Corporate governance and the timeliness of audited financial statements
The case of Kenyan listed firms

David Mutua Mathuva
Strathmore University, Nairobi, Kenya
Venancio Tauringana
University of Southampton, Southampton, UK, and
Fredrick J. Otieno Owino
Strathmore University, Nairobi, Kenya

Abstract
Purpose – The nature of corporate governance (CG) mechanisms in an entity may influence the timeliness of the audited annual report. The purpose of this paper is to argue that the “quality” of CG in a firm has a significant association with the time it takes the audited annual report and financial statements to be released.
Design/methodology/approach – Using a set of 543 firm-year observations over the period 2007–2016, the authors examine whether a validated CG-Index is associated with audit report delay (ARD). The authors employ both granular as well as aggregated approaches to the analyses. In addition, the authors include control variables known to have an association with ARD in the panel data regressions.
Findings – The findings, which are robust for self-selection among other checks, reveal that financial expertise in the audit committee, board size, board meetings and independence in the board are associated with longer ARDs. Some CG attributes such as board diversity (i.e. women and different nationalities in the board) are associated with improved timeliness of the annual reports. The results also reveal that a longer tenure for independent directors in the board is associated with a shorter ARD. Overall, the authors find that the composite CG score has a positive influence on the timeliness of annual reports.
Research limitations/implications – The study focuses on listed companies in one developing country. Additional studies focusing on other jurisdictions could yield more results.
Practical implications – The study is useful in highlighting those CG characteristics firms should focus on toward the attainment of timely corporate reporting to aid in decision making by users.
Originality/value – The study is unique since it emphasizes the importance of focusing on an aggregate CG-Index, and the contribution of the CG-Index toward the timeliness of annual reports.
Keywords Corporate governance, Kenya, Annual report, Board diversity, Audit report delay

1. Introduction and motivation
In this study, we investigate whether a composite corporate governance (CG) index has any association with the timeliness of audited annual reports, proxied by the audit report delay (ARD). According to the IASB’s conceptual framework for financial reporting, the timeliness of annual reports is seen as the conciliator between the relevance and reliability of annual reports, and ARD is a useful proxy that allows outsiders to gauge audit efficiency (Habib and Bhuiyan, 2011; International Accounting Standards Board, 2016). ARD is particularly important in emerging and newly developed capital markets where the audited annual reports are critical for investors to make informed decisions.

The usual disclaimer applies. The authors are grateful for the incisive, useful and value-adding feedback provided by the two anonymous reviewers which resulted into a substantial revision of the paper. The authors also thank the Associate Editor, Professor Musa Mangena for his useful insights on the paper. The authors are grateful to the members of Strathmore Accounting Research Group who provided useful comments.
report including financial statements is the single main source of reliable information for investors (Leventis, Weetman and Caramanis, 2005). The ideal situation is for users to obtain and utilize the annual report immediately at the end of the year, although this does not happen due to the time required to compile and provide independent assurance on the financial statements and other information. Therefore, an ARD occurs due to various reasons, which are either auditor-related, firm-specific or governance-related factors (Habib et al., 2018; Durand, 2019).

We observe that prior research on ARD focuses primarily on a specific set of individual factors explaining ARD in more developed nations with limited studies in developing economies. The studies utilize a granular approach and establish significant associations between ARD and auditor-related factors (Meckfessel and Sellers, 2017; Habib et al., 2018; Hussin et al., 2018; Rezaei and Mohd-Saleh, 2018), client-related factors (Jaggi and Tsui, 1999; Habib and Bhuiyan, 2011; Hassan, 2016; Rusmin and Evans, 2017; Swanson and Zhang, 2018) and CG-related factors (Tauringana et al., 2008; Nehme et al., 2015; Sultana et al., 2015; Ghafran and Yasmin, 2017). Nehme et al. (2015) observe that the extensive research on the determinants of ARD has laid emphasis on audit-related or company-related factors. Sultana et al. (2015) argue that prior research focuses on client factors (e.g. size and internal controls), audit function features (e.g. risk and audit complexity) or auditor characteristics (e.g. auditor type and expertise).

The relatively few studies on ARD and CG have focused on certain board features (Nehme, Assaker and Khalife, 2015; Alfraih, 2016) or audit committee (AC) features (Tauringana et al., 2008; Nehme et al., 2015; Sultana et al., 2015; Ghafran and Yasmin, 2017). A handful of the studies have attempted to study the influence of the combined CG characteristics on ARD. For instance, Baatwah (2015) finds a significant and negative association between AC quality and ARD. However, Habib and Muhammadi (2018) and Rezaei and Mohd-Saleh (2018) find an insignificant association between AC quality, board quality and ARD. This highlights mixed findings on the influence of composite CG characteristics on ARD.

In a meta-analysis study, Durand (2019) observes that studies examining the association between board size, independence and ARD have been sparse, including the USA. Given the importance placed on CG in explaining ARD (see Afify, 2009), the present study provides a deeper examination of the influence of a composite CG-Index on ARD. Further, Afify (2009) argues that there is little professional guidance on the factors to consider when assessing the strength of CG in developing an audit strategy. For instance, a client’s governance structure with strong monitoring and strategic perspectives can be useful toward improving audit efficiency (in terms of detailed testing) and audit effectiveness (in terms of assurance provision) (Cohen et al., 2002). We argue that for the CG effect to be felt in the provision of independent assurance, it is worthwhile examining the contribution of a composite CG on the timeliness and efficiency of audits.

Whereas an array of prior studies have focused on the influence of disaggregated CG characteristics on ARD (Jaggi and Tsui, 1999; Leventis, Weetman and Caramanis, 2005; Oussii and Taktak, 2018; Swanson and Zhang, 2018), we argue that such an approach fails to account for the “unobserved” real governance mix as posited by Gompers, Ishii and Metrick (2003), Boyd et al. (2017) and Black et al. (2017). We therefore construct a composite CG measure, referred to as the CG-Index in this paper, and study its association with the ARD. We further extend prior studies by examining the factors associated with ARD in Kenya’s capital market. The focus on the Kenyan capital market is informed by its uniqueness in terms of the relatively weak enforcement of regulations on company laws, governance and corruption. The implementation of the Code of Corporate Governance for Security Issuers (CCGSI) in 2015 also presents an opportunity to examine the extent to which CG plays toward the timeliness of the audited annual report. The revised Kenyan Companies Act 2015 stipulates that companies
should submit their audited annual report within six months from the year end (Government of Kenya, 2015). Whereas there is a regulatory requirement to release the annual report in a timely manner, some companies take a shorter or longer period, depending on various factors, which will be investigated in this study.

Consistent with Black et al. (2017), we address the construct validity in the CG-Index by adopting a four stage approach toward the development of a composite CG-Index. Using the CG scores obtained using the CG-Index, we examine its association with ARD, both at a granular-level as well as a composite variable. The CG-Index is based on an initial set of 37 CG attributes largely drawn from the 2015 CCGSI in Kenya (Capital Markets Authority (CMA), 2015) alongside research studies on CG and ARD. After performing construct validity on the 37 CG attributes, the final CG-Index utilized for the purposes of this study has eight characteristics. Although we still employ a granular approach to test the association of each CG-Index item with ARD, our primary focus is on the association between the composite CG-Index and ARD. This is based on the argument that not any single CG attribute influences the timeliness of audited annual report but the totality of the CG mechanisms. Second, the measurement of certain board attributes such as independence and CEO duality have been questioned. For instance, the use of a binary approach (1, 0) is disputed since it does not effectively capture the nature of independence (Black et al., 2017) and underestimates duality (Boyd et al., 2017). Further, certain CG attributes for instance gender diversity, nationalities in the board and family connections are largely underexplored by studies.

Using a sample of listed firms in a developing economy, Kenya, we observe that the CG-Index has a highly significant and negative association with ARD. This highlights the potential improvement in the timeliness of audited annual reports for companies that have embraced higher compliance with the CG code, more specifically with regard to financial expertise in the AC, board size and meetings, board independence, board diversity (in terms of having women and diverse nationalities) and the tenure of independent board members. Other variables that are negatively associated with ARD include: duality in reporting, family ownership, company size, firm profitability, having Big 4 auditors, firms with December as their year-end and cross-listed firms[5]. Finally, the study shows that the more subsidiaries a firm has, the longer the ARD.

The remainder of the paper is organized as follows: Section 2 presents the institutional setting in terms of legal and policy framework on auditing and CG. Section 3 presents both the theoretical and empirical literature review and hypotheses formulation. Next, Section 4 presents the methodology and data while Section 5 highlights the results. Finally, Section 6 concludes and presents further areas of research.

2. Institutional setting
The CG concept emerged in the 1930s where scholars such as Berle and Means (1932) observed that when companies grew they would establish separate systems of control from the direct owners. Since then, CG has gained traction over the years primarily due to massive corporate failures such as the 1932 Stock market crash in the US as well as the Enron and WorldCom scandals (Cadbury, 2002; Dagli et al., 2012). Major contributions to research in CG emerged in the UK through the establishment of the Cadbury Committee Report (1992), the Greenbury Committee Report (1995), the Hampel (1998) and Financial Reporting Council (FRC) (2003).

The OECD (2004) Code of CG is perhaps the commonly used code to guide security regulators and policy makers develop guidelines on CG for companies in many jurisdictions. The OECD code stipulates that shareholders should “obtain relevant and material information on the corporation on a timely and regular basis” (OECD, 2004, p. 18). There should be timely and accurate disclosure of all material matters regarding the company, including financial situation, performance, ownership and governance.
Section 684(1) of the Kenyan Companies Act, which commenced on September 15, 2015, stipulates that the deadline for lodging (audited) financial statements for public companies with the Registrar of companies is “six months after the end of the company’s relevant accounting reference period” (Government of Kenya, 2015, p. 753). Despite the existence of characteristic weak institutions and legislative mechanisms, countries in Africa have emphasized the adoption of best-practice CG practices in corporations, including developing and instituting CG codes to guide companies. In South Africa for instance, the King’s Committee Report and Code of Practice for CG were published in 1994 to steer CG efforts in Africa. In Kenya, the Capital Markets Act contains the CCGSI to the public, 2015. The 2015 Code replaced an earlier CG code which was established in 2002.

According to the CCGSI, shareholders have a right to receive full and timely information regarding matters to be discussed in the Annual General Meeting at least 21 calendar days before. The CCGSI requires the board to institute process for timely preparation of books of accounts and charge its AC with ensuring that the financial statements comply with applicable IFRS. The code expects board members to provide timely and balanced disclosure of all material information concerning the company (Capital Markets Authority (CMA), 2015). The ARD has been studied as a primary proxy for the timeliness of audited annual reports and CG has been found to influence it (Jaggi and Tsui, 1999; Tauringana et al., 2008; Afify, 2009; Hassan, 2016; Chan et al., 2016; Durand, 2019). Ideally, embracing good CG practices is expected to contribute positively to the timeliness of the annual report, although this is not always the case. It is on this backdrop that the present study seeks to examine the nexus between CG mechanisms and their influence on the timeliness of annual reports as proxied by ARD.

