International Journal of
Financial Studies

Article

The Determinants and Impact of Key Audit Matters Disclosure in the Auditor's Report

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Abstract: We investigate the determinants of key audit matters (KAMs) in the auditor's report. In particular, we examine the impact of overlapped audit committee (AC) directors on the quantity of KAMs disclosure. We also examine the consequences of KAMs disclosure. We test to see if the quantity of KAMs disclosure affects audit quality. Oman was among the early adopters of KAMs disclosure requirement. We, therefore, use the content analysis approach to count the number of KAMs disclosed in auditor reports of financial firms listed on the Muscat Stock Market for the period of 2014 to 2019. We use regression models to test our hypotheses. Overlapped audit committee directors are measured as the ratio of AC members who also serve on other committees within the same firm. We use audit fees as a proxy for audit quality. We find that overlapped AC membership positively affects KAMs disclosure due to the knowledge spillover that results from serving on multiple committees. We also find that KAMs disclosure positively affects the quality of external auditing. We make an important and novel contribution to the literature on financial reporting, auditing and corporate governance. We add to the literature by providing the first empirical evidence of the impact of overlapped AC members on KAMs disclosure and the impact of KAMs on the quality of external auditing. The findings provide important policy implications to exceedingly appoint overlapped members on AC to enhance the level of KAMs disclosure, which leads to an improvement in audit quality.

Keywords: key audit matters; Oman; overlapped AC membership; audit quality

Citation: Al Lawati, Hidaya, and Khaled Hussainey. 2022. The Determinants and Impact of Key Audit Matters Disclosure in the Auditor's Report. *International Journal of Financial Studies* 10: 107. https://doi.org/10.3390/ijfs10040107

Academic Editor: Sabri Boubaker

Received: 22 October 2022
Accepted: 18 November 2022
Published: 23 November 2022

1. Introduction

Audit reports were limited in their value regarding audit opinions and the existence of an expectation gap, and they were viewed as providing little informative value (Gutierrez et al. 2018). To overcome this issue, many regulators around the world implemented several reforms to increase the value and relevance of these reports. For instance, in 2013, the UK required companies listed on the London Stock Exchange to disclose the risks of material misstatements (RMMs). Another example is the provision of the International Auditing and Assurance Standards Board (IAASB) regarding disclosing key audit matters (KAMs) in 2016, and the obligation of the Public Company Accounting Oversight Board (PCAOB) to disclose critical audit matters (CAMs) in the USA in 2019.

We investigate the determinants and consequences of KAMs within the recent auditing reporting changes in the context of Oman. In particular, we investigate the effect of overlapping AC (OvAC) membership on KAMs. We also test whether KAMs affect audit quality (proxied by audit fees). The literature states that extended audit reports are prone to enhancing an auditor's accountability and professional skepticism and reduce information asymmetry, which will result in improving audit quality (International Auditing and Assurance Standards Board (IAASB) 2013a; Peecher et al. 2013; Li et al. 2019). Others state that the new requirement for extended audit reports may place higher pressure on auditors, which will ultimately have a negative impact on audit quality (increasing audit fees) (KPMG

2015; Li et al. 2019). This could be due to more resources and time needed. However, since the expanded audit reports with RMMs or KAMs were launched, researchers such as Wei et al. (2017), Gutierrez et al. (2018), Almulla and Bradbury (2019), Bédard et al. (2019), and Reid et al. (2019) have provided mixed evidence on whether the extended audit reports enhance audit quality.

We offer several contributions in our paper. First, we respond to a recent call by Kitiwong and Sarapaivanich (2020) to explore the determinants of auditors' disclosure of KAMs. To the best of our knowledge, we provide new evidence on the potential impact of overlapping AC membership on KAMs disclosure. Several researchers have investigated the relationship between overlapping AC and FRQ and voluntary disclosure (such as Chandar et al. 2012; Kalelkar 2017; Al Lawati and Hussainey 2020). However, no researcher has examined whether OvAC affects KAMs. We believe that OvAC can contribute to AC effectiveness and that this will lead to closer collaboration with the external auditor due to the thorough understanding and knowledge spillover resulting from serving on multiple committees with the company. An effective AC should incentivise external auditors to disclose more informative KAMs in their reports (Velte 2018). We also explore the consequence of the new auditor reporting requirements (e.g., their impact on audit quality). We respond to a call by Almulla and Bradbury (2019), who highlighted that using discretionary accruals may not be adequate as a proxy for audit quality. Hence, we use audit fees as a measure of audit quality following Sultana et al. (2019). Second, we offer a theoretical contribution by integrating agency, busyness and stakeholder theories in explaining the determinants and consequences of KAMs.

Third, we offer a methodological contribution by examining the period of 2014 to 2019 in Omani financial institution context, encompassing before and after the revised version of the CG Code was introduced in 2016 that mandated the listed financial companies to disclose KAMs in the extended auditor reports (Capital Market Authority (CMA) 2015). Oman was characterised by "the immaturity of the legal system in terms of protecting the wealth of minority shareholders, and a high level of ownership concentration contribute to weak CG effectiveness" (Al Lawati et al. 2021, p. 4). This led to further concentration on internal/external monitoring mechanisms and the emphasising of the role of AC in overseeing and controlling FRQ and external auditing processes, and also on protecting minority shareholders' interests (Al Lawati et al. 2021). The new revised CG Code emphasizes the overlapping matter by introducing clauses to prohibit the AC chair from sitting on multiple committees. However, the same does not apply to the other AC members (Al Lawati and Hussainey 2020). This gives the code a uniqueness that does not exist in other countries around the world. Oman provides an interesting context in which to examine the determinants and consequences of KAMs, as it possesses unique institutional characteristics that are different from other countries.

