Does Intellectual Capital and Corporate Governance have an impact on Annual Report Readability? Evidence from an Emerging Market

Abstract

Purpose
This study examines the impact of intellectual capital efficiency and corporate governance mechanisms on the annual report readability of Oman's financial sector companies.

Design/Methodology/approach
The study uses a sample of 150 firm-year observations of listed financial sector companies in the Muscat Securities Market, Oman, for the period 2014 to 2018. Flesch Reading Ease and Flesch Kinkaid Index are used as proxies for annual report readability. As part of sensitivity analysis, the study also uses the natural logarithm of annual report pages as alternative measures of readability. The investigation is conducted using random effects regression analysis and supported with system GMM estimation for robustness.

Findings
The findings of this study demonstrate a decrease in intellectual capital efficiency is associated with better readability of annual reports for the financial sector firms. Alternatively, banks report a positive association of intellectual capital efficiency with the Flesch Reading Ease score of the annual report. The structural capital and capital employed efficiency are also found to be negatively associated with annual report readability. Corporate governance mechanisms such as dispersed ownership and audit committee size also result in easy-to-read annual reports providing support to agency theory.

Research limitations/ implications
The research was conducted for financial firms of Oman, and thereby the findings can be generalized to the financial sector of countries with similar settings such as the Gulf Cooperation Council (GCC) region.

Practical implications
The policy implications arising from this study suggest a strengthening of the intellectual capital efficiency and corporate governance mechanisms to improve the readability of the firms and thereby increase investor confidence.

Originality
This paper's uniqueness is in the model used which investigates impact of intellectual capital efficiency and corporate governance mechanisms on annual report readability of an emerging market.

1. Introduction

The official and essential communication tools for investors, regulators, and other users of corporations are the annual reports or also known as the financial statements. Financial users did not take adequate account of these statements initially (You and Zhang, 2009). Through this research, we expand our analysis to Oman's financial sector firms listed on Muscat Securities Market (MSM) to provide an insight into their annual report readability. The readability of annual reports improves the quality of information and ensures that the financial statement requirements and expectations of both internal and external users are well addressed. Lehavy et al. (2011) argue that investors largely depend on expert or analyst research as the company's annual reports become less readable. Rennekamp (2012) suggests that investors are found to have stronger reactions to a highly readable and weaker response to less readable narrative information. Corporate governance plays a significant role in reducing the challenges faced by organizations and improving the stakeholder perception of the company (Biswas et al., 2008, Osma and Guillamón-Saorín, 2011). Extant literature indicates that corporate governance mechanisms have a strong relationship with IC (Buallay, 2018, Buallay and Hamdan, 2019, Yan, 2017, Muttakin et al., 2015, Dalwai and Mohammadi, 2020). Prior studies have also explored models using both corporate governance and intellectual capital that showed a positive impact on firm performance (Badingatus et al., 2020), or a multiplicative effect of board governance and IC on firm performance (Nkundabanyanga, 2016). Alternatively, Shahwan and Habib (2020) reported no influence of corporate governance efficiency but a negative impact of intellectual efficiency on the probability of financial distress (Shahwan and Habib, 2020). Corporate governance studies in the Gulf Cooperation Council (GCC) support policymakers in establishing the requisite regulations (Dalwai et al., 2015), however there are still sparse studies examining the corporate governance and IC connection for Oman (Dalwai and Mohammadi, 2020). As there are significant implications of the readability of annual reports, this study investigates the influence of corporate governance mechanisms and IC on the annual report readability of Oman's financial sector.

This research contributes to several literature streams and is useful for annual report users. First, we contribute to the literature of readability and the ability to comprehend information in annual reports measured in several research findings (Habib and Hasan, 2020, Harjoto et al., 2020, Hasan, 2020, Boubaker et al., 2019, Merkley, 2014, Liao et al., 2013). Our result contributes to the literature of readability measures of Flesch Reading Ease, Flesch Kincaid Index, and file size. Second, the findings demonstrate the value and importance of annual reports in the analysis and credibility of accounting and reports (Bacha and Ajina, 2019, Thoms et al., 2019, Ginesti et al., 2018). In addition to being a legal document, the annual reports serve as a marketing tool and help in organizational planning and transparency(Stanton and Stanton, 2002). Third, our research focuses on the financial sector of Oman, which replicates the characteristics of the GCC. To the best of our knowledge, there are no current studies on the determinants of readability of annual reports for Oman. The prior studies have examined the relationship between corporate governance mechanism and readability (Velte, 2019, García-Sánchez et al., 2019, Velte, 2018, Ginesti et al., 2018, Ginesti et al., 2017), however, this research implements the model of investigating both corporate governance and IC as determinants of readability. This study is valuable as extant literature advocates research on emerging markets such as Oman that presents an opportunity for enhancing the understanding of the country (Cavusgil, 2021). Emerging markets adopt an outward-looking strategy and improve corporate governance for signaling to stakeholders in developed countries that they can be trusted (Col and Sen, 2019). Fourth, this research fits in light of the

literature on corporate governance and its association with annual report readability. The findings will contribute to the existing corporate governance mechanisms such as the board of directors, concentrated holdings, audit committees which have been widely advocated as measures for mitigating agency cost and contribute to economic development (Boubaker et al., 2012, Boubaker and Nguyen, 2014). The corporate governance in emerging markets vary from advanced countries due to limited development of financial markets, poor access to financing, concentrated and low institutional ownership (Claessens and Yurtoglu, 2013). Lastly, the results are beneficial for the regulatory authorities as readability ease is influenced by board size and audit committee size.

This study uses Pulic's (2004) value-added intellectual capital (VAIC) model and its high-value metrics such as Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE) as IC proxies. Flesch Reading Ease and Flesch Kincaid Index are used as proxies for the readability of annual reports. The corporate governance mechanisms include board size, board independence, board meetings, ownership concentration, audit size, and audit meeting. Using a sample of 150 firm-year observations from Oman's financial sector over the period 2014 to 2018, the findings document a weak (VAIC) coefficient leads to easier-to-read annual reports. However, for the banking sub-sector, strong VAIC results in easier-to-read annual reports which are in line with the research's theoretical prediction. Audit committee size and meetings, and dispersed ownership support in improving the overall readability of the annual reports.

The remainder of the paper is structured as follows: In Section 2, the literature review provides a detailed discussion on the prior studies related to IC, corporate governance, and readability. Section 3 describes the methodology adopted in this research paper. Section 4 reports on the empirical findings and the last section 5 present the conclusion, limitations, and possible future research areas.

2. Literature Review and Hypothesis Development
2.1 Importance of intellectual capital, annual report readability and corporate governance
Intellectual capital plays a pivotal role in driving the future of an organization. The investors or shareholders need information about the prospects of the company, and intellectual capital aids in facilitating the same (Ruckdeschel, 1998). The challenges arising because of the intangible nature of intellectual capital and lack of uniform measurement mechanism for the same make it challenging to disclose them, which are critical from the shareholder's perspective (Bontis, 2003). The subjectivity in the process of efficiency of intellectual capital gives room to window dressing and manipulation. The management would be tempted to present the intellectual capital, which does not represent reality, and this would negatively impact shareholders' interests.

The annual report of a company is a useful communication tool, and apart from the figures, the narratives and disclosures are crucial to depict the direction of the company. The need is to have effective communication so that the reader, primarily the various stakeholders, can understand the shared meaning of the narratives (Hrasky and Smith, 2008). Intellectual capital efficiency facilitated by the narratives and other tools like graphs and dashboards should enhance the readability of the report and ensure the communication dimension is sufficient and the readability component is enhanced (Linsley and Lawrence, 2007, Jones and Smith, 2014). Further, the level of complexity in the presentation of the narratives could have a parallax between the intended

perception of the producer as opposed to how it is understood by the reader (Courtis, 1995). Lo et al. (2017) shows that obfuscation is undertaken to make the reports more difficult to read when the firms are suspected of managing their earnings. Similarly, it was reported that greater textual complexity is associated with higher cost of equity capital (Rjiba et al., 2021). The senior management would also deliberately indulge in obfuscating the narrative to meet their own short-term goals (Hassan, 2014)[1]. Narrative efficiency, which reduces the effectiveness of readability, is seen as a deliberate attempt by the management to hide the potential bad news of today and the future (Jones and Shoemaker, 1994, Li, 2008). Ertugrul et al. (2017) suggested that firms which present ambiguous and jargons coupled with less readable financial information were found to have more borrowing cost. Based on an exhaustive study of 42 countries over a 13 year plus period, the presence of boilerplate and length of disclosure were two key parameters differentiating the companies from the USA and other countries (Lang and Stice-Lawrence, 2015). The study concluded that the adoption of IFRS standards brought a great deal of comparability and improved readability. Kim et al. (2019) reported complex financial reports lead to a stock price crash when there is an accumulation of hidden bad news. Similarly, Lawrence (2013) reported an increase in individual returns where there were clearer and more concise disclosures. Using data from 38 countries, it was concluded that accrual-based earnings management and real earnings management are less widespread when there is weaker time disassociation in the language (Kim et al., 2017). By employing the obfuscation hypothesis, this study suggests that companies obfuscate information or hide poor performance by making less transparent disclosures to delay the capital market impact (Li, 2008).

