



## Does reduced boilerplate of KAMs indicate increased audit effort? Evidence from China



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### ABSTRACT

By examining the effects of media coverage and legal environment and the modifying effect of auditors' market shares, this paper investigates whether reduced boilerplate of key audit matters (KAMs) reflects increased audit effort. Our findings indicate that auditors can change boilerplate of KAMs according to the tone of media coverage: auditors may reduce boilerplate of KAMs when firms are exposed to more negative media coverage and may increase boilerplate of KAMs when firms are exposed to more positive media coverage. Auditors of firms that are exposed to weaker legal environment reduce boilerplate of KAMs. Boilerplate of KAMs disclosed by audit firms with larger market shares is more significantly influenced by negative media coverage and legal environment than those with smaller market shares. Additionally, the effects of media coverage and legal environment on boilerplate of KAMs are only significant for the sub-samples with non-state-owned enterprises (non-SOEs) and higher information symmetry. These results prove that reduced boilerplate of KAMs reflects increased audit effort.

### 1. Introduction

The China's Ministry of Finance (CMF) announced CSACPA1504 in 2016. Similar to its international counterpart, the CMF requires auditors to disclose key audit matters (KAMs) in audit reports to communicate the matters auditors focus on the most. Since differentiated disclosure is at the risk of conveying audited firms' confidential information and auditors can hardly benefit from personalized audit reports, KAMs are disclosed using innocuous and standardized language (Minutti-Meza, 2021). Some studies are concerned that boilerplate of KAMs can impair the informativeness of KAMs (Brasel et al., 2016; Kachelmeier et al., 2020), while other studies find that KAMs provide entity-level risk-related information (Sebeck & Kaya, 2023; Zeng et al., 2021). However, few studies examine auditors' motivation to reduce boilerplate of KAMs. This paper examines auditors' strategies for disclosing KAMs by investigating how media coverage and legal environment influence boilerplate of KAMs in China.

The unique institutional background of China provides an opportunity to investigate the motivation of differentiated KAM disclosures. Prior literature proves that the disclosure of KAMs can reduce the legal liability of auditors (Brasel et al., 2016; Kachelmeier et al., 2020). Auditors may disclose more precise KAMs to avoid legal liability (Pinto & Morais, 2019). Current studies based on developed capital markets prove that audit effort does not vary with changes in the disclosure strategy (Asbahr & Ruhnke, 2019; Chan & Liu, 2023). However, the "Disclaimer" theory may not be applicable in China. According to the auditing definition provided by the

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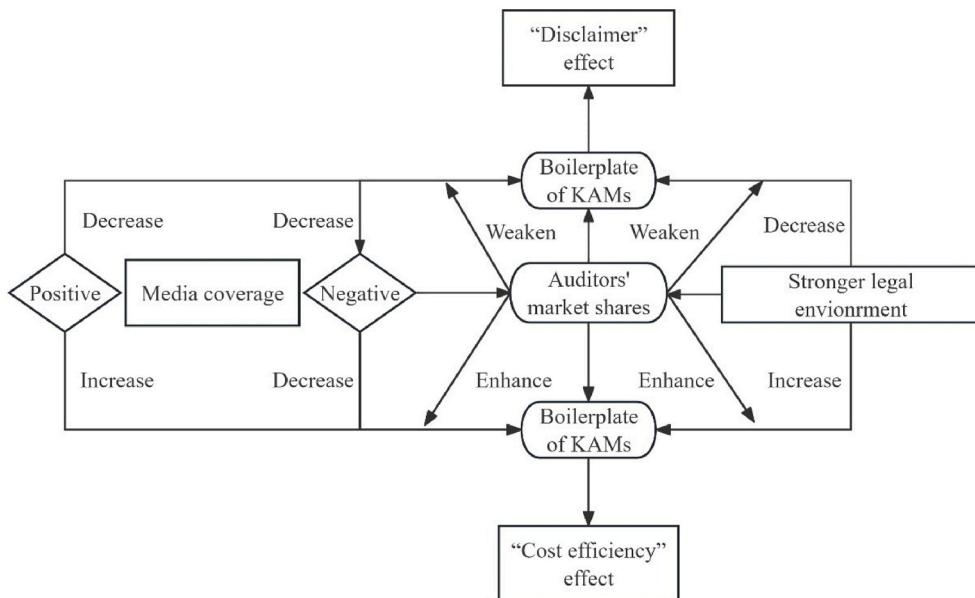
American Institute of Certified Public Accountants (AICPA) in its 1937 publication “Explanation of Basic Auditing Concepts”, auditing is a systematic process of obtaining objective evidence to verify the conformity between identified assertions and predetermined standards and communicating the results to the stakeholders of firms. According to the definition given by Professional Conduct for the China’s Institute of Certified Public Accountants (CICPA), assurance services refer to the conclusions drawn by certified public accountants regarding the information on the subject of assurance, aiming to enhance stakeholders’ perceived credibility in the information of firms. Accordingly, the definition given by the AICPA emphasizes audit process, while the CICPA puts more stress on audit results. In practice, when auditors of firms that are detected to have material misstatements issue unqualified audit opinions, it is hard for auditors to avoid legal liability based on the precise disclosure of KAMs. The administrative penalty decision by the China Securities Regulatory Commission (CSRC) against Dahua Accounting Firm in 2024 also indicates that the disclosure of specific risks in KAMs can hardly exempt auditors from legal liability. Thus, in the context of China, what motivates auditors to reduce boilerplate of KAMs when KAMs do not serve as a liability shield?

An alternative explanation is the “Cost-efficiency” theory: reduced boilerplate of KAMs indicates that auditors decide to exert higher audit effort after trading off between audit risk and audit cost. When auditors perceive higher audit risk, they adopt more specific audit procedures and undertake extensive audit effort to decrease detection risk. According to the disclosure of CSACPA 1504, the increases in audit risk assessment and the implementation of audit procedure should all be disclosed in KAMs, which results in boilerplate of KAM disclosures. Therefore, in contrast to the “Disclaimer” theory, more tailored KAM disclosures are more likely to be a result of increased audit effort.

In the risk assessment phase, auditors place particular emphasis on firms’ media coverage and legal environment, which both influence auditors’ legal risk (Dyck & Zingales, 2004; Gong et al., 2018; Miller, 2006) and information available for audit risk assessment (Miller, 2006; Mutchler et al., 1997). The market shares of audit firms determine audit resources that can be allocated when clients are subject to different media coverage and legal environment. Therefore, this paper analyzes the motivation that compels auditors to reduce boilerplate of KAMs by examining the impacts of media coverage and legal environment and their interactive effects with auditors’ market shares on the strategy of KAM disclosures.

Under the “Cost-efficiency” theory, when the audit risk assessment level of firms is higher, due to limited audit resources, audit firms with smaller market shares cannot exert higher audit effort, which may not change boilerplate of KAMs. Conversely, under the “Disclaimer” theory, audit firms with smaller market shares, facing greater client pressure, are more inclined to reduce potential legal liability through differentiated disclosure without issuing modified audit opinions. Therefore, this paper examines the impacts of media coverage and legal environment on the textual differentiation of KAMs to determine whether reduced boilerplate of KAMs reflects increased audit effort. Subsequently, this study also tests the influences of media coverage and legal environment on KAMs at different market shares to explore the motivation behind boilerplate of KAMs. Fig. 1 is a logical diagram to explain our primary hypotheses.

This study analyzes the factors influencing boilerplate of KAMs of firms with different ownership types. Furthermore, media coverage and legal environment can influence auditors’ KAM disclosures by improving information environment. Therefore, this study further examines the factors influencing boilerplate of KAMs under different information environment. The findings support the “Cost-efficiency” theory: media coverage and legal environment can impact audit risk assessment for clients, alter audit resources allocation, and consequently change the level of boilerplate of KAMs. Moreover, boilerplate of KAMs for non-state-owned enterprises (non-SOEs)



**Fig. 1.** Logical diagram.

and those with higher information asymmetry is more significantly influenced by media coverage, legal environment, and market shares of audit firms.

This paper tries to make several contributions. First, from the “Cost-efficiency” perspective, this paper provides an alternative explanation for auditors’ strategies in reducing boilerplate of KAMs. This study further explores the impact of the external environment faced by auditors, namely media coverage, legal environment, and market competitive pressures, on boilerplate of KAMs. Our result indicates that auditors are more motivated by the “Cost-efficiency” effect rather than the “Disclaimer” effect (Brasel et al., 2016; Kachelmeier et al., 2020) to change their behaviors in KAM disclosures. The findings of this paper also provide empirical evidence for further clarifying the motivation of differentiated KAM disclosures in audit reports.