In our analysis, we consider 216 firm-year observations. We find that OvAC has a positive impact on KAMs disclosure. This is due to the detailed and comprehensive understanding of these members through serving on different committees that coordinate with external auditors in disclosing the KAMs to the stakeholders to reduce information asymmetry and increase the transparency and accountability of their role. We also find that KAMs disclosure is positively increasing the audit quality. This indicates that the new regime of auditing reporting gives more liability to the auditors in requiring them to disclose more information. They will be responsible for any breach of duty and care in KAMs disclosure. Therefore, due to the increase in the litigation risk, our analysis shows an increase in the audit fees since the new audit reporting adoption.

The remainder of the paper is structured as follows. Section 2 discusses the institution setting. We review the literature and develop the research hypotheses in Section 3. We discuss our method in Section 4. Our analysis is presented in Section 5. Section 6 discusses some additional analyses. Section 7 concludes the paper.

2. Institutional Background: The Omani Context

Oman provides a unique country context within which capital market regulators have adopted the leading CG practices that meet international standards (Gebrayel et al. 2018). It was the first country in the Middle East and North Africa (MENA) to issue a CG code for listed companies in 2002 (Baatwah et al. 2015). It introduced CG standards and guidelines for improving the legal provisions contained in Omani corporate laws. The code emphasised establishing AC and highlighted its responsibility in overseeing management behaviour and reviewing FRQ (Gebrayel et al. 2018).

The Omani capital market has experienced several scandals which include: Oman National Investment Company Holding SAOG (ONIC), and after the implementation of the new version of CG Code in 2015, Moore Stephens (International Audit Firm), and KPMG (Big 4 Audit Firms). The literature shows that such scandals could be due to the ineffective governance system and low FRQ (Al-Matari 2019). Al-Matari (2019) suggests that firms are not being transparent in publishing relevant information, specifically when it relates to their ineffective internal controls and the quality of AC. This emphasises the need for better and more effective governance standards and more provisions for transparency and disclosure quality (Al-Matari 2019). Al-Matari (2019) also calls for the need to evaluate the effectiveness of CG code.

The Omani government has taking significant steps in response to the issue of the weak CG system and low levels of disclosure. First, the government reviewed and updated the CG code several times (in 2003, 2010, 2012 and finally 2015) with more detailed requirements to cope with international development and attract international investors (Capital Market Authority (CMA) 2015). A new version of the Omani CG code was introduced in 2015 that emphasises the role of AC in overseeing the financial reporting process, including the responsibility for voluntary disclosure practices, contributing to higher FRQ and reducing information asymmetry. The new code states that AC members are responsible for assessing the integrity of internal control and the framework of risk management for a company; therefore, it sets some standards for their characteristics (Capital Market Authority (CMA) 2015). For instance, the code states that the majority of AC members are required to be independent (including the AC chair). At least one member of the AC should have accounting or financial expertise.

Additionally, the code introduces a distinctive rule that prohibits the AC chair's membership in other committees in the same company (Capital Market Authority (CMA) 2015). It also sets out a requirement for the existence of nomination and remuneration/compensation committees, which would greatly increase the chances of overlapping AC members across these committees (Annuar and Abdul Rashid 2015).

The majority of studies examining the impact of overlapping AC members on FRQ have been conducted in developed countries, such as the US and Germany (e.g., Kalelkar 2017; Velte 2017). In order to overcome the challenges associated with CG and FRQ, align with changes regionally and globally, and attract foreign investors, Oman Vision 2040 was introduced in 2019 through a royal decree that gave significant importance to disclosure and transparency (Oman Vision 2040 2019). Aligning with that strategy, CMA also recommends all companies to be transparent and exercise their diligence in disclosing the needed information by regulators, shareholders and investors in a timely manner, to enable them to make the right investment decisions (Capital Market Authority (CMA) 2015).

We focus on examining the financial sector in our study. Financial institutions play a major role in financial inclusion for the economic development of Oman (Muscat Securities Market (MSM) 2019). The financial sector is the biggest sector in Omani industry, indicated by market capitalisation, and it has its own unique characteristics (Muscat Securities Market (MSM) 2019). It is extensively regulated by two key governance bodies, CMA and the Central Bank of Oman (CBO) (Muscat Securities Market (MSM) 2019), resulting in stakeholder satisfaction through the greater disclosure of voluntary information (Al-Hadi et al. 2019). The financial sector contributes to the economic growth by providing large amounts of net profit and cashflow to the country (Muscat Securities Market (MSM) 2019).

Moreover, the non-financial sector is highly dependent on it in order to satisfy its financial needs. As the Omani government is diversifying the economy and deviating from solely depending on the oil and gas industry, Oman Vision 2040 2019 (2019) has been inaugurated with a strong emphasis on the financial sector. The emphasis of the Oman Vision 2040 on the financial sector is due to its major role in generating the required funds for the other emerging sectors, such as tourism, agriculture, and education.

Finally, it is worthwhile to mention that Omani firms are more guided by Islamic economic guidelines. However, CAM and CBO require that all Omani financial institutions use International Financial Reporting Standards (IFRS) rather than the Islamic accounting standards: the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI).

3. Relevant Literature and Research Hypotheses

3.1. Prior Research on Overlapped AC Membership

Overlapping AC membership in the boardroom can be explained by two theories, agency and busyness (Habib and Bhuiyan 2016; Kalelkar 2017; Al Lawati and Hussainey 2020). Based on agency theory, the literature reports various positive results of OvAC on boards: more effective communication capabilities, increased motivations to ask critical questions, and better collective group thinking due to knowledge spillover resulting from serving on multiple committees (Habib and Bhuiyan 2016; Al Lawati and Hussainey 2020). This could lead to increased FRQ (proxied by discretionary accruals and audit fees) and voluntary disclosure (Chandar et al. 2012; Velte 2017; Al Lawati and Hussainey 2020), which in turn will reduce information asymmetry between management and shareholders. However, busyness theory argues that when corporate directors are overloaded, they will be unable to effectively monitor their companies, having limited time to scrutinize a firm's operation and strategic decisions (Elnahass et al. 2020). This could negatively affect corporate performance, increase risk-taking behaviour (Ferris et al. 2003), increase agency problems (Core et al. 1999), and negatively affect FRQ (Chang et al. 2011; Liao and Hsu 2013).

