



Disclosure quality vis-à-vis disclosure quantity: Does audit committee matter in Omani financial institutions?

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Abstract

We examine the impact of audit committee (AC) characteristics (e.g. AC foreign members, AC female members, AC members with multiple directorships, AC members with share ownership and AC with financial and supervisory expertise) on forward-looking disclosure (FLD) quality and quantity. Using a sample of Omani financial companies listed on Muscat Securities Market over a five-year period (2014–2018), we find that a number of AC characteristics (such as AC size, AC female members and AC with multiple directorships) improve FLD quality. We make no such observation for FLD quantity. The results suggest that the responsibility of AC extends to improving the quality of FLD. We provide an additional analysis on the impact of AC effectiveness (ACE) on FLD quality, which suggests that companies' compliance with CG code is beneficial for disclosure quality. We also find that the impact of ACE on FLD quality is influenced by corporate performance, leverage and the quality of external auditors. Our findings carry implications for the regulatory bodies' efforts in encouraging companies to improve disclosure quality by considering AC characteristics as well as appointing more effective AC directors.

Keywords Disclosure quality · Disclosure quantity · Audit committee · Corporate governance code · Forward-looking disclosure · Oman

JEL Classification G3 · M4 · M48

1 Introduction

Prior research shows that corporate governance (CG) mechanisms improve the quality and quantity of corporate reporting (e.g. Abdou et al. 2020; Grassa et al. 2020). The audit committee (AC) is considered as one of the main CG mechanisms upon which predicated stakeholders hope in constraining the behaviour of corporate managers (Gendron and Bédard 2006). In our paper, we investigate the impact of AC characteristics on the quality and quantity of forward-looking disclosure (FLD) in the chairman statement. The corporate

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board of directors (BODs) and its committees, such as AC, are relevant CG mechanisms that oversee managerial actions (Fama and Jensen 1983; Blue Ribbon Report 1999; Smith Report 2003; Lu and Boateng 2018; Jouida 2019). AC members have great control over the information to be disclosed in annual reports to protect shareholders' interests (Li et al. 2008; Haji 2015; Abad and Bravo 2018).

AC plays a crucial role in fulfilling investors' needs for clear, relevant, and complete information to reduce information asymmetry and agency cost and align the interests of both shareholders and managers (Samaha et al. 2015). As a result of increased concerns about CG and financial reporting after financial scandals that were witnessed around the world, regulators introduce rules and recommendations to enhance CG practice in general and AC effectiveness in particular to improve financial reporting and disclosure practice to protect shareholder interests (Dezoort et al. 2002; Abad and Bravo 2018; Sultana et al. 2019). We examine the impact of CG reforms on FLD on narrative disclosure practice in emerging economies, with a particular focus on Oman.

Oman provides a unique country context in which to examine the impact of AC characteristics on disclosure quality and quantity. It is the first country in the Middle East region to issue the CG code in 2002. The code was revised in 2016, giving ACs extended roles and responsibilities to perform their tasks through the fulfillment of two main functions, the managerial monitoring, as well as the resource provision function (Capital Market Authority (CMA) 2015). The CG code requires some specific characteristics on AC members, for instance, the majority of AC members are required to be independent, including the AC chair; moreover, at least one member of the AC should be an accounting or financial expert. These characteristics, such as AC independence, AC with financial expertise and AC with multiple directorships may be necessary for the AC members to better undertake their duties of overseeing financial reporting. These duties require a comprehensive knowledge of accounting standards, practices and procedures to aid AC members in overseeing financial reporting. This puts them in the right place to formulate corporate decision on behalf of the board, which are required to be on a timely basis (Pugliese et al. 2009), including decisions related to disclosure practice. However, research on the impact of different characteristics of AC directors on disclosure is scarce (Karamanou and Vafeas 2005; Chan et al. 2013; Wang and Hussainey 2013). Our study contributes to the literature by exploring how AC characteristics affect FLD practice.

The question of what factors affect corporate disclosure practice (quality and quantity) has been extensively examined in the literature. For instance, Hassan and Marston (2019 p. 42) review disclosure studies and conclude that "Future research might also investigate the interactions between the different dimensions, the different time orientation and the different types of disclosure, their determinants and consequences, and how they compare. For example, how does the quality of concurrent voluntary disclosure compare to the quality of forward-looking voluntary disclosure?". Prior literature uses disclosure quantity as a proxy for disclosure quality (e.g. Hussainey et al. 2003). In our paper, we test to see if FLD quantity is a good proxy for FLD quality. We also examine the impact of the characteristics of AC members (e.g. AC foreign members, AC female members, AC members with multiple directorships, AC members with share ownership and AC with financial and supervisory expertise) on FLD quality and quantity.

Our paper offers a number of contributions. First, we extend prior research by providing new evidence, using a unique hand-collected data, on how AC characteristics such as multiple AC directorships, AC female members and (AC with financial expertise) positively and (negatively) affect FLD quality. We emphasise how these characteristics provide ACs with specialised resources and comprehensive knowledge, and how these characteristics

would enhance FLD. This paper is the first, to the best of our knowledge, to explore the impact of a comprehensive set of AC characteristics on the quality and quantity of FLD in the context of Oman.

Second, while we simply count the number of FLD statements as a proxy for disclosure quantity, we use Beattie et al. (2004)'s methodology in measuring FLD quality. We analyse four quality dimensions: financial, quantitative, tone and time period orientations. We provide empirical evidence for the widely held, but heretofore empirically, undocumented in the Omani context, that disclosure quantity is not a good proxy for disclosure quality. We introduce new variables to the AC-disclosure literature in the Omani context, such as AC size, AC meetings frequency, AC independence, AC female members, AC multiple directorships, AC with financial expertise and AC foreign members. We also introduce a number of country-specific variables, such as royal members and relative (family) members on the board.

Third, we are the first, to the best of our knowledge, to study a unique sample period from 2014 to 2018, which allows us to analyse the impact of the revised CG code on disclosure practice in financial institutions. We also believe that these institutions are important and worthy of investigation, as these are the pillar of the economy and connected directly to Oman Vision 2040 (2019).

Finally, the majority of the previous studies have used agency theory to explain the impact of AC characteristics on disclosure practice (e.g. Haji 2015; Abad and Bravo 2018). Adopting one theory might be quite restrictive in explanation of a practice; we believe that there is a need of a set of theories to explain the impact of AC characteristics on FLD quantity and quality. We are adopting agency, resource-dependence and social capital theories, which we believe are not competing but complementing each other.

The paper is organised as follows. Section 2 discusses the institutional context. Section 3 reviews the literature and develops the hypotheses. Section 4 discusses the methodology. Section 5 discusses the findings. Section 6 provides additional analyses and Section concludes.

2 Institutional background

In 2002, Oman was the first country in the Middle East and North Africa region, as well as in the emerging markets to issue the CG code (Baydoun et al. 2013). Different steps were taken by the Omani government to enhance financial reporting (Dry 2003). Moreover, the Omani government adopted many steps to improve the efficiency and effectiveness of the Muscat Securities Market (MSM) and the financial sector for developing the country's economy. The Omani CG code identifies the characteristics of the BODs, AC, external auditors and internal control, executive management and the related party transactions. The CG code is revised in 2015 and published in 2016. The revised code identifies a principal responsibility of the AC as being the assessment of the integrity of internal controls and a company's risk management framework (CMA 2015). The AC is also responsible for oversight and timely preparation of financial reports. The code recommends that an AC should have an independent chair, made up of non-executive directors (most of whom are independent) and has a minimum of three members (one of whom should have financial expertise). It also recommends that a minimum of four meetings should be held in a year. It also contains a recommendation that the board should be made up of only non-executive directors who have to be trained in special governance programmes to be able to provide greater

protections for minority shareholders. The revised code emphasises the importance of the AC in overseeing and controlling the process of financial reporting and external auditing. The revised code also prevents AC chair from serving on different committees within a company (CMA 2015).

In Oman, the immaturity of legal system in terms of protecting the wealth of minority shareholders, and high level of ownership concentration contribute to weak CG effectiveness (Young et al. 2008; Hashim and Amrah 2016). Therefore, many agency conflicts found among majority and minority shareholders (Dry 2003; Hashim and Amrah 2016), thus weakening the Omani CG system (see for example CMA 2002 and revised CMA 2015). This leads to additional focus on mechanisms for internal and external monitoring, and stresses the importance of the AC in its oversight and control of financial reporting and external auditing processes, while also safeguarding the interests of minority shareholders. Thus, this study uses a comprehensive set of AC characteristics to examine their impact on FLD quality and quantity.

3 Literature review and hypotheses development

We review relevant literature and develop our research hypotheses on the effect of AC independence, meetings, size, financial expertise, AC female members, multiple directorships and AC foreign membership on FLD quality and quantity reflecting on agency, resource-dependence and social capital perspectives.

3.1 Literature review

The literature has examined the impact of AC characteristics (such as independence, the frequency of meetings and specialist knowledge) on different financial reporting measures such as fraud, current and abnormal accruals and audit fees (e.g. DeZoort et al. 2002; DeFond and Francis 2005; Yang and Krishnan 2005; Krishnan and Visvanathan 2007; Pomeroy and Thornton 2008; Bedard and Gendron 2010; Dhaliwal et al. 2010; Cohen et al. 2014; Sultana et al. 2015, 2019, 2020; Abdou et al. 2020). Limited studies examine the impact of AC characteristics on FLD in developed countries (Abad and Bravo 2018; Bravo and Alcaide-Ruiz 2019). They find that AC characteristics play a role in enhancing FLD.