Second, our findings provide additional evidence to the study of Ma et al. (2023), which proves that auditors can reduce boilerplate of KAMs of firms exposed to extensive negative media coverage. However, Ma et al. (2023) fail to figure out whether this negative association results from increased audit effort. This paper tries to distinguish the impact of different tones of media coverage and its interaction with auditors’ market shares. We find that auditors’ strategies for KAM disclosures vary with the tone of media coverage, which proves that the association between boilerplate of KAMs and media coverage results from increased audit effort.

Third, our findings validate the effectiveness of KAMs in China, which also provides implications for standard-setters. While the International Auditing and Assurance Standards Board (IAASB) expresses concern that standardized KAMs can weaken the communicative value of audit reports, our results reveal that auditors can strategically modify the textual similarity of KAMs based on audit risk assessment level. In addition, the changes in the textual KAM disclosures reflect increased audit effort. Therefore, our findings provide audit report users with a better understanding of the factors that affect boilerplate of KAMs.

## 2. Literature review

In 2016, the CMF announced CSACPA1504, requiring auditors to disclose KAMs in audit reports, which became effective in China’s A+H stock markets for the financial year ending December 31, 2016. The worldwide audit report reform evokes a broad dispute. The existing literature mainly focuses on how KAM disclosures affect auditors’ liability, audit quality, and the communicative value of audit reports.

There are mixed findings related to the influence of KAMs on auditors’ liability. Using the US sample, Brasel et al. (2016) find that auditors are subject to lower perceived liability, whether KAMs disclosed are related or unrelated to the subsequently detected misstatements. The study of Kachelmeier et al. (2020) has a similar result, reasoning that KAMs alert investors to misstatement risk in areas with high uncertainty, which reduces auditors’ perceived liability. On the contrary, Gimbar et al. (2016) argue that KAMs can increase jurors’ perceived auditors’ liability, whether KAMs are related to subsequent misstatements. Because related KAMs indicate that auditors can foresee the negative outcome but fail to exert adequate effort to control risk, unrelated KAMs lead investors to question auditors’ professions as they miss significant accounting issues.

Concerning the association between KAMs and audit quality, Almulla and Bradbury (2019) find no evidence that KAMs improve audit quality in New Zealand. Pinto and Morais (2019) examine whether the number of KAMs disclosed varies with different litigation risks, finding that auditors can increase the number of KAMs disclosed when they perceive higher litigation risk. Ma et al. (2023) investigate the influence of negative media coverage on auditors’ strategies in KAM disclosures, arguing that negative media coverage increases auditors’ perceived legal risk and compels them to reduce boilerplate of KAMs. Asbahr and Ruhnke (2019) show that auditors regard KAMs as a vital method to legitimate their judgment when they are inclined to comfort clients’ pleasure, but the changes in KAM disclosures do not alter audit effort. Auditors can only disclose innocuous KAMs in audit reports to avoid perceived liability (Brasel et al., 2016). Nevertheless, Kitwong et al. (2020) provide weak evidence that KAMs can improve audit quality by encouraging auditors to exert higher effort. Chen et al. (2019) validate that KAMs only compel auditors to put higher effort into their work when the underlying accounting quality is relatively low. Chan and Liu (2023) find that auditors can only provide more accurate KAMs and exert higher audit effort when legal liability is increased. However, in the setting of China, Zeng et al. (2021) empirically validate that the expended audit report in China improves audit quality, especially when auditors describe reasons for identifying a matter as KAMs.

The existing studies remain controversial on whether KAM disclosures could improve the communicative value of audit reports. Supporters of audit report reform argue that KAMs communicate incremental information to investors. Christensen et al. (2014) find that disclosure of KAMs in audit reports differentiates investors’ behaviors. The experimental findings of Elliott et al. (2020) indicate that including KAMs in audit reports can enhance the perceived quality of financial reports, which increases investors’ willingness to pay more. Similarly, Hoang and Phang (2020) find that non-financial KAMs about the uncertainty of estimation can enhance the perceived reliability of financial information. Sirois et al. (2018) utilize eye-tracking techniques to compare participant responses to items in financial reports highlighted in KAMs and those not. Their study shows that participants are more attentive to the matters in financial reports disclosed as KAMs, which indicates that KAM disclosures in audit reports are informative. Moroney et al. (2021) argue that KAM disclosures improve investors’ perceived credibility of audit reports, especially those proposed by smaller-scale audit firms. However, Sirois et al. (2018) demonstrate that KAM disclosures may detract investors’ focus from other important information.

In contrast, critics question the informativeness of an expended audit report. Analyzing the UK capital market, Gutierrez et al. (2018) empirically find that the behaviors of investors do not change significantly after the UK companies apply KAM reporting model. Bedard et al. (2019) examine the response of the French capital market to the disclosure of KAMs in audit reports, and their results indicate that expended audit reports do not significantly vary investors’ behaviors. Lennox and Pittman (2011) argue that KAMs can hardly provide incremental information, as the information contained by KAM disclosures in audit reports is also available from other resources.

In summary, prior literature is inconsistent on the effectiveness of KAM reporting model on the communicative value and audit

quality. An inference based on the literature is that the characteristics of KAM disclosures can alter the perceived liability of auditors. Therefore, auditors may modify their behaviors in KAM disclosures based on the audit risk assessment level, which influences audit quality and communicative value of KAMs. However, few studies investigate whether the change in boilerplate of KAMs reflects increased audit effort. On this basis, by examining whether the textual similarity of KAMs varies with media coverage and legal environment in the setting of China's audit report reform, this paper tries to investigate the motivation of auditors to use more distinguished wording in KAM disclosures.

### 3. Hypothesis development

Media coverage is a crucial external governance mechanism of the capital market, especially in emerging capital markets, such as China, where stock market is less efficient and the information environment is inferior (Dyck & Zingales, 2004; Miller, 2006). With a broad audience, mass media places significant public pressure on reporters (Dyck & Zingales, 2004). Therefore, audit failure is more likely to be detected under extensive media coverage, regardless of the tone of media coverage, which increases the legal risk auditors perceive. To avoid potential legal liability, auditors may reduce boilerplate of KAMs to warn investors of the firms' higher risk and to decrease investors' potential losses, thereby reducing the likelihood of investors pursuing compensation from auditors and the associated legal costs. According to the "Disclaimer" theory, higher media coverage may lead to tailored KAM disclosures, regardless of the tone of media coverage.

However, as a critical information intermediary, the news media is an important source of information for auditors in the risk assessment phase, according to CSACPA 1324. Negative news reports initially indicate a mass of financial fraud cases following a legislative investigation by law enforcement agencies (Kurtz, 2001), which increases the audit risk assessment level (Miller, 2006). In addition, auditors focus more on bad news (Gong et al., 2018) and are loss-averse (Tversky & Kahneman, 1973). Therefore, under the "Cost-efficiency" incentives, auditors may exert more effort to reduce detection risk when clients are subject to higher negative media coverage. Based on CSACPA 1504, the specific risks and procedures are required to be disclosed in audit reports, thereby reducing boilerplate of KAMs.

Conversely, positive media coverage conveys favorable information about firms, reducing the audit risk assessment level and diminishing the specific audit procedure. Yau (2019) indicates that auditors can follow industry experts in disclosing KAMs and are likely to use standardized wording in KAM disclosures to avoid divulging confidential client information (Minutti-Meza, 2021). Therefore, auditors may increase boilerplate of KAMs of firms exposed to more extensive positive media coverage. Accordingly, our primary hypotheses are as follows.

**H1(a).** The amount of positive media coverage is positively associated with boilerplate of KAMs.

**H1(b).** The amount of negative media coverage is negatively associated with boilerplate of KAMs.

The impact of legal environment on auditors is twofold. On the one hand, stronger legal environment increases auditors' actual legal liability (Simunic & Wu, 2009). If auditors of firms that are detected with material misstatements issue an unqualified audit opinion, investors are more likely to sue auditors and demand higher compensation. In the stronger legal environment, auditors are more sensitive to potential legal risk due to increased penalties associated with firms' misstatement risk. Therefore, under the stronger legal environment, increased legal liability can compel auditors to provide more precise KAM disclosures (Chan & Liu, 2023). However, in China's institutional background, reduced boilerplate of KAMs may hardly help auditors to decrease potential regulatory sanctions.

On the other hand, when legal environment is stronger, legal risk and legal cost of fraud for firms are increased. Stronger legal environment reduces management's motivation to engage in financial fraud (Glaum et al., 2018; Skinner, 1994), lowering material misstatement risk. In the risk assessment phase, auditors must fully understand the enterprise's legal environment. Pinto and Morais (2019) find that, with stronger legal environment, the audit risk assessment level for firms decreases, leading to the reduction in specific audit procedure and audit effort, based on the "Cost-efficiency" theory. As a result, boilerplate of KAMs may also be increased under the stronger legal environment. Accordingly, we formulate our hypothesis as follows.

