



Audit report lag and key audit matters in Australia

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Abstract

We aim to investigate the impact of mandatory key audit matters (KAMs) disclosure on audit report lag (ARL). Additionally, we examine the potential moderating effect of firm size on the association between KAMs and ARL. We conduct Ordinary Least Square regression analyses using a sample of 602 firm-year observations from 2018 to 2020. Our findings indicate that the disclosure of KAMs is associated with a reduction in firm ARL. Furthermore, we find that the association between KAMs and ARL is particularly pronounced in large firms, suggesting that the impact of KAMs disclosure on ARL is more significant in this context. Additionally, our research reveals that the negative association between KAMs disclosure and ARL becomes more prominent when the education level of the audit committee chair is higher. Our findings underscore the importance of transparent reporting through KAMs disclosure and the role of knowledgeable and educated individuals in audit committees in facilitating a more efficient and timely audit process. Also, our finding indicates that the beneficial effect of KAMs may be more noticeable to larger firms.

Keywords Audit report lag · Key audit matters · Audit committee chair · Audit fees · Audit tenure

JEL Classification M42

Introduction

We investigate the influence of Key Audit Matters (KAMs) on the Audit Report Lag (ARL). Additionally, we explore whether the relationship between KAMs disclosure and ARL differs between large and small firms. Due to the changes in auditor reporting standards, the recent shift toward more extended reporting by auditors has drawn significant attention from academic researchers (Sirois et al. 2018; Wei et al. 2019; Pinto and Morais 2019). The extended reporting framework, particularly the disclosure of KAMs, is of particular interest due to its potentially significant effects on users' actions and the capital market. Implementing the new Australian auditing standard, ISA701, aimed to enhance

decision-making and transparency for information users, although there is ongoing debate regarding the realization of the intended goals (Rahaman and Chand 2021). Audit failures in the past have raised doubts about auditors' ability to serve the public interest, leading to increased demands for more information from auditors. Standard-setting organizations such as the Financial Reporting Council (FRC), the International Auditing and Assurance Standards Board (IAASB), and the Public Company Accounting Oversight Board (PCAOB) have worked diligently to restore investor confidence. The adoption of the new Australian auditing standard, ISA701, mandates auditors to disclose significant audit problems in the independent auditor's report, expanding their obligations beyond financial statements (IAASB

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2015). This increased reporting requirement and the burden of evaluating additional information may result in an extended ARL for firms. Previous research has examined various aspects of KAMs, but the relevance and timeliness of the new audit report in the post-reform regime remain unexplored. Therefore, it is essential to investigate how these reporting changes affect the ARL of reporting firms.

Timeliness is crucial to financial reporting quality (SEC 2002) as it ensures financial statements' relevance and supports informed decision-making by information users (Abdillah et al. 2019). The release of financial statements without an accompanying independent auditor's report is considered inadequate for users, emphasizing the importance of including the auditor's report (Rahaman and Chand 2021). Regulators and authorities stress the significance of timely financial reporting while recognizing the need for the required external audit (Abernathy et al. 2017). The promptness of financial reporting is influenced by the timeliness of the audit process (Leventis et al. 2005). Timely financial reporting is essential for a well-functioning stock market and to meet the information needs of investors (Afify 2009). Delays in delivering financial information compromise the data quality (Sultana et al. 2015). Given the significance of timely reporting to stakeholders, including regulators, managers, auditors, investors, and academics, it is crucial to understand the factors that influence timeliness, especially in the context of substantial reforms (Abernathy et al. 2014). Our research aims to examine the impact of KAMS on ARL to understand better how the extended reporting requirements may influence the timeliness of financial reporting in practice in the extended reporting era.

Disclosure requirements of KAMs may affect ARL in several ways. Including KAMs in the auditor's report imposes an increased disclosure obligation on auditors, necessitating additional information and explanations about significant audit matters. This augmented responsibility can result in delays in completing the audit process and issuing the audit report, thereby extending ARL. The identification, evaluation, and reporting of KAMs require additional work from auditors, further contributing to the extended ARL. Also, the complexity associated with determining and effectively communicating KAMs can impact ARL. Auditors are required to meticulously assess and select the key issues that warrant disclosure as KAMs, considering their materiality and relevance to users of financial statements. This decision-making process often entails consultations with management and audit committees, which can introduce additional time delays in the reporting process, consequently influencing ARL.

Contrary to the prevailing belief that KAMs may prolong ARL, our argument proposes that the inclusion of KAMs in the auditor's report can lead to a reduction in ARL. This effect can be attributed to the enhanced collaboration

and transparency facilitated by KAMs, which streamline the audit process (Knechel and Payne 2001; Bédard et al. 2019). Through the provision of additional information and explanations regarding significant audit matters, KAMs promote effective communication among auditors, management, and audit committees (IAASB 2015). This improved communication fosters efficiency and facilitates faster completion of the audit, resulting in a shorter ARL (Bédard et al. 2019). In addition, KAMs may soon become boilerplate (Mock et al. 2013) and, therefore, less time and effort needed to issue audit reports. Further, given that KAMs are typically identified before the audit report date, auditors may conduct the majority of the additional audit work beforehand (Knechel and Payne 2001). This proactive approach could potentially reduce the audit delay. Therefore, our contribution challenges the initial assumptions and highlights the potential of KAMs in mitigating ARL by enhancing the overall audit timeline.

Recently, academic researchers have turned their attention to KAMs as a determinant of ARL (Bédard et al. 2019; Baatwah et al. 2022; Abdullatif et al. 2023). Focusing on emerging economies, Baatwah et al. (2022) explored the Omani capital market and presented findings suggesting a reduction in ARL in periods following KAM adoption. Abdullatif et al. (2023) examined the Jordanian context and found no significant association between the number of KAMs and ARL. Moving to developed markets, a few studies investigated whether extended auditor reporting had any effect on audit delay (Bédard et al. 2019; Reid et al. 2019). Bédard et al. (2019) investigated the French market, while Reid et al. (2019) explored the UK market to document no significant impact of the adoption of extended reporting on audit delay. They urge for more investigation in developed country contexts. However, to date, no study has examined the impact of disclosure variation of KAMs (number of KAMs and their extent of disclosure) on ARL in an Australian context or in any other jurisdictions.

This study focuses on firms listed on the Australian Stock Exchange (ASX) to investigate the impact of KAMs on ARL. Australia is one of the first nations to embrace the ISA701, which replaced the standard boilerplate report with an enhanced version. In 2016, Australia introduced a new audit reporting paradigm, requiring independent auditors to disclose KAMs (AUASB 2015).

Australia's economy primarily relies on service sectors, distinguishing it from other developed countries that often have strong manufacturing and service-based economies. In addition to this economic setting, Australia's capital market differs in corporate governance. Specifically, the introduction of the Audit Committee (AC) as a corporate governance mechanism in Australia is relatively recent, occurring within the last decade. This contrasts with jurisdictions like the US and other developed nations, where



ACs have a longer-established history (Sultana et al. 2015). Further, stringent regulations, including CLERP-9 and ASX Corporate Governance Recommendations, have been adopted to promote corporate governance standards and safeguard the public interest (Commonwealth of Australia 2004; Sultana et al. 2015). In recent years, the proportion of female auditors in Australia has been reported at 22.36% (Bepari et al. 2022), which is significantly higher contrasting with the figures of 10% in the UK (Abdelfattah et al. 2021) and 16.6% in the USA (Burke et al. 2019). Moreover, the Australian auditing landscape encompasses diverse audit firms (Sultana et al. 2015), further contributing to the unique context for studying the relationship between KAM disclosure and ARL.

While regional differences in KAM disclosure research have been observed, most studies conducted in Australia have been exploratory and focused on the early years following KAM adoption (Rahaman and Chand 2021; Suttipun 2022). However, timely analysis of audit reports is crucial, given that audited financial statements are a primary source of information for investors and stakeholders (Habib et al. 2019). Despite its importance, there is a lack of research on ARL in the post-KAM reporting era, particularly in developed markets. Additionally, findings from earlier studies examining the impact of specific standards, such as the disclosure requirement of KAMs, may not be generalizable in another jurisdiction (Knechel and Sharma 2012). Therefore, this study aims to fill the research gap by examining how the variability of KAM disclosure influences the timeliness of financial reporting in Australia, and we contribute to a better understanding of the dynamics between KAMs and ARL in the unique Australian regulatory setting.

We investigate the research question using a hand-collected sample of 602 firm-year observations from the top 300 firms listed on the Australian Stock Exchange (ASX) from 2018 to 2020. Our finding suggests that disclosing KAMs enhances communication and efficiency among auditors, management, and audit committees. The increased collaboration and transparency facilitated by KAMs streamline the audit process, reducing audit report lag. By providing additional information and explanations about significant audit matters, KAMs promote effective communication between key stakeholders involved in the audit process. Also, KAMs are likely to improve communication and transparency, contributing to more efficient completion of the audit, resulting in a shorter time between the completion of the audit and the issuance of the audit report. Furthermore, we observe that this association is particularly pronounced for large firms. Our findings support existing auditing research, which suggests that larger firms benefit from better resources, more robust internal control mechanisms, and more efficient audit communication processes. These factors contribute to

reduced audit report lag in the key audit matter disclosure era. Larger firms typically have greater financial and operational resources, allowing them to invest in robust internal control systems. Additionally, their larger scale and more extensive operations often necessitate more structured and effective audit communication processes. As a result, these firms are better equipped to handle the challenges of disclosing key audit matters and experience reduced audit report lag compared to smaller firms.