There is a number of studies that examine FLD in developing countries (Aljifri and Hussainey 2007; Aljifri et al. 2013; Alqatamin et al. 2017; Elgammal et al. 2018; Mousa and Elamir 2018; Al Lawati and Hussainey 2020). They find that some company characteristics (such as, company size, leverage and profitability) affect the level of FLD. Al Lawati and Hussainey (2020) examine the impact of some characteristics of AC on the level of FLD quantity in Omani banks. They find that overlapping AC membership positively affects FLD quantity. None of these studies, however, differentiate between FLD quality and quantity nor examine the impact of a comprehensive set of AC characteristics on FLD.

The literature uses disclosure quantity as a proxy for disclosure quality (e.g. Hussainey et al. 2003; Hussainey and Walker 2009). Limited evidence shows that quantity is not a good proxy for quality and each measure has its own determinants (Elzahar et al. 2015 in their study on Key Performance Indicators (KPIs) disclosure and Alotaibi and Hussainey 2016 in their study on Corporate Social Responsibility (CSR) disclosure). Beattie et al. (2004) and Beretta and Bozzolan (2008) state that disclosure quality gives a more realistic picture of disclosure than quantity, and helps annual report users making rational

decisions. They confirm that the dimensions considered in the disclosure quality framework give more realistic picture of disclosure than quantity, and suggest that, in assessing the disclosure, these dimensions could be used to complement each other.

Therefore, our study differs from prior studies by investigating the impact of a comprehensive set of AC characteristics on FLD quality and quantity. We also contribute to FLD literature by examining whether FLD quantity is a good proxy for FLD quality.

3.2 Hypotheses development

We use agency, resource-dependence and social capital theories to explain the effect of AC characteristics on FLD quality and quantity. Based on agency theory, AC plays crucial role in reducing the conflict of interest and information asymmetry between management and investors (Jensen and Meckling 1976). Along with agency theory, resource-dependence theory is also used to justify the economic significance of AC composition (Pfeffer and Salancik 2003), which explains the development of competition-related resources, as AC members are able to bring resources to companies through human capital (experience, expertise, knowledge and reputation) and relational capital (network of ties) (Hillman and Dalziel 2003). By using these resources to convey information about strong CG and reliable corporate disclosure to the market, they could reduce the information asymmetry between managers and stakeholders (Mitra et al. 2019). We also use social capital theory to explain how AC directors' social network internally and externally could bridge the board to new resources for advice and counsel, legitimacy, channels for communication and access to important external markets, thus making a strong argument to be included as a rationale for board diversity (Booth-Bell 2018). These resources are vital to simplify and improve the accomplishment of ACs' responsibilities in overseeing financial reporting quality (FRQ) (Abdelbadie and Salama 2019).

3.2.1 AC independence and FLD

From the agency theory's perspective, the primary role of AC is to oversee the firm's FRQ process. It enhances the BODs (principal)'s capacity to act as a monitor of management (agent) by providing more insights into the company's financial reports (Abbott et al. 2004). The AC is also expected to play a mediator role between management and external auditors since these two parties may have legitimate differences of opinion in how to best apply accounting standards (Klein 2002). In addition, from the perspective of resource dependence theory, Buallay and Al-Ajmi (2019) state that independent AC members make an effort to improve the strategic decisions conducted by BODs by bringing unique resources and competences, to provide continuity, and to assist in identifying alliances and achievements. Therefore, the existence of independent AC members may help ACs to balance divergent views of management and external auditors to produce ultimately higher FRQ (Sultana et al. 2015; Kusnadi et al. 2016; Saona et al. 2020).

Prior research has consistently found that the effectiveness of the AC is linked to its independence (Hoitash and Hoitash 2009). A positive impact of AC independence on FRQ (using different proxies, such as lower earnings management, internal control quality, auditor independence and quality) is found (Klein 2002; Carcello and Neal 2003; Krishnan 2005; Raghunandan and Rama 2007). In line with this, Haji (2015) and Buallay and Al-Ajmi (2019) find a positive impact of AC independence on disclosure quantity, while Salem et al. (2019) and Raimo et al. (2020) find a positive impact on disclosure quality.

Other stream of studies finds an insignificant relationship between AC independence and voluntary disclosure quantity, such as Li et al. (2012), Al-Maghzom et al. (2016) and Abad and Bravo (2018).

Empirical research suggests that AC independence positively affect FRQ. Some developed countries, such as the US and UK, require all AC members to be independent (Kusnadi et al. 2016). Oman and many other countries, such as Australia, China and Singapore, only require the majority of AC members to be independent. Omani CG code requires firms to appoint an AC of at least three members who must be non-executive and the majority (including the chair) should be independent¹ (CMA 2015).

In summary, and based on the above arguments, the results are mixed, and whether AC independence in Oman will be positively related to FRQ or not is still an empirical question. Based on agency and resource dependence theories and the empirical literature, our first hypothesis is:

H1: The independence of AC members affects FLD quality and quantity.

3.2.2 AC members with financial expertise and FLD

The literature argues that the financial expertise of AC members has gained the attention of regulators around the world in recent years, regarding whether such financial expertise makes a difference in improving AC effectiveness in monitoring FRQ (e.g., Bédard and Gendron 2010; Dhaliwal et al. 2010; Badolato et al. 2014). Moreover, it is considered as one of the most crucial requirements for serving on the AC (Beasley et al. 2009). The 2002 Omani CG code emphasises financial expertise and recommends that public firms should have at least one member with relevant accounting or related financial management expertise or experience. It infers that Oman encourages companies to have mixed expertise.

The primary role of AC, from the agency perspective, is to oversee a company's financial processes. This makes it very important that AC members hold financial and accounting expertise, to better control management's financial reporting practices, to produce higher FRQ and to develop more rigorous internal control systems and risk-management frameworks (Sultana 2015; Sultana and Van der Zahn 2015). According to Raghunandan et al. (2001), from the perspective of social capital theory, ACs with financial expertise have greater social network interactions with internal auditors, which reduce internal control problems (Krishnan 2005), and they are more likely to support external auditors in conflict situations with management (DeZoort and Salterio 2001). Findings from these studies support the prediction that the presence of AC members with financial expertise improves their social capital network and leads to a positive impact on FRQ. Along with agency and social capital theories, resource dependence theory also claims that having multiple experienced professionals on the board improves FRQ through knowledge sharing (Pfeffer 1972). Hence, Cohen et al. (2008), Hillman et al. (2000), Dhaliwal et al. (2010) and Kusnadi et al. (2016) argue that ACs can benefit from different expertise, such as, accounting, financial, and supervisory, which complement each other to improve FRQ.

Using different proxies of FRQ (e.g. lower earnings management and auditor quality), several studies find a positive impact of AC with financial expertise on FRQ (Bédard et al. 2004; Badolato et al. 2014; Sultana et al. 2015; Bilal et al. 2018; Ghafran and Yasmin

¹ The Omani code defines independent directors as "not having filled any senior position in the company for the last 2 years. In addition, the directors should not have any relations with the company, its parent company or its affiliated or sister companies which could result in financial transactions." (CMA 2015).

2018; Zalata et al. 2018; Lisic et al. 2019; Bala et al. 2020). In line with this, a positive impact of AC financial expertise on disclosure quantity has been found (Haji 2015; Lee and Fargher 2018; Abad and Bravo 2018; Enache et al. 2020). This indicates that companies with financial expertise require less cost to obtain additional information to understand the complexity and associated risks of certain financial transactions, and are thus able to efficiently monitor senior management and increase FRQ (Zalata et al. 2018).

Even though Albring et al. (2014) find that accounting experts add value to the AC's monitoring of auditor independence, they report ineffectiveness of broader financial expertise. This is in line with two groups of empirical literature. The first group finds a negative impact of AC with financial expertise on disclosure quantity (Li et al. 2012; Al-Maghzom et al. 2016; Buallay and Al-Ajmi 2019). The second group (e.g., Wang and Hussainey 2013; Raimo et al. 2020; Al Lawati and Hussainey 2020) finds no impact of AC financial expertise on the level of voluntary disclosure. Therefore, based on these arguments, the effectiveness of financial expertise and its impact on disclosure is still an empirical question. Therefore, based on agency, resource dependence and social capital theories and empirical literature, our second hypothesis is:

H2: The accounting and financial expertise of AC members affects FLD quality and quantity.

3.2.3 AC size and FLD

From the perspective of agency theory, AC size is expected to strengthen the effectiveness of the AC in executing its oversight and monitoring function. Moreover, based on resource-dependence theory, the effectiveness of ACs also depends on their access to resources, which they need to do their job diligently (e.g. Buallay and Al-Ajmi 2019). These resources include having a sufficient number of committee members, and access to resources from relevant entities, such as management, auditors, legal counsel, and the full board (DeZoort et al. 2002). The literature focuses mainly on AC size as a measure of resources. For instance, Allegrini and Greco (2013) state that the resource dependency theory argues that a large AC is more eager to dedicate resources and authority to effectively carry out responsibilities. The more directors there are on an AC, the more diversity, expertise and capabilities are there that would guarantee operative monitoring (Bédard and Gendron 2010). Therefore, a large number of AC members are more likely to aid a committee to expose and solve issues and dilemmas in corporate reporting processes (Li et al. 2012). Moreover, Anderson et al. (2004) and Sultana et al. (2015) suggest that a large AC provides a greater monitoring function, as it has more members to undertake various monitoring tasks, which could enhance FRQ. Furthermore, previous studies find that AC size positively affect FRQ (Bédard et al. 2004; Ahmad-Zaluki and Wan-Hussin 2010) and disclosure quantity (Li et al. 2012; Haji 2015; Buallay and Al-Ajmi 2019; Raimo et al. 2020).