**H2.** Boilerplate of KAMs can be increased under the stronger legal environment.

As indicated in the development of H1 and H2, based on the "Cost-efficiency" theory, higher negative media coverage and weaker legal environment compel auditors to exert higher effort and resources, which decreases boilerplate of KAMs. However, the available resources of audit firms vary with their market shares. Audit firms with larger market shares have abundant audit resources (Gong et al., 2018), so they can exert higher audit effort. With more quasi-rents to lose, audit firms with larger market shares care about reputation more than maintaining good customer relationships, so they are more likely to exert higher quality risk-oriented auditing (DeAngelo, 1981; DeFond et al., 1999; Moroney et al., 2021), and are more likely to perceive the risk-related signal of their client firms (Chan & Liu, 2023) from media coverage and legal environment. When auditors of firms are subject to more negative media coverage and weaker legal environment, the higher audit risk assessment level is more likely to compel larger audit firms to exert higher audit effort to avoid reputation damage arising from audit failure. Thus, higher negative media coverage and weaker legal environment are more likely to reduce boilerplate of KAMs disclosed by audit firms with larger market shares.

Nevertheless, small audit firms are resource-constrained (Gong et al., 2018). Although extensive negative media coverage and weak legal environment increase perceived audit risk, audit firms with smaller market shares have limited audit resources to decrease detection risk, which weakens the impacts of media coverage and legal environment. In addition, audit firms with smaller market

shares intend to conform more strongly to clients' preferences (Brownstein, 2003; Kunda, 1990). According to CSACPA 1504, KAMs should be selected from the matters communicated with those charged with governance. The engagement is substantially completed, and auditors must communicate how KAMs are disclosed to clients (Minutti-Meza, 2021). When auditors' market shares are small, KAM disclosures may be significantly affected by client firms. As there is a strong culture of uncertainty avoidance in China, which views differences as dangerous (Hofstede et al., 2010), firms may be reluctant to differentiate themselves from others when disclosing KAMs. Firms may limit the differentiated KAM disclosures in their communication with auditors. On this basis, the need to compete for clients and limited audit resources hinder the impact of negative media coverage and legal environment on boilerplate of KAMs for auditors with small market shares. Therefore, we formulate our hypotheses as follows.

**H3(a).** The impact of negative media coverage on boilerplate of KAMs is stronger for auditors with larger market shares than those with smaller market shares.

**H3(b).** The impact of legal environment on boilerplate of KAMs is stronger for auditors with larger market shares than those with smaller market shares.

#### 4. Research design

##### 4.1. Sample selection

According to CSACPA1504, only entities listed in A+H stock markets were required to disclose KAMs in their audit reports covering the financial year ended December 31, 2016 and 2017. Other A stock entities have been required to implement CSACPA1504 since January 1, 2018. As the sample size of 2016 is smaller (only 91 audit reports disclosed KAMs in 2016) and the first two years of the policy implemented are not representative, our main tests only include the sample from 2018 to 2022. From 2018 to 2022, 18797 audit reports disclose KAMs. Due to the unique nature of accounting for financial enterprises, 469 firm-year observations for financial companies are eliminated. We exclude 1034 observations that are specially treated and 464 observations with modified audit opinions. We also eliminate 1821 observations established less than one year and 1328 firm-year observations with missing data. The remaining sample contains 13681 firm-year observations. We obtain the textual data of KAMs, media coverage data from the Chinese Research Data Services (CNRDS), and other financial statistics from the China Stock Market and Accounting Research Database (CSMAR). We winsorize the continuous variables at the top and bottom 1 percent to mitigate outliers.

##### 4.2. Multivariate model

To test H1, whether and how boilerplate of KAMs varies with media coverage, we establish Equation (1), where *Diff* is the dependent variable and *Coverage* is the independent variable of interest.

$$Diff_{i,t} = \beta_0 + \beta_1 Coverage_{i,t} + Controls + \varepsilon_{i,t} \quad (1)$$

We measure the textual similarity ( $Diff_{i,t}$ ) using the Levenshtein Edit Distance (LVD) (Levenshtein, 1966). LVD is a simple distance metric widely used to compare the similarity between two linguistic strings, such as developing spelling checkers (Kukich, 1992) and examining the distance between immigrants' mother tongues in the labor market (Bousmah et al., 2021). LVD is the number of minimum operations needed to change one character string to another by deleting, inserting, or substituting a character.

We calculate the **textual similarity** using the following steps.

- (1) We use 'Jieba', the Python Chinese words segmentation utilities, to separate all documents of KAMs. The professional accounting dictionary is imported to 'Jieba' to discern 426 accounting and auditing professional words, such as goodwill impairment, revenue, account receivable, KAMs, financial reports, accounting estimation, and audit reports.
- (2) We delete punctuation and stop-words from the segmentation result. The stop-words are from the Chinese Stop-word List and the Baidu Stop-word List.
- (3) We use 'Levenshtein', a Python topic modeling tool, to calculate LVD. We use the '*Distance*' method in the modeling tool to calculate the least operations to transform the text of company A to that of company B by deleting, inserting, or substituting. We use Equation (2) to calculate individual KAMs' textual similarity. In Equation (2), the max (*lenth1*, *lenth2*) is the length of the longer string. *Dist* is the edit distance between the two strings.

$$LVD_{i,j} = 1 - \frac{Dist}{\max(lenth1, lenth2)} \quad (2)$$

Prior literature proves that KAMs of client firms in the same industry are more standardized. Yau (2019) indicates that auditors tend to align the wording used in KAMs with that of industry audit experts to improve audit quality. Moreover, Kitiwong and Srijunpatch (2019) propose that auditors from countries with high uncertainty-avoidance cultures are more likely to disclose industry-level KAMs. As China also has a strong uncertainty avoidance culture (Hofstede et al., 2010), auditors may prefer to disclose common industry KAMs. Zeng et al. (2021) identify a significant level of boilerplate in KAMs of companies in the same industry. Therefore, we calculate **boilerplate by measuring the average of LVD between KAMs of one firm and another firm in the same industry**.

We calculate  $LVD_{i,j}$  between KAMs of firm *i* and those of each firm *j* in the same industry in year *t*. For *N* disclosures of KAMs in a

given industry, we calculate  $C_N^2 LVD_{ij}$ . We then use the average  $LVD_{ij}$  of firm  $i$  as the firm-level similarity score. For the sake of description, we take the opposite of the similarity score as a proxy for the differentiated KAM level ( $Diff$ ).  $Diff$  ranges from  $-1$  to  $0$ , and a higher value indicates reduced boilerplate of KAMs.

*Coverage* is a proxy for media coverage, measured as the natural log of one plus the number of media reports mentioning a company's full name, abbreviation, or stock code for each firm year. To capture independent media coverage, we only retain news reports not initiated by firms. We focus on general media coverage, including web and paper media.

The data about the tone of media coverage is directly obtained from the CNRDS,<sup>1</sup> which uses supervised learning models and takes the following steps to determine the media coverage tone of a given firm.

First, 23970 randomly selected news articles are manually classified into three tones to construct the training data: negative, positive, and neutral. The training data comprises 10370 positive, 4500 negative, and 9100 neutral news articles. Second, the test data is the text of news articles in which a company's full name, abbreviation, or stock code is mentioned for each firm year. Third, the support vector machine obtains the classification model by learning the training data. Finally, the classification model is used to predict the tone of the test data.

To test H2, whether and how boilerplate of KAMs varies with legal environment, we establish Equation (3) as follows, where  $Diff$  is the dependent variable and *Enforcement* is the proxy for legal environment measured using the legal environment index for China, initiated by Fan et al. (2010). Fan et al. (2010) initiate a legal environment index for China based on evaluating the development of intermediary organization, consumer protection, intellectual property protection, and manufacturer protection in every region. A higher legal environment index indicates stronger legal environment.

$$Diff_{i,t} = \beta_0 + \beta_1 Enforcement_{i,t} + Controls + \varepsilon_{i,t} \quad (3)$$

To test the effects of media coverage and legal environment on boilerplate of KAMs under different market shares of audit firms, we adopt the interaction items  $MS \times Coverage$  and  $MS \times Enforcement$  into Equations (1) and (3), establishing Equations (4) and (5).  $MS$  is the proxy for auditors' market shares. Referring to Defond et al. (1999), we use the total assets of the audit firm's clients divided by the total assets of all listed firms to measure  $MS$ .

$$Diff_{i,t} = \beta_0 + \beta_1 Coverage_{i,t} + \beta_2 MS_{i,t} + \beta_3 MS_{i,t} \times Coverage_{i,t} + Controls + \varepsilon_{i,t} \quad (4)$$

$$Diff_{i,t} = \beta_0 + \beta_1 Enforcement_{i,t} + \beta_2 MS_{i,t} + \beta_3 MS_{i,t} \times Enforcement_{i,t} + Controls + \varepsilon_{i,t} \quad (5)$$

Following prior literature (De Franco et al., 2020; Johnston & Zhang, 2021; Pinto & Morias, 2019; Yau, 2019; Zeng et al., 2021), we control for financial characteristics of client firms and auditors that are associated with the textual similarity of KAMs. *Size* is the proxy for firm size, measured as the natural log of the total assets. *Lev* is the total liability of the firm divided by total equity. *Loss* is an indicator variable, which equals 1 if the firm makes a loss in the fiscal year and 0 otherwise.  $|DA|$  is the absolute value of discretionary accruals measured using the Modified Jones Model. *Mrr* is the proxy for executives' shareholding. We further control for auditors' change by including an indicator variable that equals 1 if at least one signed auditor is changed and 0 otherwise (*Switch*). *BM* is the book-to-market ratio. Industry fixed effect and year fixed effect are included.