Decision-making could be more effective with overlapped AC directors as they possess comprehensive and detailed knowledge about different activities undertaken by multiple committees within a company, which leads them to exercise their power in encouraging the board to disclose the relevant information necessary for stakeholders in helping them in their decision-making process. Moreover, the main role of AC is to give recommendations to the board about external auditors, which will put them in the right position to give the external auditors all the necessary information to disclose the KAMs required by the users to be transparent and accountable.

The literature also examines the impact of AC on audit quality. A key role of AC is to help external auditors as part of their oversight process over financial reporting by involving them in the audit scope and audit planning process (Sultana et al. 2019). If the regulations and standards of auditing are held to high standards, external auditors will convey high-quality financial disclosures to stakeholders (Elamer et al. 2021). Stakeholder and agency theories suggest that stakeholders demand a firm's audit process for financial reporting and also demand a modified opinion in the event of material failures by the external auditor (Velte 2018). "However, if the external auditor is dependent on management, he may publish a 'clean' (unmodified) opinion, thus contradicting the interests of the stakeholders" (Velte 2018, p. 749). Furthermore, due to the vital support external auditors provide in assisting AC in their monitoring responsibilities, ACs demand strict external audits (Aldamen et al. 2018). "Effective ACs can impact audit fees resulting from such interactions by (1) broadening the scope of the audit engagement in an overall effort to increase audit quality and therefore, the FRQ or (2) reducing the audit risk to the auditor" (Sultana et al. 2019, p. 951).

High-quality ACs have greater inducements to safeguard additional audit efforts from the external auditor to protect their reputational capital and to reduce the litigation risks. As such, the characteristics of AC directors should have vital impacts on the degree of collaboration between the two parties, the external auditor and the AC. One stream of literature reports a positive relationship between AC and audit fees, arguing that high-quality ACs seek greater audit efforts, resulting in higher audit fees (e.g., Lee and Mande 2005; Boo and Sharma 2008). This is because a high-quality auditor provides strong assurance of the quality of accounting information (Miah et al. Forthcoming). However, another stream of studies documents a negative relationship (e.g., Krishnan and Visvanathan 2009). This could be because highly effective ACs have less demand for increased audit effort since they can effectively monitor some of the FRQ processes themselves.

Recent studies have not concentrated on the determinants of KAMs disclosures, such as the impact of overlapping AC on KAMs. Our paper is the first to use AC as a determinant of KAMs in the literature. Instead, recent studies have focused on the consequences of KAMs disclosures, which we highlight later in the paper (e.g., Gimbar et al. 2016; Gutierrez et al. 2018; Reid et al. 2019).

3.2. Extended Audit Report with KAMs

During the past two decades, continuous provisions and reforms have been applied to audit reports (PwC 2015). For instance, in 2003, French auditing standards imposed a provision on all listed companies within the French stock market to disclose JOAs. This information is critical for the annual report users to clearly understand the financial statements (Bédard et al. 2019). Similarly, in 2013, the disclosure of RMMs was mandated for UK companies listed on the London Stock Exchange (Gutierrez et al. 2018). The IAASB also introduced the new International Standard on Auditing (ISA) 701, which relates to disclosing KAMs in extended audit reports (KAMs are equivalent to JOAs and RMMs) (Kitiwong and Sarapaivanich 2020). Per the new standard, auditors are required to disclose vital audit matters, in their professional opinion, regarding financial statements for years ending on or after 15 December 2016 (International Auditing and Assurance Standards Board (IAASB) 2015). Since Oman is trying to implement the best practice of CG Code in its financial institutions listed on the Muscat Securities Market (MSM), it requires companies to adopt ISA 701 standard for the audit of financial statements for years ending in 2016 and thereafter.

These KAMs disclosures are considered the most significant risk matters of material misstatements conveyed to users (Velte 2018). This type of disclosure leads to the improved quality of audit reports by increasing their communicative and informative value, which will help users to better understand the roles and responsibilities of auditors (Christensen et al. 2014; Sirois et al. 2018; Gutierrez et al. 2018; Sirois et al. 2018; Bédard et al. 2019). Additionally, these disclosures will make the judgements that are made by auditors and management more transparent and reasonable to users (Gutierrez et al. 2018) by reducing the information asymmetry between insider and outsider parties (Bédard et al. 2019).

3.3. Hypotheses Development

3.3.1. Impact of OvAC on KAMs Disclosures

In our paper, we will integrate the two recent accounting topics, OvAC and KAMs disclosure, in our empirical study. As mentioned earlier, the literature states that OvAC membership should have a positive impact on the decision-making process on the board due to their extended network channels and the thorough knowledge they possess. These members will lower the information asymmetry and better align the interests of both stakeholders and managers by disclosing all relevant information required by the users (Al Lawati and Hussainey 2020). The potential positive impact of OvAC on disclosure could be explained by the knowledge spillover effect.

The concept of knowledge spillover refers to "the process of knowledge and technology transfer when there are differences in the knowledge capacities between different regions and industries" (Xu et al. 2019, p. 83). This concept has been widely used in accounting and finance literature (see, for example, Chen et al. 2022; Chin et al. 2006). Based on agency theory, overlapping AC membership results in knowledge spillover and information exchange channels between board committees that could lead firms to reduce uncertainties and act as effective monitoring mechanisms on behalf of shareholders (Chandar et al. 2012). It is also argued that AC members sitting on other committees may influence how effectively they perform their roles in a positive way and enable them to enhance financial reporting quality (Chandar et al. 2012; Al-Dhamari et al. 2020) by gaining expertise due to knowledge spillovers (Brandes et al. 2016; Velte 2017).