3. Literature review and hypotheses
3.1 Theoretical review
The study draws heavily on agency theory which has primarily been utilized to explain why organizations incur monitoring costs to reduce agency conflicts (Jensen and Meckling, 1976). In a typical agency setting, the board and external auditors are charged with protecting shareholder interests from adverse decisions by the management (Fama and Jensen, 1983). According to Nehme et al. (2015), the management of a firm may fail to cooperate with the independent assurance providers, leading to prolonged time to complete the audit. They argue that moral hazard could also play a role in lengthening the ARD. At the board level, Alfraih (2016) opines that outside board members are important in resolving disagreements among internal management, including the external auditor. Firms with a CEO who holds a dual role would compromise a board’s commitment to minimizing agency conflicts (Fama and Jensen, 1983). According to the agency proposition, CEO duality has the potential to increase the uncertainty of information hence leading to agency conflicts (Donald and Davis, 1991). Aljifri and Moustafa (2007) further argue that institutional investors are important in CG since they help reduce agency costs due to their ability to monitor and discipline corporate managers. Baatwah (2015) opines that it is virtually impossible for shareholders to oversee the activities of the board and the management. As a result, the shareholders seek independent assurance services in a bid to obtain relevant and reliable information on the financial stewardship of the firm (Watts and Zimmerman, 1986).

Al-Matari et al. (2014) argue that the CG practices adopted by the company should positively impact the ARD in terms of providing timely information to shareholders and other users. This is because, the achievement of timely audited annual reports is largely dependent on the board’s commitment and the strength of its governance mechanisms (Beekes et al., 2014). Turley and Zaman (2004) observe that the AC is charged with financial oversight including the external audit process. Powell and Anisc (1997) argue that boards whose AC members have financial expertise are useful in reducing agency costs since they are conversant with the auditing and/or financial reporting process. They are capable of
ensuring that the external auditor’s work is competently undertaken, comprehend the audit judgments and resolve any conflicts that may arise in the course of the audit.

Some proponents argue that large ACs increase chances for opportunistic behavior and make decision-making problematic (Mintzberg, 1983). Such large ACs may inhibit active participation by members hence lowering the committees monitoring and control responsibilities. Bédard et al. (2004) argue that boards with more independent AC members are likely to enhance prudent financial oversight responsibilities, including dealings with auditors and dispute resolution. Both actions are useful in reducing the time taken by auditors to complete the external audit.

Once the independent assurance provider is selected, it is important to note that their attributes can determine the timeliness of the audited annual report too. For instance, Habib and Bhuiyan (2011) find that large, specialist auditors tend to take relatively less time to complete the audit compared to their small, non-specialist counterparts. Khan et al. (2016) find lower agency costs where firms utilize Big 4 auditors compared to non-Big 4 auditors with political connections. However, Khan et al. (2016) document that political connections are harmful to minority shareholders since they are associated with higher agency costs. Therefore, another important consideration the board should focus on is the attributes of the auditor appointed to provide the independent assurance.

A firm with diverse ownership base may increase auditor’s work due to the large number of investors with diverse interests (Jensen and Meckling, 1976). Afify (2009) explains that agency challenges arising from separation of ownership are lower in firms with high ownership concentration and family-owned firms. Rusmin and Evans (2017) argue that the lower agency costs may lead to a relatively shorter ARD in firms with diverse ownership or non-family-owned firms. In this study, we utilize agency theory to study the association between CG and ARD in a developing country context.

3.2 Empirical literature and hypothesis formulation
3.2.1 Corporate governance attributes and ARD. A growing strand of research on ARD, which was inspired about four decades ago, has produced overwhelming studies mainly utilizing a granular approach to examine the drivers of ARD (Dyer and McHugh, 1975; Davis and Whittred, 1980; Ashton et al., 1987; Oussii and Taktak, 2018; Rezaei and Mohd-Saleh, 2018; Swanson and Zhang, 2018). The meta-analyses performed by Habib et al. (2018) and Durand (2019) reveal that the drivers of ARD can be categorized into specific auditor-, CG, audit work- and firm-related factors. In this study, we shift focus to a composite measure of CG and its association with ARD. In the meta-analysis, Durand (2019) observes that variables relating to CG have received less attention by researchers and would benefit from future research, and this forms the basis for this study.

Baatwah (2015) find that only internal CG mechanisms (i.e. board size, expertise and financial expertise in the AC) are associated with timely audit reports. Afify (2009) finds a significant association between ARD and board independence, duality of the CEO and the existence of an AC. Nehme et al. (2015) find that large boards with diverse backgrounds and intellectual capacity are associated with a shorter ARD. Interestingly, Alfraih (2016) finds that firms with larger boards are likely to produce timely financial statements. Habib et al. (2018) find that the ARD is reduced by the existence of a financial expert member in the AC and ownership concentration.

According to Sultana et al. (2015), boards with independent AC members possessing financial expertise and prior AC experience are associated with shorter ARD. Ghafran and Yasmin (2017) find AC chairs with experience and monitoring expertise lead to a reduction in ARD. Oussii and Taktak (2018) establish a negative association between AC’s financial expertise and ARD. However, Nehme et al. (2015) hold the view that having a large number
of financial experts on the board is a potential source of conflicts with the auditors and may lead to a longer ARD. Nehme et al. (2015) argue that firms having large ACs with more frequent meetings and financial experts tend to exhibit longer ARD. As argued under agency theory, large committees provide an opportunity for conflicts and disagreements to arise which hinders the auditing process (Mintzberg, 1983; Nehme et al., 2015). ACs with frequent meetings could be characteristic of ineffectiveness especially when the focus is on financial and control weaknesses. This means that instituting regulation requiring financial expertise and experience in the AC is useful in enhancing the timeliness of annual reports.

Empirical studies find that CEO duality reduces the independence of the board and impairs AC’s effectiveness (Muniandy, 2007; Nehme et al., 2015). Alfraih (2016) reaffirms this proposition by establishing that firms with separate CEO-chairman roles are more likely to produce timely audited financial statements. This is because the CEO’s cooperation with the auditor facilitates the speedy conclusion of the auditing process. Nehme et al. (2015) and Alfraih (2016) find that boards with more independent, non-executive directors have shorter ARD. This is because, independence is useful in reducing conflicts at governance level and is useful in increasing transparency and disclosures which enhances the audit thereby reducing the ARD.

Nehme et al. (2015) establish that variables relating to the board of directors (board size, CEO duality, board independence) have a negative association with the ARD. In another study, Tauringana et al. (2008) find a significant and negative association between CG mechanisms (finance experts in AC and board meetings) and ARD. Ika and Ghazali (2012) find that an effective AC is likely to result in reduced financial reporting time. The study also finds that AC’s effectiveness reduces ARD. While using a composite measure of CG mechanisms from an AC perspective, Baatwah (2015) find that AC quality enhances audit report timeliness. The study finds that board quality is not significant in enhancing the timeliness of the audited report. In a similar study, Ghafran and Yasmin (2017) find that the AC’s composite compliance variable has a significant negative association with ARD. Following this line of reasoning, we formulate the following testable hypothesis:

**H1.** There is a significant negative association between the composite CG-Index and ARD.

We proceed to test this hypothesis by developing a composite CG-Index comprising of eight CG mechanisms and investigate its association with ARD, from both a granular as well as an aggregate approach.

3.2.2 Other empirical studies on the drivers of ARD. Since there has been a growing strand of research focusing on specific drivers of ARD, we present a summary literature matrix capturing the significant variables explaining the length of the ARD in various jurisdictions[6]. We limit the literature summary to the most recent studies examining the association between CG and ARD. The summary is presented in Table I.

A major contribution of this paper is the inclusion of an important variable – the composite CG-Index. Leventis et al. (2005) note that while prior models are able to explain a significant amount of ARD, a considerable portion of ARD remains unexplained[7]. Leventis et al. (2005) and Durand (2019) suggest that future research should focus on the effect of incorporating composite CG characteristics into the analysis. The present paper focuses on eight CG-related characteristics categorized into three: AC characteristics (financial expertise in the AC and number of independent non-executive directors in the AC), board structure and operations (board size, frequency of board meetings, number of independent directors in the board and tenure of independent directors) and board diversity (number of women in the board and number of nationalities in the board). The variables are described and defined in Table AI.
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Author(s)</th>
<th>Objective of study</th>
<th>Jurisdiction</th>
<th>Period of study</th>
<th>Sample size</th>
<th>Dependent variable</th>
<th>Research design and model used&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Significant independent variables (and direction of association)&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jaggi and Tsui (1999)</td>
<td>The study examines whether the audit report lag (ARL) of Hong Kong companies is associated with auditor business risk and audit firm technology</td>
<td>Hong Kong</td>
<td>1991–1993</td>
<td>393</td>
<td>ARL</td>
<td>Panel linear regression, adjusted $R^2 = 14.16%$</td>
<td>Financial condition (+), company size (−) and ROA (−)</td>
</tr>
<tr>
<td>2</td>
<td>Leventis, Weetman and Caramanis (2005)</td>
<td>The study examines the ARL of companies listed on the Athens Stock Exchange at the time of its transition from an emerging market to a newly developed capital market</td>
<td>Athens</td>
<td>2000</td>
<td>171</td>
<td>ARL</td>
<td>Multiple linear regression model, adjusted $R^2 = 24.3%$</td>
<td>Number of remarks (+), type of auditor (−), audit fee per hour (−), extraordinary items (+), size (+), uncertainty in the audit report (−)</td>
</tr>
<tr>
<td>3</td>
<td>Lee and Jahng (2008)</td>
<td>The study examines whether ARL is determined by certain auditor-related factors</td>
<td>China</td>
<td>1999–2005</td>
<td>8,833</td>
<td>Natural logarithm of ARL</td>
<td>Poisson regression, Pseudo-$R^2 = 13.45%$</td>
<td>Non-audit service fees (−), Big 4 (−), auditors opinion (−), client firm size (−), ROA (−), leverage (−), negative earnings (−), number of subsidiaries (+), firm’s listing status (−), proportion of inventory and receivables to total assets (−), extraordinary items (+) and ownership concentration (+)</td>
</tr>
<tr>
<td>4</td>
<td>Tauringana, Kyeyune and Opio (2008)</td>
<td>The study investigates the association between corporate governance mechanisms, dual language reporting and timeliness of annual reports</td>
<td>Kenya</td>
<td>2005–2006</td>
<td>72</td>
<td>Time</td>
<td>OLS regression, adjusted $R^2 = 41.9%$</td>
<td>Financial expertise in AC (−), board meetings (−), non-executive directors in the board (−), dual language reporting (−), company size (−), industry (−)</td>
</tr>
<tr>
<td>5</td>
<td>Afify (2009)</td>
<td>The study reviews literature on ARL, its determinants and its</td>
<td>Egypt</td>
<td>2007</td>
<td>372</td>
<td>ARL</td>
<td>Multiple regression,</td>
<td>Board independence (−), duality of CEO (−), existence of AC (−), company size (+),</td>
</tr>
</tbody>
</table>