## 5. Empirical results

### 5.1. Descriptive statistics and correlations

Table 1 describes all key variables in our study. The mean of  $Diff$  is  $-0.276$ , suggesting that, on average, the textual similarity of KAMs is as high as 27.6%. The minimum of  $Diff$  is  $-0.334$ , indicating that the biggest textual similarity of KAMs between a firm and its industry peers is 33.4%. Consistent with Zeng et al. (2021), the descriptive statistics show that KAMs in China are not overwhelmingly standardized. The mean value of *Enforcement* is 0.699, with a median of 2.810, indicating that the legal environment index is below the mean for more than 50% of the enterprises in the sample. The mean value of *MS* is 0.088, suggesting that, on average, the market for audit firms in China is relatively decentralized compared to developed countries.

Table 2 presents the Pearson correlation coefficients of the variables. The matrix shows that the highest coefficient is between *Size* and *BM*, below 0.8. We calculate Variance Inflation Factors for each regression. These results are all lower than 10, indicating that the effect of multicollinearity is excluded. The matrix, as shown, also indicates some crucial relations. The dependent variable  $Diff$  is significantly positively correlated with *Coverage*(negative) and significantly negatively correlated with *Enforcement*, suggesting that extensive negative media coverage and weak legal environment are related to the decline in boilerplate of KAMs. In addition, the dependent variable  $Diff$  also exhibits a significant correlation with several other control variables, namely  $|DA|$ , *Mrr*, *Loss*, *Size*, *Lev*, and *BM*.

<sup>1</sup> CNRDS is an authorized database in China. It uses artificial intelligence to collect and process the news from about 400 web financial media and 600 paper media in China. The media coverage data from the CNRDS are also classified into negative, positive, and neutral using supervised learning models.

**Table 1**

Descriptive statistics.

Variables	Obs	Mean	Min	Max	Median	Standard Deviation
Diff	13681	-0.276	-0.334	-0.172	-0.283	0.032
Coverage(positive)	13681	2.768	0.000	4.682	3.045	1.326
Coverage(negative)	13681	3.056	0.000	5.389	3.332	1.520
Enforcement	13681	0.699	0.000	3.3480	2.810	0.456
MS	13681	0.088	0.000	1.000	0.062	0.103
DA	13681	0.044	0.000	0.590	0.031	0.047
Switch	13681	0.588	0.000	1.000	1.000	0.492
Loss	13681	0.093	0.000	1.000	0.000	0.290
Size	13681	22.481	17.879	28.548	22.288	1.355
Mrr	13681	0.095	0.000	0.832	0.002	0.157
Lev	13681	0.421	0.015	1.168	0.417	0.192
BM	13681	0.713	0.127	1.236	0.726	0.270

## 5.2. Multivariate analysis

**Table 3** presents the results of H1 and H2, which examine whether media coverage and legal environment influence boilerplate of KAMs. Column (1) reports the effect of media coverage. The coefficient of *Coverage(positive)* is negative and significant, suggesting that auditors of firms exposed to higher positive media coverage can disclose KAMs using more standardized wording in KAMs than firms with lower positive media coverage, which supports H1(a). The coefficient of *Coverage(negative)* is positive and significant, suggesting that auditors of firms exposed to higher negative media coverage can reduce boilerplate of KAMs than firms with lower negative media coverage, which supports H1(b). Column (2) shows the effect of legal environment. The coefficient of *Enforcement* is negative and significant, indicating that weaker legal environment is associated with reduced boilerplate of KAMs, which is consistent with H2. These results support the “Cost-efficiency” theory: media coverage and legal environment provide information for audit risk assessment, thereby changing audit effort auditors exert and boilerplate of KAMs.

As for control variables, the coefficients of *|DA|* are all significantly positive in Columns (1) and (2). A possible reason is that auditors of firms with higher misstatement risk can exert higher audit effort to decrease detection risk, which is reflected in reduced boilerplate of KAMs. The coefficients of *Switch* are all positive and significant in Columns (1) and (2), indicating that the change of auditors can lead to reduced boilerplate of KAMs. Additionally, the coefficients of *Mrr* are significantly negative, suggesting that auditors of firms with higher executives’ shareholdings are more likely to standardize KAM disclosures.

The results of H3 are presented in **Table 4**. The coefficient of the interaction item *MS × Coverage(negative)* is positive and significant in Column (1), indicating that the market shares of audit firms positively moderate the association between negative media coverage and boilerplate of KAMs. This result is consistent with H3(a). The coefficient of the interaction item *MS × Coverage(positive)* is positive and insignificant in Column (1). The possible explanation is that auditors’ market shares primarily influence boilerplate of KAMs by affecting the allocation of audit resources. Positive media coverage reduces the resources put into auditing. Therefore, the association between positive media coverage and boilerplate of KAMs is not significantly influenced by the market shares of audit firms. The coefficient of the interaction item *MS × Enforcement* is negative and significant in Column (2), indicating that the market shares of audit firms positively moderate the association between legal environment and boilerplate of KAMs. This result is consistent with H3(b). These results are also consistent with the “Cost-efficiency” theory.

## 6. Robust test

### 6.1. The effect of authoritative media

The H1 of this paper does not differentiate the source of news reports. According to source credibility theory, recipients’ acceptance of information varies based on the expertise of the communicators (Hovland et al., 1953; Hovland & Weiss, 1951). The news reported by authoritative financial journals, such as the Top8 financial and economic journals<sup>2</sup> and the Top20 financial web media,<sup>3</sup> are explored by journalists with professional backgrounds based on careful investigation and are consequently of higher credibility to attract auditors’ attention. Therefore, in this section, we only consider the effect of media coverage from authoritative media (*Topnews*), which is from the Top8 financial and economic journals and the Top20 financial web media. *Topnews* is measured as the natural log of one plus the number of media reports from authoritative media, in which a company’s full name, abbreviation, or stock code is mentioned for each firm year. We then replace *Coverage* with *Topnews* and re-estimate Equation (1). The results are presented in Column (1) of **Table 5**. The coefficient of *Topnews(positive)* is negative and significant, and the coefficient of *Topnews(negative)* is

<sup>2</sup> According to the classification by the CNRDS, the Top8 financial and economic journals in China are Shanghai Securities News, Daily Securities News, China Securities News, The Securities Times, 21st Century Business Herald, China Business News Daily, The Economic Observer, and China Economic News.

<sup>3</sup> The Top20 major financial web media are Hexun Net, Sina Finance, Tencent, East Money, Net ease, Phoenix Finance, China Economic Net, Sohu Finance, Huaxun Net, FT China, China Securities Net, CNFOL, P5W, Stockstar, The Paper, Caixin.com, Finance Net, VICAI and Finance 21CN.

**Table 2**  
Correlation matrix.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
<i>Diff</i>	1											
<i>Coverage(positive)</i>	-0.183***	1										
<i>Coverage(negative)</i>	0.183***	-0.390***	1									
<i>MS</i>	0.037***	-0.156***	0.234***	1								
<i>Enforcement</i>	-0.104***	-0.007	-0.145***	0.026***	1							
$ DA $	0.047***	-0.155***	0.108***	0.011	0.005	1						
<i>Switch</i>	-0.011	-0.020***	0.051***	-0.006	-0.01	0.045***	1					
<i>Mrr</i>	-0.079***	0.065***	-0.097***	0.001	0.130***	-0.027***	0.013*	1				
<i>Loss</i>	0.029***	-0.028***	-0.018**	-0.067***	-0.030***	0.021***	-0.018**	-0.113***	1			
<i>Size</i>	0.064***	0.006	0.306***	0.140***	-0.075***	-0.002	0.002	-0.368***	0.018**	1		
<i>Lev</i>	0.039***	-0.024***	0.145***	0.01	-0.067***	0.098***	0.011	-0.269***	0.315***	0.534***	1	
<i>BM</i>	0.020***	0.112***	0.041***	-0.012	-0.086***	-0.031***	-0.01	-0.232***	0.179***	0.574***	0.520***	1

\*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

**Table 3**

The effects of media coverage and legal environment on boilerplate of KAMs.