Corporate governance in recent times has become one of the critical initiatives to mitigate and or reduce the risk arising from impression management. Organizations that were found to be making realistic disclosures and not focusing on impression management were the ones who had implemented corporate governance in its intended form (Osma and Guillamón-Saorín, 2011). It has also been researched that agency problems could be reduced with effective implementation of corporate governance (Bhuiyan et al., 2006). The findings of Salehi et al. (2020) suggest that companies having powerful corporate governance systems coupled with declining information asymmetry and agency conflict can enhance the quality of financial reports. Active boards reduce information asymmetry by increasing the quality and quantity of information disclosed by the firms (Kanagaretnam et al., 2007). Thereby, corporate governance plays an essential variable for the readability of annual reports in this study.

2.2 Oman's institutional settings
The listed companies in Oman are regulated by the Code of Corporate Governance for Public Listed Companies updated in December 2016 (Capital Market Authority, 2016). The code requires compliance from the companies based on fourteen principles. The annual reports are required to contain a balanced and understandable evaluation of the company accounts. Among other requirements, as per Oman's "Legislation Regulating the Companies Operating in the Field of Securities and listed companies", the companies are required to publish their annual reports in English and Arabic (Muscat Securities Market, 1998). According to chapter VIII Fund Management, Article 259, the companies are required to disclose in a fair, timely, transparent, and not misleading, their annual reports and financial statements to the public and investors. Financial reporting timeliness is more significant in developing countries especially in the Middle East and

---

[1] Refer Appendix I for discussion on obfuscation on by managers

North Africa (MENA) than in other countries, as they are the only cost-effective source available to investors (Alattar and Al-Khater 2007). Oman is prominently associated with timely financial reporting. In comparison to other regulators, Omani regulators pay greater attention to the accuracy of financial reporting. For example, Oman was one of the first MENA countries to implement international standards (IFRS/IAS) on listed companies and their auditors (Al-Shammari et al., 2008). Earlier literature has ranked the Omani Corporate Governance system as the best in the Middle East and North Africa (MENA) (Baydoun et al., 2013). It is also the first nation in the Middle East to adopt and introduce a Corporate Governance code. These characteristics can help companies in Oman understand and practice Corporate Governance more effectively than companies elsewhere in the Middle East and North Africa (MENA). The research in Oman is necessary if CG practice in the MENA region is to be promoted and strengthened ((Baatwah et al., 2015) 2015).

2.3 Hypothesis development
2.3.1 Intellectual Capital and readability of annual reports
Managerial ability in terms of disclosing intellectual capital is critical to understand the long-term potential of a particular business. Management to hide its poor performance may obfuscate information and alter the perception of the shareholder along with avoiding negative capital market impact (Li, 2008). There is enough empirical research evidence to prove that annual report opacity increases, mainly when the organizations have performed below the optimal level financially (Dempsey et al., 2012). The management, with its vast experience and knowledge of the business, can positively influence firm performance (Bertrand and Schoar, 2003). The intent of senior management is also to change the capital markets by showing high potential returns (Bonsall IV et al., 2017).

The narratives by the management as part of the annual report are very critical. The essence is the communication produced by the management intended for the shareholder. It is ethically imperative that the disclosures have transparency and present the real and factual state of affairs in the company. CEO's narcissism bend does influence the textual tone of the management commentary. However, the market takes into account this bias (Marquez-Illescas et al., 2019). As talent and experience measured through human resource investment is a critical component of intellectual capital efficiency, this study predicts, intellectual efficiency can directly impact the readability of annual reports. Thus, the following relationship is hypothesized for this study:

H1: There is a positive impact of IC on the readability of annual reports

2.3.2 Board Size and readability of annual reports
The board of directors is the ultimate decision-maker in what needs to be communicated to the outside world through annual reports. As part of corporate governance mechanisms, it is the responsibility of the board to ensure the information shared is authentic and relevant to the shareholder. The constitution of the board of directors is at the very core of the agency theory intending to maximize shareholders' return (Brennan, 2006). The Board of directors controls and influences the content of disclosures forming the part of the annual report. They are expected to act within the framework of a robust corporate governance model.

Board size directly impacts the functioning of the board with the number of directors (Brennan, 2006). Researchers in the past have agreed that the effectiveness of the board is directly proportional to the number of directors (John and Senbet, 1998). From a resource dependency theory perspective, directors having vast experience in relevant industries and a mix of directors with different exposures positively influences the symmetrical governance model, which in turn positively impacts the decision making and also affects the narratives and corporate governance. Enhancing the board's infrastructure by inducing a higher number of directors or a bigger board size influences positively the disclosures (Moeinfar et al., 2013). Abeysekera (2010) and Allegrini and Greco (2013) reported a positive relationship between board size and voluntary disclosure. The effective utilization of firms' resources is also linked to a large board size (Boubaker and Nguyen, 2012).

On the contrary, large boards, sizes have their own set of challenges, namely alignment on decision making. Time involvement versus the relevance of the communication is another area of concern, as with larger board sizes, it is seen time involved in building the consensus many times delays the communication part. Boards having more than fifteen directors were seen to have a negative impact on the disclosures (Hidalgo et al., 2011). The study predicts the number of board of directors present can directly impact the readability of annual reports. From the resource dependency theory perspective, the impact of board size on the readability of annual reports is hypothesized as follows:

H2: There is a positive impact of board size on the readability of annual reports

2.3.3 Board independence and readability of annual reports

It is very critical to have independent directors who are not related to the company. Board efficiency can be facilitated with the appointment of independent or non-executive directors (Keenan and Aggestam, 2001). Board independence is seen as an effective way to reduce impression management and enhance the narratives to ease the readability of annual reports (Hassan, 2018). Non-executive directors help in mitigating the agency conflict. It is also found that the presence of independent directors keeps in check the acts of executive directors and positively improves the efficiency of the board working (Jensen and Meckling, 1976).

On the contrary, some researchers have found that there is no impact on the intellectual disclosures and narratives owing to the presence of independent directors (Gan et al., 2013). Other researchers have concluded a negative impact on the disclosures as a consequence of non-executive directors (Eng and Mak, 2003). Tessema (2019) argues that boards with a higher percentage of independent directors curtail managerial opportunism and thus have more voluntary disclosures. The study predicts a that high percentage of independent non-executive directors can directly impact the readability of annual reports. Thus, the study to understand the impact of board independence on the readability of annual reports develops the below hypothesis:

H3: There is a positive impact of board independence on the readability of annual reports

2.3.4 Board meetings and readability of annual reports

Gray and Nowland (2018) suggest increased meeting frequency supports in monitoring and advising functions of the board of directors and also has a positive effect on firm performance. Board meeting activity is reported to be positively associated with the firm value (Eluyela et al., 2018, Brick and Chidambaran, 2010), while alternatively, some have reported a negative association as well (Vafeas, 1999). This study predicts the number of board meetings can directly impact the readability of annual reports. Thus, in this study, the board of directors' busyness measured by frequency of board meetings and its relationship with the readability of annual reports is hypothesized as follows:

H4: There is a positive impact of board meetings on the readability of annual reports

2.3.5 Ownership concentration and readability of annual reports

Shareholders have the authority to monitor and many times influence boards working owing to the agency relationship. The board of directors gets their rights in a proportion of the shares held by the shareholders. Hence ownership concentration is one of the deciding factors in board formation. A negative correlation has been established between ownership concentration and the quality of intellectual disclosures and narratives (Li et al., 2008). On the contrary, Moeinfar et al. (2013) advocated no significant influence on intellectual disclosures owing to ownership concentration.