<sup>a</sup>Research design and model used

<sup>b</sup>Significant independent variables (and direction of association)
| S.No. | Author(s) | Objective of study | Jurisdiction | Period of study | Sample size | Dependent variable | Research design and model used | Significant independent variables (and direction of association)

| 6 | Habib and Bhuiyan (2011) | impact on CG characteristics | New Zealand | 2004–2008 | 502 ARL | adjusted $R^2 = 57.1\%$ | Multiple linear regression model, adjusted $R^2 = 27\%$ | auditor type (+), industry (−), firm performance (−)

| 7 | Ika and Ghazali (2012) | The study examines the association between audit firm industry specialization and the ARL | Indonesia | 2008–2009 | 211 Financial reporting lead time | Multivariate regression analysis, adjusted $R^2 = 22.5\%$ | Audit effectiveness (−) and financial condition (+)

| 8 | Dao and Pham (2014) | The study examines the association between audit firm tenure and ARL. It also investigates the impact of auditor industry specialization on the association between audit firm tenure and ARL | Varied (data obtained from Compustat and Audit Analytics databases) | 2008–2010 | 7,291 ARL | Multiple regression, adjusted $R^2 = 14\%$ | Length of auditor-client relationship (−), auditor-industry specialization at city, national levels (−), ROA (+), leverage (+), reportable segments (+), loss (+), going concern opinion (+), material weakness in internal control (+), restatement (+), audit fees (+) and auditor change (+)

| 9 | Baatwah (2015) | The study examines whether internal and external CG mechanisms are associated with audit report timeliness | Oman | 2007-2011 | 260 Audit report timeliness | Random effects panel data regression approach, adjusted $R^2 = 15.5\%$ | AC quality (−), company size (−) and ownership concentration (−)

| 10 | Habib (2015) | The study examines empirically the effect on the ARL of a new set of Chinese Accounting Standards (CAS) introduced in 2007 that | China | 2003–2012 | 9,969 ARL and natural logarithm of ARL | OLS Regression, adjusted $R^2 = 9.33\%$ | CAS (+), loss (+), going concern opinion (+), audit fee (+), growth in sales (−), inventory and receivables to total assets (+), government ownership (+/−) and CEO duality (+) | (continued)
<table>
<thead>
<tr>
<th>S. No.</th>
<th>Author(s)</th>
<th>Objective of study</th>
<th>Jurisdiction</th>
<th>Period of study</th>
<th>Sample size</th>
<th>Dependent variable</th>
<th>Research design and model used(^a)</th>
<th>Significant independent variables (and direction of association)(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Nehme, Assaker and Khalife (2015)</td>
<td>The study examines the effect of CG mechanisms on ARL</td>
<td>FTSE 350 Companies</td>
<td>2007–2010</td>
<td>908 ARL</td>
<td>Multiple regression (with random effects), (R^2 = 17.6%)</td>
<td>Board size (–), CEO duality (–), AC meetings (+), AC independence (–), AC size (+), financial expertise of AC members (+), company size (–), ROA (–) and liquidity (+)</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Sultana et al. (2015)</td>
<td>The aim of the study is to determine whether AC compositional features are associated with the timeliness of financial reporting</td>
<td>Australia</td>
<td>2004–2008</td>
<td>494 ARL</td>
<td>OLS Regression, adjusted (R^2 = 49%)</td>
<td>Financial expertise in AC (–), AC experience (–), AC independence (–) and company size (–)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Alfraih, (2016)</td>
<td>The study examines the influence of CG mechanisms on audit delay</td>
<td>Kuwait</td>
<td>2013</td>
<td>174 Audit delay</td>
<td>Multivariate regression model, adjusted (R^2 = 37.2%)</td>
<td>Big 4 (–), board size (–), board independence (–), CEO duality (–), government ownership (+), company size (–) and ROA (–)</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Chan, Luo and Mo (2016)</td>
<td>The study examines whether prior determinants of audit reporting lag are applicable in the Chinese context. The study also investigates the consequences of long ARL in subsequent periods</td>
<td>China</td>
<td>2004–2010</td>
<td>4,025 Natural logarithm of audit lag (including long audit lag)</td>
<td>OLS regression, adjusted (R^2 = 6.5%)</td>
<td>Asset return (+), audit fee (+), auditor switching (+), good news (–), loss (+), board meetings (–), subsidiaries (+) and non-standard opinion (+)</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Hassan (2016)</td>
<td>The study investigates the determinants of the audit delay</td>
<td>Palestine</td>
<td>2011</td>
<td>46 ARL</td>
<td>Multivariate regression, adjusted (R^2 = 43.3%)</td>
<td>Company size (–), big international audit firm (+), number of company branches (–), board size (+), AC existence (–) and ownership by individual investors (–)</td>
<td></td>
</tr>
<tr>
<td>S.No.</td>
<td>Author(s)</td>
<td>Objective of study</td>
<td>Jurisdiction</td>
<td>Period of study</td>
<td>Sample size</td>
<td>Dependent variable</td>
<td>Research design and model used</td>
<td>Significant independent variables (and direction of association)</td>
</tr>
<tr>
<td>-------</td>
<td>-----------</td>
<td>--------------------</td>
<td>--------------</td>
<td>----------------</td>
<td>-------------</td>
<td>-------------------</td>
<td>-------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>16</td>
<td>Shin, Lee, Lee and Son (2016)</td>
<td>The study examines the effect of human resource investment in internal control on ARL</td>
<td>Korea</td>
<td>1999–2005</td>
<td>2,702</td>
<td>ARL</td>
<td>OLS regression, adjusted $R^2 = 27.31%$</td>
<td>Average working experience of IC employees (−), company size (−), leverage (+), book to market value (+), Big 4 auditor (+) and unqualified audit opinion (+)</td>
</tr>
<tr>
<td>17</td>
<td>Ghafran and Yasmin (2017)</td>
<td>The study examines the association of AC chair financial, experiential and monitoring expertise with the ARL</td>
<td>FTSE350 companies</td>
<td>2007–2010</td>
<td>987</td>
<td>ARL</td>
<td>Multivariate regression, adjusted $R^2 = 18.4%$</td>
<td>AC chair tenure (−), AC chair in another committee (−), AC quality (more than 3 members, at least one financial expert, has only independent directors, held more than 3 meetings during the year) (−), executive share ownership (−), Big 4 auditor (−), company size (−), subsidiaries (+), receivables and inventories to total assets (+) and acquisition (+)</td>
</tr>
<tr>
<td>18</td>
<td>Meckfessel and Sellers (2017)</td>
<td>The study seeks to address the research question: does the regrowth of sizable consulting practices by the Big 4 influence ARL and restatement rates?</td>
<td>United States</td>
<td>2000–2009</td>
<td>46,118</td>
<td>ARL</td>
<td>OLS Regression, adjusted $R^2 = 15%$</td>
<td>Restatement (+), consulting practice fees (+), client audit fees (+), non-audit fees (−), loss (+), large audit firms (+), influence (+), tenure (−), company size (−), book to market (−), going concern opinion (+) and filer type (−)</td>
</tr>
<tr>
<td>19</td>
<td>Rusmin and Evans (2017)</td>
<td>To examine the relation between two dimensions of auditor quality, namely auditor industry specialization and auditor reputation and the audit report lag</td>
<td>Indonesia</td>
<td>2010–2011</td>
<td>407</td>
<td>Audit lag</td>
<td>OLS multiple regression, adjusted $R^2 = 21.8%$</td>
<td>Subsidiaries (+), family owned (−), loss (+), industry (+), specialist (−) and Big 4 auditor (−)</td>
</tr>
<tr>
<td>20</td>
<td>Salleh, Baatwah and Ahmad (2017)</td>
<td>The study examines whether Malaysian AC financial expertise is</td>
<td>Malaysia</td>
<td>2005–2011</td>
<td>676</td>
<td>ARL</td>
<td>Fixed effects panel data, adjusted $R^2 = 5.6%$</td>
<td>Bankruptcy (+/−), ownership concentration (+/−), extraordinary items (+), age (+/−), Big 4 auditor (+) and non-audit fees (−)</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Author(s)</th>
<th>Objective of study</th>
<th>Jurisdiction</th>
<th>Period of study</th>
<th>Sample size</th>
<th>Dependent variable</th>
<th>Research design and model used</th>
<th>Significant independent variables (and direction of association)</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Habib and Muhammadi (2018)</td>
<td>The study investigates the association between political connections and ARL and the moderating effect of related party transactions</td>
<td>Indonesia</td>
<td>2007–2013</td>
<td>1,571</td>
<td>Natural logarithm of ARL</td>
<td>Fixed effects panel regression, adjusted $R^2 = 33%$</td>
<td>Political connections (–), related party transactions (+) company size (–), loss (+), audit opinion (+), ownership concentration (–) and government ownership (–)</td>
</tr>
<tr>
<td>22</td>
<td>Habib et al. (2018)</td>
<td>A meta-analysis of the determinants of ARL. The determinants are grouped under (a) audit and audit-related, (b) CG-related determinants and (c) firm-specific determinants</td>
<td>Various</td>
<td>1977–2013</td>
<td>210,437</td>
<td>ARL</td>
<td>Meta-regression technique and publication bias identification</td>
<td>Audit opinion (+), audit season variables (+), Big 4 auditor (–) non-audit services (–), auditor tenure (–), financial expert member on AC (–), owner concentration (–), firm complexity (+), profitability (–)</td>
</tr>
<tr>
<td>23</td>
<td>Hussin, Bamahros and Shukeri (2018)</td>
<td>The study examines the association between lead engagement partner workload, and audit lag. The moderating effects of partner tenure are also studied</td>
<td>Malaysia</td>
<td>2013</td>
<td>651</td>
<td>Audit lag</td>
<td>Multivariate regression analysis, $R^2 = 24%$</td>
<td>Partner workload (+), busy year-end (+), Big 4 auditor (–), AC meetings (+), company size (–), audited and unaudited profit after tax variance (+) and product segments (+)</td>
</tr>
<tr>
<td>24</td>
<td>Oussii and Taktak (2018)</td>
<td>The study investigates the relationship between the effectiveness of an AC and the financial reporting timeliness</td>
<td>Tunisia</td>
<td>2011–2013</td>
<td>162</td>
<td>Natural logarithm of audit delay</td>
<td>Panel data model, adjusted $R^2 = 67.27%$</td>
<td>Financial expertise in the AC (–), qualified audit report (+), ROA (–) and company size (–)</td>
</tr>
<tr>
<td>25</td>
<td>Rezaei and Mohd-Saleh (2018)</td>
<td>The study investigates the effect of auditor type (private vs state) and increased competition in an audit market on ARL</td>
<td>Iran</td>
<td>1999-2010</td>
<td>2,706</td>
<td>Natural logarithm of ARL</td>
<td>Multivariate regression, adjusted $R^2 = 28%$</td>
<td>Private auditor (–), competitive audit market (–), unqualified audit opinion (+), auditor switching (+), year-end (–), company size (+), ROA (–), subsidiaries (+), ownership concentration (–), state</td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>S.No.</th>
<th>Author(s)</th>
<th>Objective of study</th>
<th>Jurisdiction</th>
<th>Period of study</th>
<th>Sample size</th>
<th>Dependent variable</th>
<th>Research design and model used*</th>
<th>Significant independent variables (and direction of association)**</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>Swanson and Zhang (2018)</td>
<td>The study investigates the impact of covenant violations on the timeliness of audit</td>
<td>Audit Analytics database</td>
<td>2004–2007</td>
<td>10,536</td>
<td>Audit delay</td>
<td>OLS Regression, adjusted $R^2 = 16.99%$</td>
<td>ownership (+), private ownership (+), Herfindahl Index (client firms) (+), Herfindahl Index (firm’s assets) (+) and Herfindahl Index (client revenues) (+) Covenant violation (+), company size (−), leverage (+), loss (+), extraordinary items (+), distress (+), growth (+), year-end (−), internal control weaknesses (+), modified audit opinion (+), auditor change (+) and audit fee (+)</td>
</tr>
<tr>
<td>27</td>
<td>Durand (2019)</td>
<td>The study is a meta-analysis of the determinants of ARL</td>
<td>Top tier and AAA Journals, US Companies, Google Scholar</td>
<td>Studies covering 2003 or later</td>
<td>34 variables</td>
<td>ARL</td>
<td>Meta-analysis</td>
<td>Auditor business risk: loss (+), leverage (+), financial condition (+), audit fees (+) and restatements (+). Audit complexity: reportable segments (+), subsidiaries (+), high-growth (+), high-litigation (−), high-technology (−) and financial industry (−) Corporate governance: board size (−), board independence (+) and CEO duality (+) Audit opinion: material internal control weaknesses (+) Other audit work-related factors: busy season (+), extraordinary items (+) and sales growth (−) Client size: total assets (−), total sales and accelerated filer (−). Earnings news: change in earnings (good news) (−) Auditor characteristics: longer auditor tenure (−), non-audit fees (−)</td>
</tr>
</tbody>
</table>

