, assets turnover, sale growth (DeFond and Zhang, 2014), and absolute value of discretionary accruals (Aobdia et al., 2015), (3) auditor's characteristics; audit fee, change in audit firm, change in individual audit firm (Demirkan and Zhou, 2016), and (4) type of opinion; type of audit report (Myers, Schmidt, and Wilkkins, 2014), emphasis of matters, and qualified audit report with emphasis of matters (Czerney, Schmidt, and Thompson, 2017) as control variables for audit quality.

### 3.3 Sample and data collection

Table 1 presents our sample selection. Our final sample is 399 companies with 1,316 firm-year observations. Our sample period is from 2014 to 2017 which is two years before and after the adoption of disclosing KAMs. Data are collected from the companies' financial statements, annual reports, 56-1 form which have been published on the website of Thailand Securities and Exchange Commission ([www.sec.or.th](http://www.sec.or.th)) or the companies' websites.

**Table 1:** Sample selection

	<b>Companies</b>	<b>Observations</b>
Total number of listed companies on the main board (SET)	580	
Less: Financials	(58)	
Non-performing companies	(7)	
Companies with incomplete data for computing necessary variables	(87)	
	428	1,584
Extreme audit delays		(12)
No data on KAMs		(13)
No data on audit committee		(23)
Outliers		(220)
<b>Final sample</b>	<b>399</b>	<b>1,316</b>

## 4. Results

### 4.1 Descriptive statistics

65 percent of our sample were audited by Big 4. Untabulated results of the test differences in medians of variables between Big 4 and non-Big 4 show that clients audited by big 4 have higher a number of KAMs, greater number of audit committee meeting, higher percentage of institutional shareholders, larger size, better performance, and higher audit fee. On the other hand, those audited by non-Big 4 have a greater number of audit committee, higher percentage of block shareholders, and higher possibility for being selected as a new auditor. They are more likely to report losses and to receive unqualified opinions and explanatory paragraphs in their auditor reports.

## 4.2 Pearson correlations

Untabulated results of the correlations matrix between each pair of variables indicate that there is no high correlation between each pair, offering no evidence of multicollinearity problems.

## 4.3 Logistic regression

Table 2 presents the results of logistic regression of KAMs and control variables on Big 4. Model 1 regresses pool sample in order to test whether the disclosure of KAMs improves audit quality by comparing between two years before and two years after the implementation of KAMs. The coefficient of KAMs disclosure is not significant. This indicates that the requirement of auditor's disclosing KAMs does not affect the selection of Big 4 as perceived to be a high-quality audit firm. Model 2 regresses sample from the first two years of the implementation in order to test how the number of disclosed KAMs improve audit quality. The coefficient on a number of KAMs is positively significant (0.573, p=0.000). This is evidence that Big 4 is more likely to disclose a greater number of KAMs. This implies that the disclosure of KAMs improves audit quality and the greater number of disclosed KAM the higher audit quality.