However, a larger shareholder base would necessitate robust corporate governance mechanisms as the board would be under pressure to share all the relevant details with the shareholders (Hanafi et al., 2018, Migliardo and Forgione, 2018). Since the company would be providing sufficient information to shareholders, it will reduce the agency problem and mitigate the risk of impression management to a great extent. The study predicts that ownership concentration has an association with the readability of annual reports. Thus, the study hypothesizes the following relationship between the ownership concentration and readability of annual reports:

H5: There is a positive impact of ownership concentration on the readability of annual reports

2.3.6 Audit committee size and readability of annual reports
An audit committee can perform effective monitoring of the various business processes. However, it is advisable to have the audit committee be independent of the management. The size of the audit committee would facilitate the effectiveness of the external auditor (DeZoort and Salterio, 2001). The role of the audit committee is paramount when it comes to monitoring financial reporting and effective disclosures (Zalata et al., 2019). Li et al. (2012) suggest that a higher number of audit committee members can uncover potential issues in the corporate reporting process. A positive correlation was found in terms of intellectual capital and the implementation of corporate governance mechanisms when the audit committee was of adequate size (Mangena and Pike, 2005). Audit committee size is also found to enhance the level of voluntary corporate disclosure (Persons, 2009). Melloni et al. (2016) established a negative correlation between impression management and audit committee size. The study predicts that the audit committee size can directly impact the readability of annual reports, and the following relationship is hypothesized:

H6: There is a positive impact of audit committee size on the readability of annual reports

2.3.7 Audit committee meetings and readability of annual reports

The frequency of audit committee meetings positively influences the narrative disclosures and also leads to the choice of an efficient and effective audit firm (Abbott and Parker, 2000). The number of times the audit committee meets is a signal towards the due diligence it observes (DeZoort, 2002). The audit committees can only deal with complex issues (Raghunandan, 2007) and effective monitoring (Osma and Guillamón-Saorín, 2011) of the organization when it meets frequently. Allegrini and Greco (2013) argue that when the audit committee meets regularly, it increases the awareness of relevant accounting and auditing issues. As the audit committee members are free from the influence of the company's CEO, it is likely that by using their financial background, the readability of annual reports may improve. In light of this argument, the following relationship is hypothesized:

H7: There is a positive impact of audit committee meetings on the readability of annual reports

3. Methodology
3.1. Sample Selection
The sample selection process involves the use of Oman's financial sector firms that are listed on Muscat Securities Market (MSM). The non-financial sector firms are excluded from the study as they differ from the financial sector in terms of the regulatory and financial reporting requirements (Mahmood et al., 2019, Dalwai and Mohammadi, 2020). In 2019, the overall services sector contracted however this was offset by the financial sector growth that was around 2.8 percent for Oman (Central Bank of Oman, 2019). Franklin and Elena (2012) argued that the findings of non-financial sector annual report readability cannot be generalized to the financial sector. This emphasizes the importance of the financial sector and thus sector-specific study can make valuable contributions. We have collected data of five years for the period 2014 till 2018. There are 36 listed firms in the financial sector, but only 30 are included after excluding six firms that had missing data over the five years. To avoid the potential influence of outliers the financial variables are winsorized in the 1st and 99th percentile of the distributions. Winsorization is a popularly used technique to address the problem of outliers as it maintains the population features and the findings can be generalized to the population (Hair et al., 2006). The financial sector data comprises twelve investment firms, eight Banks, five Finance, and five Insurance firms. The listed companies in Oman are required to publish their annual reports in English and Arabic (Muscat Securities Market, 1998). The English annual reports of a total of 150 firm observations for five years are downloaded from MSM to extract the readability characteristics such as syllables, phrases, lines, number of words. The website www.online-utility.org/text/analyzer.jsp is used to measure the number of lines, characters, and words. The annual reports are available as a zip file on the MSM comprising of different sections of the report. These files are merged and then converted from pdf to word documents to extract readability characteristics. The S&P Capital IQ database is used to collect the financial variables, and reference is made to MSM for historical share price information.

3.2 Variables measurement

3.2.1 Dependent variables
There are various ways to measure the readability of annual reports. However, we adopted frequently used measurements, i.e., Flesch Reading Ease and Flesch-Kincaid grade level index

tool. The Flesch Reading Ease score is the readability measure that shows the appropriateness of a document based on the word and sentence length (Courtis, 1995). As contended by Hrasky and Smith (2008), the most frequently utilized and applied formula in readability research is the Flesch Reading Ease score[2].

The Flesch-Kincaid grade level is also designed to measure the difficulty of understanding the narratives or syllables. It is similar to Flesch Reading ease but comparatively operates with different weighting factors. John P. Kincaid developed it in 1976. Flesch Reading Ease and Flesch-Kincaid Indices were used by numerous studies to assess the readability of the annual report (Hasan, 2020, Fisher et al., 2019, Hassan Mostafa et al., 2019, Li, 2008). Formulae of both readability measures are presented in Table 3.2.

While Flesch Reading Ease offers several advantages it also has few limitations. The score does not represent text jargon, logical difficulties, structure, graphic aids, or argument logic or clarity (Hussainey et al., 2012). Despite these limitations or difficulties, the Flesch Reading Ease and Flesh-Kincaid Indices are used as reliability measures to increase comparability with prior literature.

The file size is a significant and consistent readability measure for financial information, as suggested by Loughran and McDonald (2014). The size of the annual reports as a readability measure was suggested in prior studies (Luo et al., 2018, De Franco et al., 2015, Li, 2008). The statement implies that a higher level of information could allow extracting value-related information difficult for users. As part of the robustness check, this research also uses a natural logarithm of the number of annual report pages (Luo et al., 2018, De Souza et al., 2019, Dalwai et al., 2021, García-Sánchez et al., 2019).

3.2.2 Independent variables
This study has concentrated on the value-added intellectual capital (VAIC) coefficient and corporate governance as independent variables. The corporate governance mechanisms are hand-collected through the annual reports of listed financial sector firms. At the same time, intellectual capital efficiency is assessed by VAIC methodology that provides a straightforward approach to measure and compare IC at selected sectors (Pulic, 1998). To measure the size and efficiency of intellectual capital, Pulic (2000) developed a quantitative measure called VAIC. VAIC is a monetary measure that has the benefit of providing a statistical solution that is relatively similar across departments and industries (Nadeem et al., 2019). To quantify the efficiency of intellectual capital, VAIC is recognized as an acceptable indicator where the higher value means, the greater the usage of intellectual capital by a specific organization. VAIC is considered to be a dependable approach that consists of three subcomponents, such as Human Capital Efficiency (HCE), Structural Capital Efficiency (SCE), and Capital Employed Efficiency (CEE).

The measurement of VAIC is represented through the following equation:
$VAIC_{i,t} = CEE_{i,t} + HCE_{i,t} + SCE_{i,t}$

The VAIC can be obtained by the following two steps:

---

[2] Refer Appendix II for interpretation of Flesch Reading Ease

Step 1: Calculate Value Added
Value Added (VA*) = Operating Profits (OP) + Employee Costs (EC) + Depreciation and Amortization (D&A) + Taxes (T)

Step 2: Calculate CEE, HCE and SCE
CEE= refers to capital employed efficiency (measured as VA*/CE, CE refers to capital employed)
HCE= refers to human capital efficiency (measured as VA*/HC, HC refers to total employee costs)
SCE=refers to structure capital efficiency (measured as SC/VA*, SC = VA-HC, SC refers to structural capital)

The other independent variable of this study is corporate governance. The internal corporate governance variables used in this study are board size, board independence, board meeting, concentrated ownership, audit size, and audit meeting. There are several control variables included in this study that have been prominently used in extant literature related to corporate governance, intellectual capital, and readability studies[3]. The definition of all the variables is given in table 1.

3.3. Research Model

The hypotheses of this research are tested through the following constructed regression models:

$Readability_{i,t} = \beta_0 + \beta_1 VAIC_{i,t} + \beta_2 BSIZE_{i,t} + \beta_3 BIND_{i,t} + \beta_4 BMEET_{i,t} + \beta_5 OWN_{i,t} + \beta_6 AUDSIZE_{i,t} + \beta_7 AUDMEET_{i,t} + \beta_8 FirmSize_{i,t} + \beta_9 SalesGrowth_{i,t} + \beta_{10} Leverage_{i,t} + \beta_{11} ROE_{i,t} + \beta_{12} MTB_{i,t} + \beta_{13} Age_{i,t} + \beta_{14} Liquidity_{i,t} + \beta_{15} CapitalIntensity_{i,t} + Year\ FE + Sub\text{-}Sector\ FE + \varepsilon$ (equation 1)

$Readability_{i,t} = \beta_0 + \beta_1 HCE_{i,t} + \beta_2 SCE_{i,t} + \beta_3 CEE_{i,t} + \beta_4 BSIZE_{i,t} + \beta_5 BIND_{i,t} + \beta_6 BMEET_{i,t} + \beta_7 OWN_{i,t} + \beta_8 AUDSIZE_{i,t} + \beta_9 AUDMEET_{i,t} + \beta_{10} FirmSize_{i,t} + \beta_{11} SalesGrowth_{i,t} + \beta_{12} Leverage_{i,t} + \beta_{13} ROE_{i,t} + \beta_{14} MTB_{i,t} + \beta_{15} Age_{i,t} + \beta_{16} Liquidity_{i,t} + \beta_{17} CapitalIntensity_{i,t} + Year\ FE + Sub\text{-}Sector\ FE + \varepsilon$ (equation 2)

<Insert Table 1 here>

The definition of the variables is available in table 1. Readability is proxied by three measures, FleschRead, FleschKinkaid BS Readability1. Equation 1 regresses intellectual capital (VAIC), corporate governance mechanisms, and control variables on the readability measures. Equation 2 regresses intellectual capital (VAIC), corporate governance mechanisms, and control variables on the readability measures. The xtreg routine in Stata 15 statistical software is used to ensure that the above models are correctly specified and are robust to other estimation techniques.