Variables	(1)	(2)
	Diff	Diff
<b>Coverage(negative)</b>	<b>0.002***</b> (5.68)	
<b>Coverage(positive)</b>	-0.001** (-2.26)	
<b>Enforcement</b>		-0.002*** (-2.65)
DA	0.012** (2.49)	0.013* (1.92)
Switch	0.002*** (3.98)	0.002*** (3.29)
Mrr	-0.006*** (-3.80)	-0.005* (-1.71)
Loss	0.003*** (3.91)	0.004*** (3.73)
Size	0.001** (2.14)	0.001* (1.89)
Lev	0.001 (0.72)	0.001 (0.24)
BM	0.000 (0.34)	-0.000 (-0.11)
<b>Year FE</b>	Yes	Yes
<b>Industry FE</b>	Yes	Yes
<i>Obs</i>	13681	13681
<i>R</i> <sup>2</sup>	0.253	0.274

This table presents the results of Equations (1) and (3). Column (1) shows the results of Equation (1), where the dependent variable *Diff* is the proxy for boilerplate of KAMs, and *Coverage (negative)* and *Coverage(positive)* are the proxies for negative and positive media coverage of firms, respectively. Column (2) shows the results of Equation (3), where the independent variable *Enforcement* is the proxy for legal environment. All variables are defined in Appendix A. The calculated t-statistics are reported in parentheses. Industry fixed effect and year fixed effect are included. The variables of our interests are presented in bold.

\*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

positive and significant. After eliminating non-authoritative media, our results still support the “Cost-efficiency” theory.

## 6.2. The effect of abnormal media coverage

A firm’s media coverage increases over time, with the overall industry number of media reports increasing even faster. Relatively speaking, the company’s media reports have actually decreased compared to the industry level. Therefore, in this section, we re-calculate abnormal media coverage (*AB\_coverage*), which is the natural log of one plus the difference between media coverage of firm *i* and its industry average of media coverage. We then replace *Coverage* with *AB\_coverage* and re-estimate Equation (1). The results are presented in Column (2) of Table 5. The coefficient of *AB\_coverage(positive)* is negative and significant, and the coefficient of *AB\_coverage(negative)* is positive and significant. After eliminating the effect of industry-level media coverage, these results do not alter our previous conclusions.

## 6.3. The endogenous issue

Two methods are used to solve the endogenous issue: control for audit firm fixed effect and instrumental variable estimation. First, according to Yau (2019), as audit firms have templates to disclose KAMs, KAMs reported by the same audit firms are more standardized. To alleviate the endogenous issue resulting from the disclosure template, we add audit firm fixed effect to our primary model. We then re-estimate Equations (1) and (3)–(5). The results are presented in Table 6. Column (1) reports the effect of media coverage. The coefficient of *Coverage(positive)* is negative and significant, and the coefficient of *Coverage(negative)* is positive and significant. Column (2) shows the effect of legal environment. The coefficient of *Enforcement* is negative and significant. These results still support the “Cost-efficiency” theory.

In Column (3), the coefficient of the interaction item *MS* × *Coverage(negative)* is positive and significant, and the coefficient of the interaction item *MS* × *Coverage(positive)* is positive and insignificant. In Column (4), the coefficient of the interaction item *MS* × *Enforcement* is negative and significant. These results are consistent with our previous findings.

Second, we use the instrumental variable estimation to alleviate the endogenous issues. As for Equation (1), we identify the proxies for the industry average of negative media coverage (*Negative\_mean*) and positive media coverage (*Positive\_mean*) as the instrumental variables to undertake the two-state regression. As firms in industries with high media coverage are more likely to attract media

**Table 4**

The interaction effect of auditors' market shares.

Variables	(1)	(2)
	<i>Diff</i>	<i>Diff</i>
<i>Coverage(negative)</i>	0.001 (0.99)	
<i>Coverage(positive)</i>	-0.002* (-1.89)	
<b><i>MS × Coverage(negative)</i></b>	<b>0.016**</b> (2.56)	
<b><i>MS × Coverage(positive)</i></b>	<b>0.010</b> (1.39)	
<i>Enforcement</i>		0.000 (0.45)
<i>MS</i>	-0.118*** (-7.12)	-0.063*** (-3.27)
<b><i>MS × Enforcement</i></b>		<b>-0.032***</b> (-4.51)
DA	0.027*** (4.00)	0.028*** (4.13)
<i>Switch</i>	0.002*** (3.83)	0.002*** (3.69)
<i>Mrr</i>	-0.006*** (-3.21)	-0.005** (-2.57)
<i>Loss</i>	0.004*** (3.55)	0.004*** (4.31)
<i>Size</i>	0.001** (2.20)	0.001*** (4.69)
<i>Lev</i>	0.003 (1.43)	0.002 (0.80)
<i>BM</i>	-0.000 (-0.65)	-0.000 (-1.13)
<i>Year FE</i>	Yes	Yes
<i>Industry FE</i>	Yes	Yes
<i>Obs</i>	13681	13681
<i>R</i> <sup>2</sup>	0.142	0.304

This table presents the results of Equations (4) and (5). The dependent variable across all Columns is *Diff*, which is the proxy for boilerplate of KAMs. Column (1) shows the results of Equation (4), where the *Coverage(negative)* and *Coverage(positive)* are the proxies for negative and positive media coverage of firms, respectively. Column (2) shows the results of Equation (5), where the independent variable *Enforcement* is the proxy for legal environment. *MS* is the proxy for the market shares of audit firms. All variables are defined in Appendix A. The calculated *t*-statistics are reported in parentheses. Industry fixed effect and year fixed effect are included. The variables of our interests are presented in bold.

\*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

attention, the industry average of media coverage may affect the likelihood of firms being covered by media and may not change boilerplate of KAMs for individual firms. Accordingly, we introduce *Negative\_mean* and *Positive\_mean* as the instrumental variables. The results are shown in Table 7. Columns (1) and (2) show the results of the first stage regression, where the dependent variables are *Coverage(negative)* and *Coverage(positive)*, respectively. *Coverage(negative)* and *Coverage(positive)* are both significantly related to *Negative\_mean* and *Positive\_mean*. The F-statistics of the first-stage regression exceed 10, meaning that *Negative\_mean* and *Positive\_mean* are not the weak instrumental variables. Column (3) shows the results of the second-stage regression, where the dependent variable is *Diff*. The coefficient of *Coverage(negative)* is still significantly positive, and the coefficient of *Coverage(positive)* is still significantly negative. These results do not alter our previous conclusion.

As for Equation (3), we identify the proxy for the degree of opening up of the capital market (*Open*) as the instrumental variable. The opening up of the capital market to the outside world requires the globalization of the legal system for the capital market. Therefore, a higher degree of opening up of the capital market puts forward higher requirements for the construction of the legal system and promotes the improvement of the region's legal environment. However, as far as we know, no literature finds a significant association between the degree of opening up and boilerplate of KAMs in audit reports. We introduce *Open* as an instrumental variable, which is measured as total export-import volume divided by the GDP. The results are shown in Table 7. Column (4) shows the results of the first stage regression, where the dependent variable is *Enforcement*. *Open* is significantly related to *Enforcement*. The F-statistics of the first-stage regression exceed 10, meaning that *Open* is not a weak instrumental variable. Column (5) shows the results of the second-stage regression, where the dependent variable is *Diff*. The coefficient of *Enforcement* is still significantly negative. These results keep our conclusions unchanged.