The findings of this study contribute to the growing body of literature on KAMs disclosure and make several contributions to the ARL literature. First, this study is the first attempt to investigate ARL in an Australian setting in the era of post-audit reforms, i.e., KAMs adoption. Recent studies urge investigating audit delay as an aftermath of the introduction of a new reporting model (Reid et al. 2019; Li et al. 2019). Second, this study extends two research streams (ARL and KAMs) specifically by exploring the connection between KAM communication and audit report timeliness. Regulators are now keen on evaluating the impacts of the novel and most significant ISA701 standard promulgated ever since the inception of auditing history (Rahaman and Chand 2021). While a few contemporary studies investigate whether KAM adoption increases audit delay (Bederd et al., 2019; Reid et al. 2019), this study provides a more comprehensive insight into reporting timeliness by investigating its association with KAM characteristics (issues disclosed and their extent of disclosure). This study negates the concern raised by many that KAMs would cause unnecessary delays in financial reporting (e.g., PCAOB, 2011; Knechel et al., 2012; Bédard et al. 2015). Third, we supplement prior studies by providing empirical evidence on how ACs contribute to the delivery of timely financial reports while working in a nexus between the management and external auditors when an extended version of the audit report is issued. This has exceptional importance as regulators and other market participants firmly believe the AC chair with certain expertise can perform a crucial role in improving the financial reporting quality while timeliness is a must (Martikainen et al. 2015; Baatwah et al. 2019). Finally, this study provides a better insight into KAMs disclosure by investigating how firm characteristics moderate the association between KAMs and ARL in post-reform regime. While traditionally, investors perceive a greater number of KAMs as indicative of firm risk (Rahaman and Chand 2021), they may now regard it as a signal of timely reporting when assessing alternative investment opportunities. Overall, the study findings would benefit regulators, policymakers and other stakeholders in attaining a well-functioning capital market with enhanced financial reporting and better protection of investor interest.



The paper advances as follows: the next section reviews the literature and develops hypotheses. The following section explicates the research methodology. Next the results and discussion section discusses the empirical results and provides a robustness check of the study findings while noting additional analyses. The final section concludes the paper.

Literature review and hypotheses development

Background and KAM literature

Several countries, including the UK, Ireland, France, Australia, New Zealand, China, Singapore, Thailand, and Malaysia, have adopted the new standard ISA 701 and introduced an extended version of auditor reporting (Suttipun 2020). Researchers from both developed and developing countries have been keen on exploring and investigating the nature of KAMs reported, their impacts on users' decisions, and audit quality and audit fees (Wei et al. 2019; Suttipun 2020; Rahaman and Chand 2021). Further, efforts have been endeavored to identify the determinants of KAMs disclosure (Velte 2020). The very first two countries that adopted the requirement of KAMs disclosure in their independent auditor's report are the UK and Ireland. They adopted the new standard of extended reporting early in 2013 (FRC 2015). Studies exploring the nature of KAMs disclosed find the valuation of property, plant and Equipment as the most commonly reported KAM, and taxation, the second most reported issue, followed by impairment of goodwill and intangible assets, and then management override control in the audit reports issued in the European market (PWC, 2015). Velte (2018) attempted to uncover the KAM's readability determinants in UK firms and found that the percentage of women on audit committees is significantly related to KAMs disclosure. In a separate study with a similar context, Velte (2020) found that the audit committee's financial and industry expertise is another strong influential factor for Kam's readability. Sierra-García et al. (2019) scrutinized the audit reports of the FTSE 100 companies from 2013 to 2016. They showed that auditor and client characteristics determine the number and types of KAMs disclosed in the UK. Focusing on the impact of KAMs disclosure on audit quality and audit delay, Reid et al. (2019) documented an improvement in audit quality but no significant change in audit delay. In France, Bédard et al. (2015) investigated financial statement users' reactions after the KAMs disclosure and found no such impact on users' decisions. In a multi-country analysis, Pinto and Morais (2019) assessed the determinants of KAMs in France, the UK,

and the Netherlands. They reported a connection between firm size, business segment, profitability, audit fees, and KAMs disclosure. While firm size, business segment, and audit fees positively link with the number of KAMs, the relation is inverse for highly profitable and financial firms (Pinto and Morais 2019).

Australia and New Zealand adopted the new audit reporting model in 2016. Among the early studies, KPMG (2017) explored the nature of issues disclosed by auditors in Australia. They find impairment of goodwill and intangible assets the most common issue reported as KAMs in the audit reports of ASX firms in the first year of KAM adoption. The exploratory study further shows that revenue recognition, acquisition, taxation, and valuation of property, plant and equipment (PPE) were among the most frequently reported issues in the KAM section of the new audit reports in Australia. Wei et al. (2019) investigate whether KAMs disclosure has enhanced audit quality and if there is any impact on audit fees. The study does not find any evidence of improvement in audit quality or any notion of increased audit fees. Rahaman and Chand (2021) examined whether firms in Australia are complying with the new reporting standards. Investigating the top 200 ASX firms, they found notable variations in the contents of the recent audit reports, particularly in KAMs disclosure. They provide evidence of significant variations in terms of the number and types of issues disclosed and their details presented, both within and across industries. In New Zealand, XRB and FMA (2017) documented similar issues of KAMs reporting as observed in Australian firms. Recently, Bepari et al. (2022) identified the determinants of account-level and entity-level KAMs reported by Australian auditors.

In emerging markets, a number of studies endeavored to identify the nature of KAMs disclosed and the factors affecting KAMs disclosure (PWC 2017; Wuttichindanon and Issarawornrawanich 2020; Suttipun 2022; Rahaman and Karim 2023). PWC (2017) explored the types of KAMs issued by auditors in Hong Kong. Unlike developed countries, the most common KAM is found to be the impairment of loans and receivables, which appeared in 20% of the reports in the study sample. Other issues reported, such as impairment of goodwill and intangible assets (18%), valuation and impairment of property (15%), revenue recognition (10%), and financial instruments (8%), are similar to those observed in developed countries. In Malaysia, however, revenue recognition is found to be the most commonly reported issue (reported by 32% of the sampled firms) in KAM reporting in the audit reports, followed by impairment of receivables (28%), impairment of goodwill and intangible assets (27%), and valuation of inventories (21%), in order (SC, AOB, MIA, and ACCA, 2018). In Thailand, Wuttichindanon and Issarawornrawanich



(2020) analyzed 996 annual reports of Thai firms to ascertain the prime factors influencing KAMs disclosure. The study finds that industry type, auditor's litigation risk, firm complexity, and profitability are the key determining factors of KAMs disclosure. Another study by Suttipun (2022), in the Thai context, analyzed firms over three years (2016–2018) to document the length of KAMs disclosure of around 600 words, while firms are reported to issue 1.63 KAMs, on average. The study also finds a positive connection between audit fees and KAMs disclosure. In a recent study, Rahaman and Karim (2023) explored how board features and auditor characteristics shape KAMs disclosure in emerging markets. The research findings indicate that variables such as chair gender, the presence of women on the board, audit committee (AC) size, auditor tenure, and the client-auditor relationship significantly influence the disclosure of KAMs. Conversely, factors such as AC expertise, family CEO succession, and board political connections do not show significant effects.

Given the above, the concept of KAMs disclosure is still new, as many countries are still adopting KAMs disclosure (Rahaman et al. 2023). The number of studies scrutinizing KAMs disclosure is limited, and there is a lack of empirical evidence, specifically in the Australian context. The extant studies provide initial evidence of KAM communication in Australia. Specifically, the studies are exploratory and offer insight into similarities and deviations in KAMs disclosure within and across different industries (Wei et al. 2019; Rahaman and Chand 2021). However, understanding the drivers that could exacerbate or mitigate the association between KAM disclosure and ARL could help standard setters and regulators better govern the audit process. The present study, thus, aims at mitigating the research gap by providing empirical evidence on the impact of KAMs disclosure on ARL.

Prior research investigating ARL determinants primarily focuses on firm characteristics (such as firm size, leverage, profitability, and industry type), audit characteristics (such as big-4, audit fee, and audit tenure), corporate governance characteristics (such as CEO duality, the board size, board meetings, and AC size) (Sultana et al. 2015; Habib et al. 2019). Only a few studies concentrated on KAMs as the determinant of audit lag in emerging markets (Baatwah et al. 2022; Abdullatif et al. 2023). Baatwah et al. (2022) investigated the Omani capital market with 601 firm-year observations from 2012 to 2019 reports and provided evidence of shorter ARL in post-KAM periods. However, they found no significant impact of the number of KAMs on ARL in their post-KAM sample. Abdullatif et al. (2023) also found no evidence of a significant association between the number of KAMs and ARL in a Jordanian context.

In developed markets, studies investigating the consequential effects of KAMs disclosure on ARL are also

scarce. Notably, Bédard et al. (2019) and Reid et al. (2019) examined the French and UK markets, respectively. Bédard et al. (2019) investigated the disclosure of justifications of assessments (JOAs) in expanded audit reports (a similar concept of KAMs) in a French context. Examining the audit reports with 324 firm-year observations from 2002 to 2011, the authors did not find any significant effect of JOAs on ARL. Reid et al. (2019) also have similar findings from the UK market. Using 1,292 firm-year observations based on the London Stock Exchange, they conclude that there is no significant impact of KAM adoption on audit delay surrounding the implementation of the new auditor reporting model. However, no study has yet investigated the developed market to explore how ARL is affected by disclosure variations in KAM contents. With a unique setting, the present study concentrates on KAM disclosure as a driver of ARL while uncovering the mediating role, if any, of AC characteristics in the post-KAM era. AC is seen as a major communication and monitoring intermediary between the parties, such as directors, management, and internal and external auditors involved in the financial reporting process (Sultana et al. 2015). During the last decade, regulators, policymakers, and academic researchers have given enormous attention to AC functions and their effectiveness in the procreation and disclosure of quality financial information.

Theoretical lens

Prior studies in auditing have drawn upon various theoretical frameworks, including agency theory, legitimacy theory, stakeholder theory, institutional theory, communication theory, and audit risk theory, to elucidate the motivations behind risk disclosure to stakeholders (Suttipun 2022; Rahaman et al. 2023). However, our study relies on communication, audit risk, and institutional theory to explain the association between our variables of interest.