4. Results and Discussion

4.1 Descriptive Statistics and Correlation

<Insert Table 2 and 3 here>

---

[3] Refer Appendix III for discussion on the corporate governance and control variables.

Tables 2 and 3 reports the descriptive statistics of this study's research model for the financial sector firm and subsectors, respectively. The annual report readability is measured in terms of the FleschRead score, which is derived as an average of 36.12 for the financial sector firms of Oman (Table 2). According to the classification on Flesch Reading Ease scores described by Courtis (1995), Oman's score suggests that annual reports are challenging to read and require an undergraduate attainment level to understand. This interpretation is consistent for the sub-sectors as their mean FleschRead score is within the same range. However, Insurance companies' maximum score is 86.62, that reflects certain companies publish easy-to-read annual reports. The average VAIC score of the financial sector is 4.616. The breakdown of average VAIC scores in sub-sectors is the highest in Finance companies and lowest in the Insurance sector. The banking sector reports an average VAIC score of 3.36, which is consistent with the score reported for the period 2008 and 2010 in the prior studies (Al-Musali and Ku Ismail, 2016). The HCE score is the highest composition in the VAIC, which averages around 3.96 for the financial sector.

The corporate governance variables demonstrate the strength of financial sector compliance with the regulations. The board size (BSIZE) is an average of 8 members, ranging from a minimum of 5 to 12 members and is consistent with the results for all listed companies in Oman (Pillai and Al-Malkawi, 2018). The composition of non-executive and independent directors is a mean of 74 percent that shows the adherence to Oman's Capital Market Authority issued Code of Corporate Governance for Public Listed Companies, which requires one-third of members to be independent directors. On average, the sector has 7 board meetings and 5 audit committee meetings. The ownership concentration is, on average 58 percent for the financial sector, of which some of the banks, finance companies, and investment companies have a concentration of more than 90 percent. These results are similar to the findings reported for the MENA banks, which have a high ownership concentration (Lassoued et al., 2018).

<Insert Table 4 here>

Table 4 presents the correlation between the dependent, independent, and control variables. There is a significant negative relationship between SCE and VAIC with FleschRead and a positive relationship with FleschKinkaid. This signifies that weak intellectual capital and structural capital are associated with easier-to-read annual reports. The corporate governance variables, BIND, and AUDMEET suggest a significant negative correlation with FleschRead. Velte (2019) reported no association between FleschRead and AUDMeet or AUDSIZE for premium listed UK companies, whereas this study reports a negative association between Flesch Read and AUDMEET. Similarly, Ginesti et al. (2017) reported a significant positive correlation of BSIZE and no correlation of BIND with Flesch Reading Ease score for Italy which is contradictory to the results of this study. The results of this study reflect that weak corporate governance of Oman's financial sector leads to complex readability of annual reports. FleschKinkaid, on the other hand, has a significant but weakly positive correlation with BSIZE (0.19), BMEET (0.25), OWN (0.15), and AUDMEET (0.26). Readability1 (Log of no of pages) is used as a proxy for sensitivity analysis and it demonstrates a significant negative and a little stronger correlation with BSIZE, BMEET, and AUDMEET. This relationship as well indicates weaker corporate governance mechanisms are associated with the complex readability of annual reports. The signs of a significant negative correlation between Readability1 and FirmSize are consistent with the results of Luo et al. (2018). The correlation matrix also supports identifying collinearity issues, which is serious if the

coefficient is above 0.8 (Hair et al., 2009). The correlation coefficient of explanatory variables is less than 0.65, thereby suggesting no multicollinearity issue. This is also affirmed by the regression model's variance inflation factor (VIF) analysis (not tabulated) that is less than the threshold value of 10 (Velte, 2019).

4.2 Regression Analysis

<Insert Table 5 here>

The Breusch-Langer Multiplier test was applied to choose between random effects or pooled ordinary least squares (OLS) to deal with heterogeneity in the panel data. The results suggested a rejection of the null hypothesis and adoption of the random effects. Further, the Hausman test was implemented to check the applicability of the fixed-effect or random-effect model for the regression analysis[4] (Appendix A). The fixed effect model is used if the null hypothesis is rejected due to the p-value being significant (Gujarati et al., 2020). The results however indicate that random effects are an appropriate model. Table 5 presents the random-effects generalized least squares (GLS) regression results for VAIC, corporate governance, and control variables regressed on annual report readability measures for the financial sector and sub-sectors, respectively. Panel A shows the results of FleschRead as the dependent variable. The adjusted R-square of the Financial Sector (Column 1) is 0.20 evidencing that 20% of the variation in the dependent variable can be explained by the independent and control variables. The explanatory power of the regression model expressed by adjusted R-square is very strong for the sub-sectors: Bank, Finance, and Insurance. The Wald Chi-squared test is significant at 5% for all the models indicating its validity. The VAIC is statistically significant and negative for the financial sector (Column (1)), thus lends no support to H1. The economic significance suggests a one standard deviation decrease in VAIC (=2.36) is associated with a 1.5% (2.36x0.225/36.12) increase in the financial sector FleschRead relative to the mean. The VAIC of banks is significantly and positively associated with FleschRead. This suggests that when intellectual capital efficiency is higher for the banks, the readability is higher. This lends support to the hypothesis (H1). In terms of economic significance, one standard deviation increase in VAIC (=17.67) is associated with a 26.4% (17.67 x 0.49/32.85) increase in the banking sector FleschRead relative to the mean. The VAIC result varies for the financial sector in comparison to the banking sub-sector as the financial sector is also inclusive of insurance, investment, and finance sub-sectors. The sample size of all the sub-sectors is quite small. It could also alternatively mean that banks are more effective in utilizing their intellectual capital efficiency vis-à-vis the other sub-sectors and would have more consistent reporting thus able to lend support to the hypothesized relationship.

The BIND is statistically significant and negatively correlated to the FleschRead for the financial sector and bank subsector. This, however, does not support the hypothesis (H2) of this study and is also inconsistent with the finding of the prior study (Harjoto et al., 2020) that reports board independence enhances CSR report readability. AUDSIZE positively influences the readability of the financial sector and insurance sub-sector, thereby lending support to the hypothesis (H6) and is inconsistent with the findings of Velte (2019). The BSIZE has no relationship reported for the financial sector, finance, insurance, and investment subsectors that is consistent with the findings for Italian listed firms (Ginesti et al., 2017). Alternately, board size is negatively associated with

---

[4] Refer Appendix IV for Hausman Test result

FleschRead for the banking sector indicating few members are associated with readable reports. Low market to book value ratio is associated with better readability of banks (Column (2)) which is consistent with the findings of US companies (Bradley and Sun, 2021). Panel B shows the results of FleshKinkaid as the dependent variable, which requires the inverse relationship to reflect better readability. OWN is positively and significantly associated with FleschKinkaid for the bank sub-sector (Column 7), indicating that higher ownership concentration results in lower levels of readability. These findings support the results for GCC that reported value addition of good governance cannot be maintained at higher levels of ownership concentration (Abdallah and Ismail, 2017). AUDSIZE and AUDMEET have a statistically significant negative impact on FleschKinkaid for the insurance sector (Column (9)) and finance sub-sector (Column (8)), respectively. This indicates that a higher audit committee size and more number of meetings are associated with easier-to-read annual reports. The result provides evidence that the audit committee as agents of the shareholders is expected to care about readable reports which are also recommended in prior studies for UK premium listed companies (Velte, 2019). These results lend support to H6 and H7. Several firm-level control variables determine the readability of annual reports. For example, the finance sub-sector (Column (3)) have more readable reports for larger firm size, higher ROE, and more liquidity. Similarly lower levels of leverage are associated with higher readability for the finance sub-sector (column 3) which is consistent with the findings of US firms (Xu et al., 2020).

