When Do Key Audit Matters Make Sense: The Joint Effect of Familiarity, Readability and Investors' Professional Skepticism on Information Processing and Risk Assessment

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Abstract: Using an eye-tracking and electrodermal device, this study investigates how readability and familarity of the Key Audit Matters (KAMs) jointly affect investors' attention and assessment of risk associated with KAMs. We predict and find that only when investors are familiar with the information discussed in the KAM, readability will affect their visual attention to the KAMs. When investors are unfamiliar with KAMs, professional skepticism becomes the main driver of their attention allocation. Furthermore, we distinguish dedicated visual attention and absent-minded visual attention, arguing that the positive correlation only exist between dedicated visual attention on the information and the relative importance of each information in decision-making. Consistent with this argument, we prove that Why (How) Paragraph plays a more important role in risk assessment when investors are unfamiliar (familiar) with the KAM. Our results should be of interest to regulators and auditors as they consider what and how to communicate KAMs in the audit report.

Keywords: key audit matters; Why Paragraph; How Paragraph; Readability; Familiarity; Professional Skepticism; eye-tracking

I. Introduction

The International Auditing and Assurance Standard Board (IAASB) implemented reforms of the audit reporting model in 2015. One of the most far-reaching change is to include key audit matters (KAMs) in the audit report. The description of each KAMs shall include Why the matter was considered to be one of most significant in the audit and therefore determined to be a key audit matter (Why Paragraph) and How the matter was addressed in the audit (How Paragraph) (IAASB, 2015), which provides insight into matters of significance to the audit for the first time. And the US-American Public Company Accounting Oversight Board (PCAOB) introduced the disclosure of critical

audit matters (CAMs) in 2017. Meanwhile, a large amount of national auditing standard setters have also revised the audit report, such as the Financial Reporting Council (FRC) in the United Kingdom, Ministry of Finance of the People's Republic of China, etc.. (For the consistency of the name, we adopt the term KAMs in the rest of our paper.) The primary objective to implement the reform is to enhance the communicative value of the audit report (IAASB, 2015) and provide more informative and relevant information on the audit (CFA Institute, 2010). Regulators hope to reduce information asymmetry and increase the quality of financial statements and audit reports by introducing audit reporting reforms.

Some pioneering researchers have provided evidence on the impact of KAMs. Velte and Issa (2019) reviewed 49 empirical studies on KAMs based on five major streams, including shareholders, debtholders, external auditors, boards of directors, and other stakeholders. Most studies focused on the effect of KAMs on investors' decision and reaction (Christensen et al., 2014; Kachelmeier et al., 2017; Rapley et al., 2018; Almulla and Bradbury, 2018; Trpeska et al., 2017; Porump et al., 2018; Bedard et al., 2018; Gutierrez et al., 2018). Although regulators require auditors to disclose KAMs in the audit report, the adequacy of the description of a KAM is a matter of professional judgment (IAASB, 2015). The informative and communicative value to investors varies a lot among KAMs with different forms and content in different audit reports or even in the same audit report, which leads to heterogeneous conclusions found in previous literature. Recently, experimental studies began to explore how the form and content of KAMs affect individuals' judgments and decisions. This stream of literature is very rare and there is a need to further clarify the main and interactive effect of KAMs' form and content.

In the perspectives of KAMs' form, we have noticed that auditors mainly adopt two presentation forms to communicate KAMs in the audit report: one is presented in graph and table, the other is presented in text. When presented in graph and table, the Why Paragraph is demonstrated on the left side of the graph, and the How Paragraph is on the right. It is convenient for readers to understand and compare the content of the both sides simultanelously. When presented in text, all message is arranged from top to

bottom, the Why Paragraph is followed by the How Paragraph. Even in the same audit report, auditors may use different forms to disclose different KAMs, which shed light on the topic of KAM's presentation form. According to information process theory, information presented in graphs is more intuitive and requires less cognitive effort when comparing to narrative information (Dilla et al., 2010; Kelton et al. 2010; Beattie and Jones, 2008). Therefore, whether the presentation form of KAMs affect users' decision making process raises our attention.

In the perspectives of KAMs' content, a variety of accounting topics discussed in the KAMs have been examined in the experimental settings. However, the comparability of these results was low (Velte and Issa, 2009). Unlike some obvious content-related factors, such as the detail level of description (Kipp, 2017) and the number of KAMs (Sirois et al., 2018), we focus on investors' familiarity of the matters disclosed as KAMs. Prior marketing literature concluded that familiarity has a great impact on consumers' information processing and purchase decision making (Moore and Lahmann, 1980; Srinivasan and Ratchford, 1991). When exposed to the familiar brand, consumers already have some knowledge about the brand and are more likely to update their existing knowledge and engage in relatively less extensive, more confirmation-based processing (Snyder and Stukas, 1999; Mackenzie and Spreng, 1992). However, little accounting literature focusing on how familiarity affect investors' information processing and risk assessment. To our knowledge, we are the first accounting research to explore the effect of investors' familiarity of KAMs on their decision making.

Most recent experimental and archival studies failed to observe individuals' visual attention and information process on KAMs. Sirois et al. (2018) was the first research to prove the attention directing effect of KAMs in financial statements by using eye-tracking device. Whether KAMs' form and content have distinct attention directing effect in audit reports, especially the Why Paragraph and How Paragraph, remains unclear. The Why Paragraph portrays an objective and firm-specific picture of the matter itself. While the How Paragraph discloses specific and detailed audit works related to the KAMs. Different information can be communicated and conveyed by

these two paragraphs. Based on the research and conclusion of Sirois et al. (2018), our paper further study how individuals allocation their attention and effort to Why and How Paragraph under differen conditions of KAMs' familiarity and readability, and how the attention on Why and How Paragraph affect their risk assessment.

According to information process theory, we develop hypotheses as to how the familiarity and readability of KAMs affect users' attention and how the visual attention in turn affects risk assessments. In order to test our hypotheses and fill the research gap mentioned above, we conduct a 2 × 2 eye-tracking experiment to examine the interactive effect of KAMs' form and content on individuals' visual attention and risk assessments. The within-subjects factor was the familarity of KAMs' content. Each subject was asked to read both the KAM (goodwill impairment) they are familiar with and the KAM (fixed asset impairment) they are unfamiliar with. The between-subjects factor was the readability of KAMs' form. Half of the participants received audit report that presented goodwill impairment in graph and presented fixed asset impairment in text. And the other half received the audit report that presented goodwill impairment in text and presented fixed asset impairment in graph. We invited 78 advanced financial staff, whose average working experience is 20.87 years, to read the audit report and then assessed the material misstatement risk of the KAMs. Eye movements during the whole process were recorded.

Experimental results revealed that KAMs' familarity and readability have interactive effect on users' visual attention in KAMs. We predict and prove that with the increase KAMs' readability, investors pay more attention to KAMs only when they are familiar with the content discussed in KAMs. When they are unfamiliar with it, their attention is affected by investors' trait professional skepticism, instead of KAMs' readability. Investors with higher level of professional skepticism tend to pay more attention to process the information related to KAMs when they are unfamiliar with the content discussed in KAMs.

We further analyze the causality between visual attention and decision making. The results find that attention on How Paragraph mediates the relationship between readability and risk assessment when investors are familiar with the content discussed

in the KAMs. Although higher readability increased investors' attention on Why and How Paragraph simultaneously, it is the attention spent on How Paragraph affect their perceived trust of KAMs and their risk assessment. However, attention on Why Paragraph mediates the relationship between professional skepticism and risk assessment when investors are unfamiliar with KAMs. Although higher professional skepticsm both increased investors' attention on Why and How Paragraph, it is the attention spent on Why Paragraph affect their perceived trust of KAMs and their risk assessment. Based on the results, we argue that only when individuals are dedicated to process and understand the information, the visual attention on the information have substantial impact on individuals' decision making. Otherwise, the information has little addictive value and substancial effect on investors' risk assessment no matter how long he/she spent on it. In the supplementary analysis, we provide robust evidence that when investors are unfamiliar (familiar) with the content discussed in KAMs, he/she occurs mind wandering when reading the How (Why) Paragraph.

The current study makes three contributions to the literature. First, we extend previous audit reporting literature, and research on current audit reporting reforms requiring the disclosure of KAMs by emphasizing the interactive effect of KAMs' familiarity and readability. Our research reveals a more comprehensive mechanism underlying the effect of KAMs on users' decision-making process and provides an explanation to reconcile the contradictory conclusions of previous KAM studies.

Second, this study shed light on the different informative value of Why Paragraph and How Paragraph in KAMs. Previous literature has studied the effect of How Paragraph on individuals' decision making (Christensen et al., 2014; Kachelmeier et al., 2017; Kipp, 2017). None of them compared and distinguished the informative value of Why Paragraph and How Paragraph. Our results indicate that people allocate different attention to these two parts due to various KAM's readability and familarity.

Third, our research extends the attention theory in accounting decision research by further distinguishing the dedicated visual attention and absent-minded visual attention. Most of the previous literature assumed that the more attention he/she spend on the information, the more important role it plays in the decision making (Birnberg and

Shields, 1984; Clement, 2007; Chen et al., 2016). We argue that the positive relationship between visual attention on information and the relative importance of each information in decision-making is not always exist. By measuring investors pupil diameter and electrodermal data, two biological indicators of mind wandering, we find that only when investors are dedicated to information processing can the visual attention actually affect his/her decision making.

Besides, our research adds new evidence of how mature and professional investors react to KAMs' form and content. Current experimental studies mostly relied on students and "Amazon's Mechanical Turk" participants to measure private investors' decision (Christensen et al., 2014; Dennis et al., 2019; Gimbar et al., 2016; Kipp, 2017), which had limited external validity (Köhler et al., 2016; Pelzer, 2016). This study included 78 advanced financial staffs as participants, who are more likely to be the audit report users in the real world. Results and conclusions of our research provide more practical implications for regulators and auditors.

In Section II, we review the relevant literature and develop our guiding hypotheses. Section III describes the experimental method and design, Section IV presents the current results, and Section V concludes.