Empirical research finds that a large number of multiple directorships on boards may enhance the knowledge of directors and strengthen their experience (Li and Ang 2000; Cook and Wang 2011; Field et al. 2013). Knowledge spillover resulted from overlapped directors who aligned the objectives and enhanced the coordination between remuneration committee and AC (Hermanson et al. 2012). The literature also finds that overlapping AC membership has a positive impact on financial reporting quality due to the greater level of experience and knowledge spillover that resulted from overlapping, which enhances AC monitoring quality (Chandar et al. 2012; Velte 2017; Kalelkar 2017). Habib and Bhuiyan (2016) argue and find that the presence of overlapped AC members on many committees leads to increased expertise and knowledge spillovers that can be utilised in better monitoring the management and increasing firms' FRQ.

According to Laux and Laux's (2009) theoretical model, overlapping AC membership is linked with knowledge spillovers, extensive multiple experience, and wider network channels, which are useful for the AC's vital responsibility in monitoring FRQ. However, the results contradict Chang et al. (2011), Liao and Hsu (2013), Faleye et al. (2011), and Tanyi and Smith (2015), who find that overlapping AC members negatively affect a director's monitoring quality, which reduces a firm's FRQ. This is due to the overload these members commit to and the limited time they are ending up with, which hinders their monitoring role.

Moreover, Al-Dhamari et al. (2020) and Jiang (2020) find a positive association between overlapped AC members and high accounting information quality and lower operating risk. "As KAMs are closely discussed between the AC and the external auditor during the audit" (Velte 2018, p. 750), the level of collaboration between these two parties should be enhanced by overlapped members. OvAC positively contributes to stakeholders' informational interests by the strict monitoring of financial reporting, which leads to the release of relevant disclosures to stakeholders. Therefore, it is expected that firms' disclosure level will be enhanced when the average number of overlapped AC members is higher. Based on agency and stakeholder theories, our first hypothesis is formulated as follows:

H1. *OvAC memberships increase the KAMs disclosures in the audit report.*

3.3.2. KAMs Disclosures and Audit Quality

The new requirement of audit report disclosures is likely to improve the transparency and accountability of the auditor role, which will lead to improving the audit quality of the firm (Li et al. 2019). Following the changes, auditors will demonstrate greater focus on key audit risks, which could play a great role in enhancing audit quality and audit fees due to the greater amount of resources and time spent on analysing the key audit risks exposed by the firm (Vanstraelen et al. 2011; Reid et al. 2019). One of the most important changes to the auditor's reports is disclosing KAMs. It is argued that KAMs could encourage communications between the external auditor and those charged with board of directors (e.g., AC members) (EY 2015; Deloitte 2015), which will eventually improve audit quality. In a recent study, Elmarzouky et al. (2022) provide evidence that KAMs disclosure positively impact total audit fees.

Some studies, however, find that the new audit reporting disclosures are not incrementally important to the market and have no direct impact on audit quality (Lennox et al. 2018; Gutierrez et al. 2018). Moreover, the literature states that some auditors could end up having limited time to perform their regular duties due to the allocation of more time needed to abide by with the new reporting standards (Li et al. 2019). Hence, auditors may impair audit quality due to increased time pressure (KPMG 2015). Bédard et al. (2019)

find that JOA disclosures had no impact on improving audit quality in the first year of implementation and negatively impacted audit quality in the years after. Based on the agency and stakeholder theories, and according to the earlier arguments and mixed results of the previous literature, we formulate our second hypothesis as follows:

H2. *There is an impact of KAMs disclosures on the audit quality.*

4. Research Method

4.1. Data, Sample and Regression Models

Our sample covers financial institutions listed on the MSM in Oman from 2014 to 2019. We chose this period because of the revised CG Code that was introduced in 2016 in Oman. Additionally, the significant changes to auditor reports were effectively started from the year ending 2016, which allows us to analyse the results pre and post the implementation of the new standards. We focus on financial institutions as they have the highest standards for transparent disclosures regarding auditing and CG requirements within the MSM in Oman (Capital Market Authority (CMA) 2015). The data were collected from two sources: CG and KAMs variables are manually collected from the companies' annual reports and audit reports, which are published on the MSM website, and the Bloomberg database was used for the financial variables. Our sample involves financial sub-sectors: 8 banks; 10 insurance companies, 5 financial services companies, 12 investment companies and 1 real estate company, which totalled 36 companies over 6 years summed to 216 firm-year observations.

We chose the financial sector "as it is heavily regulated by two bodies, namely the CMA and the Central Bank of Oman (CBO), resulting in more disclosure to please different stakeholders and attract new investments and also considered to be the backbone of whole economy in general and non-financial sector in particular" (Al Lawati et al. 2021, p. 12).

OLS regression analyses are carried out to examine the determinants and consequences of KAMs disclosure.

We use Model (1) to investigate the influence of overlapping AC membership on KAMs disclosure:

$$\begin{gathered}\text{KAMs} = \alpha + \beta 1\ \text{OvAC} + \beta 2\ \text{ACMeet} + \beta 3\ \text{ACSize} + \beta 4\ \text{Total Asset} + \beta 5\ \text{LEV} \\ + \beta 6\ \text{ROE} + \beta 7\ \text{Big4} + \text{Industry fixed effect} + \text{Year fixed effect} + \text{e}\end{gathered} \tag{1}$$

where KAMs refer to the number of KAMs disclosed in the company's audit report; OvAC refers to the ratio of AC members serving on other committees within the same organisation; ACMeet refers to the number of AC meetings; ACSize refers to the number of AC members; Total Asset refers to the firm size; LEV refers to the leverage of the firm; ROE refers to firm profitability; Big4 refers to the external auditor quality.