<Insert Table 6 here>

Table 6 extends the analysis to investigate if the VAIC sub-components, HCE, CEE, and SCE, have an impact on the annual report readability. The adjusted Rsq continues to be high for the Bank, Finance, and Insurance sub-sectors. The validity of the models is confirmed by the Wald chi2 which is significant for all except for the Finance sub-sector (Column (3)). The results of Panel A present that the financial sector has a statistically significant and negative coefficient for SCE (-0.829). The results suggest when structural capital efficiency is weak, readability measured through FleschRead is much better. This finding is inconsistent with the hypothesis (H1). The economic significance suggests a one standard deviation decrease in SCE (=0.85) is associated with a 2% (0.85 x 0.829 / 36.12) increase in the financial sector FleschRead relative to the mean. The audit committee size is significantly and positively associated with the FleschRead for the financial sector. Similarly, banks also have a negative coefficient for CEE, suggesting a weak capital employed efficiency leads to better readability. This finding emphasizes the institutions lack focus on alleviating the information asymmetry through enhancing the readability of annual reports. The banking sector continues to suggest that significantly weak corporate governance variables (BSIZE, BIND, OWN, and AUDMEET) lead to easier-to-read annual reports. The governance policy of the banks or the financial sector does not focus on readability and there may be other factors supporting its improvement. The factors such as low leverage, high ROE, and low capital intensity enhance the readability of the banks.

Panel B results do not lend support to hypotheses for intellectual capital or corporate governance variables. For the finance and insurance sub-sector firms, mature firms are associated with less readable annual reports. This is inconsistent with the findings for US non-financial firms where mature firms had better readability (Hasan, 2020) while firm size was insignificant for Korean firms (Jang and Rho, 2016). The result indicates that larger firms have involvement in the varied

scale of operations thus resulting in complex annual reports (Ginesti et al., 2017, Li, 2008). Higher leverage is associated with complex readability for Investment firms which is consistent with the findings for firms listed on the Standard and Poor (S&P) 500 index (Harjoto et al., 2020). This supports the obfuscation theory that suggests, leverage is one of the factors influencing the readability of accounting information.

4.3 Sensitivity Test

<Insert Table 7 here>

As part of the sensitivity analysis, this study uses an alternative annual report readability measure of the natural logarithm of the number of annual report pages (Lpages) as proposed by extant literature (Luo et al., 2018, De Souza et al., 2019, Dalwai et al., 2021, García-Sánchez et al., 2019) for length. A higher number of pages reflects lower readability. Table 7 Panel A presents the results of VAIC, its sub-components, corporate governance, and control variables regressed on the alternative measure of annual report readability proxied by the log of annual report pages. The explanatory power of these models represented by the adjusted R-sq is quite strong and valid evidenced by Wald Chi2 significance at 1%. VAIC is not significant for the financial sector and its sub-sectors. BSIZE is positively and significantly associated with Lpages of the Insurance subsector suggesting a higher number of board members leads to more complex readability. There is no support extended to hypothesis (H1) that predicts intellectual capital efficiency improves annual report readability. This result is more in line with agency theory that propagates more number of members leads to the increased cost to the firm and lengthens the time to resolve disputes (Cheng, 2008) thus it might also not be able to focus on the readability of financial reports. BSIZE is insignificant for all other models in Panel A thus being consistent with the findings reported by García-Sánchez et al. (2019) for 12 international countries and various sectors. None of the other corporate governance variables are significant in explaining the variation in readability. The results are aligned with the view by Lim et al. (2018) that suggests FleschRead and FleschKinkaid tend to capture different facets of readability from the length of annual reports. The analysis presented in Panel A is not in line with all the predicted hypotheses.

Table 7 Panel B presents the results for HCE, SCE, and CEE, corporate governance, and control variables regressed on a log of annual report pages. The intellectual capital sub-components do not have any significant impact on Lpages. The findings of the sensitivity analysis for the finance, insurance, and investment sub-sectors largely corroborate the random effects regression results presented for FleschRead and FleschKinkaid. Firm size of the financial sector (Column (6)) is positively associated with the annual report length indicating that large firms would have more to disclose and has more complexity. This is consistent with the findings of Lang and Stice-Lawrence (2015) that investigated the determinants of textual attributes of a sample of 42 countries and also reported a positive association of firm size with annual report length.

4.4. Robustness Check

<Insert Table 8 here>

This study, therefore, uses a two-step GMM approach (Arellano and Bond, 1991, Blundell and Bond, 1998) to validate the interpretation of the results documented in Tables 5 and 6[5]. Table 8 reports the diagnostic results for serial correlation and overidentifying restrictions (Hansen test) to confirm the validity of the instruments. The sub-sectors are excluded as the sample size is too low. AR1 reports the first-order correlation results, and it is not significant for any of the models in Panel A and B. This confirms the presence of no first-order correlation. There is also no second-order correlation as AR2 is statistically insignificant for the financial sector. Hansen test confirms the validity of the instruments used in this study as the results are statistically insignificant.

Panel A results in Table 8 demonstrates that the lagged values of VAIC have no significant impact on the readability of the financial sector (Columns (1) to (3)). The FleschRead of the financial sector is not influenced by any of the corporate governance variables (Column (1)). The significant negative lagged values of OWN (column (2) suggests institutions with less concentrated ownership are associated with higher complexity of annual reports. This is the only corporate governance mechanism that is significant under the system GMM estimation. The results of Table 5 are different in comparison to system GMM results, thereby suggesting the presence of endogeneity. However, the system GMM estimation results for VAIC and corporate governance are consistent for the readability measure of Lpages. Abdallah et al. (2015) suggest significant coefficients of lagged dependent variables indicate dynamic endogeneity. However, as lagged variable of VAIC is not significant in this study it does not suffer from dynamic endogeneity.

Panel B results of Table 8 indicate lagged capital employed efficiency improves the readability (FleschRead) of the financial sector (Column (4)). The results of column (4) indicate small size boards and more audit committee members lead to better readability. The finding related to audit committee size is consistent with the result reported in Table 6 thus confirming the robustness of the finding. The financial sector's human capital efficiency is positively associated with FleschKinkaid (Column (5)). Human capital efficiency leads to more complex readability. The model for Lpages (Column (6)) shows no intellectual capital sub-components and corporate governance variables are significant thus confirming the robustness of the results reported in Table 7.

5. Conclusions

This research examined the influence of intellectual capital and corporate governance on the annual report readability of Oman's financial sector firms. The findings of this study indicate a positive relationship between VAIC and Flesch Reading Ease of banks suggesting the intellectual capital efficiency can improve the readability of annual reports. Audit committee size positively influences the readability of the financial sector and insurance sub-sector thus indicating easy-to-read reports. Similarly, audit committee meetings have a positive association with the readability of the finance sector. The finding related to banks is consistent with the results of France (Bacha and Ajina, 2019) and FTSE 100 companies (Yan, 2017) that reported dispersed ownership leading to more readable reports. Reduced structural capital efficiency and capital employed efficiency are associated with difficult to read annual reports. Consistent with the findings of Ginesti et al. (2018), this study too finds highly leveraged investment sub-sector firms have more readable reports as

---

[5] Refer Appendix V for importance of system GMM

they face lower agency costs. The findings are also corroborated with robustness checks that involve alternative readability measures and system GMM estimation. The alternative readability measures have no association with intellectual capital efficiency or its sub-components. However, a higher board size is found to be associated with complex annual reports for the insurance sub-sector. The system GMM results, on the other hand, offer limited support and reported lagged capital employed efficiency of financial sector companies lead to more readable reports.

This study makes several contributions to the literature. To the best of the knowledge, this study is the first to investigate the relationship of intellectual capital efficiency and corporate governance with annual report readability. This research adds to the stream of studies in intellectual capital and readability. The intellectual capital efficiency of the financial sector is found to have complex annual report readability. Similarly, structural capital efficiency leads to difficult to read annual reports. This study also contributes to the corporate governance literature as some variables have proved to improve the annual report readability. Dispersed ownership, a greater number of audit committee meetings, and a larger audit committee size lead to increased annual report readability.

The results have implications for researchers, regulators, and practitioners. The researchers need to consider the exploration of IC and corporate governance on the readability of annual reports using a multi-theoretic approach. The companies need to reformulate the corporate governance policy for emphasizing a focus on the readability of annual reports. They can invest in improving the intellectual capital efficiency to instilling faith in investors. The companies need to implement effective techniques of knowledge management that would support them in accumulating IC to adjust and adapt to the ever-changing environment. The companies should continue to emphasize investment in employee training and development and ensure efficient utilization of their assets. The company needs to consider opacity risk that affects various stakeholders and improve the information quality. The corporate governance findings are also a signal for the policy-makers to not only require English language but insist on "Plain English" writing similar to the US Securities Act of 1993 to accentuate the ease of reading the annual reports (Du Toit, 2017, Hooghiemstra et al., 2017). This would support in quality of external reporting, enhance the competitiveness of Omani firms and attract foreign investments. This research has enriched agency theory by providing evidence on the corporate governance mechanisms such as audit committee meetings, audit committee size and dispersed ownership is associated with improved readability of annual reports.