**Table 5**  
The effects of authoritative media and legal environment.

Variables	(1)	(2)
	<i>Diff</i>	<i>Diff</i>
<b><i>Topnews(negative)</i></b>	0.003*** (2.67)	
<b><i>Topnews(positive)</i></b>	-0.002** (-2.00)	
<b><i>AB_coverage(negative)</i></b>		0.002*** (4.76)
<b><i>AB_coverage(positive)</i></b>		-0.001** (-2.11)
<b><i> DA </i></b>	0.030*** (3.58)	0.029*** (4.44)
<b><i>Switch</i></b>	0.001* (1.79)	0.002*** (3.72)
<b><i>Mrr</i></b>	-0.021*** (-7.92)	-0.006*** (-3.26)
<b><i>Loss</i></b>	-0.001 (-0.39)	0.005*** (4.72)
<b><i>Size</i></b>	0.000 (0.32)	0.001*** (2.75)
<b><i>Lev</i></b>	-0.006** (-2.14)	0.002 (1.02)
<b><i>BM</i></b>	-0.003*** (-7.46)	-0.000 (-0.67)
<b><i>Year FE</i></b>	Yes	Yes
<b><i>Industry FE</i></b>	Yes	Yes
<b><i>Obs</i></b>	13681	13681
<b><i>R</i><sup>2</sup></b>	0.413	0.390

This table presents the effects of authoritative media and legal environment. Column (1) shows the results of Equation (1), using *Topnews* to replace *Coverage*. *Topnews(negative)* and *Topnews(positive)* are the proxies for negative and positive media coverage from the authoritative media of firms, respectively. The dependent variable across all Columns is *Diff*, which is the proxy for boilerplate of KAMs. Column (2) shows the results of Equation (1), using *AB\_coverage* to replace *Coverage*. *AB\_coverage* is abnormal media coverage, measured as the natural log of one plus the difference between media coverage of firm *i* and its industry average of media coverage. All variables are defined in Appendix A. The calculated *t*-statistics are reported in parentheses. Industry fixed effect and year fixed effect are included. The variables of our interests are presented in bold.

\*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

#### 6.4. Control for economic similarities

Since economic similarities may influence firms' boilerplate of risk-related disclosures (De Franco et al., 2020), we add the proxies for economic similarities into Equations (1) and (3)–(5). To control for economic similarities, we include the variables that measure the industry average of the absolute difference in size (*Sizediff*) and book-to-market ratio (*BMDiff*) between a firm and its industry peers, multiplied by -1. The results are shown in Table 8.

Column (1) reports the effect of media coverage. The coefficient of *Coverage(positive)* is negative and significant, and the coefficient of *Coverage(negative)* is positive and significant. Column (2) shows the effect of legal environment. The coefficient of *Enforcement* is negative and significant. These results still support the "Cost-efficiency" theory.

In Column (3), the coefficient of the interaction item *MS* × *Coverage(negative)* is positive and significant, and the coefficient of the interaction item *MS* × *Coverage(positive)* is positive and insignificant. The coefficient of the interaction item *MS* × *Enforcement* is negative and significant in Column (4). These results are consistent with our primary hypotheses.

## 7. Additional analysis

### 7.1. The effect of ownership type

A distinct characteristic of China's stock market is that many listed firms are state-owned. In China's unique institutional background, it is interesting to see whether the effects of media coverage and legal environment on boilerplate of KAMs differ between state-owned enterprises (SOEs) and non-state-owned enterprises (non-SOEs). Compared to non-SOEs, SOEs receive greater public attention and are economically and politically important (Gong et al., 2018). Consequently, when SOEs exhibit higher risks without adequate risk warnings from auditors, auditors may face more severe reputational damage and administrative penalties. To avoid legal liability, auditors are more likely to differentiate KAMs of SOEs.

**Table 6**

Control for audit firm fixed effect.

Variables	(1)	(2)	(3)	(4)
	<i>Diff</i>	<i>Diff</i>	<i>Diff</i>	<i>Diff</i>
<b><i>Coverage(negative)</i></b>	<b>0.001***</b> (4.17)		0.000 (0.86)	
<b><i>Coverage(positive)</i></b>	<b>-0.001*</b> (-1.81)		-0.000 (-0.36)	
<b><i>Enforcement</i></b>		<b>-0.002**</b> (-2.16)		0.000 (0.61)
<b><i>MS</i></b>			-0.035*** (-2.75)	0.031** (2.08)
<b><i>MS × Coverage(negative)</i></b>			<b>0.010**</b> (2.10)	
<b><i>MS × Coverage(positive)</i></b>			<b>-0.002</b> (-0.40)	
<b><i>MS × Enforcement</i></b>				<b>-0.013**</b> (-2.45)
<b> DA </b>	0.009* (1.92)	0.011* (1.87)	0.021*** (3.24)	0.022*** (3.39)
<b>Switch</b>	0.001*** (2.84)	0.002*** (3.60)	0.001** (2.47)	0.001** (2.40)
<b>Mrr</b>	-0.005*** (-3.37)	-0.004** (-2.30)	-0.006*** (-3.10)	-0.005*** (-2.79)
<b>Loss</b>	0.002*** (3.04)	0.001 (1.41)	0.003*** (3.18)	0.003*** (3.62)
<b>Size</b>	-0.000 (-0.44)	-0.001* (-1.87)	-0.000 (-0.29)	0.000 (0.71)
<b>Lev</b>	0.001 (1.00)	-0.001 (-0.68)	0.003 (1.44)	0.002 (1.22)
<b>BM</b>	0.000 (0.51)	0.000 (1.37)	-0.000 (-0.34)	-0.000 (-0.62)
<b>Year FE</b>	Yes	Yes	Yes	Yes
<b>Industry FE</b>	Yes	Yes	Yes	Yes
<b>Audit firm FE</b>	Yes	Yes	Yes	Yes
<b>Obs</b>	13681	13681	13681	13681
<b>R<sup>2</sup></b>	0.306	0.303	0.432	0.414

This table presents the results of Equations (1) and (3)–(5), adding audit firm fixed effect. Column (1) shows the results of Equation (1), where the dependent variable *Diff* is the proxy for boilerplate of KAMs, and *Coverage(negative)* and *Coverage(positive)* are proxies for negative and positive media coverage of firms, respectively. Column (2) shows the results of Equation (3), where the independent variable *Enforcement* is the proxy for legal environment. Column (3) shows the results of Equations (4) and (5). All variables are defined in Appendix A. The calculated *t*-statistics are reported in parentheses. Industry fixed effect, year fixed effect, and audit firm fixed effect are included. The variables of our interests are presented in bold. \*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

However, compared to non-SOEs, SOEs have a larger scale of assets and inherent government affiliations. SOEs receive more subsidies, which reduce the motivation of SOEs' managers to engage in accounting fraud. The audit risk assessment level for SOEs is lower than that for non-SOEs. Under a risk-oriented audit approach, auditors may exert higher effort in auditing non-SOEs. Therefore, based on the "Cost-efficiency" theory, the impacts of media coverage and legal environment on boilerplate of KAMs for SOEs would be lower.

In this section, we divide the sample into two sub-samples with SOEs and non-SOEs according to the ownership type and re-estimate Equations (1) and (3)–(5). Table 9 presents the impacts of media coverage and legal environment on boilerplate of KAMs for enterprises with different ownership types. In Table 9, the coefficients of *Coverage(negative)*, *Coverage(positive)*, *Enforcement*, *MS × Coverage(negative)*, and *MS × Enforcement* are significant for the sub-sample with non-SOEs, but insignificant for the sub-sample with SOEs. These results provide further evidence that reduced boilerplate of KAMs may result from increased audit effort instead of only the disclaimer of auditors.

## 7.2. The effect of information environment

Based on the development of the primary hypotheses, auditors obtain risk information about the firms from media coverage, which alters the audit risk assessment level, thereby increasing the differentiated disclosure of KAMs. Additionally, firms that are subject to stronger legal environment can exhibit higher quality accounting information, which reduces the audit risk assessment level and consequently increases boilerplate of KAMs. Accordingly, media coverage and legal environment both influence auditors' behaviors regarding KAM disclosures by improving information environment. Current literature has shown that the analysts following affects information environment of an enterprise: an increase in the number of analysts following can alleviate information asymmetry. In China, the analysts following, although a continuous variable, has a highly skewed distribution, clustering at both ends. Some

**Table 7**  
Instrumental variable estimation.

Variables	(1)	(2)	(3)	(4)	(5)
	<i>Coverage(negative)</i>	<i>Coverage(positive)</i>	<i>Diff</i>	<i>Enforcement</i>	<i>Diff</i>
<b>Negative_mean</b>	<b>1.447***</b> (39.21)	<b>-0.340***</b> (-9.05)			
<b>Positive_mean</b>	<b>-1.285***</b> (-26.80)	<b>0.536***</b> (18.25)			
<i>Coverage(negative)</i>			<b>0.032***</b> (4.11)		
<i>Coverage(positive)</i>			<b>-0.028***</b> (-8.34)		
<i>Open</i>				<b>1.030***</b> (13.96)	
<b>Enforcement</b>					<b>-0.002**</b> (-1.99)
DA	0.151 (1.07)	0.235** (2.12)	0.031*** (5.27)	0.013 (0.25)	0.020*** (2.69)
<i>Switch</i>	-0.003 (-0.20)	0.017* (1.68)	-0.002*** (-4.13)	0.007 (1.64)	-0.002*** (-3.48)
<i>Mrr</i>	0.606*** (14.34)	0.573*** (17.46)	-0.015*** (-4.64)	0.119*** (8.73)	-0.010*** (-5.27)
<i>Loss</i>	0.230*** (10.80)	-0.135*** (-7.77)	0.016*** (8.01)	-0.025*** (-3.22)	0.005*** (4.82)
<i>Size</i>	0.303*** (49.42)	0.331*** (69.74)	0.001 (0.41)	-0.012*** (-5.59)	0.002*** (6.50)
<i>Lev</i>	-0.210*** (-4.90)	-0.076** (-2.28)	-0.006*** (-3.39)	0.028** (2.03)	-0.002 (-1.25)
<i>BM</i>	-0.070*** (-10.62)	-0.093*** (-17.50)	-0.001* (-1.85)	-0.007*** (-3.69)	-0.001** (-2.03)
<i>Year FE</i>	Yes	Yes	Yes	Yes	Yes
<i>Industry FE</i>	Yes	Yes	Yes	Yes	Yes
<i>Obs</i>	13681	13681	13681	13681	13681
<i>R</i> <sup>2</sup>	0.207	0.265	0.037	0.623	0.020

This table presents the results of instrumental variable estimation. The dependent variables of Columns (1) and (2) are *Coverage(negative)* and *Coverage(positive)*, respectively, which are the proxies for negative and positive media coverage. The dependent variable of Column (4) is *Enforcement*, which is the proxy for legal environment. All variables are defined in [Appendix A](#). Industry fixed effect and year fixed effect are included. The variables of our interests are presented in bold.