In contrast, larger size of the committee may lead to the loss of process and responsibility diffusion and the emergence of free riders (Klein 2002; Karamanou and Vafeas 2005). Wang and Hussainey (2013) and Harun et al. (2020) find that AC size has a negative effect on disclosure quantity. These results lend further support to the prediction of the agency theory, which assumes that humans act in their self-interest; hence, a larger committee size may lead to less coherence between members and hinder the AC's ability to achieve its goals (Hillman and Dalziel 2003; Buallay and Al-Ajmi 2019). In addition, Xie et al. (2003), Abbott et al. (2004), Bédard et al. (2004), Al-Maghzom et al. (2016), Salem et al.

(2019) and Al Lawati and Hussainey (2020) report that AC size does not affect accruals, restatements and voluntary disclosure quantity, respectively.

Based on the above discussion, agency and resource-dependence theories, our third hypothesis is:

H3: AC size affects FLD quality and quantity.

3.2.4 AC meeting and FLD

A number of studies use AC meetings frequency as a measure of the diligence of the AC in carrying out their responsibilities (Raghunandan and Rama 2007; Bedard and Gendron 2010). ACs need to meet regularly to ensure that the financial reporting process is functioning properly (Vafeas 2005) and to increase the likelihood of discussing and following up any financial problems (Gebayel et al. 2018). Extant evidence on the association between AC meetings and monitoring effectiveness is mixed. On the one hand, based on agency perspective, some studies find that the number of AC meetings is associated with higher FRQ (proxied by different measures, such as auditor selection and auditor quality, fewer restatements and less aggressive earnings management) (Abbott and Parker 2000; Xie et al. 2003; Abbott et al. 2004; Bédard et al. 2004; Gebayel et al., 2018). In line with this, a positive relationship is found between AC meeting frequency and the voluntary disclosure level (Li et al. 2012; Allegrini and Greco 2013; Haji 2015; Al-Maghzom et al. 2016; Bualay and Al-Ajmi 2019; Raimo et al. 2020).

On the other hand, other studies find that the number of meetings is associated with lower FRQ, for instance more restatements (Sharma and Iselin 2012) and more internal control weaknesses (Krishnan and Visvanathan 2007). Some studies also report insignificant results, including Abbott et al. (2003), Krishnan (2005), Mohamad et al. (2012), and Al Lawati and Hussainey (2020). Overall, there is no consensus in the literature regarding the association between AC meetings and FRQ. The mixed evidence in the AC meetings literature is largely the result of AC meeting measurement inconsistency. On the one hand, the literature states that more meetings may be associated with higher FRQ if ACs are proactively overseeing financial reporting, while on the other hand, it states that more meetings may also be a response by the AC to address internal control problems that arise during the year. Examples include Abbott and Parker (2000), Abbott et al. (2003), Abbott et al. (2004), Krishnan (2005) and Sharma and Iselin (2012).

The Omani code states that the AC shall meet at least four times a year, with a majority of independent directors remaining present. Thus, based on agency theory and the earlier arguments, our fourth hypothesis is:

H4: The frequency of AC meeting affects FLD quality and quantity.

3.2.5 AC interlock and FLD

AC interlock is defined when AC members hold multiple board seats in other companies. This interlock socially channels the flow of information, knowledge, policies, and practices between organisation board members (Bloch et al. 2020). There are two theoretical hypotheses that explain the impact of interlock directorships on FRQ (Baatour et al. 2017). Based on social capital theory (Abdelbadie and Salama 2019) and information transfer hypothesis (Dharwadkar et al. 2020), interlocked AC members brings greater CG experience, valuable confidential information and knowledge, including greater skills due to the complexity and

magnitude of the operations overseen. This enables them in performing their duties more diligently and ask more probing questions to management to ensure FRQ (Sultana et al. 2019). Interlocked AC members are in a better position to (1) improve communication between the AC and both internal and external auditors (Dezoort and Salterio 2001; Sultana et al. 2019); (2) reduce earnings management (e.g. Chee and Tham 2020) and decrease auditor dismissals leading to greater AC effectiveness and FRQ (Carcello and Neal 2003; Yang and Krishnan 2005); (3) improve firm performance (Ferris et al. 2003; Harris and Shimizu 2004; Trinh et al. 2020a; Cheng et al. 2020); (4) improve corporate voluntary disclosure (Eulaiwi et al. 2016; Chan et al. 2017; Al Lawati and Hussainey 2020); and (5) reduce the cost of equity capital (Sharma et al. 2020).

Moreover, the AC's relation to the financial reporting process and its network with the external auditor make it a potentially important channel for the transfer of accounting information (Dharwadkar et al. 2020). They argue that because of their business social network, AC is considered an information hub, and AC interlocks are credible channels for transmitting accounting information from companies to other companies interlocked with them through common AC members. Therefore, they expect that interlocked AC members increase the likelihood of accounting information transfer, because their common committee membership "provides the means, opportunity, and structure that enable members to perform their fiduciary and other corporate governance duties" (Peterson and Philpot 2007, p. 181). In addition, the literature shows that ensuring the level of resource diversification requires a high number of connections between directors and a prominent position in the corporate network (Basuil and Datta 2017; Popli et al. 2017).

A positive relationship is found between interlocked AC directors and FRQ (proxied by audit fees) (Sultana et al. 2019). Li and Ang (2000) show that these directors are in greater demand on the market due to their experience and expertise gathered from outside boards' seats. Similarly, Elnahass et al. (2020) find that interlocked directors are valued by the stock market and investors perceive some reputational benefits arising from an interlocked board (e.g. extended industry knowledge, established external networks or facilitation of external market sources). Therefore, this reputational benefit will lead these members to improve the quality of long-term decision making, which could positively affect the disclosures (Muravyev et al. 2016; Chou and Feng 2019). In the same vein, Gebrayel et al. (2018) and Bloch et al. (2020) find that better CG practices and efficient FRQ operations are seen in interlocked organisations. Al Lawati and Hussainey (2020) find that interlocked AC members are positively enhancing the quantity level of FLD.

However, in light of a number of high-profile corporate scandals, busyness hypothesis posits that interlocked directors are unable to diligently monitor management due to their overloaded responsibilities (Sultana et al. 2019). Several studies such as, Carpenter and Westphal (2001), Fich and Shivdasani (2006), Tanyi and Smith (2015) argue that since interlock directors being busy and stretched, such directors may provide less effective monitoring of management. In addition, Trinh et al. (2020b) find that interlocked directors encounter with difficulties in resuming their monitoring roles diligently due to the limited time available from serving on several boards. This could create more conflicts of interests between shareholders and managers and viewed negatively by the stock market and investors in particular. In addition, Sarkar et al. (2008) suggest that non-interlock-directorships serve as an important CG mechanism that could assist in overcoming the problem of earnings management. Moreover, Dhaliwal et al. (2010) and Tanyi and Smith (2015) show that interlocked ACs are less effective in constraining earnings management, which lead to lower FRQ.

However, Al-Absy et al. (2019) find that interlock directorships do not affect FRQ (measured by earnings management). Badhabi and Ismail (2017) conclude that interlocked AC members may not be able to control the management effectively and hence FRQ may be negatively affected, as busy members' ability to attend the required meetings diligently could be constrained (Ferris et al. 2003; Jiraporn et al. 2009).

The new Omani CG code expects greater oversight responsibility from AC members regarding internal and external audit matters. The Omani code suggests that, the maximum number of directorial positions for a member of the BODs in a firm is four.

There is, therefore, a natural research tension in the literature given that multiple directorships have been found to be both beneficial and detrimental to governance quality in firms. Therefore, based on agency, social capital and resource dependence theories and on empirical literature, our fifth hypothesis is:

H5: AC members with multiple directorships affect FLD quality and quantity.

3.2.6 AC female membership and FLD

There are multiple mechanisms through which female directors are able to positively affect the monitoring responsibility and thereby improve FRQ. From an agency perspective, Adams and Ferreira (2009) suggest that female presence on an AC is likely to improve monitoring as they are not part of the 'old-boys' club', which puts them closer to independent directors (Zalata et al. 2018). For instance, the appointment of female directors enables more informed decisions, enhances the decision-making process, and improves communication among board members (Bear et al. 2010). Moreover, they enhance the depth and breadth of discussion and deliberations, particularly those related to challenging issues of FRQ process (Srinidhi et al. 2011). Consistent with the resource dependence theory, AC female members may bring strategic resources to the ACs on which they serve (Campbell and Mínguez-Vera 2008), which may lead to generating new ideas and increasing ethical sensitivity and, as a result, improving voluntary disclosure practices (Tejedo-Romero et al. 2017). Also, scholars have suggested, based on resource-dependence theory, that gender diversity facilitates effective monitoring by broadening valuable resources such as expertise, experience, interests, perspectives and creativity (Erhardt et al. 2003; Hoever et al. 2012). Moreover, this effective monitoring would reduce the information asymmetry at the board level and encourage more public disclosure by limiting managers' use of insider information for their own benefit (Gul et al. 2011; Srinidhi et al. 2011) which would subsequently increase FRQ.

The literature finds that companies with female directors perceived as ethical which in turn leads to increased FRQ (Cohen et al. 1998; Zalata et al. 2018). This suggests that female directors may be unlikely to tolerate policies depicting opportunistic stance (Srinidhi et al. 2011; Zalata et al. 2018), which corroborates with the argument that women have different values at work and thereby affect decisions in organisations (Crow et al. 1991). As a result, female directors are unlikely to be involved in practices that involve collusion with the management to manipulate financial reports for personal benefit and are more likely to disclose fraudulent financial reporting practices, as the compassionate nature of females may mean considering the interests of shareholders over self-centric interests, ultimately resulting in effective monitoring of FRQ (Kaplan et al. 2009).