The present study suffers from some limitations that designate the future directions of research. The research is limited to Oman's financial sector, and thus the findings can be generalized to the financial sector of countries with similar regulatory settings. Future research can be extended to include the non-financial sector and for other countries with different cultural and regulatory settings. This study has measured intellectual capital efficiency using Pulic's VAIC model. VAIC has some inherent limitations as explained in the methodology, and thereby future research can be extended to cover intellectual capital disclosures. There are three measures of readability used in this study; however, there are other proxies such as (FOG index, BOG index, the natural logarithm of distinct words, file size) which were not considered in this study and can be used for further investigation. Corporate governance is measured using limited variables related to the board of directors, ownership, and audit committee. Other corporate governance variables such as multiple directorships, foreign and institutional ownership, female directorship would also be useful to

explain a potential influence on annual report readability. This study has measured the readability of the complete annual report. However, different parts of the annual report, such as the chairman's statement, management discussion, and analysis (MD&A), notes (narrative disclosures) can pose different readability levels. Thereby these can be studied individually.

References

ABBOTT, L. J. & PARKER, S. 2000. Auditor selection and audit committee characteristics. *Auditing: A journal of practice & theory,* 19**,** 47-66.

ABDALLAH, A. A.-N. & ISMAIL, A. K. 2017. Corporate governance practices, ownership structure, and corporate performance in the GCC countries. *Journal of International Financial Markets, Institutions and Money,* 46**,** 98-115.

ABDALLAH, W., GOERGEN, M. & O'SULLIVAN, N. 2015. Endogeneity: How Failure to Correct for it can Cause Wrong Inferences and Some Remedies. *British Journal of Management,* 26**,** 791-804.

ABEYSEKERA, I. 2010. The influence of board size on intellectual capital disclosure by Kenyan listed firms. *Journal of Intellectual Capital,* 11**,** 504-518.

AL-MUSALI, M., A. & KU ISMAIL, K., N., I. 2016. Cross-country comparison of intellectual capital performance and its impact on financial performance of commercial banks in GCC countries. *International Journal of Islamic and Middle Eastern Finance and Management,* 9**,** 512-531.

AL-SHAMMARI, B., BROWN, P. & TARCA, A. 2008. An investigation of compliance with international accounting standards by listed companies in the Gulf Co-Operation Council member states. *The International Journal of Accounting,* 43**,** 425-447.

ALLEGRINI, M. & GRECO, G. 2013. Corporate boards, audit committees and voluntary disclosure: evidence from Italian listed companies. *Journal of Management & Governance,* 17**,** 187-216.

ARELLANO, M. & BOND, S. 1991. Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *The Review of Economic Studies,* 58**,** 277-297.

BAATWAH, S. R., SALLEH, Z. & AHMAD, N. 2015. Corporate governance mechanisms and audit report timeliness: empirical evidence from Oman. *International Journal of Accounting, Auditing and Performance Evaluation,* 11.

BACHA, S. & AJINA, A. 2019. CSR performance and annual report readability: evidence from France. *Corporate Governance: The International Journal of Business in Society,* 20**,** 201-215.

BADINGATUS, S., AGUS, W. & WARA, R. A. A. 2020. The Extent of Intellectual Capital Disclosure and Corporate Governance Mechanism to Increase Market Value. *The Journal of Asian Finance, Economics and Business,* 7**,** 119-128.

BAYDOUN, N., MAGUIRE, W., RYAN, N. & WILLETT, R. 2013. Corporate governance in five Arabian Gulf countries. *Managerial Auditing Journal*.

BERTRAND, M. & SCHOAR, A. 2003. Managing with style: The effect of managers on firm policies. *The Quarterly journal of economics,* 118**,** 1169-1208.

BHUIYAN, M., ULLAH, H. & BISWAS, P. K. 2006. Agency problem and the role of Corporate Governance. *The Bangladesh Accountant,* 52**,** 109-117.

BISWAS, P. K., BHUIYAN, M. & ULLAH, H. 2008. Agency problem and the role of corporate governance revisited. *Agency Problem and the Role of Corporate Governance Revisited (October 20, 2008)*.

BLUNDELL, R. & BOND, S. 1998. Initial conditions and moment restrictions in dynamic panel data models. *Journal of econometrics,* 87**,** 115-143.

BONSALL IV, S. B., HOLZMAN, E. R. & MILLER, B. P. 2017. Managerial ability and credit risk assessment. *Management Science,* 63**,** 1425-1449.

BONTIS, N. 2003. Intellectual capital disclosure in Canadian corporations. *Journal of Human Resource Costing and Accounting,* 7**,** 9-20.

BOUBAKER, S., GOUNOPOULOS, D. & RJIBA, H. 2019. Annual report readability and stock liquidity. *Financial Markets, Institutions & Instruments,* 28**,** 159-186.

BOUBAKER, S., NGUYEN, B. D. & NGUYEN, D. K. 2012. *Corporate governance: recent developments and new trends,* Berlin Heidelberg, Springer Science & Business Media.

BOUBAKER, S. & NGUYEN, D. K. 2012. *Board directors and corporate social responsibility*, Palgrave Macmillan.

BOUBAKER, S. & NGUYEN, D. K. (eds.) 2014. *Corporate Governance and Corporate Social Responsibility: Emerging Market Focus*: World Scientific.

BRADLEY, W. & SUN, L. 2021. Proximity to broad bond rating change and annual report readability. *Asian Review of Accounting,* 29**,** 227-250.

BRENNAN, N. 2006. Boards of directors and firm performance: is there an expectations gap? *Corporate Governance: An International Review,* 14**,** 577-593.

BRICK, I. E. & CHIDAMBARAN, N. K. 2010. Board meetings, committee structure, and firm value. *Journal of Corporate Finance,* 16**,** 533-553.

BUALLAY, A. 2018. Audit committee characteristics: an empirical investigation of the contribution to intellectual capital efficiency. *Measuring Business Excellence,* 22**,** 183-200.

BUALLAY, A. & HAMDAN, A. 2019. The relationship between corporate governance and intellectual capital. *International Journal of Law and Management,* 61**,** 384-401.

CAPITAL MARKET AUTHORITY 2016. Code of Corporate Governance for Public Listed Companies. Muscat, Oman: Capital Market Authority.

CAVUSGIL, S. T. 2021. Advancing knowledge on emerging markets: Past and future research in perspective. *International Business Review,* 30**,** 101796.

CENTRAL BANK OF OMAN 2019. Annual Report 2018. Muscat, Oman: Central Bank of Oman.

CHENG, S. 2008. Board size and the variability of corporate performance. *Journal of Financial Economics,* 87**,** 157-176.

CLAESSENS, S. & YURTOGLU, B. B. 2013. Corporate governance in emerging markets: A survey. *Emerging Markets Review,* 15**,** 1-33.

COL, B. & SEN, K. 2019. The role of corporate governance for acquisitions by the emerging market multinationals: Evidence from India. *Journal of Corporate Finance,* 59**,** 239-254.

COURTIS, J., K. 1995. Readability of annual reports: Western versus Asian evidence. *Accounting, Auditing & Accountability Journal,* 8**,** 4-17.

DALWAI, T., CHINNASAMY, G. & MOHAMMADI, S. S. 2021. Annual report readability, agency costs, firm performance: an investigation of Oman's financial sector. *Journal of Accounting in Emerging Economies,* 11**,** 247-277.

DALWAI, T. & MOHAMMADI, S. S. 2020. Intellectual capital and corporate governance: an evaluation of Oman's financial sector companies. *Journal of Intellectual Capital,* 21**,** 1125-1152.

DALWAI, T. A. R., BASIRUDDIN, R. & ABDUL RASID, S. Z. 2015. A critical review of relationship between corporate governance and firm performance: GCC banking sector perspective. *Corporate Governance: The international journal of business in society,* 15**,** 18-30.

DE FRANCO, G., HOPE, O.-K., VYAS, D. & ZHOU, Y. 2015. Analyst Report Readability. *Contemporary Accounting Research,* 32**,** 76-104.

DE SOUZA, J. A. S., RISSATTI, J. C., ROVER, S. & BORBA, J. A. 2019. The linguistic complexities of narrative accounting disclosure on financial statements: An analysis based on readability characteristics. *Research in International Business and Finance,* 48**,** 59-74.

DEMPSEY, S. J., HARRISON, D. M., LUCHTENBERG, K. F. & SEILER, M. J. 2012. Financial opacity and firm performance: the readability of REIT annual reports. *The Journal of Real Estate Finance and Economics,* 45**,** 450-470.