II. Theory and Hypotheses

For a long time, the standardized audit report has been criticized by its restrictive content and limited informational and communicative value (Coram et al., 2011; Deumes et al., 2012). Nonprofessional investors and unsophisticated stakeholders find it difficult to extract relevant and useful information for their financial analyses and investment decisions (Bédard et al., 2016; Gold et al., 2012). In order to reduce information asymmetry and increase the value relevance of audit reports, IAASB, PCAOB, and regulators in other countries began to introduce the disclosure of KAMs. KAMs can help investors and other financial statement users focus on aspects of the company's financial statements that the auditor also found to be challenging (PCAOB, 2013) . Additionally, KAMs provide ways to better navigate complex financial reports

and focus investors on matters likely to be important to their decision-making (IAASB, 2011).

Regulators and standard-setters believe that KAMs in the audit report has the potential to increase the value of the audit to users by increasing their awareness of significant matters that the auditor addressed during the audit and by increasing their understanding of the work performed by the auditor. KAMs are assumed to provide additional information to financial statement users and have a positive effect on their decision-making. The disclosure of KAMs in the audit report sheds light on the research topic about how KAMs affect the information perception and investment behavior of stakeholders, debtholders, external auditors and board of directors (see reviews Velte and Issa, 2019).

Previous archival research exhibited heterogeneous results. Some studies supported the additional information value of KAMs and found that information asymmetry significantly decreased and abnormal trade volume profoundly increased following the implementation of the KAMs disclosures (Almulla and Bradbury, 2018; Reid et al., 2015; Smith, 2017; Trpeska et al., 2017; Porump et al., 2018). Experimental research focuses on the impact of KAMs on individuals' behavior. Nonprofessional investors who received a KAM paragraph were more likely to stop considering a firm as an investment than those who received a standard audit report (Christensen et al., 2014; Rapley et al., 2018). Kachelmeier et al. (2017) demonstrated similar results that the presence of KAMs paragraph reduce nonprofessional investors' confidence in reported amounts. While other literature failed to figure out any significant impact of KAMs on investors' reactions and any increased informative value (Bédard et al., 2018; Gutierrez et al., 2018; Lennox et al., 2017; Boolaky and Quick, 2016). Particularly for nonprofessional investors, KAMs exhibited no communicative value (Köhler et al., 2016).

Reason why contradictory conclusions exist is probably that the form and content of KAMs vary a lot in different audit reports. Different presentation format bring different level readability, and distinct content discussed in KAMs have different level of familiarity to investors. Previous literature provide evidence how readability and

familiarity affect individuals' information processing and decision making respectively.

How Readability Affect individuals' attention and decision-making

Individuals tend to use heuristics in decision making especially when they faced issues of limited cognitive capacity and must make trade-offs when processing information (Simon, 1978). If the information is too complicated which takes too much cognitive effort to process, individuals tend to ignore it and turn to effort-saving emotional and intuitive judgments. Under these circumstances, the efficacy and value of the information become limited. On the contrary, information that requires less cognitive effort can ease the strain on memory and attention, which is more likely to play an important role in individuals' decision-making process (Einhorn and Hogarth, 1981; Kleinmuntz and Schkade, 1993). Therefore, the presentation form of information has an impact on individuals' related judgments (Payne et al., 1993). Literature in accounting and auditing revealed that readability of financial statements affected users' judgments. For example, Tan, Wang and Zhou (2014) found that language sentiment influences investors' earnings judgments when the readability of financial disclosure is low, but not when readability is high. Clor-Proell et al. (2014) provided evidence that nonprofessional investors better decipher the reliability implications of measurement subjectivity when fair value gains appear in a separate column in the income statement. Dennis, Griffin and Zehms (2019) extended this stream of literature to KAMs and found that fully narrative description of KAMs disclosures had limited information value to nonprofessional investors. Their experimental results showed that nonprofessional investors could not fully weight value-relevant information in the KAMs disclosures when it is presented in a fully narrative form, while visual cues in the KAMs disclosures can facilitate this weighting and lead to investors' higher level of price protection.

Auditors usually adopt graphs or texts form to communicate KAMs in the audit report. KAMs presented in graphs and tables will put the Why Paragraph on the left side and the corresponding How Paragraph are placed on the right. While KAMs are presented in texts will describe Why Paragraph first, followed by the corresponding How Paragraph. In line with information processing theory, information presented in

graphs and tables is more intuitive and requires less cognitive effort when comparing to narrative information. Therefore, individuals tend to be attracted and impressed by graphical information. The accounting literatures has consistently documented that managers tend to modify visualizations through manipulating graphical presentations to impact investors' impressions of firm performance (Dilla et al., 2010; Kelton et al. 2010; Beattie and Jones, 2008). Due to the eye-catching and easy-to-memory characteristics, Managers prefer to use graphs to boost the positive effect of favorable outcomes but remove graphs when receiving unfavorable outcomes (Beattie and Jones, 2000). Investors' attention will be attracted and directed by the presenting graphs and have positive impressions of management and firm performance (Zhang, 2019). Similar favorable selectivity bias also exists in sustainability reports (Cho, Michelon and Patten, 2012; Hrasky, 2012) and social and environmental reports. Jones (2011) demonstrated that companies in high impact industries tend to present relatively more good news than bad news in graphs and distort graphs relatively more favorably than those in low impact companies.

How Familiarity Affect Investors' attention and decision-making

Previous literature identified the importance of familiarity in individuals' information processing and decision making. Marketing researchers argued that people tend to engage in relatively less extensive, more confirmation-based processing when they are exposed to an advertisement for a familiar brand (Keller, 1991; Mackenzie and Spreng, 1992; Snyder and Stukas, 1999). There is a negative relationship between familiarity and investors' external information search (Moore and Lahmann, 1980; Srinivasan and Ratchford, 1991). Fisher and Frewer (2009) found that when an individual has developed familiarity with an product or situation, they are more likely to use heuristic processing, using prior attitude as part of their information processing, instead of searching for new information.

Regulators made the requirements to add significant matters that auditors addressed during the audit and disclose corresponding audit procedures performed by auditors to address KAMs. The more detailed descriptions resulted in higher

assessments in the reliability and accuracy of KAMs, and led to lower assessed probability of material misstatement (Kipp, 2017). However, the audit procedures disclosure demonstrated contradictory impacts on investors' decision-making. Kipp (2017) proposed that the more detailed descriptions of the audit procedures increased nonprofessional investors' confidence in the audit report and perceptions of audit quality. As the description of audit procedures, that is How Paragraph, provides explicit assurance over the matter raised in the Why Paragraph, nonprofessional investors who received How Paragraph were less likely to stop investment than those who only received Why Paragraph (Christensen et al., 2014). However, Kachelmeier et al. (2017) did not find an incremental effect of audit procedure disclosure on investors' judgments and decisions.

Various items could be classified as KAMs as long as it is worthy for investors' decision making, which leads to contradictory conclusions about the effect of KAMs on individuals' judgments and lowers the comparability of previous research (Velte and Issa, 2019). Some of these items are familiar to investors. Generally speaking, these are routine and regular items presented in the financial statement. Most investors possess prior knowledge about these items and are familiar with the accounting standards and accounting treatments related to them. However, other items are relatively foreign to investors. The recognition and measurement of these matters are generally very complicated, which always make investors confuse and worried. They need to spend much more energy and time to deal with these unfamiliar items.

When investors are familiar with the content discussed in KAMs, they have previous knowledge about what the accounting items is and how to deal with it correctly according to accounting standard. They will tend to use heuristic processing, relying on existing knowledge and prior attitude to make decision and assess material risk if KAMs' readability is low, instead of searching for new information in the KAMs. Under such circumstance, KAMs has little addictive value for investors. However, investors are willing to read and process new information in KAMs if it is easy to understand and requires less cognitive effort. Therefore, readability will significantly affect investors' attention on KAMs when they are familiar with it. On the contrary, readability has less

significant effect on investors' attention on KAMs when they are unfamiliar with the content discussed in it. Because investors have little prior knowledge about the items discussed in the KAMs, they have to search information from the KAMs no matter whether it is easy to read or not. Especially for those sophisticated investors, they tend to use systematic processing and search for information in a thoughtful way. Therefore, we predict the interactive effect of KAMs' readability and familarity and raise H1 as follows:

H1: With the increase of KAMs' readability, investors pay more attention to it. And the positive relationship is more significant when investors are familiar with the content discussed in KAMs.

How Professional Skepticism Affect Investors' attention and decision-making

Except for the form and content of KAMs, investors' trait professional skepticism is one of the most mentioned factor in information processing and risk assessment. Investors with high professional skepticism tend to be more cautious, care more about norm, and are more likely to doubt evidence and expand their information search (Hurtt, 2010; Urboniene et al., 2013; Fullerton and Durtschi, 2005). Especially when dealing with unfamiliar information, investors with high professional skepticism are likely to pay more attention on the information discuseed in KAMs, trying their best to search relevant information and understand every information cue containing in KAMs. Therefore, we raise H2 as follows:

H2: Investors with higher level of professional skepticism tend to pay more attention to KAMs. And the positive relationship is more significant when investors are unfamiliar with the content discussed in KAMs.

The effect of attention on decision making

Birnberg and Shields (1984) noted that the important role that attention plays in accounting decision-making. They claimed that, within an individual's cognitive processes, attention is affected by cues in accounting information and that attention in

turns affects decision-making. Marketing research provided significant evidence that buying decisions are positively correlated with consumers' visual attention. For example, Clement (2007) studied visual influences on in-store buying decisions and demonstrated the effect of package design on consumer attention. This in turn affected in-store buying behaviors. It is generally accepted that the more attention allocates to the information cue, the more important it is to individuals' decision making (Chen et al., 2016). However, such positive relationship is not always correct. For example, an individual spend lots of time on the information just due to his/her mind wandering. And when the information is too difficult to process, individuals cannot understand and inturn affect their decision making no matter how long they spend on it. Therefore, we argue that only when the investors are dedicated to information processing can the attention on the information will have substantial impact on their decision making.