Communication theory examines how information is exchanged and interpreted within a context. Fiske (1990) delineates two primary branches within communication theory: the process and the semiotic schools. The process school focuses on message transmission, employing a linear model of communication where information flows from a source (e.g., the auditor) through a channel (e.g., the auditor's report), as outlined by Shannon and Weaver (1949). Mock et al. (2013) conducted a comprehensive review of research literature, drawing insights from communication theory and the IAASB's (2011) framework. Their study addresses the central research question concerning the specific information desired by investors and other stakeholders in the auditor's report. In the realm of KAM disclosure, communication theory suggests that KAM disclosure enables auditors to communicate critical



audit findings to firm managers, aiding understanding and decision-making. KAMs facilitate effective communication among management, auditors, and audit committees (IAASB 2015). Further, by openly addressing significant audit issues, auditors foster transparency, build trust among stakeholders, and potentially reduce the need for further inquiries. Moreover, stakeholder feedback on KAM disclosure can inform future communication strategies, improving the quality of information shared and streamlining the audit process time.

The proposition of audit risk theory posits that auditors should assess and respond to the risks of material misstatement in financial statements when planning and conducting audits. The theory provides insights into how auditors strategize their audit engagements, allocate resources, and ascertain the necessary audit effort (Markevich and Rosner 2013). The theory underscores the need to address material misstatement risks in financial statements during audits, considering factors like transaction complexity and management competency. In the context of KAM disclosure, audit risk theory suggests that KAM disclosure directs auditors' focus to critical audit issues, facilitating efficient resource allocation and resolution (Baatwah et al. 2022). Companies with signs of fraud or higher litigation risks are likely to report more KAMs (Lin 2023). Audit firms might allocate additional resources, including highly skilled partners and staff, to clients perceived as high-risk. It enhances risk assessment and materiality determination processes, allowing auditors to refine procedures and optimize resource allocation, leading to streamlined audits and decreased ARL. In essence, audit risk theory implies that KAM disclosure aids auditors in efficiently addressing audit risks, thereby contributing to timelier audits. In contrast, due to the litigation risk and reputation concerns, auditors may conduct extensive tests covering various aspects of management assertions concerning accounting and control systems for high-risk clients. They may be inclined to dedicate more time to discussing accounting estimates and judgments with management and conducting thorough analyses to arrive at an appropriate audit opinion (Chen et al. 2019; Baatwah et al. 2022). This may result in audit delays.

Institutional theory posits that large firms adhere to regulatory requirements, societal expectations, and professional standards to maintain legitimacy and ensure longevity (DiMaggio and Powell 1983). Big firms may have coercive pressure to comply with the standards alongside addressing the diverse needs of various stakeholders. Big corporations are generally more proactive in meeting social expectations than smaller firms (Liu and Taylor 2008). Regarding KAM disclosure, large firms are subject to heightened regulatory scrutiny and societal pressure for transparency. Consequently, they may promptly disclose

KAMs to meet regulatory standards and address stakeholder expectations, negatively impacting audit delay. Moreover, professional norms in auditing emphasize timely and transparent communication, further motivating large firms to comply. The institutional theory thus illuminates how the institutional context influences organizational behavior, particularly in shaping the disclosure practices of large firms concerning KAMs.

Hypotheses development

Audit report lag (ARL)

ARL is defined as the time gap (measured in calendar days) between a company's fiscal year-end and the date the auditor's report is signed (Ashton et al. 1987). Timely disclosure of accounting information reduces information asymmetry (Lee et al. 2009) and impacts firm value (Blankley et al. 2014). Auditor-verified financial statements and the accompanying annual reports are the only available and reliable sources of accounting information for potential investors (Leventis et al. 2005). Therefore, the timely release of audited financial statements is crucial to all capital market participants. We argue that the requirement of KAMs disclosure by independent auditors disclosure requirement would significantly impact audit report timeliness, and KAMs characteristics would determine the ARL.

KAMs disclosure and ARL

The key change in the audit report to include KAMs disclosure aims to increase audit transparency (Li et al. 2019) and reduce the information gap (Sirois et al. 2018). Auditors must use their professional judgment to identify all the risks the auditee organization faces. The risk so identified may be classed as KAM (Sierra-García et al. 2019). The auditor's experience is crucial in selecting matters to disclose in the KAM section of the audit report. Client characteristics could be a differential factor in KAM selection, as there is a connection between client characteristics and auditor judgment (DeFond and Zhang 2014).

Users of information view KAM disclosure favorably; however, auditors have expressed concerns about the new report format (Cordoş and Fülöp, 2015). KAMs disclosure helps users better understand the financial statements (Wei et al. 2019) and areas that involve significant risk (Boolakay and Quick 2016). It enhances the communicative and informative value of the audit reports (Sirois et al. 2018). However, choosing a KAMs topic is not an easy task, according to researchers and professionals. Identifying critical audit matters (CAMs, a disclosure requirement equivalent to KAMs, in US jurisdiction) may involve distinctively challenging audit judgment (Sierra-García



et al. 2019). KAM communication involves especially challenging, complex, or subjective auditor judgments because CAMs are related to material accounts or disclosure (PCAOB, 2017). KAMs disclosure will be challenging for auditors as disclosing new information to a third party may cause a breach of confidentiality (Rahaman and Chand 2021). In addition to choosing the KAMs subjects, writing the KAM description is complex. KAMs disclosure now needs to be entity- and industry-specific, whereas formerly, auditors would provide a boilerplate template for nearly all the organizations. The requirement of KAMs disclosure would increase the stress and burden of the auditors. Avoiding KAM disclosure being boilerplate again will require additional time and effort. Resultantly, KAM disclosure may increase the audit lag.

Efficient resource allocation plays a crucial role in influencing ARL. KAMs already identified in the previous year or by preceding auditors enable the incumbent auditors to allocate resources effectively and prioritize critical audit tasks. This focused allocation of resources streamlines the audit process, minimizing unnecessary time spent on less critical areas and ultimately reducing ARL (Shin et al. 2017; Cassell et al. 2019). KAMs contribute to streamlined audit procedures by prompting auditors to gain a deeper understanding of risks and areas requiring judgment. This understanding enables auditors to tailor audit procedures accordingly, eliminating redundancies and unnecessary steps. As a result, the time required to complete the audit is reduced (IAASB 2015). KAM disclosure facilitates clear communication, enhancing transparency and relevance by offering concise information on significant matters. Through the provision of additional information and explanations regarding significant audit matters, KAMs facilitate effective communication among auditors, management, and audit committees (IAASB 2015). This enhanced communication aids relevant stakeholders in understanding the audit process and diminishes the likelihood of prolonged discussions or requests for additional information (Köhler et al. 2020). This enhanced communication promotes efficiency and expedites the audit process, leading to a reduction in ARL (Bédard et al. 2019). Moreover, KAMs disclosure fosters stakeholder confidence and trust as stakeholders perceive auditors paying attention to significant matters, enhancing the reliability and credibility of the audit report. This increased confidence streamlines the reporting process, minimizing delays and ultimately shortening ARL (Köhler et al., 2020; Sirois et al. 2018). Furthermore, KAMs may eventually become standardized or “boilerplate” (Mock et al. 2013), potentially streamlining the process of issuing audit reports. Additionally, implementing KAMs facilitates early issue identification, enabling auditors to address matters promptly, engage in timely communication, and obtain necessary information efficiently, minimizing audit delays

(IAASB 2015). Further, as KAMs are typically identified prior to the audit report date, auditors may conduct much of the additional audit work in advance (Knechel and Payne 2001). This proactive approach has the potential to mitigate audit delays.

Recent studies that explore the association between KAM disclosure and ARL demonstrate inconclusive findings. While studies investigating the impact of KAM divergence on ARL are scarce in developed markets, a few studies found no significant effect of KAM adoption on ARL (Bédard et al., 2019; Reid et al. 2019). Research in emerging markets, on the other hand, documents a reduction in ARL as a consequential effect of KAM adoption (Baatwah et al. 2022) but exhibits no significant impact of KAM’s variation (number of KAMs, words in KAMs, etc.) on ARL (Baatwah et al. 2022; Abdullatif et al. 2023).

Given the contrasting arguments and inconclusive findings from past research, we hypothesize as follows:

H1 Mandatory requirement of KAMs affects firms ARL.

KAM and ARL in the context of a large firm

Pinto and Morais (2019) find that larger firms with diverse business segments have a higher number of KAMs but fewer in the financial sector and highly profitable firms. Larger firms have distinct advantages when it comes to reducing ARL in the presence of higher KAM disclosure. These advantages can be attributed to their greater resources, specialized expertise, proactive planning and execution, advanced technology utilization, and enhanced communication and coordination. Hrazdil et al. (2020) report that larger affirms primarily choose Big4 auditors due to their technical capabilities and industry-specialized expertise. Also, larger firms have more internal resources, including a larger audit team and more sophisticated technical capabilities. Higher KAMs allow auditors to devote more specialized resources to addressing critical issues throughout the audit process. Ample resources are available, allowing for effective and concentrated emphasis on KAM, streamlining the audit process, and lowering ARL. Larger firms also frequently have specialized teams or divisions with knowledge of particular sectors or complex accounting topics. We argue that the presence of professionals within the firm offers a more focused and effective strategy to solve these issues when KAMs affect these specialized areas. Their knowledge of the difficulties and experience can speed up the audit processes, resulting in a shorter ARL. Additionally, larger firms take a proactive approach to planning. Furthermore, larger firms have access to advanced audit technologies and tools that enhance efficiency and effectiveness. These technologies enable auditors to automate certain audit procedures, perform data



analytics, and facilitate collaboration among audit team members. The utilization of these advanced tools, mainly when the number of KAMs is higher, expedites the audit process and contributes to a reduced ARL in larger firms. In addition, larger firms emphasize robust communication and coordination between auditors and various stakeholders, such as management and audit committees. Established communication protocols and structures facilitate efficient information exchange and decision-making. Effective communication and coordination ensure the timely resolution of issues related to KAMs, minimizing delays and shortening ARL. Moreover, in line with institutional theory, large firms are subject to heightened regulatory scrutiny and societal pressure for transparency. As a result, they might promptly reveal KAMs to adhere to regulatory requirements and fulfill stakeholder expectations, leading to a decrease in audit delay.