DEZOORT, F., T., HERMANSON, D., R., ARCHAMBEAULT, D., S. AND REED, S., A. 2002. Audit committee effectiveness: a synthesis of the empirical audit committee literature. *Journal of Accounting Literature,* 21**,** 38.

DEZOORT, F. T. & SALTERIO, S. E. 2001. The effects of corporate governance experience and financial-reporting and audit knowledge on audit committee members' judgments. *Auditing: A Journal of Practice & Theory,* 20**,** 31-47.

DU TOIT, E. 2017. The readability of integrated reports. *Meditari Accountancy Research,* 25**,** 629-653.

ELUYELA, D. F., AKINTIMEHIN, O. O., OKERE, W., OZORDI, E., OSUMA, G. O., ILOGHO, S. O. & OLADIPO, O. A. 2018. Board meeting frequency and firm performance: examining the nexus in Nigerian deposit money banks. *Heliyon,* 4**,** e00850.

ENG, L. L. & MAK, Y. T. 2003. Corporate governance and voluntary disclosure. *Journal of accounting and public policy,* 22**,** 325-345.

ERTUGRUL, M., LEI, J., QIU, J. & WAN, C. 2017. Annual report readability, tone ambiguity, and the cost of borrowing. *Journal of Financial and Quantitative Analysis,* 52**,** 811-836.

FISHER, R., VAN STADEN CHRIS, J. & RICHARDS, G. 2019. Watch that tone: An investigation of the use and stylistic consequences of tone in corporate accountability disclosures. *Accounting, Auditing & Accountability Journal,* 33**,** 77-105.

FRANKLIN, A. & ELENA, C. (eds.) 2012. *The roles of banks in financial systems,* Oxford: Oxford University Press.

GAN, K., SALEH, Z., ABESSI, M. & HUANG, C. C. 2013. Intellectual capital disclosure in the context of corporate governance. *International Journal of Learning and Intellectual Capital,* 10**,** 52-70.

GARCÍA-SÁNCHEZ, I.-M., SUÁREZ-FERNÁNDEZ, O. & MARTÍNEZ-FERRERO, J. 2019. Female directors and impression management in sustainability reporting. *International Business Review,* 28**,** 359-374.

GINESTI, G., DRAGO, C., MACCHIONI, R. & SANNINO, G. 2018. Female board participation and annual report readability in firms with boardroom connections. *Gender in Management: An International Journal,* 33**,** 296-314.

GINESTI, G., SANNINO, G. & DRAGO, C. 2017. Board connections and management commentary readability: the role of information sharing in Italy. *Corporate Governance: The International Journal of Business in Society,* 17**,** 30-47.

GRAY, S. & NOWLAND, J. 2018. Director workloads, attendance and firm performance. *Accounting Research Journal,* 31**,** 214-231.

GUJARATI, D. N., PORTER, D. C. & PAL, M. 2020. *Basic econometrics,* India, Tata McGraw-Hill Education.

HABIB, A. & HASAN, M. M. 2020. Business strategies and annual report readability. *Accounting & Finance,* n/a.

HAIR, J. F., BLACK, W. C., BABIN, B. J. & ANDERSON, R. E. 2009. *Multivariate data analysis,* Uppersaddle River, NJ, Prentice Hall.

HAIR, J. F., BLACK, W. C., BABIN, B. J., ANDERSON, R. E. & TATHAM, R. L. 2006. *Multivariate Data Analysis,* New Jersey, Pearson Prentice Hall.

HANAFI, M. M., SETIYONO, B. & SANJAYA, I. P. S. 2018. Ownership structure and firm performance: evidence from the subprime crisis period. *Corporate Governance: The International Journal of Business in Society*.

HARJOTO, M. A., LAKSMANA, I. & LEE, W. E. 2020. Female leadership in corporate social responsibility reporting: Effects on writing, readability and future social performance. *Advances in Accounting,* 49**,** 100475.

HASAN, M. M. 2020. Readability of Narrative Disclosures in 10-K Reports: Does Managerial Ability Matter? *European Accounting Review,* 29**,** 147-168.

HASSAN, M. K. 2014. Risk narrative disclosure strategies to enhance organizational legitimacy: Evidence from UAE financial institutions. *International Journal of disclosure and Governance,* 11**,** 1-17.

HASSAN, M. K. 2018. Governance, product market competition and agency costs: evidence from the UAE. *International Journal of Business Governance and Ethics,* 13**,** 59-84.

HASSAN MOSTAFA, K., ABU ABBAS, B. & GARAS SAMY, N. 2019. Readability, governance and performance: a test of the obfuscation hypothesis in Qatari listed firms. *Corporate Governance: The International Journal of Business in Society,* 19**,** 270-298.

HIDALGO, R. L., GARCÍA-MECA, E. & MARTÍNEZ, I. 2011. Corporate governance and intellectual capital disclosure. *Journal of business ethics,* 100**,** 483-495.

HOOGHIEMSTRA, R., KUANG, Y. F. & QIN, B. 2017. Does obfuscating excessive CEO pay work? The influence of remuneration report readability on say-on-pay votes. *Accounting and Business Research,* 47**,** 695-729.

HRASKY, S. & SMITH, B. 2008. Concise corporate reporting: communication or symbolism? *Corporate Communications: An International Journal*.

HUSSAINEY, K., BAYERLEIN, L. & DAVIDSON, P. 2012. The influence of connotation on readability and obfuscation in Australian chairman addresses. *Managerial Auditing Journal*.

JANG, M.-H. & RHO, J.-H. 2016. IFRS adoption and financial statement readability: Korean evidence. *Asia-Pacific Journal of Accounting & Economics,* 23**,** 22-42.

JENSEN, M. C. & MECKLING, W. H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics,* 3**,** 305-360.

JOHN, K. & SENBET, L. W. 1998. Corporate governance and board effectiveness. *Journal of banking & Finance,* 22**,** 371-403.

JONES, M. & SMITH, M. 2014. Traditional and alternative methods of measuring the understandability of accounting narratives. *Accounting, Auditing & Accountability Journal,* 27**,** 183-208.

JONES, M. J. & SHOEMAKER, P. A. 1994. Accounting narratives: A review of empirical studies of content and readability. *Journal of accounting literature,* 13**,** 142.

KANAGARETNAM, K., LOBO, G. J. & WHALEN, D. J. 2007. Does good corporate governance reduce information asymmetry around quarterly earnings announcements? *Journal of Accounting and Public Policy,* 26**,** 497-522.

KEENAN, J. & AGGESTAM, M. 2001. Corporate governance and intellectual capital: some conceptualisations. *Corporate Governance: An International Review,* 9**,** 259-275.

KIM, C., WANG, K. & ZHANG, L. 2019. Readability of 10-K Reports and Stock Price Crash Risk. *Contemporary Accounting Research,* 36**,** 1184-1216.

KIM, J., KIM, Y. & ZHOU, J. 2017. Languages and earnings management. *Journal of Accounting and Economics,* 63**,** 288-306.

LANG, M. & STICE-LAWRENCE, L. 2015. Textual analysis and international financial reporting: Large sample evidence. *Journal of Accounting and Economics,* 60**,** 110-135.

LASSOUED, N., ATTIA, M. B. R. & SASSI, H. 2018. Earnings management in islamic and conventional banks: Does ownership structure matter? Evidence from the MENA region. *Journal of International Accounting, Auditing and Taxation,* 30**,** 85-105.

LAWRENCE, A. 2013. Individual investors and financial disclosure. *Journal of Accounting and Economics,* 56**,** 130-147.

LEHAVY, R., LI, F. & MERKLEY, K. 2011. The effect of annual report readability on analyst following and the properties of their earnings forecasts. *The Accounting Review,* 86**,** 1087-1115.

LI, F. 2008. Annual report readability, current earnings, and earnings persistence. *Journal of Accounting and economics,* 45**,** 221-247.

LI, J., MANGENA, M. & PIKE, R. 2012. The effect of audit committee characteristics on intellectual capital disclosure. *The British Accounting Review,* 44**,** 98-110.

LI, J., PIKE, R. & HANIFFA, R. 2008. Intellectual capital disclosure and corporate governance structure in UK firms. *Accounting and business research,* 38**,** 137-159.

LIAO, P., CHAN, A. L. C. & SENG, J. L. 2013. Intellectual capital disclosure and accounting standards. *Industrial management & data systems*.

LIM, E. K., CHALMERS, K. & HANLON, D. 2018. The influence of business strategy on annual report readability. *Journal of Accounting and Public Policy,* 37**,** 65-81.

LINSLEY, P. M. & LAWRENCE, M. J. 2007. Risk reporting by the largest UK companies: readability and lack of obfuscation. *Accounting, Auditing & Accountability Journal*.