We use Model (2) to test the impact of KAMs disclosure on audit quality:

$$\begin{gathered}\text{Audit Quality} = \alpha + \beta 1\ \text{KAMs} + \beta 2\ \text{ACMeet} + \beta 3\ \text{ACSize} + \beta 4\ \text{Total Asset} + \\ \beta 5\ \text{LEV} + \beta 6\ \text{ROE} + \beta 7\ \text{Big4} + \text{Industry fixed effect} + \text{Year fixed effect} + \text{e}\end{gathered} \tag{2}$$

where Audit quality refers to the natural logarithm of audit fees paid to the external auditors; KAMs is the number of KAMs disclosed in the company's audit report; ACMeet refers to the number of AC meetings; ACSize refers to the number of AC members; Total Asset is the firm size; LEV is the firm leverage; ROE is the firm profitability; Big4 refers to the external auditor quality.

4.2. Variables: Measurement and Descriptions

4.2.1. The Dependent Variable for Model 1: KAMs Disclosures

KAMs is the number of KAMs disclosed in the company's audit reports (Bédard et al. 2019). In 2009, the IAASB revised the section on the structure and quality of the audit in the International Standards for Auditing (ISA). Subsequently, IAASB introduced the new standard, "ISA 701: *Communicating Key Audit Matters in the Independent Auditor's Report*."

This standard mandates that auditors report KAMs as one of the main components to be disclosed in the auditor report. The IAASB defines KAMs in the ISA 701 as: "*Those matters that, in the auditor's professional judgment, were of most significance in the audit of the financial statements of the current period. Key audit matters are selected from matters communicated with those charged with governance*" (ISA 701: Para 8). The introduction of ISA 701 provides relevant and useful information to the capital market, minimises uncertainty regarding company performance, and encourages understanding of financial statements (ACCA 2018). The disclosure of KAMs makes auditors' reports more transparent and informative, thus reducing information asymmetry and improving the FRQ (Velte and Issa 2019).

Since the introduction of KAMs, an important question has been raised: what types of KAMs are reported in auditors' reports? The UK Financial Reporting Council (FRC) found that on average, UK companies had three to four KAMs in the first year of the implementation of ISA 701. Oil and gas companies announced an excessive number of KAMs, with an average of seven KAMs during the first year due to economic uncertainty in the sector. The most common issues reported in KAMs across industries are revenue accounting, provision, impairment of goodwill, forecasting, taxes, and special transactions such as acquisition and disposal (ACCA 2018).

In Oman, companies reported an average of two or three KAMs, and the most common topics are related to the impairment of receivables, revenue recognition, the valuation of inventories, intangible assets, and the impairment of goodwill.

4.2.2. Independent Variable: OvAC Membership

The independent variable of model 1 is the overlapping members between the AC and other board committees, such as risk, remuneration, nomination, and executive committees. Overlapping AC membership is measured as the number of AC members who also sit on other committees within the same company at the same time, divided by the size of the AC (OvAC) (Al Lawati and Hussainey 2020).

4.2.3. The Dependent Variable for Model 2: Audit Quality

Audit quality is measured as the natural logarithm of audit fees paid by a company to its external auditor (Gutierrez et al. 2018; Bédard et al. 2019; Sultana et al. 2019; Saeed et al. Forthcoming). Audit fees reflect the external auditor effort, which in turn affects the quality of the audit work performed (Saeed et al. Forthcoming).

The use of audit fees as a proxy for audit quality in the empirical audit literature is justified by a number of arguments. In line with signalling theory, price could signal a differentiation in levels of quality (Wolinsky 1983). DeAngelo (1981) argues that big auditors that earn higher fees are more likely to have more resources to invest compared with non-big 4 auditors. Hence, they contribute more to improving the quality of their work. Audit fee-based measures literature argues that high audit fees are associated with increased audit effort and cost. Companies pay higher audit fees to compensate for auditors' reputations as well as auditors' industry specialization and the overall service quality (Simunic 1980; Ferguson and Stokes 2002; Craswell 1999; Hoitash et al. 2007).

4.2.4. Independent Variable: KAMs Disclosures

As was mentioned earlier, KAMs disclosures refer to the number of KAMs disclosed in the audit report.

4.2.5. Control Variables for Both Models

Following the KAMs literature (Bédard et al. 2019; Li et al. 2019; Reid et al. 2019), we control for firm characteristics that affect corporate disclosure practices such as firm profitability (Return on Equity [ROE]), firm leverage [LEV] (total debt/total assets), firm size [LogAsset] measured by the natural logarithm of total assets, and [Big 4] measured as a dichotomous variable that is one if audited by a Big4 firm and otherwise zero. Following Al Lawati and Hussainey (2020), we also control for some CG variables such as AC size

[ACSize], which refers to the number of members in the AC, and AC meeting [ACMeet], which refers to the number of meetings held by the AC.

5. Results

5.1. Descriptive Statistics

Our descriptive analysis is shown in Table 1. The analysis shows variability in the KAMs disclosure. On average, the sampled companies disclose about 1 significant KAMs issue in their extended audit report annually. The maximum number of KAMs found in one of the financial firms is 5, with a minimum of zero. This is very similar to what has been disclosed by Malaysian companies, with a maximum of 7 KAMs and a minimum of 1 (Abu and Jaffar 2020). The analysis shows how the sampled companies implement the new requirement and disclosing a good number of KAMs in their audit report. Different types of KAMs are reported in the auditor's reports in Omani financial institutions. These include: revenue recognitions, impact assessment of IFRS 9 and related disclosure, impairment of goodwill and related carrying value of the investment, impairment of loans, advances and financing activities for customers, valuation and impairment of available for sale investment, derivative liabilities, investment of financial instruments, valuation of inventories, estimated used in calculation of insurance funds and deferred taxes.

Table 1. Descriptive Statistics.

Variables	Mean	Std. Dev.	Min	Max
KAMs	0.97	1.18	0.00	5.00
OvAC	0.36	0.32	0.00	1.00
ACMeet	4.82	1.60	0.00	12.00
ACSize	3.38	0.58	2.00	6.00
LEVTDTA	16.38	21.88	0.00	69.58
ROE	2.21	31.93	−251.20	37.41
Big4	0.89	0.31	0.00	1.00
LogAsset	2.05	0.92	−0.40	4.10
LogFee	4.27	0.46	3.43	5.48

See Section 4 for variable definitions.