Moreover, many previous studies find that companies with female directors are more likely to increase FRQ (proxied by different measures, such as less earnings management

and higher audit quality) (Zalata et al. 2018; Gull et al. 2018; Bala et al. 2020; Chee and Tham 2020; Saona et al. 2020; Sultana et al. 2020). In addition, Allini et al. (2016), Al-Yahyaee et al. (2017), and Aribi et al. (2018) find that the presence of women on a board makes a significant difference to the quantity of risk disclosure, which improves the effectiveness of the board and enhance accountability and transparency.

Extant research also supports the idea that companies with female board members outperform their rivals. For instance, Gul et al. (2011) find that female directors are associated with richer information environment and similarly, Gul et al. (2013) show that gender diversity adds to the transparency and accuracy of financial reports. Recently, Bravo and Alcaide-Ruiz (2019) and Bravo and Reguera-Alvarado (2019) find a positive association between gender diversity on the AC and the corporate voluntary disclosure.

Based on agency and resource dependence theories and consistent with the findings above, our sixth hypothesis is:

H6: AC Female directors have a positive impact on FLD quality and quantity.

3.2.7 AC foreign membership and FLD

From the resource-dependence perspective, foreign directors bring with them invaluable knowledge concerning contextual issues in foreign markets and hence they contribute to the strategic decision-making quality (Zahra and Filatotchev 2004). They are also less likely to be associated with companies and their management and are therefore considered to be independent (Van der Walt and Ingley 2003). Furthermore, foreign directors may bring much needed expertise and diversity, especially for companies that operate globally (Al-Matari et al. 2014). Including foreign members on the boards would enhance the monitoring of management and induce them to act in the best interest of companies' current owners by disclosing high quality information to shareholders (Grassa et al. 2020). By doing so, they will show the managers their loyalty to the company they serve on which could help them in securing their position in the company. Haniffa and Cooke (2002), Barako et al. (2006) and Grassa et al. (2020) find that foreign board members have a positive impact on disclosure quantity.

On the contrary, foreign directors are inherently costly -they may come from a different culture, speak a different language, be physically distant from the companies on whose boards they serve and may demand a higher level of compensation for the inconvenience of serving on the boards outside their own country of residence (Al-Matari et al. 2014). This could lead them to damage FRQ due to not fully concentrating on the process of financial reporting and not being aware of the country context. Cao et al. (2019) find that the negative role of foreign directors in the strategic decision-making process is due at least in part to the cultural differences between board directors, especially in transactions with a high degree of uncertainty. They confirm the argument that national cultural diversity hinders communication and collaboration within boards. In the same vein, Firoozi et al. (2016) find that companies with AC foreign members have lower FRQ. This has been explained by the small number of foreign directors on AC, which gives them a minimal effect on monitoring the FRQ process.

Although the importance of this variable is clear, there is a lack of previous studies examining this relationship, and especially foreign members on ACs. We believe we can add empirical knowledge by examining this characteristic in ACs, which has not yet been studied from this perspective, and we expect an effect on the quality and quantity of

Table 1 Sample distribution across industries

Financial sub-sector	N
Banking	8
Insurance	10
Financial services	5
Investment	12
Real estate	1
Total companies	36
Total observations for the study sample	36 × 5 (years) = 180

voluntary disclosure. Based on the above arguments and agency, resource dependence and social capital theories, our seventh hypothesis is:

H7: Foreign members serving on AC affect FLD quality and quantity.

4 Research design and methods

4.1 Data collection and sample selection

We draw our sample from the population of Omani financial companies listed on MSM between the 2014 and 2018. Oman's financial sector consists, mainly, of conventional and Islamic banks, finance and leasing companies, investment/brokerage companies, insurance companies and real estate (MSM 2019). Data concerned AC characteristics and country-specific variables are hand-collected from annual reports. Moreover, corporate performance data are obtained from Bloomberg. Furthermore, a manual content analysis of chairmen's statement is applied to measure FLD quality and quantity.

We choose 2014–2018 to analyse the effect of the regulatory changes following the updated code of CG in Oman, as it has been inaugurated in 2016. We argue that the newly mandated AC function would encourage more disclosure to avert the attention of the public. The population of the study is consisted of 180 company-year observations over the period, as shown in Table 1. Financial sector has been selected due to its unique nature. It is the largest sector in Oman, indicated by market capitalisation (MSM 2019), and 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 (Al-Hadi et al. 2016). Moreover, the financial sector is considered to be the backbone of the whole economy in general and the non-financial sector in particular; therefore, it links directly to Oman's Vision 2040 (2019). For instance, the financial sector in Oman is dominated by commercial banks, which account for more than 90% of the financial sector's total assets and liabilities (CBO 2018).

Annual reports are considered to be legal and official documents and are regulated by the CMA and published on the MSM website (CMA 2015). Moreover, annual reports are mandatory documents, which all listed companies must prepare, and Al-Hadi et al. (2016) suggest that the accounting information provided in these reports is the only reliable source of information available to users in GCC capital markets.

We follow Hussainey and Walker's (2009) method, focusing on annual report narratives, because they contain more voluntary FLD than other sections of the annual report. Moreover, the narrative sections are considered to be mandatory in Oman, but the content reported in the chairman's statement and MD&A comprise voluntary textual narrative disclosure. As a result, our paper obtains FLD scores by analysing the chairman's statement. The Chairman's statement contains an important information associated with the companies' future position (Smith and Taffler 2000). Additionally, as Abrahamson and Amir (1996) note, the issues addressed in the chairman's statement, which is more readable, are of broader strategic nature, and are different in a qualitative sense to the MD&A, which is more regulated. Furthermore, Bartlett and Chandler (1997) and Clatworthy and Jones (2006) provide evidence that the chairman's statement usually has greater information content to stakeholders, and specifically to investment analysts, which help them in making investment decisions.

4.2 Variables: measurement and description

4.2.1 Dependent variable: FLD variable

FLD involves both quantity and quality information. First, FLD quantity is measured by counting the number of sentences related to the future (Hassanein and Hussainey 2015; Al Lawati and Hussainey 2020). Sentences are commonly considered as the unit of analysis in disclosure studies, because they are more reliable coding units than words: words cannot be interpreted and coded without the context of a sentence (Milne and Adler 1999; Hassanein et al. 2019). We test the reliability and validity of our measure through both reproducibility and stability tests (Krippendorff 2013), and no mistakes or errors were found. We also test for internal consistency using Cronbach's Alpha. We find that Cronbach's Alpha percentage is 92 which is considered high compared to the acceptable percentage in disclosure studies (e.g. 91.3%) (Al Lawati and Hussainey 2020).

Second, to measure FLD quality, following Beattie et al.'s (2004) method, a comprehensive four-dimensional quality framework (financial/non-financial, good/bad news, quantitative/qualitative and long/short term orientations) is used. We illustrate the measurement of each dimension of the quality framework that is used to measure FLD quality. First, we measure the non-financial attribute by dividing the number of non-financial sentences in each chairman's statement by the total number of forward-looking sentences in that report (FinQuality). Second, we measure the tone dimension by taking the proportion of all good forward-looking sentences within the chairman's statement (Tone). Third, the time dimension is counted by scaling the long-term forward-looking sentences over the total amount of forward-looking sentences within the chairman's statement (TimeQuality). The fourth dimension is measured through the proportion of qualitative forward-looking sentences within each chairman's statement (QLYOrientation). Finally, we measure the FLD quality by averaging the four scores of the quality dimensions (Quality FLD).

4.2.2 Independent variables

Our seven main variables of interest are defined following Hoitash and Hoitash (2009), Kusnadi et al. (2016) and Al Lawati and Hussainey (2020). First, the size of AC (*ACSize*) which refers to the number of directors on the AC of firm *i* in time period *t*; second, is the diligence of AC (*ACMeet*) and refers to the number of AC meetings held for firm *i* in time period *t*; third, multiple directorships of AC members are denoted (*ACMul*) and measured as the percentage of AC members serving on multiple boards for firm *i* in time period *t*. Fourth, independent of AC members (*ACInd*) and refers to the proportion of independent AC directors for firm *i* in time period *t*; fifth, is the proportions of females on the AC (*ACFem*); sixth, the percentage of AC foreign directorship (*ACFor*). Lastly, the percentage of AC members with financial and accounting expertise (*ACFin*) is measured as those who are certified public accountants (CPAs) or have prior work experience as a chief financial officer (CFO), vice president of finance, financial controller, investment banker, chief investment officer, financial analyst, auditor, or any other corporate finance or major accounting position.

4.2.3 Control variables

We include a set of control variables to increase the predictive ability of the model and minimise the effect of omitted variables (Lopes and de Alencar 2010). The additional country-specific and company characteristics used as control variables are from the extant research. We control for auditor quality by incorporating a variable for the presence of an external Big 4 audit firm (*Big4*) following Al-Shammari et al. (2008), Al-Hadi et al. (2016) who find that compliance with accounting standards in GCC countries is driven by auditor quality. Based on meta-analyses of disclosure studies and prior literature on FLD (Aljifri and Hussainey 2007; Al-Najjar and Abed 2014; Khlif and Hussainey 2016; Kılıç and Kuzey 2018; Al Lawati and Hussainey 2020), several control variables are considered to be related to the disclosure of this information: company size, leverage and profitability. Company size is measured as the natural logarithm of total assets (*LogAsset*); the ratio of total debt to total assets has been used to measure companies' leverage (*LEVDTA*) and *ROE* is used to measure profitability (Aljifri and Hussainey 2007; Abed et al. 2014; Al Lawati and Hussainey 2020).