There is an inverted-U curve between information load and information usage (Chewning and Harrell, 1990). As the amount of input information provided to the decision maker is increased, the amount of information the individual integrates into the decision output initially rises. However, byond a certain point, further increases in the amount of information provided to a decision maker results in a decrease in the amount of information actually integrated into the individual's decision outputs (Eppler et al., 2004; O'Reilly, 1980). Due to individuals' limited capability for information processing, a person has difficulties in identifying the relevant information and information details when information overload occurs(Miller, 1956; Schneider, 1987; Jacoby, 1997; Jacoby et al., 1974; Meyer, 1998).

For those who are familiar with the content discussed in KAMs, Why Paragraph provides information that is similar with what they have already known, requiring less cognitive effort to process. Therefore, investors have enough cognitive capability to process and understand How Paragraph, which provides incremental information to their existing knowledge. The more attention an individual allocate to How Paragraph, the more addicative information he/she get from the KAMs. Although higher readability of KAMs increases investors' attention to Why and How Paragraph of KAMs simultaneously, only the increased attention on How Paragraph has positive

impact on their decisions on risk assessment. The familiarity of the content discussed in KAMs makes investors believe that information in Why Paragraph overlaps their existing knowledge. What they do is just simply browsing instead of processing and understanding dedicatedly, making less contribution to their final decision compared to How Paragraph. Therefore, we raise H3 as follows:

H3: When investors are familiar with the content discussed in the KAMs, attention on How Paragraph mediates the negative relationship between KAMs' readability and investors' risk assessment.

For those who are unfamiliar with the content discussed in KAMs, both Why and How Paragraph provide new and incremental information to investors. After processing and understanding the complicated information in Why Paragraph, investors do not have enough capability to deal with How Paragraph dedicately. Although investors with higher level of professional skepticism tend to allocate more attention to both Why and How Paragraph of KAMs, only the increased attention on Why Paragraph has positive impact on their decisions on risk assessment. How Paragraph serves as the information load for investors and its information has little addicative value for investors' decision outcomes. Therefore, we raise H4 as follows:

H4: When investors are unfamiliar with the content discussed in the KAMs, attention on Why Paragraph mediates the positive relationship between investors' trait professional skepticism and risk assessment.

III. Method

Experimental Design

We designed a 2×2 experiment with one within-subjects factor and one between-subjects factor. The within-subjects factor was the familarity of the KAM-related content. Each subject was asked to read two KAMs: one was about the impairment of goodwill (familiar KAM) and the other is about the impairment of fixed asset (unfamiliar KAM). Then each subject was required to assess the material misstatement

risk of these two KAMss collectively. The between-subjects factor was the type of readability (presentation form) of the KAM-related account. All participants were randomly divided into two groups. Participants in Group A received the audit report that presented goodwill impairment in graph and presented fixed asset impairment in text (See Appendix I). While participants in Group B received the audit report that presented goodwill impairment in text and presented fixed asset impairment in graph (See Appendix II).

Participants

Seventy-eight financial staffs who took training lessons in Xiamen National Accounting Institute were invited to take part in the experiment. An eye-tracking device was set up in an office at Xiamen National Accounting Institute. Subjects were scheduled to take the experiment individually during their spare time. Each subject was instructed that he/she was going to participate in a study using an eye-tracking device to explore investors' judgment and decision-making, and he/she could discontinue the experiment at any time without penalty. Table 1 shows participants' demographic information. Participants' average age was 43.65 years old and the average full-time working experience was 20.87 years. 51.28% were female. Participants' perception value of audit report and KAMs were moderate, with an average rating of 4.36 on a scale from 1 to 9 for audit report (1 for valuable and 9 for worthless), and an average rating of 4.42 for KAMs. All the demographic factors exhibited insignificant differences between Group A and Group B, indicating successful randomization. Participants performed each task individually, and were allowed to choose two books as compensation for participating in the study.

Table 1: Participant demographics information

	Group A mean(s.d. or percent of sample) (n=36)	Group B mean (s.d. or percent of sample) (n=42)	Overall	One-way ANOVA p-value
Gender				0.111

Male	14(38.89%)	24(57.14%)	38(48.72%)	
Female	22(61.11%)	18(42.86%)	40(51.28%)	
Age	43.33(8.93)	43.93(7.55)	43.65(8.17)	0.751
Full-time work experience (years)	22.44(7.66)	19.52(8.31)	20.87(8.09)	0.113
Perception value of audit report[1]	4.25(2.20)	4.45(2.46)	4.36(2.34)	0.705
Perception Value of KAMs[2]	4.53(2.44)	4.33(2.57)	4.42(2.50)	0.734
Perception task difficulties[3]	4.70(1.92)	5.05(2.20)	4.89(2.08)	0.458
Professional skepticism	130.00(11.82)	133.26(17.55)	131.76(15.17)	0.347

Apparatus

To observe the participants' visual attention and allocation of KAMs, we used a desktop-mounted Gazepoint GP3 eye-tracker to record their eye movements while they read audit reports and processed information. The GP3 eye-tracker is produced by the Vancouver-based Gazepoint (www.gazept.com). The 320 mm × 45 mm device was put under a 20-in computer monitor to track the eye movements of the participants, who were sitting directly in front of the monitor. As the participants mostly relied on their eyes and one hand to click the mouse to turn pages, tracking eye movement is a direct approach to investigate how they allocated their visual attention in processing the audit evidence. The eye-tracker used in this study sampled at 60 Hz, and the raw eye-tracking data were collected and analyzed using the eye-movement analysis software provided with the eye-tracking device.

Procedures and Materials

The experiment consisted of three tasks, described as follows: In the pre-experiment task, the participants completed the HPSS in 5 minutes and the instructions

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[1] 1=Valuable; 9=Worthless
[2] 1=Valuable; 9=Worthless
[3] 1=Very easy; 9=Very difficult

were presented. The in-experiment task required the participants to assume to be an investor and read the audit report including 2 KAMs, one is about goodwill impairment and the other is about fixed asset impairment. There was no time limit for this task. The post-experiment task involved a questionnaire with demographic and personality-related questions and gift-giving.

Pre-experiment task

Each participant was told that he/she was going to participate in an audit report reading and risk assessment task of goodwill and fixed asset impairment with an eye-tracking device, and he/she was given the option to continue or not. The participants that chose to continue were required to complete the HPSS. HPSS is a 30-item professional skepticism scale developed by Hurtt (2010) that measures people's trait skepticism from six characteristics dimensions: questioning mind, suspension of judgment, search for knowledge, interpersonal understanding, autonomy, and self-esteem[4]. The participants were required to circle the response that indicated how they generally felt about each statement from 1 to 6 ("1" represents strongly disagree and "6" represents strongly agree). The scale scores ranged from 30 to 180, and the average score of the participants was 131.76, which was consistent with the average level demonstrated in previous literature (Hurtt, 2010; Hurtt et al., 2013). Printed instructions were given to the participants after they completed the HPSS. The participants were told to assume the role of an investor, and they had to assess the material misstatement risk of goodwill and fixed asset after reading the audit report. After finishing the HPSS, each participant was led to the computer and performed a calibration procedure that took approximately 2 min before starting the formal experimental task to ensure that the eye-tracker could capture the positions of the pupils of the subjects while they were looking at different areas of the screen.

In-experiment task

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[4] To cater to the participants' native language, we translated the HPSS into Chinese. To ensure the accuracy of the translation, we adopted binary translation. First, we translated the HPSS into Chinese, and then hired a postgraduate student majoring in translation to translate it back into English to see whether significant differences existed between the original version and translated version.

The experimental materials used in this study were adapted and simplified from two Chinese listed companies' audit reports in 2017. The goodwill impairment experimental material was adapted from one of the KAMs of BEIJING CAPITAL CO., LTD.'s audit report, and the fixed impairment experimental material was adapted from one of the KAMs of SANY's audit report. In the original audit reports, auditors disclosed different reasons of why they classified these two accounting items as KAMs. In order to avoid different risk perceptions caused by the different descriptions of the KAMs instead of the different risk perceptions of the assets themselves, we simplified the description paragraph of the goodwill and the fixed asset. In our experiment, the reasons why these two items were chosen as the KAMs were the impairment test was required at the end of the year according to the company's accounting policy. A large number of subjective judgments during the impairment test made them to be considered as the KAMs. We made these adjustments to ensure the experimental results are caused by the different risk perceptions of the KAM-related asset type. For the How Paragraph, both of the two KAMs had disclosed five audit procedures, and the language tone, total characters and contents of each audit procedure were also controlled to be similar. Each participant read the audit report on the computer screen with no time limit. When they finished reading the audit report, they were led to the desk near the computer and required to assess the material misstatement risk of goodwill and fixed asset on the paper questionnaire.

Post-experiment task

The participants were asked to complete a post-experiment questionnaire that included questions about their work experience, familiarity of goodwill and fixed asset, understanding of goodwill impairment and fixed asset impairment, perceived value of audit report and KAMs, perceived task difficulty, attitude toward the working environment, and other demographic information. They were then allowed to take two books as present with them before leaving the office.

Measurement of Attention Allocation: Eye-Tracking Device

Our study investigates how the form and content of KAMs affect individuals' attention allocation when reading and processing the audit report. To achieve this, we rely on the eye-tracking device mentioned above. Recording of eye movements provides an objective and direct trace of where an individual's attention is being directed to a particular area (Sirois et al., 2018). Eye movements reflect the internal processing of information (Rayner, 1998).

Eyes remain almost motionless, whereas saccades are movements from one fixation to another. In order to see an object clearly, one must move the eyeball to make that object appear directly on the fovea, an area near the center of the retina densely covered with receptors (Jacob 1995). When readers fixate their eyes in such a way in a given area, they are paying attention to this area and attempting to understand the content as the brain starts to process the visual information received from the eyes (Rayner 1998; Wedel and Pieters 2007). At that moment, a person's eye position can be directly recorded by an eye tracker. The Eye-tracking device makes it convenient for researchers to measure participants' attention to a specific area of information by recording their fixations number and fixation duration. The longer the time a person gazed on the information, the more critical role it plays in the decision-making process (Birnberg and Shields, 1984; Chen et al., 2016). Assigning different attention to different items reflect a person's choices in information processing.