**Notes:** aWhere more than one estimation model is used, the highest adjusted $R^2$ is cited; bWe observe varying degrees of significance with regard to the industry control variables
3.2.3 **Control variables.** In addition to our test variable, we include a set of control variables as follows. Prior studies have established a positive association between liquidity and ARD (Nehme et al., 2015). With regard to complexity measured by the ratio of inventory and receivables to total assets, a positive association with ARD has been established by studies such as Lee and Jahng (2008), Habib (2015) and Ghafran and Yasmin (2017). Jaggi and Tsui (1999), Ika and Ghazali (2012) and Swanson and Zhang (2018) established a positive association between a firm’s financial condition (distress) and ARD. With regard to dual language reporting, Tauringana et al. (2008) found a negative association with ARD while Rusmin and Evans (2017) established a negative association between family ownership and ARD.

There have been mixed findings on the association between firm size and ARD, with some studies establishing a positive association (Leventis et al., 2005; Afify, 2009; Rezaei and Mohd-Saleh, 2018). Majority of the studies have established a negative association between firm size and ARD (Jaggi and Tsui, 1999; Tauringana et al., 2008; Habib and Bhuiyan, 2011; Sultana et al., 2015; Shin et al., 2016; Meckfessel and Sellers, 2017; Swanson and Zhang, 2018). In terms of a firm’s financial performance, most studies have established a negative association with ARD (Jaggi and Tsui, 1999; Lee and Jahng, 2008; Afify, 2009; Nehme et al., 2015; Alfraih, 2016; Oussii and Taktak, 2018; Rezaei and Mohd-Saleh, 2018). However, Dao and Pham (2014) established a positive association between a firm’s profitability and ARD.

Prior studies such as Leventis et al. (2005), Alfraih (2016), Ghafran and Yasmin (2017) and Hussin et al. (2018) have established a negative association between Big 4 auditors and ARD. However, studies such as Afify (2009), Hassan (2016), Shin et al. (2016) and Meckfessel and Sellers (2017) have found a positive association between Big 4 auditors and ARD. In terms of the audit season, studies such as Habib et al. (2018) and Hussin et al. (2018) have established a negative association between auditor’s busy periods and ARD. However, Rezaei and Mohd-Saleh (2018) found a positive association between auditor’s peak periods and ARD. In this study, we argue that cross-listed firms may exhibit reduced ARD owing to auditor concentration in the various jurisdictions in which the cross-listed firms are domiciled. Finally, extant studies have established that having more subsidiaries leads to longer ARDs (Lee and Jahng, 2008; Habib and Bhuiyan, 2011; Dao and Pham, 2014; Chan et al., 2016; Ghafran and Yasmin, 2017; Habib et al., 2018).[8]

### 4. Methodology and data

#### 4.1 Sample and data

The study targeted the 67 listed companies on the NSE over a ten-year period from 2007 to 2016. Data were hand collected from a variety of sources ranging from audited annual reports of the companies in the sample, Market screener (www.marketscreener.com) among other internet sources. The final sample comprises of an unbalanced panel data set with 543 firm-year observations for 55 listed companies over the ten-year period. Table II, panels A and B, presents the sample chosen for the study. According to Table II, panel B, banks constituted the highest proportion of the firms in the sample (20 percent) followed by manufacturing companies (15 percent). There was only one company in the telecommunications sector in the sample.

#### 4.2 Construction of the CG-Index

The main test variable for the study is the CG-Index and its constituent components. The initial list of CG-related characteristics is developed from the following sources:

1. the provisions contained in the OECD CG code;
2. the provisions in the 2015 CCGSI in Kenya;
(3) the CG provisions in the Kenyan Companies Act 2015; and

(4) other CG items were borrowed from extant literature (see Gompers et al., 2003; Kent and Zunker, 2013; Black et al., 2017).

In applying steps (1) to (4), a comprehensive CG-Index with 37 items is developed. To determine the final items to include in the CG-Index, the following steps are followed:

(1) All significant items that have been established by literature are considered. In this case, variables such as AC experience, AC independence, board meetings and NEDs in the board had a consistent and significant association with ARD (Tauringana et al., 2008; Nehme et al., 2015; Sultana et al., 2015; Chan et al., 2016). Variables such as AC meetings and AC size have been found to have a significant and positive association with ARD (Nehme et al., 2015; Hussin et al., 2018).

(2) Consistent with Black et al. (2017), a panel multivariate regression between the 37 CG items and ARD was performed to establish the significant CG items (at the 5 percent level) for inclusion in the CG-Index. The model used is as follows:

\[ \ln ARD_{it} = \alpha_0 + \beta_i \sum_{j=1}^{n} CG\_Item_{ij} + \varphi_i + \gamma_i + \epsilon_i, \]

where \( \ln ARD_{it} \) is the natural logarithm of ARD of firm \( i \) in time \( t \), \( CG\_Item_{ij} \) represents the specific CG items in the comprehensive index. Owing to observed heterogeneity in CG practices across the 55 listed companies in the sample, we include the cross-section, industry and firm-year controls in the model[9]. The significant CG items from the estimation model are board size, board meetings, board committees, non-executive directors in the board, “executive” board chair, timely disclosure, auditor tenure over five years, number of women
in the board, number of nationalities in the board, disclosure of the existence of a board charter, annual governance audit disclosure, foreign ownership and closely regulated firms.

Based on the results from Steps (1) and (2), the final CG-Index comprising of eight most significant and commonly shared CG characteristics is developed. Table AI provides a summary of the CG-Index items.

4.3 Estimation model

The dependent variable for the study is the natural logarithm of ARD modeled as a function of the test variable (i.e. the CG-Index score) among a set of control variables adopted from extant literature. The estimation model utilized is as follows:

\[ \ln(ARD_{it}) = \alpha_0 + \delta_1 CG\_Index_{it} + \beta_1 LIQUID_{it} + \beta_2 INV\_REC_{it} \\
+ \beta_3 Z\_SCORE_{it} + \beta_4 DUALITY_{it} + \beta_5 FAMILY\_OWN \\
+ \beta_6 SIZE_{it} + \beta_7 ROE_{it} + \beta_8 BIG\_4 + \beta_9 BUSY\_YE_{it} \\
+ \beta_{10} CROSS\_LIST_{it} + \beta_{11} NO\_SUBSID_{it} + \rho_i + \varphi_t + \gamma_t + \epsilon_{it}, \]

where \( \ln(ARD) \) is the natural logarithm of ARD, \( CG\_Index \) represents the CG score derived using the CG-Index. The model includes a set of control variables which are defined in Table III. In addition, cross-section, industry and firm-year controls are included in the model.

A panel ordinary least squares regression model is adopted. The results of the Hausman test produced a \( \chi^2 \) statistic of 26.153 (\( p = 0.010 \)) and this informed the use of fixed effects model in the regression analyses. This approach is consistent with studies such as Salleh et al. (2017) and Habib and Muhammadi (2018). Due to potential self-selection bias in the variables being tested, a Heckman self-selection approach is performed in one of the robustness checks.