Furthermore, we control for other country-specific characteristics that relate to the GCC, which includes Oman. Following Al-Hadi et al. (2016) and Salem et al. (2019), we control for the presence of family directors (*Relatives*) on the board, measured as a dummy variable equal to one if a company has directors from the same family on the board and zero otherwise. Moreover, following Al-Hadi et al. (2016) and Dicko et al. (2020), ruling family membership (*Royal*) is controlled and set to equal to one if a company has at least one ruling director on the board and zero otherwise. These members have an influential power on the boards as they have a direct access to various information and to multiple resources due to their connectedness, thus will help in disclosing relevant information in order to aligning the interests of both shareholders and managers and reducing agency costs (Salem et al. 2019; Dicko et al. 2020).

Finally, FLD could be influenced by general disclosure practices within specific industries and over years (Wang and Hussainey 2013; Kılıç and Kuzey, 2018). Industry and year dummies are created.

Table 2 Descriptive statistics

Variable	Mean	SD	Min	Max
Quality FLD	0.71	0.15	0.00	1.00
Quantity FLD	13.26	8.45	0.00	40.00
FinQaulity	0.51	0.26	0.00	1.00
Tone	0.86	0.18	0.00	1.00
TimeQuality	0.65	0.25	0.00	1.00
QLYOrientation	0.80	0.19	0.00	1.00
ACMeet	4.77	1.56	0.00	12.00
ACSize	3.39	0.59	2.00	6.00
ACInd(%)	0.78	0.20	0.00	1.00
ACFem(%)	0.02	0.08	0.00	0.33
ACMul(%)	0.56	0.32	0.00	1.00
ACFor(%)	0.32	0.31	0.00	1.00
ACFin(%)	0.73	0.28	0.00	1.00
Big 4	0.89	0.31	0.00	1.00
TotalAsset (m)	852.86	2,053.89	0.40	12,544.50
ROE%	3.26	29.00	-251.20	37.41
LEV (TD/TA)	16.34	21.72	0.00	69.58
Relatives	0.46	0.50	0.00	1.00
Royal	0.16	0.36	0.00	1.00

Variable definitions—see Sect. 4.2

5 Research model

We use multivariate ordinary least squares (OLS) regression following prior studies (e.g. Abad and Bravo 2018; Kılıç and Kuzey 2018; Bravo and Alcaide-Ruiz 2019; Raimo et al. 2020; Al Lawati and Hussainey 2020) after ensuring that all the necessary assumptions for OLS have been met. The two models are as follows:

$$\begin{aligned}
 \text{Model 1 : Quantity FLD} = & \beta_0 + \beta_1 \text{ACMeet} + \beta_2 \text{ACSize} + \beta_3 \text{ACInd} \\
 & + \beta_4 \text{ACFem} + \beta_5 \text{ACMul} + \beta_6 \text{ACFor} + \beta_7 \text{ACFin} \\
 & + \beta_8 \text{Big4} + \beta_9 \text{Total Asset} + \beta_{10} \text{LEV} + \beta_{11} \text{ROE} \quad (1) \\
 & + \beta_{12} \text{Relatives} + \beta_{13} \text{Royal} + \text{Year Dummies} \\
 & + \text{Industry Dummies} + \varepsilon
 \end{aligned}$$

$$\begin{aligned}
 \text{Model 2 : Quality FLD} = & \beta_0 + \beta_1 \text{ACMeet} + \beta_2 \text{ACSize} + \beta_3 \text{ACInd} \\
 & + \beta_4 \text{ACFem} + \beta_5 \text{ACMul} + \beta_6 \text{ACFor} + \beta_7 \text{ACFin} \\
 & + \beta_8 \text{Big4} + \beta_9 \text{Total Asset} + \beta_{10} \text{LEV} + \beta_{11} \text{ROE} \quad (2) \\
 & + \beta_{12} \text{Relatives} + \beta_{13} \text{Royal} + \text{Year Dummies} \\
 & + \text{Industry Dummies} + \varepsilon
 \end{aligned}$$

(Refer to Sect. 4.2 for variables definitions).

6 Empirical results

6.1 Descriptive statistics

Table 2 presents our descriptive statistics. The analysis shows a significant variation in the FLD. On average, Omani financial companies release about 13 sentences of forward-looking information in their chairman's statement annually. The maximum number of FLD sentences is 40, with a minimum of 0. The results show how Omani financial institutions are encouraged to disclose FLD in their chairman's statement. The result is similar to what has been found in Al Lawati and Hussainey (2020).

The overall result of the current study shows that the mean of FLD quality is 71%, with a minimum value of 0 and maximum of 100%. According to the attributes of FLD quality, we find that the chairman's statement in Oman is dominated by non-financial, good, long-term and qualitative FLD, which is consistent with previous studies (e.g. Mousa and Elamir 2018; Al Lawati and Hussainey 2020), with an average of 51%, 86%, 65% and 80% respectively for each of the FLD quality dimension as follow: FinQuality, Tone, TimeQuality and QLYOrientation. This indicates that Omani financial companies are moving forward towards disclosing high quality relevant information to help the shareholders in making appropriate decisions.

In terms of AC characteristics, we observe that on average, the proportion of financial and accounting expertise directors on ACs is 73%. In addition, the average values for ACFor, ACMul and ACFem are 32%, 56% and 2%, respectively. Interestingly, the ACs are highly independent, scoring an average of 78%, with some committees are totally independent, while others are not. Moreover, the average size of AC is 4 members, with up to a maximum of 6 members and a minimum of just 2 members. Furthermore, in relation to AC meetings frequency, there are on average of 5 AC meetings annually, with up to a maximum of 12 and surprisingly with a minimum of 0.

In terms of audit quality, almost 90% of the study sample are audited by one of the Big 4 audit firms. According to the sample classification between family and royal companies, almost half of the sample have relative members on the board and on average, 16% of our sampled companies have royal directors.

6.2 Correlation analysis

Table 3 shows that there is no correlation between the quantity and quality measures of FLD, which confirms the results of the previous study conducted by Alotaibi and Hussainey (2016), who provide empirical evidence that disclosure quantity is not a proper proxy for disclosure quality. Moreover, we find a positive correlation between FLD quantity and AC meeting, auditor quality, company size, profitability, leverage and ruling members on the board. In addition, a negative association has been found between FLD quantity and relative members on the boards.

Moving to FLD quality, the results show a positive correlation between this variable and company size, profitability and ruling members on the board, while a negative correlation has been found between FLD quality and relative members on the board.

In addition, the correlation among all variables is below 0.8, suggesting that multicollinearity is not a problem (Gujarati and Porter 2009). This is confirmed by the variance inflation factors (VIF) as all variables have VIF less than 10 (Tabachnick and Fidell 2013).

Table 3 Pearson correlation matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Quality FLD	1														
2. Quantity FLD	0.014	1													
3. AC Meet	-0.080	.156*	1												
4. ACSize	0.127	0.091	-0.031	1											
5. ACInd (%)	-0.054	0.053	-0.022	0.012	1										
6. ACFem (%)	0.070	0.104	0.038	-0.046	.172*	1									
7. ACMul (%)	0.051	0.107	.190*	-0.098	-0.163*	.147*	1								
8. ACFor (%)	0.047	-0.058	0.030	0.022	-0.070	-.148*	-.162*	1							
9. ACFin (%)	-0.075	-0.003	-0.001	0.080	0.050	.153*	0.028	0.029	1						
10. Big 4	-0.047	.332**	.229**	0.043	-0.089	0.099	.248**	0.026	0.030	1					
11. LogAsset	.156*	.308**	.387**	0.057	-0.009	0.044	-0.005	-0.016	.163*	.449**	1				
12. ROE%	.282**	.184*	0.099	0.100	0.043	0.032	-0.008	0.020	-0.010	.369**	.334**	1			
13. LEV (TO/TA)	0.035	.313**	0.001	0.018	0.058	0.006	.163*	0.118	.149*	.196**	.173*	0.102	1		
14. Relatives	-.178*	-.168*	-0.146	-0.036	-0.024	-0.003	0.103	-.279**	-.154*	0.060	-0.095	0.109	0.016	1	
15. Royal	.174*	.162*	-0.026	0.081	.190*	0.017	-0.091	-0.133	0.026	.147*	0.145	0.029	-0.132	-.239**	1

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Variable definitions—see Sect. 4.2

Table 4 Multiple regression analysis

Variables	Quantity FLD	Quality FLD
	Model 1	Model 2
ACMeet	0.176	−0.019***
ACSize	0.989	0.027*
ACInd	0.774	−0.089*
ACFem	7.246	0.218*
ACMul	0.508	0.092***
ACFor	−3.472*	0.033
ACFin	−3.643*	−0.091***
Big4	5.152**	−0.162***
LogAsset	1.132	0.039***
ROE	0.016	0.002***
LEVTDTA	0.113***	0.000
Relatives	−3.493***	−0.057***
Royal	1.911	0.075***
_cons	4.235	0.846
Industry dummies	Yes	Yes
Years dummies	Yes	Yes
No. of obs	180	180
Prob > F	0.000	0.000
R-squared	0.278	0.282

*Coefficient is significant at 10%

**Coefficient is significant at 5%

***Coefficient is significant at 1%

Variable definitions—see Sect. 4.2

6.3 Regression analysis

Table 4 reports the regression analysis. Model (1) examines the impact of the independent variables on the FLD quantity (Quantity FLD), while, Model (2) studies the influence on the FLD quality (Quality FLD). Both models are significant, with Prob > F values less than 0.01, indicating their validity.