We used Gaze Analysis, which is the eye-tracking analysis software that is provided with the Gazepoint eye-tracker device, to measure the amount of time the participants spent on a particular area of interest (AOI). Gaze Analysis provides a user-friendly interface that allows researchers to define the AOI directly on a screen. First, as Figure 1 shows, we identified 21 unique AOIs. Second, the Gazepoint eye-tracker measured the time the participants fixated on a particular AOI, with fixation defined as spending at least 0.3333 seconds focused on an area with a maximum radius of 50 pixels.

Measurement of Mind Wandering: Eye-Tracking Device and electrodermal Device

Mind wandering refers to drifts of attention from current train of thought (often an external task) to internal thoughts (Smallwood and Schooler, 2015). Mind wandering is a frequent occurrence, even during attention-demanding tasks, and fluctuations of attention due to mind wandering are associated with poorer performance on an external task (Unsworth and Robison, 2016a; McVay and Kane, 2010). A number of techniques have been developed to examine mind wandering. Previous literature has proved that pupil dilates relative to baseline levels due to increase in cognitive processing load (Beatty, 1982). In terms of mind wandering, several recent studies have exmined links between pupil dialations and reports of mind wandering during cognitive tasks. Experimental evidence found that mind wandering is associated with smaller pupil diameters (Unsworth and Robison, 2016a; Unsworth and Robinson, 2018). In this paper, we got pupil diameters from Gazepoint eye-tracker device directly.

In addition, Grandchamp et al. (2014) and Mittner et al. (2014) suggested that much of the time when participants report mind wandering during attention-demanding tasks, mind wandering is associated with low arousal levels. Large number of psychology and marketing literature have proved that electrodermal activities (EDA) is a reliable measurement of emotional arousal (Gakhal and Senior，2008；Somervuori and Niklas，2013；Gangadharbatla et al.，2013). In this paper, we use Empatica E4 Wristband to record participants' electrodermal activities during the experiment.

Dependent Variables

Risk Assessment. Each participant was required to assess the material misstatement risk of goodwill and fixed asset collectively on a scale of 1-9. One represents there is no material misstatement risk, and nine represents there is material misstatement risk. The higher the score is, the more likely the asset to be misreported.

Attention allocation to Why Paragraph. As shown in Figure 1, Zone A and Zone G are the areas containing information of Why Paragraph. Participants' eye movements in these two areas indicated that their mind was focused on the objective information

of KAM-related accounting matters and the reason why it is chosen as KAMs. We measured participants' attention to specific zone as the number of fixations, which reveals the amount of cognitive processing (Poole and Ball, 2006) and has been proved to be related to the importance of the information during individuals' decision-making (Orquin and Mueller Loose, 2013). In Group A, the number of fixations in Zone A represented a subject's attention allocated to the Why paragraph of goodwill, and the number of fixations in Zone G represented a subject's attention allocated to the Why paragraph of fixed asset. In Group B, the number of fixations in Zone A represented a subject's attention allocated to the Why Paragraph of fixed asset, and the number of fixations in Zone G represented a subject's attention allocated to the Why Paragraph of goodwill.

===== Insert Figure 1 about here =====

Attention allocation to How Paragraph. As shown in Figure 1, Zone B-F and Zone H-L are areas containing information of KAM-related How Paragraph. Participants' eye movements in these ten areas indicated their mind was focused on the information of how auditors dealt with the KAMs. In Group A, the number of fixations in Zone B-F represented a subject's attention allocated to five goodwill-related audit procedures collectively, and the sum of fixations represented the subject's total attention on the How Paragraph of goodwill. The number of fixations in Zone H-L represented a subject's attention allocated to five fixed asset-related audit procedures collectively, and the sum of fixations represented the subject's total attention on the How Paragraph of fixed asset. In Group B, the number of fixations in Zone B-F represented a subject's attention allocated to five fixed asset-related audit procedures collectively, and the sum of fixations represented the subject's total attention on the How Paragraph of fixed asset. The number of fixations in Zone H-L represented a subject's attention allocated to five goodwill-related audit procedures collectively, and the sum of fixations represented the subject's total attention on the How Paragraph of

goodwill.

Mind Wandering of Why Paragraph. In Group A, the average pupil diameters and electrodermal activities in Zone A represented a subject's level of mind wandering when processing the Why paragraph of goodwill, and the average pupil diameters and electrodermal activities in Zone G represented a subject's level of mind wandering when processing the Why Paragraph of fixed asset. In Group B, the average pupil diameters and electrodermal activities in Zone A represented a subject's attention allocated to the Why Paragraph of fixed asset, and t the average pupil diameters and electrodermal activities in Zone G represented a subject's attention allocated to the Why Paragraph of goodwill.

Mind Wandering of How Paragraph. In Group A, the number of fixations in Zone B-F represented a subject's level of mind wandering of five goodwill-related audit procedures collectively, and the average of pupil diameter and electrodermal activities represented the subject's level of mind wandering of the How Paragraph of goodwill. The number of fixations in Zone H-L represented a subject's level of mind wandering of five fixed asset-related audit procedures collectively, and the average of pupil diameter and electrodermal activities represented the subject's level of mind wandering of the How Paragraph of fixed asset. In Group B, the number of fixations in Zone B-F represented a subject's level of mind wandering of five fixed asset-related audit procedures collectively, and the average of pupil diameter and electrodermal activities of fixations represented the subject's level of mind wandering of the How Paragraph of fixed asset. The number of fixations in Zone H-L represented a subject's level of mind wandering of five goodwill-related audit procedures collectively, and the average of pupil diameter and electrodermal activities represented the subject's level of mind wandering on the How Paragraph of goodwill.

IV. Results

Manipulation check

All participants were required to answer the questions "Do the Key Audit Matter

of goodwill present in the format of graph?" and "Do the Key Audit Matter of fixed asset present in graph?" in the post experiment questionnaire. All participants in Group A and Group B gave the correct answers to these two questions, which indicated that every participant successfully perceived the presention form of KAMs we manipulated.

All participants were required to answer the questions "Are you familiar with the provisions of goodwill impairment?" and "Are you familiar with the provisions of fixed assets impairment?" in the post experiment questionnaire. The average rating of goodwill impairment was 4.69 on a scale from 1 to 9 for audit report (1 for "I don't know at all" and 9 for "I understand it fully"). The average rating of fixed asset impairment was 6.18 on a scale from 1 to 9 for audit report (1 for "I don't know at all" and 9 for "I understand it fully"). Participants believed that they had significant more knowledge of fixed asset impairment than goodwill impairment (p=0.000), which indicated that every participant successfully perceived the content of KAMs we manipulated.

Descriptive statistics

Table 2 shows the descriptive statistics. Overall, participants spent more time on How Paragraph than Why Paragraph. The average fixation numbers of Why Paragraph about fixed asset and goodwill were 91.12 and 92.41 respectively, and the average fixation number of How Paragraph about fixed asset and goodwill were 136.99 and 125.01. For the risk assessment questions, "To what extent do you think the fixed asset impairment has material misstatement?" and "To what extent do you think the goodwill impairment has material misstatement?" on a scale of 1-9, with a rating of 9 as "There is material misstatement" and 1 as "There is no material misstatement", the participants, on average, gave a rating of 4.82 for fixed asset impairment and 4.67 for goodwill impairment.

===== Insert Table 2 about here =====

Test of H1

Hypotheses H1 predicts that with the increase of KAMs' readability, investors tend to pay more attention to KAMs especially when investors are familiar with the content discussed in KAMs. We use analysis of covariance (ANCOVA) to investigate the main and interactive effects of KAMs' familiarity and readability on participants' attention on KAMs. Table 3 presents ANCOVA results (Panel B), simple effects (Panel C), and a graphical depiction of the means and the significant interaction detected in the ANCOVA (Panel A). We see a statistically significant main effect of readability (F=7.627, p=0.006), and a significant interaction between KAMs' readability and familarity (F=2.960, p=0.087). And we find significant evidence that participants paid more attention to KAMs with increase of the readability when they are familiar with the content discussed in KAMs, which support H1. That is participants paid more attention to KAMs under graph form condition than those under text form condition when fixed asset is mentioned in KAMs (F=7.551, p=0.007). There is no significant attention difference between graph form condition and text form condition when goodwill is mentioned in KAMs (F=1.306, p=0.255). Experimental results indicate that readability is the main driver of attention when investors are familiar with what is discussed in the KAMs.

Table 3.

ANCOVA for the effect of Familiarity and Readability on participants' attention on KAM

Panel A: Mean attention allocation ratio
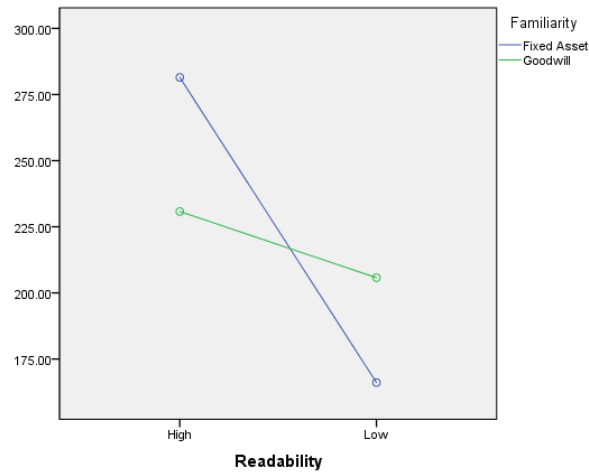
Panel B: Analysis of Covariance on attention allocation ratio

Factor	Df	Sum of Squares	F	p-value
Gender	1	127884.291	5.111	0.025**
Age	1	107481.629	4.296	0.040**
Experience	1	89505.525	3.577	0.061*
Familiarity	1	1184.873	0.047	0.828
(1=Goodwill, 0=Fixed Asset)				
Readability	**1**	**190819.109**	**7.627**	**0.006***
(1=Low, 0=High)				
Familarity * Readability	**1**	**474049.597**	**2.960**	**0.087***
Error	149	3728038.615		

Panel C: Simple Effects

Factor	Df	Sum of Squares	F	p-value

Effect of readability within fixed asset	**1**	**200345.898**	**7.551**	**0.007****
Effect of readability within goodwill	1	34664.267	1.306	0.255
Effect of asset within High Readability	1	23515.18	0.886	0.348
Effect of asset within Low Readability	1	11679.153	0.440	0.508

Notes: Reported P-value are two-tailed.