\*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

companies attract the attention of a large number of analysts, but others have zero analysts following. Therefore, we divide the sample into two sub-samples based on the industry median of analysts following for that year referring to prior literature (e.g., [Xu et al., 2019](#)) and re-estimate Equations [\(1\)](#) and [\(3\)–\(5\)](#).

The results are shown in [Table 10](#). The coefficients of *Coverage(negative)*, *Coverage(positive)*, *Enforcement*, *MS × Coverage(negative)*, and *MS × Enforcement* are all significant for the sub-sample with lower analysts following and are insignificant for the sub-sample with higher analysts following. These results indicate that when the level of information asymmetry of a company is low, media coverage and legal environment influence the higher audit risk assessment level by improving information environment, thereby affecting boilerplate of KAMs.

## 8. Conclusion

A worldwide reform on audit reports has been initiated to improve audit reports' informativeness and increase audit work's transparency. In 2016, the CMF issued CSACPA No.1504, requiring auditors of firms listed in China's A+H stock markets to communicate KAMs in audit reports. Prior literature argues that KAM disclosures have the "Disclaimer" effect for auditors. However, in China's institutional background, auditors of firms that are detected with material misstatements and unqualified audit opinions can hardly decrease their legal liability only by reducing boilerplate of KAMs. This paper, utilizing China's KAM data, investigates the influence of media coverage and legal environment on boilerplate of KAMs disclosed by auditors with different market shares. These results reveal that boilerplate of KAMs decreases as negative media coverage increases and increases as positive media coverage increases. In addition, auditors of firms that are subject to weaker legal environment can reduce boilerplate of KAMs. These associations are stronger for audit firms with larger market shares. Finally, media coverage and legal environment can only influence boilerplate of KAMs of non-SOEs and firms with higher information asymmetry.

This paper provides an alternative explanation using the "Cost-efficiency" theory: when auditors perceive higher audit risk, they

**Table 8**  
Control for economic similarities.

Variables	(1) <i>Diff</i>	(2) <i>Diff</i>	(3) <i>Diff</i>	(4) <i>Diff</i>
<b><i>Coverage(negative)</i></b>	<b>0.002***</b> (3.77)		0.001 (1.06)	
<b><i>Coverage(positive)</i></b>	<b>-0.000***</b> (-3.73)		-0.001 (-1.32)	
<b><i>MS</i></b>			-0.087*** (-6.75)	0.052*** (3.40)
<b><i>Enforcement</i></b>		<b>-0.002***</b> (-4.51)		-0.000 (-0.20)
<b><i>MS × Coverage(negative)</i></b>			<b>0.015***</b> (3.24)	
<b><i>MS × Coverage(positive)</i></b>			<b>0.003</b> (0.48)	
<b><i>MS × Enforcement</i></b>				<b>-0.025***</b> (-4.53)
DA	0.030*** (4.48)	0.030*** (4.49)	0.027*** (3.96)	0.028*** (4.19)
<b><i>Switch</i></b>	0.002*** (3.69)	0.002*** (3.66)	0.002*** (3.83)	0.002*** (3.69)
<b><i>Mrr</i></b>	-0.006*** (-3.45)	-0.005*** (-2.70)	-0.006*** (-3.15)	-0.005*** (-2.58)
<b><i>Loss</i></b>	0.004*** (4.30)	0.005*** (4.80)	0.004*** (3.64)	0.004*** (4.39)
<b><i>Size</i></b>	0.001 (1.63)	-0.001*** (-3.33)	-0.001** (-2.19)	-0.001*** (-4.53)
<b><i>Lev</i></b>	0.002 (0.92)	0.001 (0.71)	0.003 (1.40)	0.002 (0.80)
<b><i>BM</i></b>	-0.000 (-0.58)	-0.000 (-1.08)	-0.000 (-0.55)	-0.000 (-1.17)
<b><i>Sizediff</i></b>	0.002 (0.81)	0.003 (0.99)	0.002 (0.69)	0.003 (1.00)
<b><i>BMdiff</i></b>	-0.022 (-0.62)	-0.035 (-0.97)	-0.024 (-0.67)	-0.043 (-1.20)
<b><i>Year FE</i></b>	Yes	Yes	Yes	Yes
<b><i>Industry FE</i></b>	Yes	Yes	Yes	Yes
<b><i>Obs</i></b>	13681	13681	13681	13681
<b><i>R</i><sup>2</sup></b>	0.239	0.242	0.211	0.342

This table presents the results of Equations (1) and (3)–(5), controlling for the proxies for economic assimilates (*Sizediff* and *BMdiff*). *Sizediff* is the industry average of the absolute difference in size between a firm and its industry peers, multiplied by -1. *BMdiff* is the industry average of the absolute difference in book-to-market ratio between a firm and its industry peers, multiplied by -1. Column (1) shows the results of Equation (1), where the dependent variable *Diff* is the proxy for boilerplate of KAMs, and *Coverage(negative)* and *Coverage(positive)* are the proxies for negative and positive media coverage of firms, respectively. Column (2) shows the results of Equation (3), where the independent variable *Enforcement* is the proxy for legal environment. Columns (3) and (4) show the results of Equations (4) and (5). All variables are defined in Appendix A. The calculated *t*-statistics are reported in parentheses. Industry fixed effect and year fixed effect are included. The variables of our interests are presented in bold.

\*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

**Table 9**  
The effect of ownership type.

Variables	SOEs				Non-SOEs			
	(1)		(2)		(5)		(6)	
	<i>Diff</i>	<i>Diff</i>	<i>Diff</i>	<i>Diff</i>	<i>Diff</i>	<i>Diff</i>	<i>Diff</i>	<i>Diff</i>
<b><i>Coverage(negative)</i></b>	<b>0.001</b> (1.39)		-0.000 (-0.20)		<b>0.003***</b> (6.14)		0.003** (2.42)	
<b><i>Coverage(positive)</i></b>	<b>0.001</b> (0.54)				-0.002*** (-3.71)			
<b><i>Enforcement</i></b>		<b>-0.001</b> (-1.47)		-0.001 (-0.85)		<b>-0.002***</b> (-3.73)		0.002 (1.57)
<b><i>MS</i></b>			-0.112*** (-4.10)	-0.015 (-0.46)			-0.120*** (-3.27)	0.112*** (4.53)
<b><i>MS × Coverage(negative)</i></b>			<b>0.018</b> (1.57)				<b>0.001***</b> (3.05)	
<b><i>MS × Enforcement</i></b>				<b>-0.001</b> (-0.07)				<b>-0.050***</b> (-5.63)
<b> DA </b>	0.037** (2.22)	<b>0.040***</b> (4.11)	<b>0.070***</b> (5.52)	0.071*** (5.57)	0.004 (0.64)	0.003 (0.62)	0.059*** (4.38)	0.010 (1.26)
<b><i>Switch</i></b>	0.002** (2.32)	<b>0.002***</b> (2.92)	<b>0.002**</b> (2.24)	<b>0.002***</b> (2.12)	<b>0.002***</b> (2.94)	<b>0.002***</b> (2.90)	<b>0.003***</b> (2.69)	<b>0.002***</b> (2.92)
<b><i>Mrr</i></b>	-0.020 (-0.96)	-0.014 (-1.02)	-0.031* (-1.86)	-0.025 (-1.49)	-0.002 (-1.07)	-0.001 (-0.90)	-0.015*** (-4.36)	-0.002 (-0.99)
<b><i>Loss</i></b>	0.003 (1.58)	0.004*** (2.59)	0.005** (2.34)	0.005*** (2.63)	0.003*** (3.46)	0.004*** (4.41)	0.004** (2.23)	0.004*** (3.94)
<b><i>Size</i></b>	-0.000 (-0.25)	-0.001* (-1.83)	0.000 (0.12)	0.002*** (2.78)	0.001* (1.68)	-0.001** (-2.08)	0.000 (0.04)	0.001*** (2.79)
<b><i>Lev</i></b>	-0.001 (-0.18)	-0.001 (-0.39)	0.003 (0.94)	0.002 (0.61)	0.001 (0.78)	0.001 (0.70)	0.003 (0.67)	0.001 (0.53)
<b><i>BM</i></b>	-0.000 (-0.17)	-0.000 (-0.68)	-0.001 (-1.31)	-0.001* (-1.74)	0.000 (0.53)	0.000 (0.13)	-0.006*** (-6.92)	-0.000 (-0.74)
<b><i>Year FE</i></b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b><i>Industry FE</i></b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b><i>Obs</i></b>	9682	9682	9682	9682	3999	3999	3999	3999
<b><i>R</i><sup>2</sup></b>	0.215	0.389	0.114	0.277	0.120	0.323	0.610	0.524