6.3.1 AC independence

AC independence (ACInd) is shown to have a significant negative relationship with FLD quality at the 0.1 level, however, no association has been found with FLD quantity. We partially accept H1. The results are contradicting agency theory; however, they are in line with the findings of Li et al. (2012), Al-Maghzom et al. (2016) and Abad and Bravo (2018) who report an insignificant association with disclosure practices. According to Haniffa and Cooke (2002), a possible explanation for this result is that independent directors lack business knowledge to make certain effective actions. In terms of the disclosure process, independent directors may also prevent managers from disclosing verifiable information to prevent the risk of facing a greater accountability and reputation costs (Ajinkya et al. 2005). Therefore, independent directors can have incentives to withhold FLD to minimise

these costs, as it is verifiable ex-post. Other possible justification could be that long-tenured independent directors may become closer to managers and, therefore, their monitoring role can be compromised (Vafeas 2003). This could be the case in the Omani context, companies try to hold the same independent members for many years, which could impair their monitoring role by becoming closer to management team. Moreover, in Oman, the independence of directors can be in form but not substantive. It is noted that a large ratio of independent members in listed companies are the main shareholders or executive directors of large shareholders (Al-Hadi et al. 2016). Additionally, the existence of relatives from second level and above as independent members is found in the top management of many companies. These cases may impede the role of independent directors in AC in monitoring and overseeing the processes of financial reporting and internal controls (Raweh et al. 2019).

6.3.2 AC with financial expertise

The study finds that AC members with financial expertise (ACFin) negatively affect FLD quality (at a significant level of 0.01) and quantity (at a significant level of 0.1). H2 has been accepted. The results are consistent with Li et al. (2012) and Carrera et al. (2017), who find the same effect on FRQ and Al-Maghzom et al. (2016) and Buallay and Al-Ajmi (2019) on the level of disclosure. However, the findings contradict the agency theory as well as Haji (2015), Abad and Bravo (2018) and Enache et al. (2020). This could be explained by the possibility that these crucial directors prevent managers from disclosing verifiable information to avoid the risk of high legitimacy and public pressure costs (Ajinkya et al. 2005). Further Bruynseels and Cardinaels (2014) suggest that this could be attributed to the connectedness of AC financial experts to the CEOs, which has an adverse effect on oversight quality, which is consistent with negative side of the social capital theory. Moreover, because of the Omani ACs are mostly made up of non-accounting financial experts, this might reduce the power of AC financial experts to influence FLD.

6.3.3 AC size

The analysis shows that there is a positive and significant impact of AC size (ACSize) on FLD quality at the 0.1 level, however, no impact has been found on the FLD quantity. The result partially accepts H3. The findings are also consistent with resource-dependence theory and with prior literature (Ahmad-Zaluki and Wan-Hussin 2010; Li et al. 2012; Haji 2015; Buallay and Al-Ajmi 2019; Raimo et al. 2020). That could be explained that large groups are able to share different knowledge and expertise about the potential benefits of releasing information towards values of a company (Allegrini and Greco 2013). In addition, large groups of ACs in Oman tend to be resourceful and are able to cover individual weaknesses, thus resulting in an enhanced monitoring role especially after considering the AC in Oman as the “keystones” of corporate financial governance following the occurrence of fraudulent financial reporting in recent years (CMA 2015).

6.3.4 AC meetings

We find that the frequency of AC meetings (ACMeet) is negatively influencing in determining the quality of FLD at a significant level of 0.01. However, it is shown to have

insignificant association with FLD quantity. The results partially support H4. The results contradict the agency theory and observations by Li et al. (2012), Haji (2015) and Buallay and Al-Ajmi (2019). The results, however, are in line with Mohamad et al. (2012).

A reasonable explanation suggested by Baatwah et al. (2015) is that AC members in Oman may be overcommitted by solving directors' conflicts during meetings, such as related party transactions, and therefore commit less time to addressing their main roles related to FRQ, and external auditor reports. These members are thus less motivated to monitor, discuss and disclose relevant information to stakeholders. This would lead regulators to increasingly monitor the way these meetings are conducting in Oman, and there will be more encouragement from regulators to emphasise more voluntary information disclosures. This will help shareholders to obtain the benefit of information circulated at these meetings.

6.3.5 AC multiple directorship

Our analysis shows that ACs with multiple directorships (ACMul) positively affect FLD quality at a significant level of 0.01, however, no impact has been found on FLD quantity. Hence, we partially accept H5. The result suggests that these members can assist the board in taking the right decision on disclosing high level of FLD, which will be useful to investors in making informed investments decisions (Eulaiwi et al. 2016). Based on social capital theory and resource-dependence theory, which argue that due to the business connections, AC members could gain valuable experience (including governance experience) from serving on other boards, which provides them with the skills and motivations to seek greater assurances in the area of FRQ (Sultana et al. 2019). The results are in line with the agency and resource-dependence arguments as well as Yang and Krishnan (2005), Eulaiwi et al. (2016), Gebrayel et al. (2018) and Al Lawati and Hussainey (2020). Furthermore, Abdelbadie and Salama (2019), Trinh et al. (2020a) and Elnahass et al. (2020) provide evidence that interlocked directors are very beneficial to companies in terms of the extended knowledge, wider channel networks and broader experience that these members gain from serving on different companies. They also state that these members perceived valuable by the stock markets and investors due to the reputational benefit they have.

The results have implications for nomination committees in Omani financial companies, suggesting that they need to appoint more of these members to ACs due to their positive effect on financial reporting, which can encourage foreign investment and restore confidence in the market through beneficial decisions.

6.3.6 AC female members

A positive impact has been found of AC female members (ACFem) on the FLD quality at a significant level of 0.1. However, no influence has been found on FLD quantity. H6 is accepted partially. The result is consistent with agency theory and with previous studies (Ammer and Ahmad-Zaluki 2017; Gull et al. 2018; Aribi et al. 2018; Bravo and Alcaide-Ruiz 2019). This could be because females have different capabilities than males due to the different socialisation processes for men and women (Srinidhi et al. 2011). Furthermore, female directors may often have to demonstrate remarkable skills to gain managerial positions and corporate-board membership (Bala et al. 2020). Moreover, women are found to be more ethical in their professional life and less likely to engage in immoral activities to

gain monetary benefits than men (Kaplan et al. 2009), and hence improve FRQ. The contribution made by Omani women to economy and society has increased in recent years, which is reflected in the fact that the number of working women has been doubled and tripled in the public and private sectors respectively according to the National Centre for Statistics and Information (Bureau 2015). Bureau (2015) also mentions that Omani women hold an increasing number of top government and business positions.

6.3.7 AC foreign members

Our analysis shows that AC foreign (ACFor) members negatively affect FLD quantity at a significant level of 0.1, however, no impact has been found on FLD quality. Hence, we partially accept H7. This could be because these members come from different settings, and thus might not be fully aware of the Omani system. Moreover, the time and energy spent on cross-border travels are likely to place excessive burden on foreign directors, potentially undermining their incentives and ability to effectively monitor senior management, hence, reducing FRQ (Masulis et al. 2007). In addition, Firoozi et al. (2016) state that because of few numbers of foreign members serving on AC compared to the local directors, the former directors will have a slight influence in encouraging the boards to disclose high level of voluntary information. Board nomination committees should carefully consider the cost and benefit of hiring foreign members to achieve the best possible outcomes for shareholders by aligning the interests of BODs with shareholders' interests, and ensuring the disclosure of all relevant information required for making beneficial decisions.

6.3.8 Control variables

Our analysis shows that company size (LogAsset), profitability (ROE) and leverage ratio (LEVTDTA) are shown to be positive and significant at the confidence level of 99% in relation to FLD practice, suggesting that large, profitable, and highly geared companies release more FLD. The results are consistent with Liu (2015) and Elgammal et al. (2018).

We also find a positive impact of auditing (Big4) on FLD quantity at a significant level of 0.05. This is consistent with Al-Hadi et al. (2016) who find same effect on voluntary disclosure. However, a negative influence is found on the quality level of FLD at a significant level of 0.01. This could be due to recent international auditors' high-profile scandals in Oman, such as KPMG and Moore Stephen. These international auditors could influence companies on withholding FLD to avoid the increase in legitimacy costs resulting from their failure in meeting what they have promised.

We also find that family directorship (Relatives) is an impediment to both the quality and quantity of FLD, as evidenced by the negative and statistically significant coefficients for this variable at the 0.01 level. The results are consistent with those of prior research (e.g. Ali et al. 2007; Al-Hadi et al. 2016; Eulaiwi et al. 2016). Moreover, our paper finds that companies with ruling family members (Royal) are positively affecting the quality of FLD at a significant level of 0.01, which contradicts the results of Al-Hadi et al. (2016). Our result is consistent with previous studies (e.g. Dicko et al. 2020). We suggest that royal family members provide ACs with specific human capital and complement the knowledge and abilities of the other directors by having insider information, which leads to an improvement of disclosure quality by providing more FLD in Oman. To conclude, family

Table 5 The impact of AC share ownership and supervisory expertise on FLD

Variables	Quantity FLD	Quality FLD
	Model 1	Model 2
ACShr	−9.228***	−0.047
ACSup	1.348	−0.083*
Big4	3.273*	−0.130***
LogAsset	2.585***	0.024*
ROE	−0.005	0.002***
LEVDTA	0.130***	0.001
Relatives	−1.937*	−0.052**
Royal	1.311	0.060**
_cons	7.255	0.854
Industry dummies	Yes	Yes
Years dummies	Yes	Yes
No. of obs	180	180
Prob > F	0.000	0.000
R-squared	0.332	0.204

* Coefficient is significant at 10%

** Coefficient is significant at 5%

*** Coefficient is significant at 1%

Variable definitions—see Sect. 4.2

and royal members are considered two-edged sword. It is a valuable resource for connected companies, but it comes at a cost of higher agency problems (Belghitar et al. 2019).