We hypothesize as follows:

H2 The impact of KAMs on firms' ARL is more pronounced in larger firms.

Research design

Sample selection and data collection

The study sample covers the top ASX 300 firms in Australia. We select ASX300 as they are considered major firms in Australia and likely to represent top firms in other developed economies. Data for three years, from 2018 to 2020, were collected from the respective companies' annual reports and the Securities Industry Research Centre of Asia–Pacific (SIRCA) database. KAMs reporting was adopted in Australia for the reporting period that ended on or after 15 December 2016. While only around 40 companies reported KAMs in 2016, almost all the listed companies disclosed KAMs in 2017. However, we ignored these two years to avoid any implementation shock. Variables such as ARL (computed interval between the balance sheet date and the audit report date), AC characteristics (size of audit committee, proportion of females in the AC, AC chair tenure, AC chair level of education, AC financial expertise), auditor characteristics (audit fees, auditor gender, auditor tenure), firm characteristics (size of the firm: total assets, firm's profitability: ROA), and control variables such as Big-4 auditors, total intangibles were collected from the SIRCA database. The number of KAMs reported, and the

Table 1 Sample selection process

	Observations	%
<i>Panel A: Sample Selection</i>		
Firms listed on the ASX 300 in 2018–2020	900	
Foreign firms on the ASX top 300	(123)	
Total excluding foreign firms	777	
Non-availability of annual reports	(21)	
Observations excluded for missing data	(156)	
Final sample	602	66.89
<i>Panel B: Sample breakdown by industry</i>		
Consumer discretionary	101	16.78
Consumer staples	38	6.31
Energy	31	5.15
Financials	79	13.12
Health care	42	6.98
Industrials	69	11.46
Information technology	60	9.97
Materials	91	15.12
Real estate	67	11.13
Telecommunication services	11	1.83
Utilities	13	2.16
<i>Panel C: Sample observations by year</i>		
2018	208	34.55
2019	197	32.72
2020	197	32.72



number of AC meetings were cautiously coded from the annual reports of the respective companies. The Microsoft Office program computed the number of words used in the KAM description. We follow the industry sectors of the sample companies and align them with the Australian Stock Exchange (ASX) website. The sample selection process is provided in Panel A, Table 1. We exclude foreign firms listed in ASX and the firm-year observations due to the non-availability of the annual reports or missing data, the final sample stands at 602 firm-year observations. The distribution of the sample observations across eleven industries is shown in Panel B, while Panel C presents the year-wise breakdown of the sample.

Measuring KAM disclosure

Current auditing studies frequently use the variables the number of KAMs and the number of words describing KAMs to determine the factors that influence KAM disclosure or extended reporting, determine whether the new reporting model has achieved the emphasized goal of increased transparency, and pinpoint reporting variability within and across industries/countries (e.g., Pinto and Morais 2019; Wuttichindanon and Issarawornrawanich 2020; Suttipun 2022; Rahaman and Chand 2021; Baatwah et al. 2022; Abdullatif et al. 2023; Rahaman et al. 2023; Rahaman and Karim 2023). Several recent studies, conducted in both emerging and developed markets and published in high-quality journals, have utilized these proxies as measures of KAMs disclosure (Abdelfattah et al. 2021; Rahaman and Chand 2021; Bepari et al. 2022; Suttipun 2022). In addition, studies focusing on auditor judgment also employ the number of issues/KAMs disclosed as a measure of KAMs disclosure. According to recent studies, the extent of the disclosure and the readability of KAMs description vary noticeably (Velt, 2018; Sierra-Garca et al., 2019). Research has also revealed that different businesses, industries, and countries have different numbers of KAMs (Rahaman and Chand 2021). This study examines both the quantity of KAMs, and the number of words used to describe KAMs as indicators of KAM disclosure.

Model specification

The empirical analyses of the study relied on regression models to test the association between response variable ARL and explanatory variables representing KAMs disclosure, AC features, auditor characteristics, and firm characteristics. Besides, we control for variables that are found to be associated with the variable of interest, as evidenced by prior research. Further, a set of dummy variables representing industry categories and years were included to control the specific effects of the two variables.

The ordinary least square (OLS) regression models used are as follows:

$$\begin{aligned} \text{ARL}_{it} = & \beta_0 + \beta_1 \text{KAM}_{it} \\ & + \beta_2 \text{ACCHEDU}_{it} + \beta_3 \text{ACCHTEN}_{it} \\ & + \beta_4 \text{PWAC}_{it} + \beta_5 \text{ACEXPT}_{it} \\ & + \beta_6 \text{AUDFEE}_{it} + \beta_7 \text{AUDGEN}_{it} \\ & + \beta_8 \text{AUDTEN}_{it} + \beta_9 \text{FRMSIZE}_{it} \\ & + \beta_{10} \text{ROA}_{it} + \beta_{11} \text{BIG4}_{it} \\ & + \beta_{12} \text{LOSS}_{it} + \beta_{13} \text{INTANG}_{it} \\ & + \beta_{14} \text{ACMEET}_{it} + \beta_{15} \text{NAFEE}_{it} \\ & + \sum \text{INDFE} + \sum \text{YEARFE} + \varepsilon_{it} \end{aligned} \quad (1)$$

We use two measures for audit report lag (ARL), $d\text{ARL}$ and $\ln\text{ARL}$. First, $d\text{ARL}$ is the number of days between the company year-end date and the audit report date. Second, $\ln\text{ARL}$ is the natural logarithm of the number of days between the company year-end date and the audit report date. Also, following contemporary studies (Rahaman and Chand 2021; Baatwah et al. 2022; Abdullatif et al. 2023; Rahaman et al. 2023; Rahaman and Karim 2023), we use two alternative measures for KAMs, NumKAMs and WordKAMs . First, NumKAMs is the total number of KAMs reported in the audit report. Second, WordKAMs is the total number of words used to describe KAMs. Our primary variable of interest is $\beta_1 \text{KAM}_{it}$. A positive association with coefficient β_1 would suggest that the presence of KAMs is associated with an increase in firm audit report lag. Conversely, a negative association with the coefficient β_1 would indicate that KAMs are associated with a reduction in firm audit report lag.

Consistent with prior research in ARL, we include a range of control variables. For instance, we control PWAC, ACCHTEN, ACMEET and ACCHEDU. Diversity in the audit committee offers a broader range of perspectives and experiences in decision-making. An audit committee with diversity can enhance the consideration of significant audit matters and encourage more comprehensive disclosure of KAMs in the audit report. Therefore, having female members on the Audit Committee is expected to be associated with a higher likelihood of KAM disclosure, and we control PWAC. Considering the competing argument prevails in the existing literature, we control audit committee chair tenure (ACCHTEN). A longer tenure suggests a deeper understanding of the firm's operations, financial reporting processes, and audit requirements. This knowledge and experience can enhance the oversight of the audit, aiding in identifying and communicating KAMs. Consequently, longer tenure may be linked to a higher likelihood of KAMs disclosure, as an extended tenure raises concerns about independence and objectivity. Close relationships with management or entrenched practices can compromise the



chair's ability to objectively assess significant audit matters and advocate for transparent KAM disclosure. We control audit committee chair education (ACCHEU) as a chair with higher education qualifications may possess a deeper understanding of accounting principles, financial reporting standards, and auditing practices. This enhanced knowledge base can better comprehend significant audit matters and facilitate effective oversight of the audit process, i.e., KAMs disclosure.

In line with the meta-analysis by Habib et al. (2019) on ARL determinants, we include a set of control variables to explore the association between firm-specific attributes and ARL. Firm size (FRMSIZE) may affect audit procedure complexity due to scale and profitability (ROA), impacting scrutiny levels during audits. Additionally, we consider audit quality (BIG4), where auditors from larger firms may streamline processes and expedite report insurance. Further, we consider auditors' economic bonding (AUDFEE and NAFEE), reflecting auditor incentives and diligence. Firm distress risk (LOSS) as firms experiencing financial constraints may undergo more extensive audits, leading to report delays. Firm intangible assets (INTANG) signal a firm's reputation in financial disclosure, potentially impacting ARL. Finally, we control for industry effects and year effects in the analyses. All the variables in the models are defined in Appendix 1.

Results and discussion

Descriptive statistics and univariate analyses

Descriptive statistics for the study variables are presented in Table 2, Panel A. Our sample firm has an average of 53.11 days ARL. Also, the average number of KAMs disclosed is 2.64, ranging between 1 and 7 in our sample period. The length of KAMs description significantly varies within the sample, ranging between 230 and 3827 words. The ASX300 firms pay \$6.27 million as audit fees, on average. Big-4 firms audit 92% of sample firms, and a female auditor audits 31% of the firm-year observations. Our sample has 17% of the firms report a negative profit. Table 2, Panel B presents the results of the mean difference test. The sample was divided into two groups based on the level of Key Audit Matter (KAM) reported each year: firms with KAM lower than the mean (KAM < mean) and firms with KAM higher than the mean (KAM > mean). Our analysis reveals that firms with lower KAM reported in a specific year experience more extended audit report lags, indicating that KAMs are not associated with increased time to complete the audit process. Moreover, firms with below-average KAMs are characterized by smaller size, lower audit fees, lower frequencies of audit committee meetings, and

lower levels of education among the audit committee chairs. These findings demonstrate statistical significance at a 5% level.