<table>
<thead>
<tr>
<th>Variable type</th>
<th>Measure</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \ln(ARD) )</td>
<td>A measure of the</td>
<td>= natural logarithm of number of days from the year end till the date of the</td>
</tr>
<tr>
<td></td>
<td>timeliness of the</td>
<td>independent auditor’s report</td>
</tr>
<tr>
<td></td>
<td>financial statements,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>the ARD</td>
<td></td>
</tr>
<tr>
<td><strong>Test variable</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( CG_Index )</td>
<td>CG-Index score</td>
<td>= actual CG score to the maximum possible CG characteristics in the CG-Index</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( LIQUID )</td>
<td>Liquidity</td>
<td>= ratio of current (liquid) assets to current (deposit) liabilities</td>
</tr>
<tr>
<td>( INV_REC_TA )</td>
<td>Audit complexity</td>
<td>= (inventory + receivables)/total assets</td>
</tr>
<tr>
<td>( Z_SCORE )</td>
<td>Financial condition</td>
<td>= (-4.336 - 4.513 \times ROA + 5.679 \times (Debt/TA) + 0.004 \times (CA/CL) ) (Zmijewski, 1984)</td>
</tr>
<tr>
<td>( DUALITY )</td>
<td>Dual language reporting</td>
<td>= 1 if the company reported in both English and Swahili languages and 0 if</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the annual report was reported in one language</td>
</tr>
<tr>
<td>( FAMILY_OWN )</td>
<td>Family ownership of the</td>
<td>= 1 if the firm is largely family owned, 0 if otherwise</td>
</tr>
<tr>
<td></td>
<td>firm</td>
<td></td>
</tr>
<tr>
<td>( SIZE )</td>
<td>Size of the company</td>
<td>= natural logarithm of market capitalization</td>
</tr>
<tr>
<td>( ROE )</td>
<td>Profitability-return on</td>
<td>= net income after tax scaled by total equity</td>
</tr>
<tr>
<td></td>
<td>equity</td>
<td></td>
</tr>
<tr>
<td>( BIG_4 )</td>
<td>Auditor type</td>
<td>= 1 if the audit firm is a Big 4, 0 if otherwise</td>
</tr>
<tr>
<td>( BUSY_YE )</td>
<td>Audit season</td>
<td>= 1 if the financial year-end is December, 0 if otherwise</td>
</tr>
<tr>
<td>( CROSS_LIST )</td>
<td>Cross-listing status</td>
<td>= 1 if the firm is cross-listed and 0 if otherwise</td>
</tr>
<tr>
<td>( NO_SUBSID )</td>
<td>Number of subsidiaries</td>
<td>= number of operating subsidiaries a firm has</td>
</tr>
</tbody>
</table>

Table III. Variable definitions
5. Results and discussion

5.1 Descriptive statistics

Table IV presents the descriptive statistics on all variables in the study. In absolute terms, the mean (median) ARD in days is 86.310 (84.000). The ARD is slightly higher than the 75.490 days reported by Tauringana et al. (2008) for listed firms in Kenya over the period 2005–2006 but is within the requirement by the Kenyan Capital Markets Authority to file the audited annual report within six months after year end. There is only one instance where a company in the sample had an ARD above the regulatory limit in one year (218 days)[10]. The mean (median) lnARD of 4.408 (4.431) reflects a relatively normal distribution[11].

The reported mean ARD of 86.310 days is higher than 67.212 days for Egyptian firms (Afify, 2009), 61.000 days for New Zealand firms (Habib and Bhuiyan, 2011), 61.960 days for Compustat firms (Dao and Pham, 2014), 84.340 days for Chinese firms according to Habib (2015) and 79 days for Indonesian firms according to Rusmin and Evans (2017). It is however lower than the ARD of 86.660 days for Chinese firms (Chan et al., 2016) and 136 days for Tunisian firms according to Oussii and Taktak (2018). The findings depict that the ARD keeps changing over time as shown by the difference between the present study and Tauringana et al. (2008) in the case of Kenyan listed firms and the two studies by Habib (2015) and Chan et al. (2016) in the case of Chinese firms.

The results in Table IV reveal that the companies in the sample have adopted the CG mechanisms included in the appendix with a mean(median) score of 56.7 (62.5) percent. This score is higher than the 52 percent established by Baatwah (2015) for listed companies on the Muscat Securities Market. Notably, 79 percent of the firms’ AC members have financial

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>25%</th>
<th>Median</th>
<th>75%</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>lnARD</td>
<td>543</td>
<td>4.408</td>
<td>0.328</td>
<td>2.197</td>
<td>4.220</td>
<td>4.431</td>
<td>4.654</td>
<td>5.385</td>
</tr>
<tr>
<td>ARD_DAYS</td>
<td>543</td>
<td>86.310</td>
<td>26.680</td>
<td>9.000</td>
<td>68.000</td>
<td>84.000</td>
<td>105.000</td>
<td>218.000</td>
</tr>
<tr>
<td><strong>Specific test variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIN_EXPERT_AC</td>
<td>543</td>
<td>0.790</td>
<td>0.417</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>2.000</td>
</tr>
<tr>
<td>IND_NED_AC</td>
<td>543</td>
<td>2.882</td>
<td>1.412</td>
<td>0.000</td>
<td>2.000</td>
<td>3.000</td>
<td>4.000</td>
<td>8.000</td>
</tr>
<tr>
<td>BOARD_SIZE</td>
<td>543</td>
<td>8.413</td>
<td>2.544</td>
<td>3.000</td>
<td>7.000</td>
<td>8.000</td>
<td>10.000</td>
<td>16.000</td>
</tr>
<tr>
<td>BOARD_MEETINGS</td>
<td>543</td>
<td>5.650</td>
<td>4.414</td>
<td>3.000</td>
<td>4.000</td>
<td>4.000</td>
<td>4.000</td>
<td>5.000</td>
</tr>
<tr>
<td>IND_BOARD</td>
<td>543</td>
<td>3.556</td>
<td>1.877</td>
<td>1.000</td>
<td>3.000</td>
<td>3.000</td>
<td>4.000</td>
<td>10.000</td>
</tr>
<tr>
<td>WOMEN_BOARD</td>
<td>543</td>
<td>1.146</td>
<td>1.167</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
<td>2.000</td>
<td>5.000</td>
</tr>
<tr>
<td>NATIONALITIES_BOARD</td>
<td>543</td>
<td>1.711</td>
<td>1.103</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>5.000</td>
</tr>
<tr>
<td>IND_DIRECTOR_TENURE</td>
<td>543</td>
<td>1.989</td>
<td>0.454</td>
<td>1.000</td>
<td>2.000</td>
<td>2.000</td>
<td>2.000</td>
<td>8.000</td>
</tr>
<tr>
<td><strong>Composite test variable</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CG_INDEX</td>
<td>543</td>
<td>0.567</td>
<td>0.099</td>
<td>0.375</td>
<td>0.500</td>
<td>0.625</td>
<td>0.625</td>
<td>0.875</td>
</tr>
<tr>
<td><strong>Control variables</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIQUID</td>
<td>543</td>
<td>5.729</td>
<td>6.625</td>
<td>0.036</td>
<td>1.568</td>
<td>3.182</td>
<td>8.443</td>
<td>38.721</td>
</tr>
<tr>
<td>INV_REC_TA</td>
<td>543</td>
<td>0.168</td>
<td>0.164</td>
<td>0.001</td>
<td>0.041</td>
<td>0.117</td>
<td>0.250</td>
<td>0.719</td>
</tr>
<tr>
<td>DUALITY</td>
<td>543</td>
<td>0.529</td>
<td>0.500</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>FAMILY_OWN</td>
<td>543</td>
<td>0.166</td>
<td>0.372</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>ROE</td>
<td>543</td>
<td>2.041</td>
<td>3.017</td>
<td>-0.364</td>
<td>0.660</td>
<td>0.234</td>
<td>3.731</td>
<td>7.261</td>
</tr>
<tr>
<td>BIG_4</td>
<td>543</td>
<td>0.902</td>
<td>0.297</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>BUSY_YE</td>
<td>543</td>
<td>0.646</td>
<td>0.479</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>CROSS_LIST</td>
<td>543</td>
<td>0.201</td>
<td>0.401</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>NO_SUBSID</td>
<td>543</td>
<td>1.457</td>
<td>2.008</td>
<td>0.000</td>
<td>1.000</td>
<td>1.000</td>
<td>1.000</td>
<td>17.000</td>
</tr>
</tbody>
</table>

Table IV. Descriptive statistics
expertise compared to 92 percent of FTSE350 firms (Ghafran and Yasmin, 2017). The results show that a typical board has eight members with a majority of them being non-executive (five members). The results also depict that the boards of listed companies in Kenya score low in diversity as shown by the number of women and the number of nationalities represented in the board. According to the results, the independent board members have served for an average of two years. The results show a maximum tenure of eight years which is within the regulatory limit of nine years according the code of CG for listed companies in Kenya (Capital Markets Authority (CMA), 2015).

With regard to the control variables, the results show that the sampled companies demonstrate a relatively good liquidity position above the threshold of 2. The average inventory and receivables to total assets is 16.8 percent which is lower than the 27.28 percent reported for FTSE 350 firms (Ghafran and Yasmin, 2017). The firms in the sample have a mean Z-score of −2.355 which seems to be lower than the −14.60 established for Indonesian firms by Ika and Ghazali (2012). We also find that 53 percent of the firms sampled provided the annual report in both Swahili and English which is lower than the 61 percent established for Kenyan listed firms by Tauringana et al. (2008) over the period 2005–2006. In terms of ownership, we find that 16.6 percent of the firms were family owned. The average ROE for the sampled firms was 2.041 with 90 percent of the firms being audited by a Big 4 audit firm. The results show that 64.6 percent of the firms have December as their financial year. This represents a relatively large number of companies being audited at around the same time, implying more work for the auditors which could impact the timeliness of the annual reports. Finally, we find that 20.1 percent of the firms are cross-listed and operating at least one subsidiary company.

5.2 Correlation analysis
Table V reports the Spearman’s correlation coefficients. According to the table, the ARD seems to be negatively correlated with most of the CG variables with the exception of financial expertise in the AC. This points to potential increased ARD when boards have many financial experts in the AC. As a preliminary confirmation of our testable hypothesis (H1), the results depict a highly significant and negative correlation between the CG_INDEX and ARD (coefficient = −0.084, p-value 0.050). This points to a potential positive contribution of the composite CG measure on the timeliness of annual reports. We confirm this conjecture by performing panel regression analyses in the preceding section. According to the results, the highest and lowest correlation coefficients are 0.626 and −0.387 which are below 0.8. Further, the variance-inflation factors (VIFs) are below 5, implying that multicollinearity was not a problem.

5.3 Estimation results
In Table VI, we report the results of the regression analyses. According to the results, the lnARD is positively associated with all CG-Index items except the number of women in the board, the number of nationalities in the board and independent directors’ tenure which have negative coefficients. More specifically, the results show that AC members with financial expertise are associated with a longer ARD (coefficient = 0.093, t-value = 1.94). The finding alludes to agency theory which posits that AC members with financial expertise may spend time in ensuring that auditors’ work is competently undertaken and comprehend audit judgments (Powell and Anisc, 1997). The finding is consistent with Nehme et al. (2015) who posit that a higher proportion of AC members with financial expertise are likely to probe auditor’s suggestions before reaching a consensus on the matters raised by the auditor. The finding is contrary to the belief that having more financial experts in the AC would have fostered cooperation with the auditor hence leading to a reduced ARD.