*, **, and *** denote significance at 0.1, 0.05, and 0.01, respectively (two-tailed)

Test of H2

H2 predicts that investors with higher level of professional skepticism tend to pay more attention to KAMs especially when investors are unfamiliar with the content discussed in KAMs. We use participants' total fixation of the KAMs as dependent variables, participants' professional skepticism as independent variable, age, gender, and working experience as control variables to nvestigate the effect of professional skepticism on KAMs' attention when investors are familiar and unfamiliar with the KAMs respectively. Table 4 presents the results. The third column is the logit regression result when fixed asset is exhibited as KAMs. We can see there is insignificant relationship between investors' professional skepticism and their attention on KAMs when they are familiar with the content discussed in KAMs. The fourth column is the logit regression result when goodwill is exhibited as KAMs. We can see there is a signifant positive relationship between investors' professional skepticism and their attention on KAMs when they are unfamiliar with the content discussed in KAMs (F=1.744, p=0.085). That is to say participants with higher professional skepticism tend to pay more attention to the information contained in KAMs, which is in line with H2. Experimental results indicate that professional skepticism is the main driver of attention when investors are unfamiliar with what is discussed in the KAMs.

Table 4.

The Effect of Professional Skepticism on Visual Attention of Familiar/Unfamiliar Item

Logit regression results for:

$Visual\ Attention = \beta_0 + \beta_1 Prefessional\ Skepticism + \beta_2 Age + \beta_3 Gender +$

$\beta_4 Experience + \varepsilon$

Independent Variable	Expected Sign	Coefficient (t)	Coefficient (t)
Intercept		-362.086	-224.815
		(-1.317)	(-1.180)
Professional Skepticism	+	**1.672**	**1.974***
		(1.272)	**(1.744)**
Gender		-62.687	-23.218
		(-1.576)	(-0.677)
Age		7.718	2.979
		(1.974)	(1.410)
Experience		3.063	3.039
		(1.208)	(1.430)
No. Observations		78	78
Adjusted R^2		0.065	0.036

*, **, and *** denote significance at 0.1, 0.05, and 0.01, respectively (two-tailed)

Test of H3 and H4

    H3 predicts that attention on How paragraph mediates the relationship between KAMs' readability and investors' risk assessment when investors are familiar with the content discussed in the KAMs. To provide direct evidence for H3, we employ a mediation model and test the indirect effect suggested by our hypotheses using a bootstrapping-based analysis (Hayes, 2013). Table 5 shows the model estimates of H3 in Panel A, and the results of the bootstrap tests in Panel B. There is a significant indirect effect between readability and risk assessment through fiaxation on How Paragraph is

positive and significant (Effect=0.2185, 90%CI=[0.0032,0.4927]). When investors are familiar with the content discussed in KAMs, higher readability makes them pay more attention to How Paragraph (β_1=-0.550, p=0.04), and higher readability in turn leads to lower perceived risk (β_1=-0.004, p=0.138). When we use investors' attention on Why Paragraph as the mediation variable, there is no significant indirect effect (90%CI=[-0.4455,0.3845]). These results indicates that How Paragraph plays a more important role in investors decision making when they are familiar with what is discussed in KAMs, which is consistent with H3.

Table 5.

Mediation Test for the effect of Readability for Familiar Item

Panel A: Moderated Mediation Model
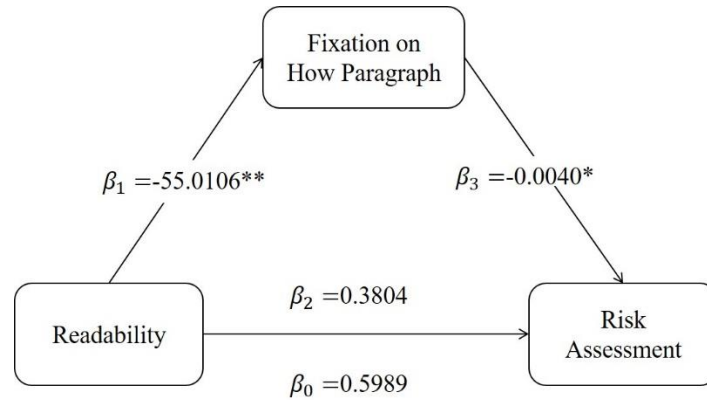
Panel B: Bootstrap Results

	Effect	Boot SE	Lower 90%CI	Upper 90% CI
Direct effect	0.3804	0.6133	-0.6415	1.4023
Indirect effect	0.2185	0.1542	0.0032	0.4927

Notes:

Risk Assessment $= \beta_0 Readability + \alpha_0 Gender + \alpha_1 Age + \alpha_2 Experience + \varepsilon$

Fixation_Why $= \beta_1 Readability + \alpha_0 Gender + \alpha_1 Age + \alpha_2 Experience + \varepsilon$

Risk Assessment
$$= \beta_2 Readability$$
$$+ \beta_3 Fixation_{Why} + \beta_4 Fixation_{Why} * Readability + \alpha_0 Gender + \alpha_1 Age$$
$$+ \alpha_2 Experience + \varepsilon$$

Variable Definitions:

H4 predicts that attention on Why paragraph mediates the relationship between KAMs' readability and investors' risk assessment when investors are unfamiliar with the content discussed in the KAMs. To provide direct evidence for H4, we employ a mediation model and test the indirect effect suggested by our hypotheses using a bootstrapping-based analysis (Hayes, 2013). Table 6 shows the model estimates of H4 in Panel A, and the results of the bootstrap tests in Panel B. There is a significant indirect effect between readability and risk assessment through fiaxation on How Paragraph is positive and significant (Effect=-0.0097, 90%CI=[-0.0201,-0.0010]). When investors are unfamiliar with the content discussed in KAMs, investors with higher professional skepticism tend to pay more attention Why Paragraph (β_1=-0.8026, p=0.129), and higher readability in turn leads to lower perceived risk (β_1=-0.0121, p=0.004). When we use investors' attention on How Paragraph as the mediation variable, there is no significant indirect effect (90%CI=[-0.0127,0.0012]). These results indicates that Why Paragraph plays a more important role in investors decision making when they are unfamiliar with what is discussed in KAMs, which is consistent with H4.

Table 6.

Mediation Test for the effect of Why Paragraph for Unfamiliar Item

Panel A: Moderated Mediation Model
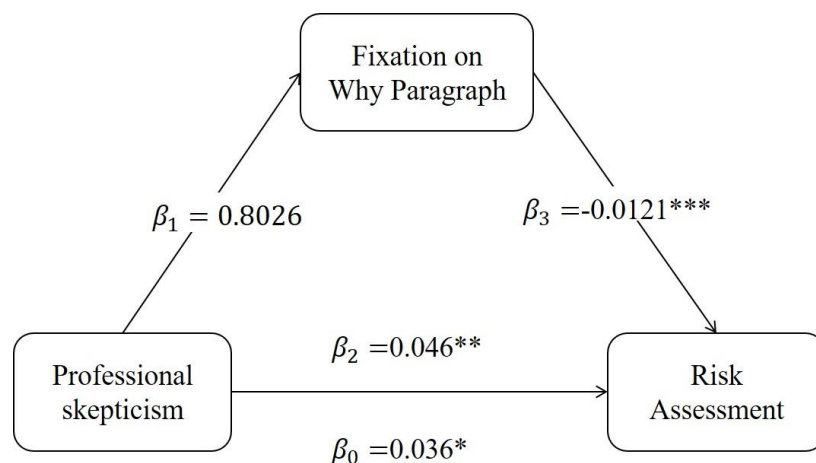
Panel B: Bootstrap Results

	Effect	Boot SE	Lower 90%CI	Upper 90% CI
Direct effect	0.0461	0.0184	0.0155	0.0767
Indirect effect	-0.0097	0.0057	-0.0201	-0.0010

Notes:

$Risk\ Assessment = \beta_0 ProfessionalSkepticism + \alpha_0 Gender + \alpha_1 Age + \alpha_2 Experience + \varepsilon$

$Fixation\_Why = \beta_1 ProfessionalSkepticism + \alpha_0 Gender + \alpha_1 Age + \alpha_2 Experience + \varepsilon$

$Risk\ Assessment$
$$= \beta_2 ProfessionalSkepticism$$
$$+ \beta_3 Fixation_{Why} + \beta_4 Fixation_{Why} * ProfessionalSkepticism + \alpha_0 Gender$$
$$+ \alpha_1 Age + \alpha_2 Experience + \varepsilon$$

Variable Definitions:

Professional Skepticism=a continuous variable measured by HPSS (Hurtt, 2010). The higher the score of HPSS, the higher trait professional skepticism level a person possesses.

*, **, and *** denote significance at 0.1, 0.05, and 0.01, respectively (two-tailed)

Test of Mind Wandering

According the results of H3 and H4, we find that attention on How Paragraph plays a mediation role in predicting investors' risk assessment when investors are familiar with the content discussed in KAMs. However, it is the Why Paragraph plays the mediation role when investors are unfamiliar with KAMs. Therefore, we conclude that How Paragraph provide more addictive value when processing familiar KAMs, while Why Paragraph is more important when processing unfamiliar KAMs. When participants are familiar with the KAMs, they are dedicated to process the How Paragraph and exhibit mind wandering in Why Paragraph. On the contrary, investors are dedicated to understand the information containing in Why Paragraph instead of How Paragraph when they are unfamiliar with KAMs. We use paired T test to compare an individual's pupil diameter and electrodermal activities when he/she are reading Why and How Paragraph. Table 7 presents unfamiliar group's results of pupil diameter in panel A, and results of electrodermal activities in Panel B. We can see that participants' pupil diameter when reading Why Paragraph is significantly larger than than when reading How Paragraph (Average difference= 0.546, p=0.001), indicating

that participants are more dedicated to How Paragraph than Why Paragraph. Mind wandering occurs when they are reading Why Paragraph. However, there is no significant difference when we use electrodermal activities as the measurement of mind wandering.