In Table 2, Panel C reports the results of the correlation analysis. Our findings demonstrate a negative relationship between ARL and the disclosure of KAMs. Specifically, the correlation between the natural logarithm of audit report lag (LnARL) and the number of KAMs (*NumKAMs*) is -0.132 ($p < 0.01$), indicating that firms with a higher number of KAMs experience a shorter ARL. Consistently, the correlation between LnARL and the number of words (*WordKAMs*) is -0.192 ($p < 0.01$), suggesting that firms with larger KAMs reports have shorter ARL. Furthermore, we observe a negative correlation between LnARL and the education level of the audit committee chair (ACCHEU), suggesting that a higher education level of the audit committee chair is associated with a reduction in ARL. We find that ARL is lower when firms have higher audit fees (AUDFEE), are audited by a female auditor (AUDGEN), and have an auditor with longer tenure (AUDTEN). Furthermore, larger firms (FRMSIZE) and those with higher profitability (ROA) experience shorter audit report lags. Overall, these results indicate significant associations between various attributes of firm-specific variables and ARL, highlighting the importance of KAMs disclosure, audit committee chair education (ACCHEU), audit fees (AUDFEE), auditor characteristics (AUDTEN), firm size (FRMSIZE), and profitability (ROA) in influencing the duration of the audit report process. As a prerequisite for regression analysis, the relevant assumption tests were conducted. Emory (1982) suggests that there may be a multicollinearity problem if the correlation between two independent variables is greater than 0.80. The results of Pearson correlations (untabulated) indicate no concern from multicollinearity, as all of the correlation coefficients reported are below 0.80. Further, the variance inflation factor (VIF) appears to be less than three for each of the variables (the mean VIF is 1.47; untabulated), suggesting that the multicollinearity problem is not a concern in our study (Johnston 1984).

Main results

In the previous section, we conducted a bivariate analysis, which provided preliminary insights into the variables used in our research model. However, bivariate analysis alone may not account for the influence of other corporate governance and firm-specific attributes. This section uses OLS regression analysis to account for corporate governance and firm-specific factors, more thoroughly understanding the association between KAMs disclosure and ARL.



Table 2 Panel A—Descriptive statistics, Panel B—Mean Difference Test, Panel C—Correlation analysis

Variables	N	Mean	S.D	Min	Max
<i>Panel A Descriptive statistics</i>					
AUDGEN	602	0.25	0.43	0.00	1.00
AUDTEN	602	1.89	0.71	0.00	2.56
BIG4	602	0.92	0.28	0.00	1.00
PWAC	602	0.31	0.22	0.00	1.00
AUDFEE	602	13.54	1.29	10.52	21.00
FRMSIZE	602	21.33	1.76	16.90	27.67
NumKAMs	602	2.64	1.10	1.00	7.00
WordsKAMs	602	999.42	497.68	230.00	3,827.00
ROA	602	0.05	0.09	-0.41	0.49
lnARL	602	3.95	0.20	3.26	4.58
dARL	602	53.11	11.12	26.00	98.00
ACCHTEN	602	1.29	0.77	0.00	2.56
ACMEET	602	1.53	0.39	0.00	2.77
ACEXPT	602	0.71	0.27	0.00	1.00
INTANG	602	0.22	0.24	0.00	0.92
LOSS	602	0.17	0.38	0.00	1.00
NAFEE	602	0.26	0.18	0.00	0.80
ACCHEDU	602	4.46	1.01	0.00	5.00
Variables				Mean Difference	t-statistics
<i>Panel B – Mean Difference Test</i>					
	KAMs < mean	KAMs > mean			
AUDTEN	1.840	1.930	-0.090	-1.553	
BIG4	0.923	0.911	0.012	0.470	
PWAC	0.294	0.328	-0.034	-1.820*	
AUDFEE	13.053	13.970	-0.917	-9.341****	
FRMSIZE	20.767	21.830	-1.063	-7.760****	
NumKAMs	1.690	3.497	-1.807	-34.973****	
WordsKAMs	692.596	1273.443	-580.849	-17.582****	
ROA	0.046	0.045	0.001	0.101	
lnARL	3.969	3.937	0.032	1.972**	
dARL	53.993	52.314	1.678	1.853*	
ACCHTEN	1.323	1.255	0.075	1.187	
ACMEET	1.493	1.564	-0.071	-2.247**	
ACEXPT	0.720	0.707	0.013	0.590	
INTANG	0.200	0.240	-0.040	-2.10**	
LOSS	0.190	0.160	0.030	0.960	
NAFEE	0.248	0.266	-0.018	-1.218	
ACCHEDU	4.384	4.554	-0.169	-2.045**	



Table 2 (continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
<i>Panel C – Correlation analysis</i>																		
(1) LnARL	1.000																	
(2) dARL	0.982***	1.000																
(3) NumKAMs	-0.132***	-0.110***	1.000															
(4) WordsKAMs	-0.192***	-0.168***	0.741***	1.000														
(5) ACCHEDU	-0.157***	-0.158***	0.111***	0.159***	1.000													
(6) ACCHTEN	0.056	0.065*	-0.037	-0.042	-0.021	1.000												
(7) PWAC	-0.056	-0.082**	0.082**	0.163***	0.127***	-0.134***	1.000											
(8) ACEXPT	-0.118***	-0.116***	0.077*	0.078**	0.250***	0.021	0.020	1.000										
(9) AUDFEE	-0.175***	-0.160***	0.471***	0.545***	0.150***	-0.050	0.303***	0.168***	1.000									
(10) AUDGEN	-0.095**	-0.087**	-0.002	-0.005	0.065*	0.030	0.059	0.028	0.088**	1.000								
(11) AUDTEN	-0.252***	-0.247***	0.140***	0.222***	0.119***	0.085**	0.108***	0.118***	0.297***	0.053	1.000							
(12) FRMSIZE	-0.242***	-0.212***	0.429***	0.550***	0.132***	-0.098**	0.276***	0.190***	0.748***	0.030	0.304***	1.000						
(13) ROA	-0.172***	-0.188***	-0.080**	-0.144***	0.051	0.000	0.026	-0.027	-0.047	0.067*	0.111***	-0.085**	1.000					
(14) BIG4	-0.092**	-0.101***	-0.011	0.174***	0.088**	-0.032	0.157***	0.131***	0.266***	0.067*	0.129***	0.197***	-0.049	1.000				
(15) LOSS	0.201***	0.206***	-0.010	0.080**	-0.061	-0.032	-0.050	-0.039	-0.080**	-0.040	-0.087**	-0.123***	-0.618***	0.988**	1.000			
(16) INTANG	0.011	-0.014	0.049	0.013	-0.035	-0.017	0.065*	0.115***	0.153***	-0.073*	-0.098**	-0.093**	-0.014	0.155***	0.009	1.000		
(17) ACMEET	-0.093**	-0.088**	0.149***	0.181***	-0.030	0.055	0.172***	0.026	0.301***	0.028	0.033	0.321***	-0.036	0.081**	-0.055	0.069*	1.000	
(18) NAFEE	-0.014	-0.015	0.033	0.035	0.056	0.012	0.108***	0.023	0.030	-0.022	-0.011	0.039	0.126***	0.126***	-0.051	0.027	0.029	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Table 3 Regression results for ARL

Variables	(1)	(2)	(3)	(4)
	LnARL	dARL	LnARL	dARL
NumKAMs	-0.013* (0.008)	-0.741* (0.450)		
WordsKAMs			-0.0001** (0.000)	-0.002* (0.001)
ACCHEDU	-0.053*** (0.019)	-2.913*** (1.064)	-0.051*** (0.019)	-2.830*** (1.066)
ACCHTEN	0.029* (0.015)	1.875** (0.862)	0.029* (0.015)	1.866** (0.861)
PWAC	0.045 (0.036)	0.988 (2.036)	0.047 (0.036)	1.165 (2.028)
ACEXPT	-0.049 (0.030)	-2.994* (1.680)	-0.051* (0.030)	-3.085* (1.681)
AUDFEE	0.025** (0.010)	1.430** (0.575)	0.026** (0.010)	1.408** (0.570)
AUDGEN	-0.026 (0.018)	-1.349 (0.995)	-0.028 (0.018)	-1.442 (0.996)
AUDTEN	-0.049*** (0.012)	-2.802*** (0.650)	-0.048*** (0.012)	-2.735*** (0.650)
FRMSIZE	-0.023*** (0.008)	-1.001** (0.443)	-0.021** (0.008)	-0.911** (0.451)
ROA	-0.166 (0.107)	-9.762 (6.001)	-0.173 (0.107)	-10.038* (6.000)
BIG4	-0.047 (0.029)	-2.975* (1.637)	-0.036 (0.029)	-2.430 (1.627)
LOSS	0.036 (0.026)	2.139 (1.478)	0.040 (0.026)	2.382 (1.483)
INTANG	-0.053 (0.042)	-4.183* (2.335)	-0.051 (0.042)	-4.154* (2.334)
ACMEET	-0.008 (0.021)	-0.682 (1.177)	-0.008 (0.021)	-0.649 (1.175)
NAFEE	0.025 (0.043)	1.283 (2.393)	0.025 (0.043)	1.205 (2.390)
Constant	4.381*** (0.112)	72.818*** (6.314)	4.314*** (0.119)	70.319*** (6.677)
Observations	602	602	602	602
R-squared	0.234	0.216	0.237	0.217
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Prob > F	0.000	0.000	0.000	0.000

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Finding of H1

The results of H1, which investigates the effects of KAM disclosure on ARL, are shown in Table 3. We use two distinct KAM measures, *NumKAMs* and *WordKAMs*, and consider two ARL proxies, LnARL and dARL. We include NumKAMs measure in columns (1) and (2) of the regression

model, which respectively use LnARL and dARL as the dependent variables. The coefficient on *NumKAMs* in column (1) shows a negative association (coefficient -0.013 , $p < 0.10$), suggesting that a decrease in firm ARL is related to increasing KAM disclosure. This concludes that giving KAMs more specific information results in shorter ARL. The effect is economically significant, as a one standard-deviation increase in *NumKAMs* is associated with a 1.43 percent decrease in the audit delay ($100 \times -0.013 \times 1.10$). The coefficient on *WordKAMs* also shows a negative association in column (2) (coefficient -0.741 , $p < 0.10$), supporting the idea that revealing KAMs more descriptively might be beneficial. We now focus on dARL as the dependent variable in columns (3) and (4). The regression findings in column (3) show a negative association between *WordKAMs* and LnARL, suggesting that more KAM disclosure is linked to faster delivery of audit reports. The coefficient on *WordKAMs* also exhibits a negative association in column (3) (coefficient -0.0001 , $p < 0.10$), indicating a relationship between decreased dARL and greater *WordKAMs* disclosure. The result is both statistically and economically significant. A one standard-deviation increase in *WordKAMs* is associated with a 4.97 percent decrease in audit delay ($100 \times -0.0001 \times 497.68$). Overall, the results in Table 3 offer support in favor of Hypothesis 1. Indicating that higher openness and specificity in revealing important audit concerns are related to shorter ARL and dARL, both measures of KAM disclosure, *NumKAMs* and *WordKAMs*, exhibit a negative association with audit report lag. These results highlight the importance of robust KAM disclosure practices in reducing the time required to complete the audit process. Our findings diverge from those of Abdullatif et al. (2023), who found no significant association between the number of KAMs and ARL in Jordan. Similarly, our observations contradict the findings in the UK and France, where KAM adoption was found to have no effect on ARL (Bédard et al. 2019; Reid et al. 2019). However, our results align somewhat with those of Baatwah et al. (2022), who provided evidence of a lower ARL in post-KAM periods in Oman.