Moreover, the results show that overlapping AC membership in Omani financial companies is on average 37% of the total board composition, with a maximum of 100% and a minimum of 0. This means that out of every ten members, approximately four AC members serve on different committees in the same company.

Regarding the control variables, the average AC size is four directors, with a maximum of six directors and a minimum of two directors. The Omani CG Code states that at least 3 directors must be appointed to an AC, which means that not all the sampled companies follow this rule. Furthermore, concerning AC meetings frequency, on average five annual meetings are held, with a maximum of twelve and a minimum of zero. We also noted that almost 90% of the sampled companies are audited by one of the big 4 audit firm (Deloitte, Ernst and Young, KPMG, or PricewaterhouseCoopers). This indicates that Omani financial institutions are keen to increase their reputation in the stock market by improving financial reporting quality through the appointment of big 4 auditors (Al Lawati et al. 2021).

5.2. Correlation Analysis

Our correlation analysis is shown in Table 2. The table shows a positive correlation between audit quality (logFee) and KAMs disclosure (significant at 0.05), overlapped AC membership (significant at 0.01), AC meetings frequency (significant at 0.01), total assets (significant at 0.01), profitability (significant at 0.01), and Big 4 (significant at 0.01).

Table 2. Pearson's Correlation Analysis.

	Variables	1	2	3	4	5	6	7	8	9
1	KAMs	1								
2	OvAC (%)	0.007	1							
3	ACMeet	0.238 **	0.256 **	1						
4	ACSize	0.016	−0.052	0.008	1					
5	LogAsset	0.139 *	0.227 **	0.367 **	0.065	1				
6	LogFee	0.138 *	0.289 **	0.429 **	0.125	0.865 **	1			
7	ROE%	0.079	0.016	0.104	0.113	0.355 **	0.242 **	1		
8	LEV (TD/TA)	0.014	−0.189 **	−0.011	0.021	0.171 *	−0.002	0.090	1	
9	Big 4	−0.085	0.132	0.196 **	0.047	0.444 **	0.441 **	0.381 **	0.200 **	1

* indicates that the correlation is significant at the 0.05 level (2-tailed). ** indicates that the correlation is significant at the 0.01 level (2-tailed).

The correlations between all variables are less than 0.8, which indicates that we do not have a multicollinearity problem (Gujarati and Porter 2009). The variance inflation factors (VIFs) are also checked and are all less than the critical value of 10, as suggested by Tabachnick and Fidell (2013). This suggests that multicollinearity is not a problem for our analysis.

5.3. Empirical Analysis

Table 3 reports our empirical findings. Model (1) tests hypothesis 1, which investigates the impact of the overlapped AC membership on KAMs disclosures. Model (2) tests hypothesis 2, which studies the influence of KAMs disclosure on audit quality of the firms. Both models are significant, and their Prob > F values are below 0.01, reflecting their validity.

Table 3. Regression Analysis.

	Model 1 KAMs			Model 2 Audit Quality	
Variables	**Coefficients**	**Significance**	**Variables**	**Coefficients**	**Significance**
OvAC	0.37 *	0.08	KAMs	0.02 *	0.10
ACMeet	0.08 **	0.05	ACMeet	0.02 **	0.02
ACSize	0.06	0.54	ACSize	0.07 ***	0.00
LogAsset	0.64 ***	0.00	LogAsset	0.24 ***	0.00
LEVTDTA	0.01	0.27	LEVTDTA	0.002 *	0.06
ROE	0.004 *	0.08	ROE	−0.001 **	0.04
Big4	−1.04 ***	0.00	Big4	0.19 ***	0.00
_cons	−2.15	0.00	_cons	3.56	0.00
Industry Effect	Yes		Industry Effect	Yes	
Years Effect	Yes		Years Effect	Yes	
No. of Obs	216		No. of Obs	216	
Prob > F	0		Prob > F	0	
R-squared	0.50		R-squared	0.86	

* coefficient is significant at 10%; ** coefficient is significant at 5%; *** coefficient is significant at 1%; See Section 4 for variable definitions.

In model (1), the estimated coefficient of OvAC is positive and statistically significant with KAMs disclosure at the confidence level of 90%, consistent with agency theory. Hence, the first hypothesis (H1) is accepted. Based on agency theory, having AC members serving on multiple committees would enable them to acquire thorough and comprehensive knowledge across the firm, which would significantly assist in the collaboration process with the external auditors, leading to an improvement in the KAMs disclosures in the extended audit reports. The finding is in line with the results of previous studies (e.g., Chandar et al. 2012; Habib and Bhuiyan 2016; Kalelkar 2017; Velte 2017; Al Lawati and Hussainey 2020) that overlapped AC membership improves FRQ and corporate disclosure. The findings offer implications for Omani regulators to exceedingly appoint these members on AC due to the unique information they could provide to the external auditors, assisting them in increasing the level of KAMs disclosure that could help stakeholders in making appropriate investment decisions.

Concerning the control variables, we find that AC meeting frequency (ACMeet) positively affects the KAMs disclosure in Omani financial institutions at the confidence level of 95%. ACs need to meet on a regular basis to ensure that the FRQ process is appropriately monitored and to increase the likelihood of communicating and following up on any financial problems with external auditors. This will lead to disclosing more KAMs in the extended audit reports. The result is consistent with Buallay and Al-Ajmi (2019) and Raimo et al. (2021), who find a positive relationship with voluntary disclosure.

We also find that company size (LogAsset) and profitability (ROE) have a significant and positive impact, at the confidence levels of 99% and 90%, respectively, on KAMs disclosure, indicating that large and profitable companies disclose more KAMs due to the complexity of the business operations. The results are in line with Elgammal et al. (2018) and Al Lawati et al. (2021), who find the same results with voluntary disclosures. A negative and significant relationship is found between Big 4 and KAMs disclosure at the confidence level of 99%. This could be due to the recent scandals with some of the Big 4 firms in Oman (e.g., KMPG, Moore Stephen), which could influence companies to withhold the disclosure of KAMs to protect their legitimacy and political image in the stock market.