Table 7.

Paired T Test of Mind Wandering for Unfamiliar Item

Panel A: Pupil diameter

	Average Difference	S.D.	t	df	Sig.
Why-How	0.546	1.365	3.369	70	0.001***

Panel B: Electrodermal Activities

	Average Difference	S.D.	t	df	Sig.
Why-How	0.071	0.595	0.890	54	0.377

Notes:

*, **, and *** denote significance at 0.1, 0.05, and 0.01, respectively (two-tailed)

Table 8 presents familiar group's results of pupil diameter in panel A, and results of electrodermal activities in Panel B. We can see that participants' emotional arousal when reading Why Paragraph is significantly smaller than than when reading How Paragraph (Average difference= -0.064, p=0.058), indicating that participants are more dedicated to Why Paragraph than How Paragraph. Mind wandering occurs when they are reading How Paragraph. However, there is no significant difference when we use pupil diameter as the measurement of mind wandering.

Table 8.

Paired T Test of Mind Wandering for Unfamiliar Item

Panel A: Pupil diameter

	Average Difference	S.D.	t	df	Sig.
Why-How	0.061	1.252	0.419	73	0.677

Panel B: Electrodermal Activities

	Average Difference	S.D.	t	df	Sig.
Why-How	-0.064	0.251	-1.938	56	0.058*

Notes:

*, **, and *** denote significance at 0.1, 0.05, and 0.01, respectively (two-tailed)

Ⅴ. Conclusions

Our study investigates the interactive effect of KAMs' readability and familarity on individuals' visual attention on KAMs and their risk assessment. We provide significant evidence that readability affects investors' attention on KAMs when they are familiar with the content discussed in KAMs. While professional skepticism is the main driver of investors' attention on KAMs when they are unfamiliar with the content discussed in KAMs. In the mechanism analysis, we find that although participants' attention on Why and How Paragraph increased with the increase of KAMs' readability when investors are familiar with the content discussed in KAMs, only the increased attention on How paragraph significantly lower participants' risk assessment. On the contrary, although participants' attention on Why and How Paragraph increased with the increase of professional skepticism when investors are unfamiliar with the content discussed in KAMs, only the increased attention on Why Paragraph significantly lower participants' risk assessment. Based on these results, we conclude that the information containing in Why (How) Paragraph is more valuable in decision making t

This study provides a comprehensive understanding of the mechanism underlying the effect of KAMs on users' information processing and decision making. We clarify the effect of the form and content of KAMs on people's visual attention and risk assessment. Moreover, we extend the attention directing effect of KAMs (Sirois et al., 2018) to the more specific information areas, suggesting that informative value of Why Paragraph and How Paragraph in KAMs varies collectively according to different levels of readability and familarity. Last but not the least, our research distinguished dedicated visual attention and absent-minded visual attention. Experimental results prove that the positive correlation only exist between dedicated visual attention on the information and the relative importance of each information in decision-making, which suggests that researchers should take mind wandering into consideration when using visual attention of the information to measure participants' coginitive effort and perceived importance of the information.

The current study has two main limitations that should be considered. First, the number appeared in KAMs about fixed asset impairment and goodwill impairment is slightly different, which may lead to the argument that the effect of KAMs' content is raised by participants' different perceptions of numbers. In order to ensure that our results are caused by different risk perception type of the KAMs, we have tried our best to make sure that the language tone and content of the two KAMs are the same. However, it will become very wired if the number of two KAMs in the same audit report is the same. In order to make an experimental environment that's similar to real investment circumstance, we remain the numbers that appeared in the two KAMs, such as the book value, to be different but control them to the same magnitude. We will implement supplementary experiments to solve this problem in the future. Second, the experimental material is relatively simple. In order to control the similarity of KAMs' content, we simplified the description in KAMs and sacrificed some external validity to the internal validity. Future research can try to add rich and specific information in both Why and How Paragrph to raise the external validity. Our reseach is the first accounting literature attempting to capture investors' mind wandering in information processing by using pupil diameter and electrodermal activities, which provide good

opportunities and new perspectives for researchers to further study individuals' judgment and decision making process in the future.

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Table 2: Descriptive statistics and Pearson's correlations among variables

	Mean	S.D.	Gender	Age	Full-time work experience	Perception Value of audit report	Perception Value of KAMs	Task Difficulty	Professional Skepticism	Fixation on KAMs (fixed asset)	Fixation on audit procedures (fixed asset)	Fixation on KAMs (goodwill)	Fixation on audit procedures (goodwill)	Risk assessment of fixed asset	Risk assessment of goodwill
Gender	0.49	0.503	1												
Age	43.59	5.261	-0.081	1											
Full-time work experience	20.87	8.097	-0.071	-0.245*	1										
Perception Value of audit report	4.36	2.335	0.159	0.174	-0.123	1									
Perception Value of KAMs	4.42	2.499	0.257*	0.280*	-0.196	0.817**	1								
Task Difficulty	4.885	2.076	-0.020	-0.075	-0.111	0.041	-0.031	1							
Professional Skepticism	131.76	15.174	-0.086	-0.066	-0.050	-0.254*	-0.320**	-0.049	1						
Fixation on KAMs (fixed asset)	91.12	79.107	-0.049	0.233*	-0.026	-0.061	-0.086	0.068	0.185	1					
Fixation on	136.99	119.61	-0.292**	0.142	0.149	-0.144	-0.275*	0.007	0.080	0.613**	1				

audit procedures (fixed asset)															
Fixation on KAMs (goodwill)	92.41	69.818	-0.048	0.091	-0.010	-0.042	-0.126	0.048	0.168	0.330**	0.300**	1			
Fixation on audit procedures (goodwill)	125.01	98.094	-0.102	-0.034	0.227*	-0.236*	-0.368**	0.123	0.171	0.361**	0.550**	0.640**	1		
Risk assessment of fixed asset[5]	4.82	2.729	-0.248*	0.244*	-0.263*	-0.104	0.047	-0.256*	0.060	0.022	-0.106	-0.092	-0.130	1	
Risk assessment of goodwill[6]	4.67	2.541	0.007	-0.001	-0.072	-0.185	-0.090	-0.190	0.202	0.183	-0.029	-0.247*	-0.102	0.293**	1

* Correlation is significant at 0.01 (two-tailed).

* Correlation is significant at 0.05 (two-tailed).

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[5] 1=there is no material misstatement risk; 9=there is material misstatement risk

[6] 1=there is no material misstatement risk; 9=there is material misstatement risk

Figure1.

Screenshoots from the experimental interface and AOIs definition

S

三、关键审计事项 N

关键审计事项是我们根据职业判断，认为对本期财务报表审计最为重要的事项。这些事项的应对以对财务报表整体进行审计并形成审计意见为背景，我们不对这些事项单独发表意见。 M

（一）商誉减值测试 O

关键审计事项 P	在审计中如何应对该事项 Q
于 2017 年 12 月 31 日，ABC 股份有限公司合并资产负债表中商誉账面价值为人民币 885,006,081.05 元，于合并利润表计提商誉减值人民币 6,238,713.56 元。根据公司的会计政策，企业合并形成的商誉至少在每年年度终了进行减值测试。减值测试要求估计包含商誉相关资产的可收回金额，即相关资产组的公允价值减去处置费用后的净额与相关资产组预计未来现金流量的现值两者之中的较高者。在确定相关资产组预计未来现金流量的现值时，公司需要恰当的预测相关资产组未来现金流的长期平均增长率，并合理确定计算相关资产组预计未来现金流量现值所采用的折现率，这涉及管理层重大会计估计和判断，同时考虑商誉对于财务报表整体的重要性，因此我们将商誉减值作为关键审计事项。 A	（1）评估及测试与商誉减值测试相关的内部控制的设计及执行有效性，包括关键假设的采用及减值计提金额的复核与审批；B （2）评估管理层进行现金流量预测时使用的方法，并对减值测试模型和关键假设进行了复核；C （3）将现金流量预测所使用的数据与历史数据、实际经营情况、预算等进行比较，评估管理层对现金流量的预测；D （4）检查商誉减值测试计算的准确性，并对管理层的关键假设进行评估，包括增长率、折现率等；E （5）获取管理层对折现的现金流量预测中采用的关键假设的敏感性分析，并评价关键假设的变化对减值评估结论的影响以及是否存在管理层偏向的迹象。F

（二）固定资产减值 R

1、事项描述 S

于 2017 年 12 月 31 日，ABC 股份有限公司合并资产负债表中固定资产净值为人民币 12,805,431,000 元，于合并利润表计提固定资产减值准备人民币 90,269,906.34 元。根据公司的会计政策，企业在资产负债表日评估固定资产是否存在减值迹象。对于存在减值迹象的进行减值测试，减值测试结果表明资产或资产组的可收回金额低于其账面价值的，按其差额计提减值准备并计入减值损失。可收回金额为资产或资产组的公允价值减去处置费用后的净额与资产预计未来现金流量的现值两者之间的较高者。在估计可收回金额时涉及的关键假设包括资产组的判断、公允价值及处置费用的预测；在使用未来现金流量现值法时涉及的关键假设包括未来的收入增长率、毛利率、费用率及折现率，这涉及管理层的重大判断，因此我们确定固定资产减值为关键审计事项。 G

2、审计应对 T

我们针对固定资产减值执行的审计程序主要包括： U

（1）评估及测试了与固定资产减值相关的内部控制的设计及执行有效性，包括关键假设的采用及减值计提金额的复核及审批；H （2）选择对资产组的判断进行了独立的复核，以确定其是否属于能够独立产生现金流入的最小资产组合；I （3）获取管理层编制的存在减值迹象的固定资产的减值测试表，选取样本对采用未来现金流量现值法的检查了计算的准确性；J （4）测试管理层减值测试所依据的基础数据，评估管理层减值测试中所采用的关键假设及判断的合理性，以及复核和评价管理层利用其估值专家的工作；K （5）综合考虑了历史上该资产或资产组的历史运营情况、行业趋势及新的市场机会及由于规模效应所带来的成本及费用节约，以评价管理层使用的未来收入增长率、毛利率和费用率假设是否在合理性范围内。L

Notes:

(1) Zone A contains information about KAM description presented in graph;

(2) Zone B contains information about the first KAM-related audit procedure presented in graph;

(3) Zone C contains information about the second KAM-related audit procedure presented in graph;

(4) Zone D contains information about the third KAM-related audit procedure presented in graph;

(5) Zone E contains information about the fourth KAM-related audit procedure presented in graph;

(6) Zone F contains information about the fifth KAM-related audit procedure presented in graph;

(7) Zone G contains information about KAM description presented in text;

(8) Zone H contains information about the first KAM-related audit procedure presented in text;

(9) Zone I contains information about the second KAM-related audit procedure presented in text;

(10) Zone J contains information about the third KAM-related audit procedure presented in text;

(11) Zone K contains information about the fourth KAM-related audit procedure presented in text;

(12) Zone L contains information about the fifth KAM-related audit procedure presented in text;

(13) Zone M contains information relevant to understanding KAMs;

(14) Zone N is the heading "Key Audit Matters";

(15) Zone O is the subheading of KAM presented in graph;

(16) Zone P is the heading "Why the matter was considered to be a Key Audit Matter" presented in graph;

(17) Zone Q is the heading "How the matter was addressed in the audit" presented in graph;

(18) Zone R is the subheading of KAM presented in text;

(19) Zone S is the heading "Why the matter was considered to be a Key Audit Matter" presented in text;

(20) Zone T and Zone U are the heading "How the matter was addressed in the audit" presented in text.