The results could be explained with the help of communication theory and audit risk theory. In light of communication theory, KAM disclosure enables auditors to communicate critical audit findings to firm managers, aiding understanding and decision-making, eventually expediting the audit process. The more KAMs there are, the more effective communication between the auditors and managers will be, resulting in lower ARL. On the other hand, in line with audit risk theory, firms receiving more KAMs may have skilled partners and audit teams with optimized resource allocation, leading to streamlined audits and decreased ARL.

We also incorporate control variables associated with the characteristics of audit committees in our study, in addition to looking at the effect of Key Audit Matter (KAMs)



Table 4 Number of KAMs and words in KAMs: Large vs. Small firms

Variables	(1)	(2)	(3)	(4)
	Large firms	Small firms	Large firms	Small firms
	LnARL	LnARL	dARL	dARL
NumKAMs	-0.021* (0.011)	-0.012 (0.011)		
WordsKAMs			-0.0001** (0.000)	-0.000 (0.000)
ACCEDU	-0.054* (0.029)	-0.064** (0.026)	-0.047 (0.029)	-0.064** (0.026)
ACCHTEN	0.042** (0.021)	0.031 (0.022)	0.043** (0.021)	0.029 (0.022)
PWAC	0.058 (0.050)	0.037 (0.055)	0.066 (0.050)	0.037 (0.055)
ACEXPT	-0.043 (0.047)	-0.048 (0.039)	-0.046 (0.046)	-0.045 (0.039)
AUDFEE	0.029** (0.013)	0.044** (0.017)	0.028** (0.013)	0.041** (0.017)
AUDGEN	-0.036 (0.026)	-0.004 (0.024)	-0.039 (0.026)	-0.004 (0.024)
AUDTEN	-0.028 (0.018)	-0.050*** (0.016)	-0.025 (0.018)	-0.050*** (0.016)
FRMSIZE	-0.036*** (0.012)	-0.036** (0.017)	-0.034*** (0.012)	-0.038** (0.017)
ROA	0.177 (0.276)	-0.188 (0.124)	0.129 (0.274)	-0.179 (0.124)
BIG4	-0.183*** (0.055)	-0.020 (0.034)	-0.164*** (0.055)	-0.014 (0.034)
LOSS	0.030 (0.040)	0.046 (0.038)	0.031 (0.040)	0.049 (0.038)
INTANG	-0.043 (0.071)	-0.052 (0.055)	-0.045 (0.071)	-0.051 (0.055)
ACMEET	0.045 (0.033)	-0.020 (0.028)	0.047 (0.033)	-0.020 (0.028)
NAFEE	0.113* (0.064)	0.013 (0.059)	0.109* (0.063)	0.016 (0.059)
Constant	4.662*** (0.224)	4.336*** (0.284)	4.604*** (0.224)	4.368*** (0.291)
Observations	301	301	301	301
R-squared	0.345	0.271	0.352	0.269
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Prob > F	0.000	0.000	0.000	0.000

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

disclosure on audit report latency. While considering the influence of other pertinent factors, these control variables assist us in better understanding the precise consequences of KAMs disclosure. The audit committee chair's educational is one crucial factor we consider. Our findings demonstrate

a negative correlation between audit committee chair education and business audit report delays, suggesting that the length of the audit report process tends to be shorter when the audit committee chair has a higher level of education and skill. Our findings support that an educated audit committee chair may help complete the process more quickly and effectively. We also investigate the effect of the audit committee chair's term on the delay in the audit report. Interestingly, our study shows a positive correlation for the audit committee chair's term, showing that a longer tenure for the chair is linked to a higher audit report lag for the company. This result raises the possibility that lengthier audit report gaps might result from the audit committee chair's increased propensity for thoroughness and consideration. By considering these control variables linked to audit committee characteristics, we can better understand how audit committee characteristics affect audit report delay. The results indicate that shorter audit report delays are linked with audit committee chair education and experience, emphasizing the need for competent people in executive roles on the audit committee. A longer tenure, however, may result in an increased audit report lag, presumably because of a more careful and methodical approach to the audit process, according to the positive coefficient for audit committee chair tenure. Overall, these control factors offer insightful information on how audit committee characteristics affect audit report latency, enabling us to analyze the impacts of KAM disclosure while considering a wider context of corporate governance more accurately.

Finding of H2

The results of H2 are presented in Table 4. We split the sample into two groups: large firms ($\text{LnAsset} > \text{median}$) and small firms ($\text{LnAssets} \leq \text{median}$) to test the theory that the impact of Key Audit Matters (KAMs) disclosure is more evident in larger firms. We re-estimated Eq. (1) for every group independently. While Column 2 focuses on the relationship between the number of KAMs (*NumKAMs*) and the natural logarithm of audit report lag (*LnARL*) for small firms, Column 1 offers the findings for large firms. *NumKAMs* and *LnARL* have a negative correlation in big enterprises (Column 1), with a coefficient of -0.021 ($p < 0.10$). This suggests that lower audit report delay is related to higher KAMs disclosure for large enterprises. Although we observe a negative association between KAMs and *LnARL* in small firms (Column 2), the association is not statistically significant. We investigated this link further by looking at *WordsKAMs* and *dARL* as alternate KAMs and audit report lag metrics. *WordsKAMs* and *dARL* have a negative association for big firms, with a coefficient of -0.0001 ($p < 0.05$). However, overall statistical significance for the relationship between *WordsKAMs* and *dARL* is not present for small firms. In



Table 5 Endogeneity test

Dependent variable	First-stage regression		Second-stage regression			
	NumKAMs	NumWords	LnARL	dARL	LnARL	dARL
IND_AVG_KAM	0.962** (0.402)					
IND_AVG_WORD		0.995*** (0.345)				
NumKAMs			-0.013* (0.008)	-0.741* (0.453)		
NumWords					-0.0001** (0.000)	-0.002** (0.001)
Constant	-5.912*** (1.235)	-3,324.752*** (380.460)	4.294*** (0.287)	70.476*** (16.152)	4.462*** (0.410)	82.646*** (23.112)
Observations	602	602	602	602	602	602
R-squared	0.323	0.430	0.234	0.217	0.238	0.220
Other controls	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Prob > F	0.000	0.000	0.000	0.000	0.000	0.000

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

conclusion, our results are consistent with Hypothesis 2, which states that the influence of KAM disclosure on audit report latency is greater in bigger firms. We find that in big firms there is a strong negative association between *NumKAMs* and LnARL, suggesting that higher KAM disclosure results in shorter audit report delays. In small firms, the association is less apparent and statistically insignificant. Likewise, although it is not statistically significant, there is some evidence of a negative connection between *WordsKAMs* and dARL in small firms.

The results can be explained by invoking institutional theory. Institutional theory suggests that large firms conform to regulatory mandates, normative expectations, and professional norms to gain legitimacy and ensure survival. In the context of KAMs disclosure, large firms face greater regulatory scrutiny and societal expectations regarding transparency. Also, the auditors of large firms may face institutional pressure such as “coercive isomorphism”, “mimetic isomorphism” and “normative isomorphism” as explained by DiMaggio and Powell (1983). Consequently, they may disclose KAMs promptly to comply with regulations and meet stakeholder demands, leading to a negative association with audit delay. Professional norms within the auditing profession also reinforce the importance of timely and transparent communication of audit findings, further incentivizing large firms to issue audited financial statements with shorter ARL.

In a nutshell, our study offers convincing proof that KAMs disclosure is essential for lowering audit report delay. The results show that shorter audit report lags (ARL) and duration-adjusted ARLs (dARL) are related to higher

Table 6 Regression results for single KAM using PSM and EB

Variables	PSM		EB	
	(1)	(2)	(3)	(4)
	LnARL	dARL	LnARL	dARL
Single_KAM	0.093*** (0.013)	4.503*** (0.721)	0.021* 0.013	1.50** (0.746)
Constant	4.240*** (0.109)	74.267*** (6.031)	4.031*** (0.121)	56.204*** (6.799)
Observations	587	587	602	602
R-squared	0.677	0.731	0.208	0.209
Controls	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Prob > F	0.000	0.000	0.000	0.000

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

transparency and specificity in revealing important audit problems. Additionally, audit report lag is greatly influenced by the characteristics of audit committees, notably the tenure and degree of education of the audit committee chair. Shorter ARLs frequently result from the accelerated audit process by having an educated and experienced audit committee chair. However, lengthier terms as the audit committee chair can result in higher ARL, perhaps because of a more careful and comprehensive approach. Furthermore, our research shows that big firms strongly associate with KAMs disclosure and audit report delays. This indicates that bigger firms may be more significantly impacted by KAMs disclosure in terms of



lowering audit report delay. By concentrating on this distinction, our findings offer significant insights into the differing effects of KAMs disclosure across various firm sizes. These findings underline the need to consider firm-specific variables like size when analyzing the association between KAMs disclosure and audit report delay. These findings deepen our comprehension of the intricate link between KAMs disclosure, corporate characteristics, and the general effectiveness of the audit process. This study makes an important contribution by clarifying the function of KAMs disclosure and audit committee characteristics.