In model 2, our analysis shows a positive and significant relationship between KAMs disclosure and audit quality at the confidence level of 90%, consistent with stakeholder theory. Therefore, the second hypothesis (H2) is accepted. This suggests that the new requirement of the audit report will increase the transparency and accountability of the audit function, which in turn will reduce the ambiguity faced by the stakeholders and enhance the audit quality of the firms' reporting. The result is consistent with Vanstraelen et al. (2011) and Reid et al. (2019), but it contradicts Bédard et al. (2019). The results offer practical implications for financial firms to increase the level of KAMs disclosure, which will reduce the information asymmetry between stakeholders and managers and simultaneously could help stakeholders in making appropriate investment decisions.

The analysis of the control variables shows that AC meeting frequency is positively affecting the audit quality of the firms at the confidence level of 95%. This could be because AC members have many meetings, which allows them to discuss more analytical queries with management to ensure that financial statements are free from material misstatements. This will enhance their communication between the AC and both internal and external auditors, which in turn will improve the audit quality of the firms. Moreover, a positive impact is found between AC size and audit quality at the confidence level of 99%. This suggests that AC size is expected to enhance AC effectiveness in performing its monitoring and oversight roles. Therefore, a large number of AC members could be beneficial in exposing and solving issues in corporate reporting processes (Feng and Huang 2021), which in turn could enhance audit quality in Oman.

Similar to model 1, we find that company size (LogAsset) and Big 4 have a positive and significant impact at the confidence level of 99% on audit quality, suggesting that large companies and firms audited by Big 4 are paying higher audit fees to increase the quality of their audit reports due to the complexity and magnitude of the business operations.

6. Additional Analyses

6.1. Impact of Overlapped AC Chair (OvACChr) on KAMs Disclosure

One of the unique aspects of the Omani revised CG Code is the prevention of the AC chair membership in other committees within a firm. In this additional analysis, we examine whether an overlapped AC chair could enhance the disclosure of KAMs or impair it. We believe that the AC chair, by overlapping on different monitoring committees, would be informed about all the material risks that the company could be exposed to, which would help in conveying this information to the external auditors and disclosing it in the audit reports to help users in the decision-making process.

The results of this additional analysis are shown in Table 4. The table shows that the estimated coefficient (OvACChr) is positive and significant. This suggests that AC chairs, by serving on multiple committees, will acquire thorough and comprehensive knowledge through the network channels built with different figurative directors on the board. This could assist them in sharing important information about the material risks to the external auditors, so they can disclose them in their audit reports.

Table 4. Impact of OvACChr on KAMs.

	KAMs	
Variables	**Coefficients**	**Significance**
OvACChr	0.18 **	0.04
ACMeet	0.10 **	0.02
ACSize	0.06	0.55
LogAsset	0.62 ***	0.00
LEVTDTA	0.01	0.34
ROE	0.004 *	0.08
Big4	−0.99 ***	0.00
_cons	−2.05	0.00
Industry Effect	Yes	
Years Effect	Yes	
No. of Obs	216	
Prob > F	0	
R-squared	0.50	

* coefficient is significant at 10%; ** coefficient is significant at 5%; *** coefficient is significant at 1%; See Section 4 for variable definitions.

Our analysis provides practical implications for Omani regulators to encourage the board to appoint AC members on multiple committees in the company and to investigate further the consequences of preventing the AC chair from serving on different committees, as the results are contradictory.

6.2. Impact of the Interaction of Overlapped AC and KAMs Disclosure on Audit Quality

As both overlapped AC members and KAMs disclosure affect audit quality, we examine the joint impacts of both variables on audit quality. We identify four possible scenarios following pioneer disclosure studies such as those by Hussainey and Walker (2009), Enache and Hussainey (2020), and Elberry and Hussainey (2021).

6.2.1. First Scenario

Overlapped AC members and KAMs disclosures convey the same information in different ways. Thus, the coefficient of OvAC will be equal to the coefficient of KAMs. In other words, the coefficient of OvAC*KAM should be negative and equal in absolute value to the coefficient of OvAC or KAM. Hence, the total impact should be as follows:

$$\text{KAM} + \text{OvAC} + \text{KAM*OvAC} = \text{KAM or OvAC} \quad (3)$$

6.2.2. Second Scenario

Overlapped AC membership and KAMs disclosure provide "additive unrelated information". In this scenario, the coefficient of the joint effect OvAC*KAMs should be insignificant. Therefore, the total impact should be as follows:

$$\text{OvAC} + \text{KAMs} - \text{OvAC*KAMs} = \text{OvAC} + \text{KAMs} \quad (4)$$

6.2.3. Third Scenario

Overlapped AC and KAMs convey "related information, which is multiplicative or reinforcing". They consider being strictly complementary. In this case, the total of the coefficients of OvAC, KAMs, and OvAC*KAM should be significantly greater than the total of the coefficients of KAM and OvAC. Thus, the total impact should be as follows:

$$\text{OvAC} + \text{KAMs} + \text{OvAC*KAMs} \geq \text{OvAC} + \text{KAMs} \quad (5)$$

6.2.4. Fourth Scenario

Overlapped AC and KAMs provide "related information, but some of the information is common to both, i.e., partially additive". Thus, the total of the coefficients of OvAC, KAMs, and OvAC*KAMs should be significantly less than the total of the coefficients of OvAC and KAMs. Therefore, the coefficient of OvAC*KAMs should be significantly negative. Hence, the total impact should be as follows:

$$\text{OvAC} + \text{KAMs} + \text{OvAC*KAMs} < \text{OvAC} + \text{KAMs} \quad (6)$$

Based on the above arguments, we examine which of these four scenarios is present. Table 5 shows that the coefficients for OvAC, KAMs, and OvAC*KAMs are 0.0878, 0.0621, and −0.0831 respectively, which is consistent with the fourth scenario. The total of the coefficients of OvAC, KAMs, and OvAC*KAMs is significantly less than the total of the coefficients of OvAC and KAMs, described in the following equation:

$$\text{OvAC} + \text{KAMs} + \text{OvAC*KAMs} < \text{OvAC} + \text{KAMs}$$
$$0.075 + 0.050 + -0.081 < 0.075 + 0.050$$
$$0.044 < 0.125$$

Table 5. Impact of the Interaction of OvAC and KAMs on Audit Quality.