The results reveal a positive association between independent, non-executive AC members and the ARD (coefficient = 0.018, t-value = 3.20). However, the sign of the coefficient changes while its significance diminishes when all the CG-index items are
Table V. Spearman’s correlation matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>lnARD</th>
<th>CG_INDEX</th>
<th>FIN_EXPERT_AC</th>
<th>IND_NED_AC</th>
<th>BOARD_SIZE</th>
<th>BOARD_MEETINGS</th>
<th>IND_BOARD</th>
<th>WOMEN_BOARD</th>
<th>NATIONALITIES_BOARD</th>
<th>CONF BOARD</th>
<th>IND_DIRECTOR_TENURE</th>
<th>LIQUID</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG_INDEX</td>
<td>-0.084</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIN_EXPERT_AC</td>
<td>0.024</td>
<td>0.532</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_NED_AC</td>
<td>-0.108</td>
<td>0.111</td>
<td>0.218</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOARD SIZE</td>
<td>-0.152</td>
<td>-0.003</td>
<td>0.267</td>
<td>0.298</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOARD_MEETINGS</td>
<td>-0.033</td>
<td>0.133</td>
<td>0.158</td>
<td>0.221</td>
<td>0.453</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_BOARD</td>
<td>-0.006</td>
<td>-0.210</td>
<td>0.085</td>
<td>0.588</td>
<td>0.165</td>
<td>0.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOMEN_BOARD</td>
<td>-0.129</td>
<td>0.471</td>
<td>0.189</td>
<td>0.084</td>
<td>0.472</td>
<td>0.288</td>
<td>0.010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NATIONALITIES_BOARD</td>
<td>-0.014</td>
<td>0.199</td>
<td>0.028</td>
<td>-0.008</td>
<td>-0.052</td>
<td>-0.049</td>
<td>-0.075</td>
<td>0.214</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_DIRECTOR_TENURE</td>
<td>-0.165</td>
<td>0.160</td>
<td>0.099</td>
<td>0.169</td>
<td>0.252</td>
<td>0.099</td>
<td>0.068</td>
<td>0.252</td>
<td>-0.133</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIQUID</td>
<td>0.019</td>
<td>0.061</td>
<td>-0.246</td>
<td>-0.132</td>
<td>-0.211</td>
<td>-0.172</td>
<td>-0.080</td>
<td>0.043</td>
<td>0.003</td>
<td>0.106</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INV_REC_TA</td>
<td>0.057</td>
<td>0.019</td>
<td>0.056</td>
<td>0.020</td>
<td>-0.171</td>
<td>-0.125</td>
<td>0.066</td>
<td>-0.052</td>
<td>-0.055</td>
<td>-0.040</td>
<td>-0.107</td>
<td></td>
</tr>
<tr>
<td>Z_SCORE</td>
<td>0.028</td>
<td>0.131</td>
<td>0.186</td>
<td>-0.010</td>
<td>0.242</td>
<td>0.247</td>
<td>-0.075</td>
<td>0.195</td>
<td>-0.073</td>
<td>0.011</td>
<td>-0.285</td>
<td></td>
</tr>
<tr>
<td>DUALITY</td>
<td>-0.303</td>
<td>0.012</td>
<td>0.165</td>
<td>0.181</td>
<td>0.381</td>
<td>0.288</td>
<td>0.128</td>
<td>0.113</td>
<td>-0.067</td>
<td>0.022</td>
<td>-0.176</td>
<td></td>
</tr>
<tr>
<td>FAMILY_OWN</td>
<td>-0.137</td>
<td>-0.103</td>
<td>-0.072</td>
<td>-0.187</td>
<td>-0.262</td>
<td>-0.195</td>
<td>-0.095</td>
<td>-0.364</td>
<td>-0.199</td>
<td>0.067</td>
<td>0.083</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.274</td>
<td>0.148</td>
<td>0.275</td>
<td>0.572</td>
<td>0.626</td>
<td>0.335</td>
<td>0.229</td>
<td>0.392</td>
<td>0.063</td>
<td>0.164</td>
<td>-0.157</td>
<td></td>
</tr>
<tr>
<td>ROE</td>
<td>0.023</td>
<td>-0.073</td>
<td>-0.299</td>
<td>0.068</td>
<td>-0.054</td>
<td>-0.112</td>
<td>0.013</td>
<td>0.142</td>
<td>0.131</td>
<td>-0.032</td>
<td>0.361</td>
<td></td>
</tr>
<tr>
<td>BIG_4</td>
<td>-0.210</td>
<td>0.017</td>
<td>0.057</td>
<td>0.226</td>
<td>0.100</td>
<td>-0.029</td>
<td>0.169</td>
<td>0.023</td>
<td>0.056</td>
<td>0.145</td>
<td>-0.006</td>
<td></td>
</tr>
<tr>
<td>BUSY_YE</td>
<td>-0.112</td>
<td>0.042</td>
<td>0.089</td>
<td>0.117</td>
<td>0.032</td>
<td>-0.038</td>
<td>0.243</td>
<td>0.064</td>
<td>-0.055</td>
<td>-0.039</td>
<td>-0.008</td>
<td></td>
</tr>
<tr>
<td>CROSS_LIST</td>
<td>-0.233</td>
<td>0.062</td>
<td>0.155</td>
<td>0.290</td>
<td>0.410</td>
<td>0.299</td>
<td>0.193</td>
<td>0.208</td>
<td>0.144</td>
<td>0.105</td>
<td>-0.105</td>
<td></td>
</tr>
<tr>
<td>NO_SUBSID</td>
<td>0.015</td>
<td>-0.002</td>
<td>0.027</td>
<td>0.066</td>
<td>0.091</td>
<td>0.174</td>
<td>0.003</td>
<td>0.074</td>
<td>0.219</td>
<td>0.208</td>
<td>-0.254</td>
<td></td>
</tr>
<tr>
<td>VIFs</td>
<td>na</td>
<td>2.80</td>
<td>2.30</td>
<td>1.40</td>
<td>2.60</td>
<td>1.30</td>
<td>1.80</td>
<td>2.70</td>
<td>1.40</td>
<td>1.20</td>
<td>1.30</td>
<td></td>
</tr>
<tr>
<td>Tolerance</td>
<td>na</td>
<td>0.36</td>
<td>0.43</td>
<td>0.71</td>
<td>0.38</td>
<td>0.77</td>
<td>0.56</td>
<td>0.37</td>
<td>0.71</td>
<td>0.83</td>
<td>0.77</td>
<td></td>
</tr>
</tbody>
</table>

Variable

<table>
<thead>
<tr>
<th>Variable</th>
<th>INV_REC_TA</th>
<th>Z_SCORE</th>
<th>DUALITY</th>
<th>FAMILY_OWN</th>
<th>SIZE</th>
<th>ROE</th>
<th>BIG_4</th>
<th>BUSY_YE</th>
<th>CROSS_LIST</th>
<th>NO_SUBSID</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG_INDEX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIN_EXPERT_AC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_NED_AC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOARD_SIZE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOARD_MEETINGS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_BOARD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOMEN_BOARD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NATIONALITIES_BOARD</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_DIRECTOR_TENURE</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIQUID</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(continued)
<table>
<thead>
<tr>
<th>Variable</th>
<th>VIFs</th>
<th>Tolerance</th>
</tr>
</thead>
<tbody>
<tr>
<td>INV_REC_TA</td>
<td>1.60</td>
<td>0.63</td>
</tr>
<tr>
<td>Z_SCORE</td>
<td>1.40</td>
<td>0.71</td>
</tr>
<tr>
<td>DUALITY</td>
<td>1.80</td>
<td>0.56</td>
</tr>
<tr>
<td>FAMILY_OWN</td>
<td>2.30</td>
<td>0.43</td>
</tr>
<tr>
<td>SIZE</td>
<td>2.90</td>
<td>0.34</td>
</tr>
<tr>
<td>ROE</td>
<td>3.00</td>
<td>0.33</td>
</tr>
<tr>
<td>BIG_4</td>
<td>1.50</td>
<td>0.67</td>
</tr>
<tr>
<td>BUSY_YE</td>
<td>1.50</td>
<td>0.67</td>
</tr>
<tr>
<td>CROSS_LIST</td>
<td>1.40</td>
<td>0.71</td>
</tr>
<tr>
<td>NO_SUBSID</td>
<td>1.40</td>
<td>0.71</td>
</tr>
<tr>
<td>VIFs</td>
<td>1.60</td>
<td>0.63</td>
</tr>
<tr>
<td>Tolerance</td>
<td>1.40</td>
<td>0.71</td>
</tr>
</tbody>
</table>
considered in one model (Model 9). In a meta-analysis, Durand (2019) argues that board independence influences the ARD in some countries but not others. The finding is contrary to Nehme et al. (2015) and Sultana et al. (2015) who find that boards with more independent, non-executive directors have shorter ARDs. It would be argued that companies often seek independent board members to aid in primarily financial oversight. As established earlier, the independent, non-executive AC members who are well versed with financial matters tend to take longer to agree with auditor’s suggestions hence resulting into a longer ARD.

The results illustrate a positive association between board size and ARD (coefficient = 0.011, \( t \)-value = 2.50), a finding which mirrors Hassan (2016). The finding is in line with agency theory that posits that a large board may create communication and coordination challenges with a reduction in board members’ participation (Jensen, 1993). Hassan (2016) argues that the long association between a large board and ARD is due to the time it takes to reach an agreement with the auditor on certain matters of importance on the audit. We find that, the more frequent the board meets, the longer the ARD (coefficient = 0.008, \( t \)-value = 5.16). This would imply that the more the board meets, the longer it takes decisions to be made leading to a longer ARD. This is contrary to the belief that more frequent board meetings are likely to address problems as they arise and are therefore quicker in approving the release of the annual report (Tauringana et al., 2008; Chan et al., 2016). According to the results, and consistent with previous findings with regard to the AC membership, firms with more independent directors in the board experience longer ARD (coefficient = 0.019, \( t \)-value = 5.08). It seems that having more independent directors in the boards of listed firms in Kenya brings in more scrutiny to the financial reporting and oversight which increases the time taken to release the audit report.

In terms of board diversity, we find a negative association between women in the board and ARD (coefficient = −0.032, \( t \)-value = −2.76). The influence of women in the board on ARD has been largely under-explored and this is perhaps a new and interesting finding on the role of gender diversity in the board toward an improvement in the timeliness of annual reports. It seems that having more women in the board helps in compelling the auditor to release the audited accounts in a timely manner. Next, the results show a negative association between the number of nationalities in the board and ARD (coefficient = −0.028, \( t \)-value = −3.84). This is yet another underexplored area where the results seem to suggest that boards with diverse representation from various nationalities are useful in reducing the ARD hence improving the timeliness of annual reports. The results illustrate that the longer the tenure of independent directors, the shorter the ARD (coefficient = −0.069, \( t \)-value = −2.01). This implies that independent directors who have served in the board for a longer period are likely to have better understanding of the business and are aware of areas of control weakness and will be quick to point out the areas for auditor’s attention. The finding seems to mirror Ghafran and Yasmin (2017) who found that board members who serve longer in the board as AC chairs are associated with reduced ARD.