Appendix

Appendix I. Audit report received by participants in Group A

- *Chinese version[7]*

三、关键审计事项

关键审计事项是我们根据职业判断，认为对本期财务报表审计最为重要的事项。这些事项的应对以对财务报表整体进行审计并形成审计意见为背景，我们不对这些事项单独发表意见。

（一）商誉减值测试

关键审计事项	在审计中如何应对该事项
于 2017 年 12 月 31 日，ABC 股份有限公司合并资产负债表中商誉账面价值为人民币 885,006,081.05 元，于合并利润表提商誉减值人民币 6,238,713.56 元。根据公司的会计政策，企业合并形成的商誉至少在每年年度终了进行减值测试。减值测试要求估计包含商誉的相关资产组的可收回金额，即相关资产组的公允价值减去处置费用后的净额与相关资产组预计未来现金流量的现值两者之中的较高者。在确定相关资产组预计未来现金流量的现值时，公司需要恰当的预测相关资产组未来现金流的长期平均增长率，并合理确定计算相关资产组预计未来现金流量现值所采用的折现率，这涉及管理层重大会计估计和判断，同时考虑商誉对于财务报表整体的重要性，因此我们将商誉减值作为关键审计事项。	（1）评估及测试与商誉减值测试相关的内部控制的设计及执行有效性，包括关键假设的采用及减值提金额的复核与审批； （2）评估管理层进行现金流量预测时使用的方法，并对减值测试模型和关键假设进行了复核； （3）将现金流量预测所使用的数据与历史数据、实际经营情况、预算等进行比较，评价管理层对现金流量的预测； （4）检查商誉减值测试计算的准确性，并对管理层的关键假设进行评估，包括增长率、毛利率、折现率等； （5）获取管理层对折现的现金流量预测中采用的关键假设的敏感性分析，并评价关键假设的变化对减值评估结论的影响以及是否存在管理层偏向的迹象。

（二）固定资产减值

1、事项描述

于 2017 年 12 月 31 日，ABC 股份有限公司合并资产负债表中固定资产净值为人民币 12,805,431,000 元，于合并利润表计提固定资产减值准备人民币 90,269,906.34 元。根据公司的会计政策，企业于资产负债表日评估固定资产是否存在减值迹象。对于存在减值迹象的进行减值测试，减值测试结果表明资产或资产组的可收回金额低于其账面价值的，按其差额计提减值准备并计入减值损失。可收回金额为资产或资产组的公允价值减去处置费用后的净额与资产预计未来现金流量的现值两者之间的较高者。在估计可收回金额时涉及的关键假设包括资产组的判断、公允价值及处置费用的预测；在使用未来现金流量现值法时涉及的关键假设包括未来的收入增长率、毛利率、费用率及折现率，这涉及管理层的重大判断，因此我们确定固定资产减值为关键审计事项。

2、审计应对

我们针对固定资产减值执行的审计程序主要包括：

（1）评估及测试了与固定资产减值相关的内部控制的设计及执行有效性，包括关键假设的采用及减值计提金额的复核及审批；

（2）选择对资产组的判断进行了独立的复核，以确定其是否属于能够独立产生现金流入的最小资产组合；

（3）获取管理层编制的存在减值迹象的固定资产的减值测试表，选取样本对采用未来现金流量现值法的检查了计算的准确性；

（4）测试管理层减值测试所依据的基础数据，评估管理层减值测试中所采用的关键假设及判断的合理性，以及了解和评价管理层利用其估值专家的工作；

（5）综合考虑了历史上该资产或资产组的历史运营情况、行业走势及新的市场机会及由于规模效应带来的成本及费用节约，以评价管理层使用的未来收入增长率、毛利率和费用率假设是否在合理范围内。

- *English Version[8]*

Key Audit Matters descript matters that, in our professional judgment, were of most significance in our audit of the financial statements. Our audit procedures relating to these matters were designed in the context of our audit of the financial statements as a whole and the formation of audit opinions of the current period. We will not express an opinion on individual accounts or disclosures.

1、Goodwill Impairment Test

Why the matter was considered to be a Key Audit Matter	How the matter was addressed in the audit

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By December 31st, 2017, the book value of goodwill in the consolidated balance sheet of ABC Co., Ltd. was 885,006,081.05 Chinese yuan, and the impairment of goodwill was 6,238,713.56 in the consolidated income statement. According to ABC's accounting policies, the goodwill formed by corporate merger needs to be tested for impairment at least once at the end of each year. Impairment test requires to evaluate the recoverable amount of goodwill-related asset groups, which is the higher of the net value of the goodwill-related asset groups' fair value minus disposal and the present value of goodwill-related asset groups' estimated future cash flows. When determining the present value of the estimated future cash flows of goodwill-related asset groups, management needs to properly predict the average long-term growth rate and reasonably determine the discount rate, which involves significant accounting estimates and professional judgments. Considering the importance of goodwill for financial statements, we take the impairment of goodwill as a Key Audit Matter.

(1) Evaluate and test the effectiveness of internal control's design and implementation related to the impairment of goodwill, including the adoption of key assumption and the approval of the amount of impairment;

(2) Test the cash flor forecasting approach used by management and review the impairment test mode and key assumptions;

(3) Compare the data used in cash flow forecasting with historical data, actual operating data, budgets, etc., to evaluate management's forecast of cash flow;

(4) Test the accuracy of calculation related to the impairment test of goodwill, and evaluate key assumptions used by management, including growth rate, gross profit rate, discount rate, etc.;

(5) Obtain sensitivity analysis of the key assumption used in cash flow forecasting, evaluate the impact of changes in key assumptions on impairment conclusions, and figure out whether there are signs of management bias.

2、Fixed Asset Impairment Test

Why the matter was considered to be a Key Audit Matter

By December 31st, 2017, the book value of fixed assets in the consolidated balance sheet of ABC Co., Ltd. was 12,805,431,000 Chinese yuan, and the impairment of goodwill was 90,269,906.34 in the consolidated income statement. According to ABC's accounting policies, management needs to assess whether there is any indication of impairment of the fixed assets on the balance sheet date and implement impairment test for those that have signs of impairment. If the recoverable amount of a fixed asset of the related asset group is lower than its book value, an impairment loss needs to be confirmed based on the difference between the recoverable amount and book value. The recoverable amount is defined as the higher of the net value of the fixed assets' fair value minus disposal and the present value of fixed assets' estimated future cash flows. When determining the present value of the estimated future cash flows of goodwill-related asset groups, management needs to properly predict the average long-term growth rate and reasonably determine the discount rate, which involves significant accounting estimates and professional judgments. Considering the importance of goodwill for financial statements, we take the impairment of fixed asset as a Key Audit Matter.

How the matter was addressed in the audit

(1) Evaluate and test the effectiveness of internal control's design and implementation related to the impairment of fixed asset, including the adoption of key assumption and the approval of the amount of impairment;

(2) Review the selection of related asset groups to ensure whether it belongs to the smallest asset group capable of generating cash flow;

(3) Obtain management's impairment test of fixed assets and test the accuracy of calculations related to the present value method;

(4) Test the basic data used in management's impairment test, evaluate the

rationality of key assumptions and professional judgments adopted in the impairment test, and understand related valuation works provided by other experts;

(5) Review the historical operation of the fixed asset or related asset groups, industry trend, new market opportunities, and cost savings brought by scale effects to evaluate whether the revenue growth rate, gross profit rate, and expense ratios used by management are reasonable.