7 Additional analyses

7.1 Examining the impact of AC share ownership and supervisory expertise on FLD

We use alternative measures for AC independence and AC financial expertise, following Habib and Bhuiyan (2018) and Ksnadi et al. (2016), respectively. In the first test, we examine the effect of AC share ownership on FLD quality and quantity. The literature finds that equity holdings align AC member interests with those of shareholders and provide more effective oversight of financial reporting, the same role to what independence does (Hillman and Dalziel 2003; Habib and Bhuiyan 2018). In the second test, we examine the influence of AC supervisory expertise on FLD quality and quantity. The literature shows the need to differentiate AC expertise into several components (e.g. Goh 2009; Ksnadi et al. 2016). Table 5 illustrates our additional analyses. Model (1) examines the impact of AC share ownership and AC supervisory expertise on FLD quantity, while Model (2) examines the impact of these two variables on FLD quality.

7.1.1 Impact of AC share ownership on FLD

This additional test answers the call suggested by Malik (2014) and Velte (2017) that AC share ownership needs to be examined further with regard to the monitoring process from an international perspective. Based on agency theory, Jensen and Meckling (1976) state that it is acceptable for directors to possess a percentage value of a company's shares to motivate them to align their interest with the interest of other stakeholders and to serve as a management monitor on behalf of shareholders. Two arguments are put forward in the literature to elucidate the relationship between AC share ownership and financial reporting.

On the one hand, some studies are in favor of increased equity holdings by AC members. For instance, MacGregor (2012) finds that AC responsiveness to risk is heightened by equity holdings. Beasley et al. (2000) reveal that financial statement fraud is reduced by an increase in the level of share ownership by AC members, and FRQ is simultaneously improved (Vafeas 2005). Moreover, Bolton (2014) finds that AC shareholding is considered a vital mechanism in aligning the interests of directors and external shareholders.

However, agency theory discourages to apply the management compensation system to the AC due to increased conflicts of interest (Velte 2017). Compensating AC directors with equity and shareholding may diminish the objectivity of such AC directors, support the managerial opportunism and weaken the monitoring mechanism (Yang and Krishnan 2005). They find that stock ownership by AC members increases quarterly earnings management, which leads to lower FRQ. Furthermore, Cullinan, Du and Jiang (2010) reveal that there is a greater likelihood that weakness in internal control will be reported by firms with a stock option plan for their AC members than firms without. Moreover, Archambeault et al. (2008) find that AC incentive-based compensation is positively associated with financial restatements. In addition, using the US and New Zealand CG settings, Bédard et al. (2004) and Sharma and Kuang (2014) respectively, confirm that higher levels of stock ownership by AC directors increase aggressive earnings management behaviour, which could reduce FRQ. Recently, Al Lawati and Hussainey (2020) find a negative relationship between AC members with share ownership and the quantity level of FLD in Omani banks.

We create a variable (ACShr) which represents the proportion of AC members who hold or represent a company's shares on AC size following Eulaiwi et al. (2016) and Al Lawati and Hussainey (2020). A multiple regression analysis has been conducted to examine the impact of AC share ownership on the FLD quantity and quality.

We find a negative and significant relationship between AC share ownership (ACShr) and the quantity level of FLD (Model 1) at the 0.01 level. This could be because ACs with share ownership in Oman may reduce the level of FLD by colluding with management to protect their investment, which will lead to a reduction in share price and consequently decrease the market value of the company, which will harm all shareholders. In addition, Velte (2017) find that the remuneration of AC directors, along with equity compensation, may affect the way in which their monitoring tasks are performed, which could harm FRQ.

7.1.2 Impact of AC supervisory expertise on FLD

We also respond to a call by the Omani CMA regulators to diversify board members with different and rich experiences. Supervisory expertise is considered as important as financial expertise and they are classified as AC members with prior work experience in supervisory roles (ACSup) such as chief executive officers (CEO), chief operation officers (COO), chairman of a board of directors, or company presidents and or having more than

20 years of experience in their field, following Hoitash and Hoitash (2009) and Kusnadi et al. (2016).

Resource dependence theory argues that directors extract human capital resources from other directors to improve firm performance (Pfeffer 1972). Hence, both Hillman et al. (2000) and Cohen et al. (2008) argue that AC can benefit from a mix of accounting and non-accounting expertise, such as finance expertise and supervisory expertise. However, Dhaliwal et al. (2010) find that supervisory experts, such as CEOs or company presidents, are unable to help accounting and finance experts to enhance FRQ, which appears to contradict the findings of Goh (2009), who find that AC members with supervisory expertise are positively associated with firms' timeliness in the remediation of internal control deficiencies, which enhances FRQ. Moreover, Faleye et al. (2018) find board industry (supervisory) expertise reduces real earnings management and increases FRQ.

A multiple regression analysis has been conducted to examine the impact of AC supervisory expertise on FLD quantity and quality in the context of Oman. The study finds that AC members with supervisory expertise negatively affect FLD quality (Model 2) at the 0.1 level. This could be explained by these crucial members preventing reporting forward-looking information by managers in order to avert the risk of greater responsibility and litigation costs being faced by companies (Ajinkya et al. 2005). Therefore, they may have some incentives to withhold FLD to minimise these costs. In Oman, AC members are recruited based on seniority from fairly small circles of elites and which are staffed with directors who often have little spare time and despite having wide general experience, normally have limited specialised expertise, which could extensively harm FRQ (Al-Hadi et al. 2017).

7.2 Checking for endogeneity

We run additional tests to confirm that the results are not affected by endogeneity problem. There are three causes of endogeneity, namely, correlated omitted variables, structural reverse causality and measurement errors (Lopes and de Alencar 2010).

Firstly, omitted variables arise when not all relevant explanatory variables have been included because of data unavailability, and this omitted variable is correlated with the explanatory variables (Lopes and de Alencar 2010). We conduct a "Ramsey test" to check if any variables have been missed from the model. The result confirms the null hypothesis which states that the model has no omitted variables. Moreover, we include a set of control variables that can potentially solve the possible endogeneity of the specifications (Lopes and de Alencar 2010).

Secondly, structural reverse causality refers to the direction of causality between X and Y (Lopes and de Alencar 2010). We perform the Wu-Hausman endogeneity test across all our test models to examine whether the reverse causality problem exists. The test statistics confirm that there is no presence of endogeneity issue.

Thirdly, a measurement error occurs when instead of measuring the constructed dependent variable, a proxy is used which does not represent the underlying variable well (Lopes and de Alencar 2010). We have differentiated between the quality and quantity measures of FLD, moreover, we use a robust estimation technique (Table 5).

Table 6 Impact of ACE on FLD quantity and quality

Variables	Quantity FLD Model 1	Quality FLD Model 2
ACE	0.370	-0.022
Big4	5.371***	-0.121***
LogAsset	1.186*	0.016
LEVDTA	0.101***	0.000
ROE	0.016	0.002***
Relatives	-2.556**	-0.048**
Royal	2.482*	0.072**
_cons	4.939	0.789
Industry dummies	Yes	Yes
Years dummies	Yes	Yes
No. of obs	180	180
Prob > F	0.000	0.000
R-squared	0.241	0.186

*Coefficient is significant at 10%

**Coefficient is significant at 5%

***Coefficient is significant at 1%

Variable definitions—see Sect. 4.2

7.3 Impact of AC effectiveness (ACE) on FLD quantity and quality

In order to ensure that our results are rigorous, we conduct several further tests. Since our results show that AC independence, AC size, AC meeting and AC financial expertise have a significant impact on FLD quality and/or quantity, we create a new variable which consists of the four referred AC characteristics to composite one variable (AC Effectiveness) following Zaman et al. (2011) and Al-Shaer et al. (2017). These authors find that the interactions of these variables are likely to impact more strongly than their individual components. AC Effectiveness (ACE) is thus a dichotomous variable equal to 1 when (i) the AC membership consists of all independent non-executive directors, (ii) at least one member of the AC has financial expertise, (iii) AC members meet at least three times a year, and (iv) AC comprised of at least three members, 0 otherwise.

We run a regression analysis to examine the impact of ACE on FLD quantity and quality. The results in Table 6 show that the composite variable (ACE) has an insignificant effect on FLD quantity and quality. Returning to the results, the quality and quantity of FLD seems better explained by the separate effect of AC characteristics, rather than by a combined variable (as shown in the main regression of the paper). Also, by considering the AC characteristics separately, we get the exact impact of each individual characteristic rather than diluting it in one combined variable.