Finally, and in confirmation with our testable hypothesis (H1), the findings show a highly significant and negative association between the composite CG-Index and ARD (coefficient = −0.366, \( t \)-value = −2.89). Although not explicit as is the case in the present study, the finding is in support of Nehme et al.’s (2015) general findings that variables relating to the board of directors have a negative association with ARD. The results also mirror Tauringana et al.’s (2008) findings of a significant and negative association between CG mechanisms and ARD. The findings also mirror Baatwah (2015) and Ghafran and Yasmin (2017) who found a negative association between AC quality and ARD. The significant and negative association between CG-Index and ARD illustrates the combined influence of CG mechanisms on the timeliness of annual reports. It can be argued that taking a granular view of CG mechanisms may not provide the overall contribution of CG on the timeliness of annual reports. The results therefore provide empirical evidence on the need to examine CG in totality when assessing its influence on the timeliness of annual reports.
<table>
<thead>
<tr>
<th>Variable/model</th>
<th>Pred. sign.</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FIN_EXPERT_AC</td>
<td>–</td>
<td>0.093**</td>
<td>(1.94)</td>
<td>0.018***</td>
<td>(3.20)</td>
<td>0.011**</td>
<td>(2.50)</td>
<td>0.008***</td>
<td>(5.16)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_NED_AC</td>
<td>–</td>
<td>0.018***</td>
<td>(2.0)</td>
<td>0.019***</td>
<td>(5.08)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOARD SIZE</td>
<td>+/-</td>
<td></td>
<td></td>
<td>0.008***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOARD_MEETINGS</td>
<td>–</td>
<td></td>
<td></td>
<td>0.008***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_BOARD</td>
<td>+/-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOMEN_BOARD</td>
<td>?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NATIONALITIES_BOARD</td>
<td>?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IND_DIRECTOR_TENURE</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CG_INDEX</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LIQUID</td>
<td>+</td>
<td>0.004*</td>
<td>(1.80)</td>
<td>0.004***</td>
<td>(1.93)</td>
<td>0.004***</td>
<td>(1.87)</td>
<td>0.004***</td>
<td>(1.81)</td>
<td>0.003*</td>
<td>(1.63)</td>
</tr>
<tr>
<td>INV_REC_TA</td>
<td>+</td>
<td>0.051</td>
<td>(0.56)</td>
<td>0.085</td>
<td>(0.94)</td>
<td>0.088</td>
<td>(0.98)</td>
<td>0.084</td>
<td>(0.89)</td>
<td>0.069</td>
<td>(0.72)</td>
</tr>
<tr>
<td>Z_SCORE</td>
<td>+</td>
<td>-0.004</td>
<td>-0.002</td>
<td>-0.002</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.001</td>
<td>-0.004</td>
<td>-0.002</td>
<td>-0.004</td>
</tr>
<tr>
<td>DUALITY</td>
<td>–</td>
<td>-0.130**</td>
<td>-0.131***</td>
<td>-0.141***</td>
<td>-0.146***</td>
<td>-0.135***</td>
<td>-0.122***</td>
<td>-0.126***</td>
<td>-0.138***</td>
<td>-0.152***</td>
<td>-0.134***</td>
</tr>
<tr>
<td>FAMILY_OWNER</td>
<td>–</td>
<td>-0.166**</td>
<td>-0.143***</td>
<td>-0.151***</td>
<td>-0.138***</td>
<td>-0.142***</td>
<td>-0.156***</td>
<td>-0.167***</td>
<td>-0.145***</td>
<td>-0.138***</td>
<td>-0.143***</td>
</tr>
<tr>
<td>SIZE</td>
<td>+/-</td>
<td>-0.031**</td>
<td>-0.025***</td>
<td>-0.031***</td>
<td>-0.026***</td>
<td>-0.024***</td>
<td>-0.017**</td>
<td>-0.025***</td>
<td>-0.020***</td>
<td>-0.033***</td>
<td>-0.018**</td>
</tr>
</tbody>
</table>

Dependent variable = lnARD

(continued)
<table>
<thead>
<tr>
<th>Variable/model</th>
<th>Pred. sign.</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
<th>(10)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>+/-</td>
<td>-0.021***</td>
<td>-0.027***</td>
<td>-0.026***</td>
<td>-0.025***</td>
<td>-0.026***</td>
<td>-0.023***</td>
<td>-0.025***</td>
<td>-0.026***</td>
<td>-0.017***</td>
<td>-0.027***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(−364)</td>
<td>(−4.67)</td>
<td>(−4.48)</td>
<td>(−4.25)</td>
<td>(−4.68)</td>
<td>(−3.78)</td>
<td>(−4.30)</td>
<td>(−4.58)</td>
<td>(−2.31)</td>
<td>(−4.76)</td>
</tr>
<tr>
<td>BIG_4</td>
<td>+/-</td>
<td>-0.142***</td>
<td>-0.156***</td>
<td>-0.142***</td>
<td>-0.157***</td>
<td>-0.155***</td>
<td>-0.147***</td>
<td>-0.139***</td>
<td>-0.138***</td>
<td>-0.114***</td>
<td>-0.147***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(−5.23)</td>
<td>(−6.06)</td>
<td>(−5.13)</td>
<td>(−5.27)</td>
<td>(−6.08)</td>
<td>(−5.72)</td>
<td>(−5.31)</td>
<td>(−5.24)</td>
<td>(−4.60)</td>
<td>(−5.50)</td>
</tr>
<tr>
<td>BUSY_YE</td>
<td>+/-</td>
<td>-0.093***</td>
<td>-0.096***</td>
<td>-0.092***</td>
<td>-0.089***</td>
<td>-0.110***</td>
<td>-0.086***</td>
<td>-0.099***</td>
<td>-0.098***</td>
<td>-0.095***</td>
<td>-0.093***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(−5.54)</td>
<td>(−5.54)</td>
<td>(−4.93)</td>
<td>(−4.80)</td>
<td>(−5.53)</td>
<td>(−5.61)</td>
<td>(−5.74)</td>
<td>(−5.23)</td>
<td>(−4.84)</td>
<td>(−5.55)</td>
</tr>
<tr>
<td>CROSS_LIST</td>
<td>?</td>
<td>-0.071***</td>
<td>-0.075***</td>
<td>-0.081***</td>
<td>-0.072***</td>
<td>-0.078***</td>
<td>-0.078***</td>
<td>-0.059***</td>
<td>-0.064***</td>
<td>-0.073***</td>
<td>-0.069***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(−2.98)</td>
<td>(−2.92)</td>
<td>(−2.72)</td>
<td>(−2.82)</td>
<td>(−3.02)</td>
<td>(−2.25)</td>
<td>(−2.48)</td>
<td>(−2.76)</td>
<td>(−3.06)</td>
<td>(−2.82)</td>
</tr>
<tr>
<td>NO_SUBSID</td>
<td>+</td>
<td>0.018**</td>
<td>0.019**</td>
<td>0.020**</td>
<td>0.017**</td>
<td>0.016**</td>
<td>0.020**</td>
<td>0.024**</td>
<td>0.022**</td>
<td>0.017**</td>
<td>0.020**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(2.29)</td>
<td>(2.38)</td>
<td>(2.67)</td>
<td>(2.43)</td>
<td>(2.03)</td>
<td>(2.81)</td>
<td>(2.35)</td>
<td>(2.78)</td>
<td>(2.23)</td>
<td>(2.76)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(−1.82)</td>
<td>(−1.37)</td>
<td>(−1.15)</td>
<td>(−1.55)</td>
<td>(−1.31)</td>
<td>(−1.58)</td>
<td>(−1.26)</td>
<td>(−1.54)</td>
<td>(−2.50)</td>
<td>(−0.82)</td>
</tr>
<tr>
<td>Cross-section controls</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Firm-year controls</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry controls</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td></td>
<td>0.212</td>
<td>0.294</td>
<td>0.205</td>
<td>0.211</td>
<td>0.210</td>
<td>0.209</td>
<td>0.208</td>
<td>0.209</td>
<td>0.245</td>
<td>0.212</td>
</tr>
<tr>
<td>SE of regression</td>
<td></td>
<td>0.291</td>
<td>0.292</td>
<td>0.292</td>
<td>0.291</td>
<td>0.291</td>
<td>0.291</td>
<td>0.291</td>
<td>0.285</td>
<td>0.291</td>
<td>0.291</td>
</tr>
<tr>
<td>Prob. (F-statistic)</td>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Notes: ***, **** Significant at the 10, 5 and 1 percent levels, respectively.
With regard to control variables, we find that firms that report in dual language experience reduced ARD, and this is consistent across all models and with Tauringana et al. (2008). Consistent with Rusmin and Evans (2017), the results reveal that family-owned firms have shorter ARD, and this is significant at the 1 percent level across the models. Consistent with studies such as Sultana et al. (2015), Alfraih (2016), Meckfessel and Sellers (2017) and Oussii and Taktak (2018), the results show that firm size is highly significant and negatively associated with ARD. According to the results, a firm’s profitability, as measured by ROE, has a significant and negative association with ARD at the 1 percent level, and this is consistent with studies such as Lee and Jahng (2008), Nehme et al. (2015), Alfraih (2016), Habib et al. (2018), Oussii and Taktak (2018) and Rezaei and Mohd-Saleh (2018). We further find a highly significant and negative association between firms audited by Big 4 auditors and ARD and this is consistent with Leventis et al. (2005), Alfraih (2016), Ghafran and Yasmin (2017) and Hussin et al. (2018). This demonstrates that being audited by a Big 4 audit firm is particularly useful in reducing the ARD, and we note that over 90 percent of the listed firms in the sample are audited by Big 4 audit firms.

According to the results, and consistent with Rezaei and Mohd-Saleh (2018), firms whose financial year end is December have shorter ARDs, perhaps to cater for the peak periods. The results show that cross-listed firms experience shorter ARDs, possibly due to auditor establishment and concentration in the various jurisdictions in which the companies are cross-listed. Finally, firms with more subsidiaries experience longer ARD, and this is consistent with Lee and Jahng (2008), Habib and Bhuiyan (2011), Dao and Pham (2014), Chan et al. (2016), Ghafran and Yasmin (2017), Rusmin and Evans (2017), Habib et al. (2018) and Rezaei and Mohd-Saleh (2018). The regression models show that the adjusted $R^2$ when all CG-Index items are included is at its high of 24.5 percent, which implies that the inclusion of all CG items in one model improves the model’s explanatory power.