Appendix II. Audit report received by participants in Group B

● *Chinese version*

三、关键审计事项

关键审计事项是我们根据职业判断，认为对本期财务报表审计最为重要的事项。这些事项的应对以对财务报表整体进行审计并形成审计意见为背景，我们不对这些事项单独发表意见。

（一）固定资产减值

关键审计事项	在审计中如何应对该事项
于 2017 年 12 月 31 日，ABC 股份有限公司合并资产负债表中固定资产净值为人民币 12,805,431,000 元，于合并利润表计提固定资产减值准备人民币 90,269,906.34 元。根据公司的会计政策，企业于资产负债表日评估固定资产是否存在减值迹象。对于存在减值迹象的进行减值测试，减值测试结果表明资产或资产组的可收回金额低于其账面价值的，按其差额计提减值准备并计入减值损失。可收回金额为资产或资产组的公允价值减去处置费用后的净额与资产预计未来现金流量的现值两者之间的较高者。在估计可收回金额时涉及的关键假设包括资产组的判断、公允价值及处置费用的预测；在使用未来现金流量现值法时涉及的关键假设包括未来的收入增长率、毛利率、费用率及折现率，这涉及管理层的重大判断，因此我们确定固定资产减值为关键审计事项。	（1）评估及测试了与固定资产减值相关的内部控制的设计及执行有效性，包括关键假设的采用及减值计提金额的复核及审批； （2）选择对资产组的判断进行了独立的复核，以确定其是否属于能够独立产生金额流入的最小资产组合； （3）获取管理层编制的存在减值迹象的固定资产的减值测试表，选取样本对采用未来现金流量现值法的检查了计算的准确性； （4）测试管理层减值测试所依据的基础数据，评估管理层减值测试中所采用的关键假设及判断的合理性，以及了解和评价管理层利用其估值专家的工作； （5）综合考虑了历史上该资产或资产组的历史运营情况、行业走势及新的市场机会及由于规模效应带来的成本及费用节约，以评价管理层使用的未来收入增长率、毛利率和费用率假设是否在合理性范围内。

（二）商誉减值测试

1、事项描述

于 2017 年 12 月 31 日，ABC 股份有限公司合并资产负债表中商誉账面价值为人民币 885,006,081.05 元，于合并利润表计提商誉减值人民币 6,238,713.56 元。根据公司的会计政策，企业合并形成的商誉至少在每年年度终了进行减值测试。减值测试要求估计包含商誉的相关资产组的可收回金额，即相关资产组的公允价值减去处置费用后的净额与相关资产组预计未来现金流量的现值两者之中的较高者。在确定相关资产组预计未来现金流量的现值时，公司需要恰当的预测相关资产组未来现金流的长期平均增长率，并合理确定计算相关资产组预计未来现金流量现值所采用的折现率，这涉及管理层重大会计估计和判断，同时考虑商誉对于财务报表整体的重要性，因此我们将商誉减值作为关键审计事项。

2、审计应对

我们针对商誉减值测试执行的审计程序主要包括：

（1）评估及测试与商誉减值测试相关的内部控制的设计及执行有效性，包括关键假设的采用及减值计提金额的复核与审批；

（2）评估管理层进行现金流量预测时使用的方法，并对减值测试模型和关键假设设计进行了复核；

（3）将现金流量预测所使用的数据与历史数据、实际经营情况、预算等进行比较，评价管理层对现金流量的预测；

（4）检查商誉减值测试计算的准确性，并对管理层的关键假设进行评估，包括增长率、毛利率、折现率等；

（5）获取管理层对折现的现金流量预测中采用的关键假设的敏感性分析，并评价关键假设的变化对减值评估结论的影响以及是否存在管理层偏向的迹象。

● *English version*

Key Audit Matters descript matters that, in our professional judgment, were of most significance in our audit of the financial statements. Our audit procedures relating to these matters were designed in the context of our audit of the financial statements as a whole and the formation of audit opinions of the current period. We will not express an opinion on individual accounts or disclosures.

1、Fixed Asset Impairment Test

Why the matter was considered to be a Key Audit Matter	How the matter was addressed in the audit
By December 31st, 2017, the book value of fixed assets in the consolidated balance sheet of ABC Co., Ltd. was 12,805,431,000 Chinese yuan, and the impairment of goodwill was 90,269,906.34 in the consolidated income statement. According to ABC's accounting policies, management needs to assess whether there is any indication of impairment of the fixed assets on the balance sheet date and implement impairment test for those that have signs of impairment. If the recoverable amount of a fixed asset of the related asset group is lower than its book value, an impairment loss needs to be confirmed based on the difference between the recoverable amount and book value. The recoverable amount is defined as the higher of the net value of the fixed assets' fair value minus disposal and the present value of fixed assets' estimated future cash flows. When determining the present value of the estimated future cash flows of goodwill-related asset groups, management needs to properly predict	(1) Evaluate and test the effectiveness of internal control's design and implementation related to the impairment of fixed asset, including the adoption of key assumption and the approval of the amount of impairment; (2) Review the selection of related asset groups to ensure whether it belongs to the smallest asset group capable of generating cash flow; (3) Obtain management's impairment test of fixed assets and test the accuracy of calculations related to the present value method; (4) Test the basic data used in management's impairment test, evaluate the rationality of key assumptions and professional judgments adopted in the impairment test, and understand related valuation works provided by other experts; (5) Review the historical operation of the fixed asset or related asset groups, industry trend, new market opportunities and cost savings brought by scale effects to evaluate whether the revenue growth

the average long-term growth rate and reasonably determine the discount rate, which involves significant accounting estimates and professional judgments. Considering the importance of goodwill for financial statements, we take the impairment of fixed asset as a Key Audit Matter.	rate, gross profit rate and expense ratios used by management are reasonable.

2、Goodwill Impairment Test

Why the matter was considered to be a Key Audit Matter

By December 31st, 2017, the book value of goodwill in the consolidated balance sheet of ABC Co., Ltd. was 885,006,081.05 Chinese yuan, and the impairment of goodwill was 6,238,713.56 in the consolidated income statement. According to ABC's accounting policies, the goodwill formed by corporate merger needs to be tested for impairment at least once at the end of each year. Impairment test requires to evaluate the recoverable amount of goodwill-related asset groups, which is the higher of the net value of the goodwill-related asset groups' fair value minus disposal and the present value of goodwill-related asset groups' estimated future cash flows. When determining the present value of the estimated future cash flows of goodwill-related asset groups, management needs to properly predict the average long-term growth rate and reasonably determine the discount rate, which involves significant accounting estimates and professional judgments. Considering the importance of goodwill for financial statements, we take the impairment of goodwill as a Key Audit Matter.

How the matter was addressed in the audit

(1) Evaluate and test the effectiveness of internal control's design and implementation related to the impairment of goodwill, including the adoption of key

assumption and the approval of the amount of impairment;

(2) Test the cash flor forecasting approach used by management and review the impairment test mode and key assumptions;

(3) Compare the data used in cash flow forecasting with historical data, actual operating data, budgets, etc., to evaluate management's forecast of cash flow;

(4) Test the accuracy of calculation related to the impairment test of goodwill, and evaluate key assumptions used by management, including growth rate, gross profit rate, discount rate, etc.;

(5) Obtain sensitivity analysis of the key assumption used in cash flow forecasting, evaluate the impact of changes in key assumptions on impairment conclusions, and figure out whether there are signs of management bias.

Appendix III Hurtt Professional Skepticism Scale (HPSS)

Statements that people use to describe themselves are given below. Please circle the response that indicates how you *generally* feel. There are no right or wrong answers. Do not spend too much time on any one statement.

	Strongly Disagree					Strongly Agree
	1	2	3	4	5	6
I often accept other people's explanations without further thought.						
I feel good about myself.						
I wait to decide on issues until I can get more information.						
The prospect of learning excites me.						
I am interested in what causes people to behave the way that they do.						

I am confident of my abilities.					
I often reject statements unless I have proof that they are true.					
Discovering new information is fun.					
I take my time when making decisions.					
I tend to immediately accept what other people tell me.					
Other people's behavior does not interest me.					
I am self-assured.					
My friends tell me that I usually question things that I see or hear.					
I like to understand the reason for other people's behavior.					
I think that learning is exciting.					
I usually accept things I see, read, or hear at face value.					
I do not feel sure of myself.					
I usually notice inconsistencies in explanations.					
Most often I agree with what the others in my group think.					
I dislike having to make decisions quickly.					
I have confidence in myself.					
I do not like to decide until I've looked at all the readily available information.					
I like searching for knowledge.					
I frequently question things that I see or					

hear.						
It is easy for other people to convince me.						
I seldom consider why people behave in a certain way.						
I like to ensure that I've considered the most available information before making a decision.						
I enjoy trying to determine if what I read or hear is true.						
I relish learning.						
The actions people take and the reasons for those actions are fascinating.						

Appendix IV Demographic and general questions

Thank you for completing this audit work. Please take a few minutes to provide some basic information and answer several questions. The results of the questionnaire will be kept confidential, and no personal information will be disclosed to any third party in any way.

1. Serial No. _____

2. Gender :   ☐ Male   ☐ Female

3. Age : _____

4. What is your major? _____

5. How many years of full-time working experience do you have? _____ years.

6. Have you participated in any audit task (full-time or intern)?
☐ Yes   ☐ No

7. Have you participated in any audit task about asset impairment?

☐ Yes   ☐ No

8.   Have you read audit report before?
☐ Yes   ☐ No

9.   Have you paid attention to Key Audit Matters in audit report before?
☐ Yes   ☐ No

10.   Have you used audit report to make an investment before?
☐ Yes   ☐ No

11.   Are you familiar with the provisions of goodwill impairment? (From 1 to 9, please choose the number that best represents your opinion.)

1	2	3	4	5	6	7	8	9
Not at all								Fully understand

12.   Are you familiar with the provisions of fixed asset impairment? (From 1 to 9, please choose the number that best represents your opinion.)

1	2	3	4	5	6	7	8	9
Not at all								Fully understand

13.   Do you think the audit report valuable? (From 1 to 9, please choose the number that best represents your opinion.)

1	2	3	4	5	6	7	8	9
Valuable								Worthless

14.   Do you think the Key Audit Matters valuable? (From 1 to 9, please choose the number that best represents your opinion.)

1	2	3	4	5	6	7	8	9
Valuable								Worthless

15.   Is the goodwill impairment presented in graph?
☐ Yes   ☐ No

16.   Is the fixed asset impairment presented in graph?
☐ Yes   ☐ No

17. Do you think whether the Key Audit Matters presented in graph affects your judgment? (From 1 to 9, please choose the number that best represents your opinion.)

1   2   3   4   5   6   7   8   9

Greatly effect   Not at all

18. Do you think the task was realistic? (From 1 to 9, please choose the number that best represents your opinion.)

1   2   3   4   5   6   7   8   9

Very realistic   Not realistic at all

19. Do you think the task was difficult? (From 1 to 9, please choose a number that best represents your opinion.)

1   2 3 4 5 6 7 8 9

Very easy   Very difficult

20. Do you think you have the chance to demonstrate your ability during the task? (From 1 to 9, please choose a number that best represents your opinion.)

1   2   3   4   5   6   7   8   9

Great chance   Not at all

21. Would you be interested in participating again if similar tasks were available in the future?

1   2   3   4   5   6   7   8   9

Absolutely yes   Absolutely no