**Table 2:** Logistic regressions of the selection of big 4 on KAMs and control variables

	Predicted Sign	Model 1 Full sample 2014-2014		Model 2 Two years after the adoption of KAMs 2016-2017	
		Coefficient	p-value	Coefficient	p-value
<b><u>Test Variables</u></b>					
<i>KamsDisclosure</i>	+	-0.175	0.242		
<i>NumberKams</i>	+			0.573***	0.000
<b><u>Clients' corporate governance</u></b>					
<i>NumAuditCom</i>	+	-1.005***	0.000	-1.556***	0.000
<i>ProAuditComActEd</i>	+	0.326	0.295	0.114	0.803
<i>AuditComMeeting</i>	+	0.044	0.144	0.043	0.304
<i>PerBlockShare</i>	-	1.525***	0.000	2.023***	0.002
<i>PerInstituteShare</i>	+	3.934***	0.000	4.570***	0.000
<b><u>Clients' characteristics</u></b>					
<i>NumYearTrade</i>	+	-0.017	0.054	-0.026**	0.037
<i>LogTotalAssets</i>	+	0.439***	0.000	0.566***	0.000
<i>ROA</i>	+	-0.014	0.990	2.234	0.231
<i>Leverage</i>	-	-0.075	0.663	-0.053	0.835
<i>Loss</i>	-	0.277	0.239	0.520	0.152
<i>CurrentRatio</i>	+	0.061*	0.084	0.077	0.139
<i>AssetsTurnover</i>	+	0.760***	0.000	0.974***	0.000
<i>SalesGrowth</i>	+	-0.236	0.534	-0.382	0.536
<i>AbDCA</i>	-	0.182	0.820	1.237	0.303
<b><u>Auditor's characteristics</u></b>					
<i>LogAuditFee</i>	+	1.234***	0.000	0.982***	0.000
<i>AuditFirmChange</i>	+	-1.509	0.229	-13.495	0.984
<i>AuditorChange</i>	+	0.219	0.207	0.218	0.389
<i>AuditFirmChangeandAuditorChange</i>	+	1.687	0.190	13.272	0.984
<b><u>Type of opinion</u></b>					
<i>TypeOpinion</i>	-	-2.414***	0.000	-1.716*	0.086
<i>DiscloseEmphasisOtherMatter</i>	-	-0.990***	0.000	-1.273***	0.000
<i>TypeOpinionandDiscloseEmphasisOtherMatter</i>	-	2.255***	0.008	1.800	0.156

	Predicted Sign	Model 1		Model 2	
		Full sample 2014-2014		Two years after the adoption of KAMs 2016-2017	
		Coefficient	p-value	Coefficient	p-value
Industry Fixed Effects		Include		Include	
Constant		-24.998***	0.000	-24.154***	0.000
Log likelihood		-581.139		-272.812	
Prob > chi2		0.000		0.000	
Pseudo R2		0.3201		0.3613	
Observations		1,316		664	

Note: \*\*\* p<0.01, \*\* p<0.05, \* p<0.1 one-tailed when predicted signs are made and two-tailed when they are not.

## 5. Conclusions and suggestions

Our descriptive statistics test reports that a number of disclosed KAMs are on average 2. In comparison to non-Big 4's clients, Big 4's clients have a greater number of disclosed KAMs and are larger companies who pay higher audit fees. Even though the disclosure of KAMs are perceived to pose the greater risk to an auditor (Almulla and Bradbury, 2018; Gutierrez et al., 2018) and increase auditors' accountability (Wei et al., 2017), Big 4, as perceived to be a high-quality auditor, discloses a greater number of KAMs. Moreover, the logistic regression test on the impact of the number of KAMs on audit quality provides evidence that the number of KAMs improves audit quality. Therefore, the greater number of KAMs the higher audit quality. Our interpretation on these results is that Big 4's high risk and accountability would be commensurate with high audit fees. The disclosure of a greater number of KAMs may also help Big 4 show the clients their tremendous effort put into the audits.

Even though the standard setters and regulators worried that the auditors and the stakeholders of audits were too overwhelmed with KAMs, our findings suggest that to improve audit quality the disclosure of KAMs should not be restricted to how many of them are appropriate. KAMs causes the auditors to be prepared to consider complex matters requiring careful judgment and to explain their audit approach to these matters publicly in their audit reports. Therefore, auditors will put their professional skepticism more in order; this in turn contributes to higher audit quality. The restriction of number of KAMs would make the new audit report be less informative and KAMs would not provide adequate specific information of the clients as the standard setters' expectation. However, the auditor has to consider that this information is the most significance in the audit of the financial statements of the current period and presented in a useful way.

The limitation of our study is that we use only one proxy as the proxy for audit quality. Therefore, interpretations of our findings here should be considered with care. Future study should use other alternative measures of audit quality, for example, financial restatement, audit fee, market reaction, and going concern audit report. This will help us have better understanding of the effect of KAMs on audit quality.

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