5.4 Robustness checks
5.4.1 Self-selection bias. Prior studies on ARD have established that a self-selection problem arises since clients tend to “self-select” their auditors (Habib and Bhuiyan, 2011; Dao and Pham, 2014). This leads to biased OLS regression results. Consistent with Dao and Pham (2014), we apply Heckman’s (1979) approach to deal with the self-selection bias in the reported results. To achieve this, we use two-stage least-squares regression (2SLS). The first stage entails obtaining estimates from a probit regression model to calculate the inverse Mills ratios. Using the estimates, we construct the following first stage model:

$$CG_{\text{Index}}_{it} = \beta_0 + \beta_1 \text{SIZE}_{it} + \beta_2 \text{ASSET\_TURN}_{it}$$
$$+ \beta_3 \text{DEBT\_TA}_{it} + \beta_4 \text{C\_ASSETS}_{it}$$
$$+ \beta_5 \text{Q\_RATIO}_{it} + \beta_6 \text{ROA}_{it} + \beta_7 \text{ROA} \times \text{LOSS}_{it} + \epsilon_i,$$

where SIZE is the natural logarithm of market capitalization, ASSET\_TURN the asset turnover calculated as sales scaled by total assets, DEBT\_TA the long-term debt to total assets, C\_ASSETS the current assets scaled by total assets, Q\_RATIO the quick ratio, calculated as current assets minus inventories divided by current liabilities, ROA the return on assets, calculated as net income after tax divided by total assets, LOSS the a dummy variable which takes 1 when the firm reports a loss and 0 otherwise.

Stage 2 entails adding the inverse Mills ratios to the main OLS panel regression models. The results, which are not reported, are consistent with the previous findings. More specifically, we find a negative association between CG-Index and ARD (coefficient = –0.373, $t$-value = –2.75). The sign and significance of the control variables in the second-stage regression are similar to originally reported results.
Compared to the earlier regression model, the explanatory power of the second regression model as measured by the adjusted $R^2$ is 21.24 percent, which is marginally higher compared to the previous results.

5.4.2 Replacement of $Z_{SCORE}$ with $ROA$ and $LEVERAGE$. The original model measures a firm’s financial condition using Zmijewski’s (1984) Z-score. We attempt to replace the Z-score with $ROA$ and $LEVERAGE$ in the models[12]. The re-estimation produced a coefficient on the CG-Index of $-0.347$ with a $t$-value of $-2.77$ which is significant at the 1 percent level. With the exception of the coefficients on $ROA$ and $LEVERAGE$, the results for the controls remain as previously reported.

5.4.3 Alternative measures of ARD. We include the absolute ARD in days and ARD in days scaled by 365 days as a dependent variable along the test and control variables. In the first instance, the coefficient on the CG-Index is $-27.791$ with a $t$-value of $-3.18$. In the second instance, the coefficient on the CG-Index is $-0.076$ with a $t$-value of $-3.18$. In both instances, the results for the control variables remain as previously reported. Owing to space constraints, the detailed robustness results could not be reported in this paper but are available from the corresponding author upon request.

6. Conclusion
In this paper, we examine the contribution of a composite CG-Index on the timeliness of annual reports. The study is motivated by calls for “professional guidance” on the factors to consider in assessing the strength of CG when developing an audit strategy (see for instance, Afify, 2009). We argue that, for the full effect of CG practices to be felt in the provision of independent assurance, then an examination of a full set of the CG practices is warranted. Companies could focus on individual CG practices as established by prior literature with a view to enhancing the timeliness of the annual reports. This leaves the question: is it sufficient to focus on disparate CG aspects? Which CG aspects are useful in enhancing the timeliness of annual reports? How can a mix of the CG aspects be achieved to ensure that the timeliness of annual reports is addressed much more comprehensively? It is these questions which motivated the present study.

Using data obtained from listed companies in Kenya’s NSE, the results provide empirical evidence of a positive contribution of a composite CG-Index on the timeliness of annual reports. Of greater contribution to the reduced ARD were CG attributes relating to board diversity in terms of having women and individuals of diverse nationalities in the board. The results also show that the tenure of independent directors is useful in enhancing the timeliness of the annual report. We find that attributes such as having more financial experts in the AC, larger boards, more frequent board meetings and having more independent board members contribute to an increase in the ARD. These findings are useful in expunging those CG practices that contribute positively toward the timeliness of annual reports and those that do not. It is essential for firms to consider what aspects of their governance could potentially contribute negatively toward the provision of timely information to shareholders and other users.

The study was not without limitations. First, the study focused on listed companies in a single developing economy and additional studies are certainly necessary. Second, while most of the CG attributes could be obtained from the annual reports and other sources, it would be worthwhile to conduct primary interviews with the board and management to dig deeper into other unobservable drivers of ARD that are not usually reported in the annual reports. Further research could perform a deeper examination of certain aspects which are not comprehensively pursued in this study such as the contribution of ownership dispersion on the timeliness of annual reports. The authors are already pursuing this aspect.
Notes

1. Prior studies such as Durand (2019) and Habib et al. (2018) have performed extensive meta-analyses on the determinants of ARD and established an array of firm-, corporate-governance-, and auditor-related factors that influence length of ARD.

2. Afify (2009) reports improved model reliability when corporate governance (CG) characteristics (board independence, duality of the CEO and the existence of an AC) are considered in ARD studies. Afify (2009) recommends future studies to focus on the association between CG quality and ARD.

3. For brevity purposes, we only cite a few of the many studies examining the association between CG and audit report delay (ARD). The omitted studies, based on our extensive literature review include (Lee and Jahng, 2008; Habib and Bhuiyan, 2011; Iba and Ghazali, 2012; Dao and Pham, 2014; Sultana et al., 2015; Nehme et al., 2015; Habib, 2015; Tauringana et al., 2008; Hassan, 2016; Chan et al., 2016; Shin et al., 2016; Alfraih, 2016; Rezaei and Mohd-Saleh, 2018; Ghafran and Yasmin, 2017; Rusmin and Evans, 2017; Salleh et al., 2017; Meckfessel and Sellers, 2017; Durand, 2019; Habib and Muhammadi, 2018; Habib et al., 2018; Hussin et al., 2018).


5. Kiswahili is the second most spoken language in Africa (140m people), after English (150m people) and is among six rarest languages globally (www.elearning-africa.com/eLA_Newsportal/).

6. Owing to the myriad of studies on the drivers of ARD spanning four decades, we focus on more recent studies which had a bearing on CG and ARD. This resulted into a review of 27 more recent studies on the phenomenon under investigation.

7. We note that from the reviewed literature, the adjusted $R^2$ ranged from 5.6 to 67.27 percent, with a typical study reporting an adjusted $R^2$ of 26 percent. This implies that the explanatory power of the models used could be improved.

8. Durand (2019) argues that most ARD studies consider the most significant control variables. In this study, we analyzed 31 potential control variables used by prior studies. The regression model includes 11 most relevant (not necessarily significant) variables.

9. We note that none of the 37 CG items were dropped from the model and the VIFs were below 10, indicating that multicollinearity was not a serious problem among the variables. The model’s adjusted $R^2$ was 61.1 percent.

10. We note that the company in question had obtained approval from the Capital Markets Authority to delay the release of their audited financial statements. We further note that the company had issued a profit warning that its losses would widen. The delay was occasioned by a delay in the completion of the audit in a subsidiary operating unit (www.standardmedia.co.ke/article/20012 78884/transcendury-its-subsidiary-to-delay-release-of-financial-results).

11. The skewness and Kurtosis of the variable $\ln$ARD is $-0.90$ and $4.09$, respectively.

12. We retain ROE in the estimation model since we do not find a strong correlation between ROA and ROE (the correlation coefficient is 0.259).

References


**Further reading**


### Appendix

#### CG aspect

**AC characteristics**

1. **Financial expertise in the AC**
   - Measurement for the granular regressions: 1 if the AC has at least a member with financial expertise in accounting, finance or audit, 0 if otherwise
   - Measurement for coding the CG-Index: = 1 if at least one member in the AC has financial expertise, 0 if otherwise

2. **Number of independent non-executive directors in the AC**
   - = number of independent, non-executive directors in the AC
   - = 1 if the number of independent directors is greater than 2, 0 if otherwise

**Board structure and operations**

3. **Board size**
   - = number of board members
   - = 1 if number of board members is at least 7, 0 if otherwise

4. **Frequency of board meetings**
   - = number of board meetings in a year
   - = 1 if the board held at least 4 meetings in a year, 0 if otherwise

5. **Number of independent directors in the board**
   - = number of independent directors in the board
   - = 1 if the number is less than 4, 0 if otherwise

6. **Tenure of independent directors**
   - = number of years the independent director has served in a single listed company
   - = 1 if tenure is at least 3 years, 0 if otherwise

**Board diversity**

7. **Number of women in the board**
   - = number of women in the board
   - = 1 if there are at least 2 women in the board, 0 if otherwise

8. **Number of nationalities in the board**
   - = number of nationalities represented by the members in the board
   - = 1 if there is at least one nationality represented in the board, 0 if otherwise

<table>
<thead>
<tr>
<th>CG aspect</th>
<th>Measurement for the granular regressions</th>
<th>Measurement for coding the CG-Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC features</td>
<td>= 1 if the AC has at least a member with financial expertise in accounting, finance or audit, 0 if otherwise</td>
<td>= 1 if at least one member in the AC has financial expertise, 0 if otherwise</td>
</tr>
<tr>
<td>Number of independent non-executive directors in the AC</td>
<td>= number of independent, non-executive directors in the AC</td>
<td>= 1 if the number of independent directors is greater than 2, 0 if otherwise</td>
</tr>
<tr>
<td>Board size</td>
<td>= number of board members</td>
<td>= 1 if number of board members is at least 7, 0 if otherwise</td>
</tr>
<tr>
<td>Frequency of board meetings</td>
<td>= number of board meetings in a year</td>
<td>= 1 if the board held at least 4 meetings in a year, 0 if otherwise</td>
</tr>
<tr>
<td>Number of independent directors in the board</td>
<td>= number of independent directors in the board</td>
<td>= 1 if the number is less than 4, 0 if otherwise</td>
</tr>
<tr>
<td>Tenure of independent directors</td>
<td>= number of years the independent director has served in a single listed company</td>
<td>= 1 if tenure is at least 3 years, 0 if otherwise</td>
</tr>
<tr>
<td>Number of women in the board</td>
<td>= number of women in the board</td>
<td>= 1 if there are at least 2 women in the board, 0 if otherwise</td>
</tr>
<tr>
<td>Number of nationalities in the board</td>
<td>= number of nationalities represented by the members in the board</td>
<td>= 1 if there is at least one nationality represented in the board, 0 if otherwise</td>
</tr>
</tbody>
</table>

**Table AI. CG-Index**

---

**Corresponding author**

David Mutua Mathuva can be contacted at: dmathuva@strathmore.edu

---

*For instructions on how to order reprints of this article, please visit our website: [www.emeraldgrouppublishing.com/licensing/reprints.htm](http://www.emeraldgrouppublishing.com/licensing/reprints.htm)*

*Or contact us for further details: permissions@emeraldinsight.com*