	Audit Quality	
Variables	**Coefficients**	**Significance**
KAMs	0.05 **	0.02
OvAC	0.075 *	0.10
KAMs*OvAC	−0.081 **	0.04
ACMeet	0.02 **	0.02
ACSize	0.07 ***	0.00
LogAsset	0.23 ***	0.00
LEVTDTA	0.003 **	0.03
ROE	−0.001 *	0.08
Big4	0.18 ***	0.00
_cons	3.59	0.00
Industry Effect	Yes	
Years Effect	Yes	
No. of Obs	216	
Prob > F	0	
R-squared	0.86	

* coefficient is significant at 10%; ** coefficient is significant at 5%; *** coefficient is significant at 1%; See Section 4 for variable definitions.

Therefore, the fourth scenario is applied, which states that overlapped AC membership and KAMs disclosures are partially substitutes for each other as they provide "related information, however, some of the information is common to both". This substitution effect shows that overlapped AC and KAMs disclosure provide related information and can substitutefor each other in their impacts on audit quality.

7. Conclusions

The paper investigated the determinants and consequences of KAMs in Omani financial listed companies over a six-year period (2014–2019). We examined the impact of overlapping AC membership on KAMs disclosure. We also investigated the impact of KAMs disclosure on the audit quality. The new extended audit report must contain company-specific information about the most important types of risks that it could be exposed to, such as the application of materiality, and the audit's scope.

We chose Oman because a revised CG Code was introduced in 2016 with significant updates to the CG provisions in which the AC role is executed (Al Lawati et al. 2021). Additionally in 2016, Oman implemented the new ISA 701 requirement to disclose KAMs more transparently in audit reports regarding material risks that could threaten the process of the company. ACCA (2018) also mandated that companies communicate KAMs in their reports to stimulate better governance, support better auditor quality, encourage better corporate reporting and help investors differentiate better between corporations that have received "clean" audit reports. In addition, enhancing the auditor's reporting output had led to the improvement of AC production eventually. This will lead directly to a positive impact on audit quality.

We find a positive relationship between overlapping AC and KAMs disclosure due to the knowledge spillover resulted from serving on multiple committees within a company. We argue that these members contribute to strict monitoring roles and increase the cooperation with external auditors. Consequently, we find a positive impact of KAMs disclosure on audit quality (proxied by audit fees), as this type of disclosure tends to enhance the quality of audit reports by increasing their communicative and informative value, which will help users to better understand the roles and responsibilities of auditors. Our study provides new empirical evidence of the determinants and consequences of KAMs in Oman.

We contribute to the CG and audit literature in many ways. First, we respond to a research call to explore the determinants of KAMs disclosure by introducing overlapping AC membership as one of the AC composition variables and its impact on the disclosed items of KAMs in the audit reports. Second, we offer a methodological contribution by examining the period of 2014 to 2019 in the Omani financial context wherein the revised CG Code was introduced in 2016 that required financial companies to disclose KAMs in their extended audit reports. The revised CG Code also gives attention to the overlapping matter by prohibiting the AC chair from serving on multiple committees, although the other AC members are permitted. Therefore, Oman provides an interesting context for examining the determinants and consequences of the implementation of KAMs disclosure.

Our findings provide an important policy implication that Omani regulators should be aware of the effectiveness of overlapped AC directors in improving the disclosure of KAMs. Disclosing KAMs in the auditor reports has significantly enhanced the auditors' work as they are putting more of their professional scepticism on display. Additionally, as the results provide empirical evidence that KAMs disclosure increases the audit quality of a firm's reporting, regulators should encourage boards to release this important information, which would assist stakeholders in better evaluating companies' positions. In addition, disclosing KAMs would provide stakeholders and investors with a good impression of where auditors have spent most of their time and effort as they have to focus more closely on the bigger issues than the less flamboyant ones. This study has several implications for the academics and professionals in the field. On one hand, academics will benefit from our paper's empirical evidence and should teach some sophisticated case studies to concerned students involving analysing companies' audit situations and providing better recommendations. On the other hand, from a professional perspective, KAMs disclosure would encourage better communication between AC directors and regulators, which would lead to better corporate governance and reductions in information asymmetry. Moreover, KAMs release would assist auditors in focussing more on the audit areas that require further and careful judgement, and this would eventually lead to higher audit quality (ACCA 2018).

Our paper has some limitations and offers interesting ideas for future research. First, the paper focuses only on the Omani context, which limits the generalizability. Future research could examine the same hypotheses in different institutional contexts and compare for differences and similarities in disclosing KAMs. Second, we focus only on overlapping AC membership as a determinant of KAMs disclosure. Future research also could use other characteristics of AC members such as AC with financial expertise, AC with multiple directorships and AC female members as determinants of KAMs disclosure. Third, future research could also not solely depend on archival data but instead integrate stakeholders' interview responses regarding what additional information they require in audit reports to help them make better-quality decisions.

Author Contributions: Formal analysis, H.A.L.; Methodology, H.A.L.; Supervision, K.H.; Validation, K.H.; Writing—original draft, H.A.L.; Writing—review & editing, K.H. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data available on request due to restrictions.

Conflicts of Interest: The authors declare no conflict of interest.

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