Endogeneity concern

The estimates obtained through ordinary least squares regression for our test variable KAMs disclosure may be subject to potential self-selection bias. This arises because companies are eligible to minimize the likelihood of receiving more KAMs. We conduct several robustness tests to address the endogeneity concern due to selection bias reverse causality or correlated omitted variables. First, we use two-stage least-squares regression (2SLS). Following Hasan (2020), we use the industry average of test variables (IND_AVG_KAM and IND_AVG_WORD) as the instrument to model the first-stage equation. Number of KAMs and their details vary across industries, and firms in highly regulated and environmentally sensitive industries are likely to report more KAMs with extensive disclosures (Rahaman et al. 2023). We expect IND_AVG_KAM and IND_AVG_WORD to correlate positively with NumKAMs and WordKAMs, respectively. However, IND_AVG_KAM and IND_AVG_WORD are less likely to be associated with ARL. Table 5 reports our results for 2SLS. The positive coefficients for the instrumental variables suggest that the included instruments IND_AVG_KAM and IND_AVG_WORD are significantly correlated, respectively, with the number of KAMs and number of words. The second-stage regression results suggest that the negative association between KAMs disclosure and ARL remains robust after accounting for the endogenous relationship. The coefficients for LnARL and dARL are statistically significant at the 10 and 5% levels, respectively. Therefore, the results obtained from the 2SLS analysis confirm the findings from our primary analysis, as presented in Table 3.

As an alternative method to address endogeneity, we employ propensity-score matching (PSM) to pair single KAM and multiple KAMs companies, aiming to mitigate the inherent endogeneity resulting from the selection processes of KAMs and their extent of disclosure. Through this method, we match single KAM companies with multiple KAMs ones based on observable characteristics such as company size, thereby creating a more homogeneous sample for analysis. We construct a dummy variable Single_KAM

Table 7 Regression results for KAM adoption and ARL

Variables	(1) LnARL	(2) dARL
POST_ADOPT	-0.051** (0.026)	-3.387** (1.556)
ACCEDU	-0.015*** (0.005)	-0.842*** (0.323)
ACCHTEN	0.015** (0.007)	0.848* (0.444)
PWAC	-0.071*** (0.024)	-4.380*** (1.423)
ACEXPT	-0.074*** (0.020)	-4.530*** (1.181)
AUDFEE	0.024*** (0.008)	1.221*** (0.470)
AUDGEN	0.014 (0.013)	0.582 (0.769)
AUDTEN	-0.034*** (0.007)	-1.986*** (0.446)
FRMSIZE	-0.007 (0.005)	-0.224 (0.328)
ROA	-0.070 (0.053)	-3.330 (3.184)
BIG4	-0.051*** (0.019)	-3.028*** (1.131)
LOSS	0.035* (0.018)	2.209** (1.057)
DEC_YR	0.060*** (0.017)	3.224*** (1.050)
Constant	4.111*** (0.074)	60.471*** (4.446)
Observations	1302	1302
R-squared	0.178	0.165
Year FE	Yes	Yes
Industry FE	Yes	Yes
Prob > F	0.000	0.000

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

by coding 1 for observations with one KAM and 0 otherwise, multiple KAMs are used. Then, we model the choice of single KAMs using logit regression. We use the same controls as in our main model (Table 3). We also control for potential differences across industries and years. Consistent with prior research, we use caliper distance of 0.025 without replacement. Table 6 presents the PSM regression results for LnARL in column (1) and dARL in column (2). The regression results show that Single_KAM is positively (significant at 1%) associated with both LnARL and dARL which suggests that disclosure of more KAMs reduces the audit lag. The results thus support our main findings of the study.



Also, following contemporary studies, we use entropy balancing (EB) to address the endogeneity issue. EB adjusts for systematic and random inequalities in representation in the sample (Hainmueller 2012). Unlike PSM, EB uses the full sample and reweights the sample to create a pseudo population to address the covariate imbalance. We use EB so that the first and second moments of all covariates in a given year are the same between the low KAMs (single KAM) and high KAMs disclosure. When comparing the mean and variance values of all covariates in the entropy-balanced sample between observations of the two subsamples, we find no statistically significant differences in covariate means and variances. Table 6 (column 3 and column 4) presents the regression results for EB sample. The coefficients for both LnARL and dARL models are positive and significant at 10% and 5%, respectively. The results are consistent with our main findings and thus support our hypothesis.

Further, we aim to explore whether the adoption of KAMs has led to a reduction in the overall audit lag across Australian firms. To conduct this analysis, we require an expanded dataset encompassing both pre- and post-adoption periods. We use 1,302 firm-year observations covering a period of eight years from 2013 to 2020 by leveraging the data from the SIRCA database. Australia adopted the standard ISA 701 and enforced it effective from the reporting period ending on or after 15 December 2016 (Rahaman and Chand 2021). Therefore, we created a dummy variable POST_ADOPT as a pre-post identifier where we assigned a code 1 for all the reporting years ending on or after 15 December 2016 and 0 otherwise. We use the following regression model to estimate the coefficient for POST_ADOPT:

$$\begin{aligned}
 \text{ARL}_{it} = & \beta_0 + \beta_1 \text{POST_ADOPT}_{it} \\
 & + \beta_2 \text{ACCHEDEU}_{it} + \beta_3 \text{ACCHTEN}_{it} \\
 & + \beta_4 \text{PWAC}_{it} + \beta_5 \text{ACEXPT}_{it} \\
 & + \beta_6 \text{AUDFEE}_{it} + \beta_7 \text{AUDGEN}_{it} \\
 & + \beta_8 \text{AUDTEN}_{it} + \beta_9 \text{BIG4}_{it} \\
 & + \beta_{10} \text{FRMSIZE}_{it} + \beta_{11} \text{ROA}_{it} \\
 & + \beta_{12} \text{LOSS}_{it} + \beta_{13} \text{DEC_YR}_{it} \\
 & + \sum \text{INDFE} + \sum \text{YEARFE} + \varepsilon_{it}
 \end{aligned} \tag{2}$$

Consistent with prior literature (e.g., Baatwah et al. 2022), we control for audit committee characteristics such as AC chair education level (ACCHEDEU), AC chair tenure (ACCHTEN), proportion of women in AC (PWAC), and financial expertise of the AC (ACEXPT). We also control for auditor characteristics such as audit fees (AUDFEE), auditor gender (AUDGEN), audit firm tenure (AUDTEN), and big 4 auditor (BIG4). Past studies find a significant association between auditor features and audit lag (Abdullatif et al. 2023). In addition, we control

for firm size (FRMSIZE), net income (ROA), reported loss (LOSS), and December yearend (DEC_YR).

Table 7 presents our regression results for KAM_ADOPT. The estimated coefficients are negative and statistically significant ($p < 0.05$) for both of our audit lag measures, LnARL and dARL. Consistent with Baatwah et al. (2022), the results indicate that KAM adoption has significantly reduced the audit lag in Australian firms. This observation corroborates our main findings that KAMs disclosure is negatively associated with audit lag.

Additional analysis

Does audit committee chair education affect the association between KAM and ARL?

According to earlier research, business high-ups' behavior and decisions are influenced by their level of education (Martikainen et al. 2015; Baatwah et al. 2015). A person's capacity for learning, logical thought, and environmental flexibility are all influenced by their level of schooling. A director with greater education is more flexible and self-assured and is more equipped to deal with hurdles and changes (Barker and Mueller 2002). According to Baatwah et al. (2019), AC chairs with accounting competence improve the timeliness of the audit report. According to Finkelstein et al. (2009), CEOs who hold an MBA make different decisions than those who do not. In their investigation of large companies in Europe, Herranz et al. (2020) found that audit committees (AC) with higher levels of expertise (education and experience) meet more frequently and pay lower audit fees. Less audit time and effort put forth by the auditors may be used as justification for lower audit fees. However, Alkebeese et al. (2021) found no correlation between the level of AC education and audit fees. In this context, we conjecture that AC chairs with substantially better education would reach quick choices and aid auditors in doing their work on schedule, resulting in a reduced ARL.