This table presents the results of Equations (1) and (3)–(5) for the sub-samples with SOEs and non-SOEs. Columns (1)–(4) show the results of Equations (1) and (3)–(5) for the sub-sample with SOEs. Columns (5)–(8) show the results of Equations (1) and (3)–(5) for the sub-sample with non-SOEs. The dependent variable across all Columns is *Diff*, which is the proxy for boilerplate of KAMs. *Coverage(negative)* and *Coverage(positive)* are proxies for negative and positive media coverage of firms, respectively. *Enforcement* is the proxy for legal environment. *MS* is the proxy for the market shares of audit firms. All variables are defined in Appendix A. The calculated *t*-statistics are reported in parentheses. Industry fixed effect and year fixed effect are included. The variables of our interests are presented in bold.

\*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

will adopt more specific audit procedures and put into extensive audit effort to decrease detection risk, which will be disclosed in KAMs and reduce boilerplate of KAMs. In response to the concern of boilerplate of KAMs, our findings prove that auditors can provide more tailored KAMs when the audit risk assessment level is higher. Therefore, this paper could help users of expanded audit reports understand auditors' motivation to disclose differentiated KAMs sincerely.

#### CRediT authorship contribution statement

**Qianqun Ma:** Writing – original draft, Validation, Software, Methodology, Investigation, Data curation. **Qi Wang:** Writing – original draft, Resources, Funding acquisition. **Kongwen Wang:** Validation, Investigation, Formal analysis. **Chong Wu:** Methodology, Resources, Software.

#### Informed consent

Informed consent was obtained from all individual participants included in the study.

#### Ethical approval

This article does not contain any studies with human participants or animals performed by any of the authors.

**Table 10**

The effect of information environment.

Variables	Higher analysts following				Lower analysts following			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Diff	Diff	Diff	Diff	Diff	Diff	Diff	Diff
<b>Coverage(negative)</b>	<b>0.001</b> (1.02)		0.002* (1.95)		<b>0.001**</b> (2.45)		-0.001 (-0.86)	
<b>Coverage(positive)</b>	<b>0.002</b> (1.52)				-0.005*** (-4.02)			
<b>Enforcement</b>		-0.001 (-0.77)		0.000 (0.15)		-0.002** (-2.08)		0.001 (0.58)
<i>MS</i>			-0.108*** (-4.06)	0.059 (1.30)			-0.102*** (-2.88)	0.074 (1.55)
<i>MS</i> × <i>Coverage(negative)</i>			0.012 (1.33)				0.024** (2.03)	
<i>MS</i> × <i>Enforcement</i>				-0.026 (-1.56)				-0.041** (-2.36)
DA	0.070*** (4.29)	0.056** (2.56)	0.040*** (4.24)	0.041*** (2.73)	-0.002 (-0.33)	0.004 (0.55)	0.028** (2.05)	0.016 (1.20)
<i>Switch</i>	0.001 (0.98)	0.003** (2.17)	0.001 (1.21)	0.001 (0.91)	0.002*** (4.09)	0.002*** (3.25)	0.005*** (4.11)	0.003*** (3.10)
<i>Mrr</i>	-0.016*** (-3.43)	-0.001 (-0.13)	0.000 (0.08)	0.001 (0.27)	-0.006*** (-3.14)	-0.006** (-2.14)	-0.008** (-2.36)	-0.008* (-1.95)
<i>Loss</i>	0.014*** (4.19)	0.004 (1.27)	0.002 (1.20)	0.003 (1.49)	0.003*** (3.37)	0.004*** (3.32)	0.003* (1.65)	0.004*** (2.95)
<i>Size</i>	0.000 (0.20)	0.001 (1.37)	0.002*** (3.69)	0.002*** (2.70)	0.000 (1.01)	0.001* (1.74)	-0.001 (-0.66)	0.001 (1.39)
<i>Lev</i>	-0.000 (-0.02)	-0.001 (-0.14)	0.005* (1.83)	0.003 (0.67)	-0.002 (-1.12)	-0.001 (-0.49)	-0.002 (-0.55)	-0.001 (-0.25)
<i>BM</i>	-0.002*** (-3.52)	0.001 (0.49)	-0.000 (-0.39)	-0.000 (-0.19)	0.000 (0.59)	-0.000 (-0.45)	-0.001 (-0.95)	-0.001 (-0.81)
<i>Year FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Industry FE</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Obs</i>	6840	6840	6840	6840	6841	6841	6841	6841
<i>R</i> <sup>2</sup>	0.215	0.125	0.488	0.244	0.120	0.314	0.279	0.246

This table presents the results of Equations (1) and (3)–(5) for the sub-samples with different information environment. Columns (1)–(4) show the results of Equations (1) and (3)–(5) for the sub-sample with higher analysts following. Columns (5)–(8) show the results of Equations (1) and (3)–(5) for the sub-sample with lower analysts following. The dependent variable across all Columns is *Diff*, which is the proxy for boilerplate of KAMs. *Coverage(negative)* and *Coverage(positive)* are proxies for negative and positive media coverage of firms, respectively. *Enforcement* is the proxy for legal environment. *MS* is the proxy for the market shares of audit firms. All variables are defined in Appendix A. The calculated *t*-statistics are reported in parentheses. Industry fixed effect and year fixed effect are included. The variables of our interests are presented in bold.

\*, \*\*, and \*\*\* denote 10 percent, 5 percent, and 1 percent significance levels, respectively.

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## Declaration of competing interest

We declare that we have no conflict of interest.

## Appendix. A Variable definitions

Variables	Description
<i>Diff</i>	The opposite value of the average of KAMs' textual similarity in each industry year.
<i>Coverage(negative)</i>	Negative media coverage, measured as the natural log of one plus the number of negative media coverage for the firm in the fiscal year.
<i>Coverage(positive)</i>	Positive media coverage, measured as the natural log of one plus the number of positive media coverage for the firm in the fiscal year.
<i>Enforcement</i>	The proxy for legal environment, measured using the legal environment index for China, initiated by Fan et al. (2010).
<i>MS</i>	The market shares of audit firms, measured by the total assets of clients of respective audit firms divided by the total assets of listed companies.
DA	The absolute value of discretionary accruals, measured using the modified Jones model.
<i>Switch</i>	An indicator variable, which equals 1 if any signed auditors are changed in that fiscal year and 0 otherwise.

(continued on next page)

(continued)

Variables	Description
<i>Mrr</i>	The executives' shareholding.
<i>Loss</i>	An indicator variable, which equals 1 if the firm makes a loss in that fiscal year and 0 otherwise.
<i>Size</i>	The natural log of the closing assets.
<i>Lev</i>	The total liability of the firm divided by the total equity at the end of the year.
<i>BM</i>	The book-to-market ratio.
<i>Topnews (negative)</i>	Negative media coverage, measured as the natural log of one plus the number of negative media coverage from authoritative media for the firm in the fiscal year.
<i>Topnews(positive)</i>	Positive media coverage, measured as the natural log of one plus the number of positive media coverage from authoritative media for the firm in the fiscal year.
<i>AB_coverage</i>	Abnormal media coverage, measured as the natural log of one plus the difference between media coverage of firm $i$ and its industry average of media coverage.
<i>Open</i>	The degree of opening up, measured as the total import-export volume divided by the GDP.
<i>Sizediff</i>	The industry average of the absolute difference in size between a firm and its industry peers, multiplied by $-1$ .
<i>BMdiff</i>	The industry average of the absolute difference in book-to-market ratio between a firm and its industry peers, multiplied by $-1$ .

## Data availability

The data that has been used is confidential.

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