7.4 Impact of the interaction between ACE and Regulation on FLD quantity and quality

In a recent study, Al-Faryan and Dockery (2020) provide empirical evidence that corporate governance change positively affects market efficiency and hence increase the quality

Table 7 Impact of the Interaction between ACE and regulation on FLD quantity and quality

Variables	Quantity FLD Model 1	Quality FLD Model 2
ACE	0.587	-0.015
Regulation	1.130	-0.008
ACE*Reg	0.012*	0.034*
Big4	5.306***	-0.123***
LEVTDTA	0.101***	0.000
ROE	0.019	0.002***
LogAsset	1.155*	0.016
Relatives	-2.492**	-0.048**
Royal	2.509*	0.073**
_cons	4.490	0.794
Industry dummies	Yes	Yes
Years dummies	Yes	Yes
No. of obs	180	180
Prob > F	0.000	0.000
R-squared	0.245	0.192

* Coefficient is significant at 10%

** Coefficient is significant at 5%

*** Coefficient is significant at 1%

Variable definitions—see Sect. 4.2

of information by releasing reliable information to market participants. In addition, Gontarek and Belghitar (2020) show that agency costs related to governance mechanisms (e.g. CEO duality) may be moderated by regulations. Therefore, to assess the robustness of the results, we run additional analysis to examine the effect of AC effectiveness on FLD quantity and quality and how this relation is moderated by the release of the new code. A variable (Regulation) has been created which takes the value of 1 for the period of 2017 and 2018 (after the implementation of the revised code), and zero for the period from 2014 to 2016 (before the revised code).

Models 1 and 2 in Table 7 show that the interaction variable combining ACE and Regulation has a positive and significant impact on FLD quantity and quality at the 0.1 level. This means that ACE plays a positive role in enhancing the FLD practices in the period after the implementation of the new code. The results offer practical implications to regulators to apply new and improve the existing provisions in the Omani code to enhance FLD.

7.5 Impact of the interaction between ACE and company characteristics on FLD quality

We undertake further sensitivity analysis to shed light on whether the AC effectiveness has an impact on the quality of FLD, by interacting with company characteristics, which may enhance or diminish this impact. The common characteristics used in the literature are company size, profitability, leverage and external auditor type (Big 4) (Ioannou and Serafeim 2017) which are found to have a significant impact on voluntary disclosure.

Table 8 Impact of the interaction between ACE and company characteristics on FLD quality

Variables	Quality FLD			Quality FLD			Quality FLD		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
ACE	-0.032	-0.106***	0.006	ACE	ACE	0.006	ACE	ACE	0.087
LogAsset	0.000	-0.055*	0.078***	ROE	LEV	0.078***	Big4	Big4	-0.074*
ACE*Log Asset	0.016	0.137***	-0.096**	ACE*ROE	ACE*LEV	-0.096**	ACE*Big4	ACE*Big4	-0.123*
Big4	-0.105***	-0.063*	-0.119***	Big4	Big4	-0.119***	LEVTDTA	LEVTDTA	0.000
LEVTDTA	0.000	0.000	0.012	LEVTDTA	LogAsset	0.012	ROE	ROE	0.002***
ROE	0.002***	0.029**	0.002***	LogAsset	ROE	0.002***	LogAsset	LogAsset	0.012
Relatives	-0.049***	-0.038*	-0.049**	Relatives	Relatives	-0.049**	Relatives	Relatives	-0.051**
Royal	0.076***	0.063*	0.076***	Royal	Royal	0.076***	Royal	Royal	0.076***
_cons	0.807	0.749	0.783	_cons	_cons	0.783	_cons	_cons	0.756
Industry dummies	Yes	Yes	Yes	Industry dummies	Industry dummies	Yes	Industry dummies	Industry dummies	Yes
Years dummies	Yes	Yes	Yes	Years dummies	Years dummies	Yes	Years dummies	Years dummies	Yes
No. of obs	180	180	180	No. of obs	No. of obs	180	No. of obs	No. of obs	180
Prob > F	0.000	0.002	0.000	Prob > F	Prob > F	0.000	Prob > F	Prob > F	0.000
R-squared	0.181	0.129	0.213	R-squared	R-squared	0.213	R-squared	R-squared	0.199

* Coefficient is significant at 10%

** Coefficient is significant at 5%

*** Coefficient is significant at 1%

Variable definitions—see Sect. 4.2

Table 8 illustrates four models using the interaction terms for each mentioned factor. Model 1 shows an insignificant impact of the interaction term (ACE*LogAsset) on FLD quality. According to interaction term (ACE*ROE) in Model 2, the coefficient is positive and statistically significant at the 0.01 level, which indicates that ACE positively improves FLD quality in high profitable companies. This indicates that AC members of good profitable companies are encouraged to disclose high quality FLD as this might attract current and foreign investment. Moreover, the interaction term (ACE*LEV) in Model 3 presents a significant negative impact on FLD quality at the 0.05 level. This is because companies with high leverage are considered to be in high-risk which lead AC members to reduce FLD quality to legitimise themselves for not attaining what they promise the stakeholders with. Furthermore, the interaction variable (ACE*Big4) in Model 4 shows a significant and negative impact on FLD quality at the 0.1 level. This indicates that ACE negatively influences FLD quality in companies audited by one of Big 4 auditors. This could be due to the recent high-profile scandals in Oman related to international auditors, such as KPMG and Moore Stephen, as these international auditors try not to encourage companies to report FLD, which might increase the legitimate costs if companies cannot attain what they promise the stakeholders. This could also harm Big 4 auditors' reputation in the stock market, especially if the investors perceived a wrong signal, which could negatively effect on their investment decisions (Salem et al. 2019).

8 Conclusions

We examine the impact of AC characteristics on FLD over a 5 year period (2014–2018). This period relates to “before and after” significant policy updates to the CG code in which the AC function is being exercised. We find that AC characteristics affect FLD practices.

We find a significant positive relationship between AC interlocked members, AC size and AC female members and FLD quality. Conversely, the findings also suggest that AC independence, the frequency of AC meetings and ACs with financial expertise negatively affect FLD quality. It is also evident that FLD quantity is negatively affected by AC foreign and financial expertise.

These obtained insights contribute to expand previous CG and voluntary disclosure research in three significant ways. First, the study contributes to the body of knowledge by expanding the literature relating to AC characteristics and FLD, which provides a set of new characteristics (e.g. AC female members, foreign members on AC, AC share ownership, AC interlocked members and AC financial and supervisory expertise) that have been examined for the first time in the Middle East.

Second, using the theoretical framework as a basis for explaining how each attribute of AC members could affect the level of FLD, our paper contributes to the literature on AC- disclosure by theoretically justifying and empirically examining the implications of three theories–agency, resource-dependence and social capital–with respect to FLD in the financial sector, with its attendant heavy regulation and strict supervision. These theories combine fruitfully with valid arguments to explain such phenomena.

Third, we contribute to the methodology by measuring the quantity and quality of FLD in the Omani context. We follow Beattie et al.'s (2004) quality framework in measuring the quality of FLD by considering four attributes: financial, quantitative, disclosure tone and time period orientations. Interestingly, we also add to the body of disclosure literature

that there is no relationship between the quantity and the quality of FLD. Each measure represents its own meaning of disclosure; therefore, disclosure quantity should not be used as a proxy for quality. Furthermore, our study differs from the previous studies related to disclosure by conducting research on the financial sector rather than non-financial. Given that developed countries have formed the basis of most previous studies related to AC-disclosure, this research also extends this issue into developing countries, where different market structures and regulations exist.

A number of interesting implications can be drawn from the findings of this study for regulators and academics. For regulators, the findings suggest that the role of ACs can be extended to ensure the quality of voluntary disclosure, and not just the financial reporting process. Regulators in Oman should, therefore, base on the recent regulatory changes and encourage ACs to ensure the quality of the overall reporting process to include different aspects of FLD, such as financial orientation, tone orientation, time orientation and quantitative orientation. These findings also have direct implications for the selection of AC members with specific characteristics to improve FLD quality, as the disclosure of such information is a mechanism with which to reduce information asymmetry in capital markets and to work towards the Oman Vision 2040 strategy.

Contrary to the commonly held view that an AC's function is to detect financial reporting misstatements, this study's findings show, for accounting academics and educators, that the role of the AC extends to FLD. This implies that ACs can play an integral role in recent calls for comprehensive corporate reporting. In terms of theoretical implications, the findings seem to support the grounds of agency, resource-dependence and social capital theories in regulatory reform settings. Agency theory suggests that the AC function offers a monitoring role that can potentially enhance the quality of corporate reporting, with resource-dependence theory suggesting that different AC characteristics bring specific and valuable resources to a firm and contribute to disclosure strategies. Social capital theory suggests that the business connections of AC members with different companies provide confidential information, which could help in strengthening FRQ. These theories, originally found applicable in a widely held ownership structure setting, explain the disclosure and governance practices in closely controlled business environments such as in Oman.

Despite the practical implications, there are a number of limitations in relation to the study. Our sample is considered small, due to the small size of Omani financial institutions. We focused only on the Omani context, which limits generalisability as disclosure practices may be affected by company type, industry and institutional context. Furthermore, we are aware of the effect that other board composition variables (e.g. board size and meeting) may have on disclosure quality.

Given the novelty of our study, we believe that our findings offer opportunities for future research. This research could be extended by analysing different institutional contexts. Future studies could also examine the impact of AC characteristics on voluntary risk disclosure, the cost of equity, credit rating, trade credit and companies' performance. In addition, the Omani revised CG code prevented AC chair from being a member of any other committee within a company. However, it sets out the requirement for nomination and remuneration/compensation committees, which resulted in overlapping members across these committees. Further research could examine whether overlapping AC membership improve the FLD quantity and quality and which type of overlapping matters. Finally, it could be interesting to examine the impact of performance on FLD tone in financial institutions as this would help stakeholders to know whether managers are providing truthful explanation or engaging in impression management.

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Compliance with ethical standard

Conflict of interest We confirm that there is no conflict of interest associated with this paper.

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