Table 8 reports the findings. We split the sample into two different groups: AC Chair High education (CPA, FCPA, CA, FCA, ACMA, FCMA, ACCA, CIMA, CFA, and/or PhD) and AC Chair Low education (Secondary, Bachelor, BA, MA, and/or MBA). We find a negative association between the *NumKAMs* and LnARL (coefficient -0.015 , $p < 0.10$) in the group of samples where the audit committee chair's education is higher. Consistently, we find the association between *WordsKAMs* and LNARL is negative and statistically significant at the 1% level. Our findings do not suggest any statistically significant association between audit report lag and KAM in the group of samples where the audit committee chair's education background is low. Overall, our findings support the conjecture that the AC chair's



Table 8 AC Chair Higher Education VS. Low Education

Variables	(1) AC chair high education LnARL	(2) AC chair low education LnARL	(3) AC chair high education LnARL	(4) AC chair low education LnARL
NumKAMs	-0.015* (0.009)	-0.023 (0.022)		
WordsKAMs			-0.0001*** (0.000)	0.000 (0.000)
ACCHTEN	0.017 (0.017)	0.063 (0.038)	0.016 (0.017)	0.057 (0.038)
PWAC	0.062 (0.042)	-0.021 (0.089)	0.067 (0.041)	-0.003 (0.089)
ACEXPT	-0.070* (0.036)	0.035 (0.060)	-0.073** (0.036)	0.032 (0.060)
AUDFEE	0.021* (0.012)	0.044** (0.022)	0.022* (0.012)	0.037* (0.022)
AUDGEN	-0.014 (0.020)	-0.093** (0.043)	-0.016 (0.020)	-0.094** (0.044)
AUDTEN	-0.044*** (0.013)	-0.053** (0.026)	-0.041*** (0.013)	-0.050* (0.026)
FRMSIZE	-0.027*** (0.009)	-0.008 (0.020)	-0.023** (0.009)	-0.016 (0.021)
ROA	-0.229* (0.133)	-0.027 (0.228)	-0.245* (0.133)	-0.089 (0.227)
BIG4	-0.021 (0.036)	-0.088 (0.057)	-0.007 (0.035)	-0.079 (0.057)
LOSS	0.028 (0.030)	-0.001 (0.068)	0.033 (0.030)	-0.020 (0.069)
INTANG	-0.039 (0.050)	-0.094 (0.095)	-0.038 (0.050)	-0.109 (0.096)
ACMEET	0.025 (0.025)	-0.085* (0.045)	0.025 (0.025)	-0.070 (0.044)
NAFEE	-0.006 (0.049)	0.034 (0.094)	-0.002 (0.049)	0.049 (0.095)
Constant	4.415*** (0.128)	3.972*** (0.314)	4.315*** (0.135)	4.121*** (0.320)
Observations	459	143	459	143
R-squared	0.232	0.326	0.240	0.320
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Prob > F	0.000	0.001	0.000	0.002

Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

education level impacts the audit report timeliness. AC with a highly educated chair reduces the audit delay. Highly educated members are perhaps more capable of focusing on the most relevant issues and their cascading aspects from the vast amount of available information. Extant literature shows that ACs with higher education and expertise meet more frequently (Herranz et al. 2020), reduces the

likelihood of fraudulent reporting (Lary and Taylor 2012), and improve the quality of the financial reports (Habib and Bhuiyan 2011). Non-executive board members with higher education are more capable of understanding the relevance of disclosure and are more willing to focus on corporate risk reporting (Martikainen et al. 2015). ACs comprised of highly educated members are perhaps more cooperative with



auditors in selecting and disclosing KAMs, thereby reducing the ARL. Our observation is, thus, in line with prior research findings.

Conclusion

Informed by the insights drawn from communication theory, audit risk theory, and institutional theory, and recognizing the dearth of research within the Australian context, this research study addresses two critical aspects of auditing and financial reporting: the impact of KAMs disclosure on audit report lag, and the potential variation in this association between large and small firms. Enhancing transparency through KAMs disclosure is crucial as it allows stakeholders to make more informed decisions by understanding the critical aspects of an audit. Investigating the relationship between KAMs disclosure and audit report lag provides valuable insights into the efficiency and timeliness of the audit process, which is essential for ensuring the usefulness of financial statements. Moreover, considering the differential effects of KAMs disclosure between large and small firms, it is important to recognize the unique challenges and complexities faced by organizations of different sizes. This research aims to shed light on how KAM disclosure affects audit report lag differently in these two contexts, allowing for the development of tailored practices and policies. By examining these research questions, this study contributes to the academic literature on auditing, promotes transparency in financial reporting, and provides practical implications for auditors, regulators, and standard-setting bodies seeking to improve the effectiveness and efficiency of the audit process.

Based on a meticulously hand-collected sample of KAMs information from ASX-listed firms spanning the period of 2018 to 2020, this research study reveals a significant reduction in audit report lag because of KAM disclosure. The results show the significance of transparency in financial reporting by establishing an association between giving thorough information about important audit issues and shorter audit report lag. The study also reveals an intriguing trend: larger firms see a greater impact from KAM disclosure on audit report delays. Findings show that larger firms stand to gain more from disclosing KAMs in decreasing audit report delay. These findings not only add to the body of knowledge on KAM disclosure but also provide auditors and regulators with useful guidance for streamlining audit procedures and fostering financial reporting transparency for all sizes of firms.

Our findings offer important policy implications for standard setters, managers, auditors, investors, and other stakeholders. KAM disclosure is negatively associated with ARL, suggesting that KAM communication is

effective in the Australian context. This may interest the regulators in assessing whether KAM implementation meets the desired outcome. While the disclosure of KAMs has been mandated by the standard ISA 701, the number of issues disclosed and the level of detail provided are ultimately at the discretion of the auditors and largely depend on their professional judgment (Rahaman and Chand 2021). IAASB anticipated that KAMs would facilitate effective communication among auditors, management, and audit committees, which, in turn, would enhance reporting transparency and reduce audit lag (IAASB 2015). Our results are useful for standard setters who are primarily informed by most archival research from developed markets and have traditionally believed that KAM disclosure has negative consequences (Baatwah et al. 2022). However, our study findings reveal that a greater number of KAMs actually result in a shorter audit lag. Standard setters may revise the standard and require the auditors to disclose a minimum number of KAMs. Next, from the perspective of an auditing expert, the findings provide valuable insights to enhance the audit procedure and advance efficient auditing practices. Our study findings would provide auditors with insights into how KAM disclosure affects the timeliness of audit reporting. Auditors who disclose a greater number of KAMs alongside longer audit delays may adjust their audit processes to align with common practices. The study shows the value of openness and the necessity for auditors to consider the difficulties various-sized firms encounter. The larger effect of KAM disclosure on audit report delay in big firms points to specialized strategies for maximizing effectiveness. These consequences increase auditing standards and procedures, increasing the accuracy and clarity of financial reporting to the advantage of both investors and auditors.

Further, corporate managers and investors can now evaluate the timeliness of audit reports by comparing the number of significant matters disclosed in their respective audit reports, as well as considering the size of the respective companies. Investors benefit from KAMs disclosure because it increases financial reporting's transparency and gives investors the knowledge they need to make wise investment choices. The study demonstrates a significant decrease in audit report lag because of KAMs disclosure, demonstrating increased audit process efficiency and timely completion. While investors typically view a higher number of KAMs as an indicator of firm risk (Rahaman and Chand 2021), they may now consider it a sign of prompt reporting when evaluating alternative investment options. Investors who depend on current financial information to assess investment possibilities will find this material useful. In addition, corporate boards aiming to expedite audit completion and the early issuance of financial reports, while prioritizing



effective KAM communication, may now be inclined to appoint individuals with higher levels of education as Audit Committee chairs. Thus, this study highlights the importance of KAMs disclosure for everyone involved in the financial reporting process and offers insightful information about how it affects audit report delay.

Although our research has substantial implications for investors and the auditing sector, it is crucial to be cautious when extrapolating the findings. The top 300 ASX firms in Australia, which provide a mix of growing and established firms, are the only 300 firms included in the research. However, a larger sample that includes low-performing and family-owned firms may yield divergent results. Additionally, the study did not account for unquantifiable factors such as auditor judgments and the client-auditor relationship in estimating the influence of KAMs disclosure on audit report lag. Furthermore, the study did not consider the readability of KAM disclosure and its impact on audit report lag, which could be an area of investigation in future studies conducted in different jurisdictions. Acknowledging and considering these limitations when applying the findings to other contexts or making broader conclusions is important. Future research can build upon these limitations to provide a more comprehensive understanding of the relationship between KAM disclosure and audit report lag.

Appendix 1: Definitions of variables employed in the study

Variables	Definition
<i>Dependent Variable</i>	
$LnARL_{it}$	Natural logarithm of the number of days between the company year-end date and the audit report date
$dARL_{it}$	Number of days between the company year-end date and the audit report date
<i>Independent Variable</i>	
$NumKAMs_{it}$	Total number of KAMs reported in the audit report
$WordKAMs_{it}$	Total number of words used to describe KAMs
<i>Control Variables</i>	
$PWAC_{it}$	Ratio of females in the audit committee, i.e., number of females in the audit committee divided by total members in the audit committee
$ACCHTEN_{it}$	Natural logarithm of the number of months the AC chair has served the AC
$ACCHEDU_{it}$	AC Education index ranges from 1 to 5 (1 if the highest level of education in elementary school to 5 if the highest level is a PhD)

Variables	Definition
$ACEXPT_{it}$	Number of financial experts in the AC divided by total members in the AC. Financial expert is someone having professional qualification(s) and/or experience as a principal or chief accounting officer, auditor, public accountant, principal or chief financial officer, controller; and/or experience as a CEO or president of a for-profit firm (Bhuiyan and D'Costa, 2020)
$AUDFEE_{it}$	Natural logarithm of the statutory audit fee reported in the financial statements
$AUDGEN_{it}$	A dummy variable coded 1 if the audit partner was a female, 0 otherwise
$AUDTEN_{it}$	Natural logarithm of the number of years the current audit firm is auditing the company
$FRMSIZE_{it}$	Natural logarithm of the total assets of the company
ROA_{it}	The ratio of earnings before taxes to total assets
$BIG4_{it}$	A dummy variable coded 1 if audited by a BIG-4 firm; 0 otherwise
$ACMEET_{it}$	Natural logarithm of the number of AC meetings held during the year
$INTANG_{it}$	Total intangible assets scaled by total assets of the company
$LOSS_{it}$	A dummy variable coded 1 if the firm has negative profit, 0 otherwise
$NAFEE_{it}$	Ratio of non-audit fees to total fees
$POST_ADOPT_{it}$	A dummy variable coded 1 for all the reporting years ended on or after 15 December 2016 and 0 otherwise
DEC_YR_{it}	A dummy variable coded 1 if the yearend is in December, 0 otherwise
$INDFE \& YEARFE$	Industry fixed effects (where industry identifier dummies such as 1, 2, 3, 4... and 10 are used) and year-fixed effects (2018, 2019 and 2020)
it	i is the subscript for company; t is the subscript for year
β_0	Intercept
ϵ	Error term

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Declarations

Conflict of interest The author declares that they have no conflict of interest.

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