LO, K., RAMOS, F. & ROGO, R. 2017. Earnings management and annual report readability. *Journal of Accounting and Economics,* 63**,** 1-25.

LOUGHRAN, T. & MCDONALD, B. 2014. Measuring readability in financial disclosures. *The Journal of Finance,* 69**,** 1643-1671.

LUO, J.-H., LI, X. & CHEN, H. 2018. Annual report readability and corporate agency costs. *China Journal of Accounting Research,* 11**,** 187-212.

MAHMOOD, Y., AHMAD, M., RIZWAN, F. & RASHID, A. 2019. Do banking sector concentration, banking sector development and equity market development influence firms' financial flexibility? Evidence from Pakistan. *South Asian Journal of Business Studies,* 9**,** 115-129.

MANGENA, M. & PIKE, R. 2005. The effect of audit committee shareholding, financial expertise and size on interim financial disclosures. *Accounting and Business Research,* 35**,** 327-349.

MARQUEZ-ILLESCAS, G., ZEBEDEE, A. A. & ZHOU, L. 2019. Hear me write: Does CEO narcissism affect disclosure? *Journal of Business Ethics,* 159**,** 401-417.

MELLONI, G., STACCHEZZINI, R. & LAI, A. 2016. The tone of business model disclosure: an impression management analysis of the integrated reports. *Journal of Management & Governance,* 20**,** 295-320.

MERKLEY, K. J. 2014. Narrative disclosure and earnings performance: Evidence from R&D disclosures. *The Accounting Review,* 89**,** 725-757.

MIGLIARDO, C. & FORGIONE, A. F. 2018. Ownership structure and bank performance in EU-15 countries. *Corporate Governance: The international journal of business in society*.

MOEINFAR, Z., AMOUZESH, N. & MOUSAVI, Z. 2013. Intellectual capital disclosure and corporate governance. *International Research Journal of Applied and Basic Sciences,* 4**,** 1962-1965.

MUSCAT SECURITIES MARKET 1998. Legislations regulating the companies operating in the field of securities and listed companies. *In:* MARKET, M. S. (ed.) *Royal Decree No. 80/98.*

MUTTAKIN, M. B., KHAN, A. & BELAL, A. R. 2015. Intellectual capital disclosures and corporate governance: An empirical examination. *Advances in Accounting,* 31**,** 219-227.

NADEEM, M., DUMAY, J. & MASSARO, M. 2019. If you can measure it, you can manage it: a case of intellectual capital. *Australian Accounting Review,* 29**,** 395-407.

NKUNDABANYANGA, S. K. 2016. Board governance, intellectual capital and firm performance. *Journal of Economic and Administrative Sciences,* 32**,** 20-45.

OSMA, B. G. & GUILLAMÓN-SAORÍN, E. 2011. Corporate governance and impression management in annual results press releases. *Accounting, Organizations and Society,* 36**,** 187-208.

PERSONS, O. S. 2009. Audit committee characteristics and earlier voluntary ethics disclosure among fraud and no-fraud firms. *International journal of disclosure and governance,* 6**,** 284-297.

PILLAI, R. & AL-MALKAWI, H.-A. N. 2018. On the relationship between corporate governance and firm performance: Evidence from GCC countries. *Research in International Business and Finance,* 44**,** 394-410.

PULIC, A. Measuring the performance of intellectual potential in knowledge economy. 2nd McMaster Word Congress on Measuring and Managing Intellectual Capital by the Austrian Team for Intellectual Potential, 1998. McMaster University, Hamilton, 1-20.

PULIC, A. 2000. VAIC™–an accounting tool for IC management. *International journal of technology management,* 20**,** 702-714.

RAGHUNANDAN, K., & RAMA, D., V. 2007. Determinants of audit committee diligence. *Accounting Horizons,* 21**,** 265-279.

RENNEKAMP, K. 2012. Processing Fluency and Investors' Reactions to Disclosure Readability. *Journal of Accounting Research,* 50**,** 1319-1354.

RJIBA, H., SAADI, S., BOUBAKER, S. & DING, X. 2021. Annual report readability and the cost of equity capital. *Journal of Corporate Finance,* 67**,** 101902.

RUCKDESCHEL, C. 1998. Intellectual Capital: The New Wealth of Organizations by Thomas Stewart. *Performance Improvement,* 37**,** 56-59.

SALEHI, M., ARIANPOOR, A. & DALWAI, T. 2020. Corporate Governance and Cost of Equity: Evidence from Tehran Stock Exchange. *The Journal of Asian Finance, Economics, and Business,* 7**,** 149-158.

SHAHWAN, T. M. & HABIB, A. M. 2020. Does the efficiency of corporate governance and intellectual capital affect a firm's financial distress? Evidence from Egypt. *Journal of Intellectual Capital,* 21**,** 403-430.

STANTON, P. & STANTON, J. 2002. Corporate annual reports: research perspectives used. *Accounting, Auditing & Accountability Journal*.

TESSEMA, A. 2019. The impact of corporate governance and political connections on information asymmetry: International evidence from banks in the Gulf Cooperation Council member countries. *Journal of International Accounting, Auditing and Taxation,* 35**,** 1-17.

THOMS, C., DEGENHART, A. & WOHLGEMUTH, K. 2019. Is Bad News Difficult to Read? A Readability Analysis of Differently Connoted Passages in the Annual Reports of the 30 DAX Companies. *Journal of Business and Technical Communication,* 34**,** 157-187.

VAFEAS, N. 1999. Board meeting frequency and firm performance. *Journal of financial economics,* 53**,** 113-142.

VELTE, P. 2018. Does gender diversity in the audit committee influence key audit matters' readability in the audit report? UK evidence. *Corporate Social Responsibility and Environmental Management,* 25**,** 748-755.

VELTE, P. 2019. Associations between the financial and industry expertise of audit committee members and key audit matters within related audit reports. *Journal of Applied Accounting Research,* 21**,** 185-200.

XU, Q., FERNANDO, G., TAM, K. & ZHANG, W. 2020. Financial report readability and audit fees: a simultaneous equation approach. *Managerial Auditing Journal,* 35**,** 345-372.

YAN, X. 2017. Corporate governance and intellectual capital disclosures in CEOs' statements. *Nankai Business Review International*.

YOU, H. & ZHANG, X.-J. 2009. Financial reporting complexity and investor underreaction to 10-K information. *Review of Accounting studies,* 14**,** 559-586.

ZALATA, A. M., NTIM, C., ABOUD, A. & GYAPONG, E. 2019. Female CEOs and core earnings quality: new evidence on the ethics versus risk-aversion puzzle. *Journal of Business Ethics,* 160**,** 515-534.

Table 1: Summary of variables:

Variables	Description	Sources
Dependent variables		
FleschRead	Flesch Reading Ease Score = 206.8-(1.015 x words per sentence) -(84.6 x syllables per word)	(Hassan Mostafa et al., 2019, Linsley Philip and Lawrence Michael, 2007, Xu et al., 2018)
FleschKincaid	Flesch Kincaid Grade Level Score = (11.8 x syllables per word) + (0.39 x words per sentence) -15.59	(De Franco et al., 2015, Hsieh et al., 2016, Guay et al., 2016, Xu et al., 2018)
Lpages (robustness check)	Natural logarithm of number of annual report pages	(Luo et al., 2018)
Independent variables		
VAIC	Value added intellectual capital	(Appuhami and Bhuyan, 2015, Shahveisi et al., 2017, Dalwai et al., 2018, Buallay and Hamdan, 2019, Dalwai and Mohammadi, 2020)
HCE	Human capital efficiency	
CEE	Capital employed efficiency	
SCE	Structural capital efficiency	
BSIZE	Board size is measured as number of directors.	(Appuhami and Bhuyan, 2015, Li, 2008)
BIND	Board independence is the percentage of independent nonexecutive directors in total director composition.	(Appuhami and Bhuyan, 2015, Hidalgo et al., 2011)
BMEET	Board meetings is measured as the number of board meeting held in a year.	(Gray and Nowland, 2018)
OWN	Ownership concentration measured as the sum of the percentage of shareholders holding more than 5%.	(Shahveisi et al., 2017, Li et al., 2008)
AUDSIZE	Audit committee size by Number of audit committee members.	(Li et al., 2012, Li et al., 2008)
AUDMEET	Audit committee meetings are the number of audit committee meetings held in a year.	(Li et al., 2012, Li et al., 2008)
Control variables		
FirmSize	Log of total assets	(Hassan Mostafa et al., 2019, Hasan and Habib, 2020, Guay et al., 2016)
SalesGrowth	Sales growth rate from year t-1 to year t	(Luo et al., 2018)

Leverage	Debt to assets ratio	(Hassan Mostafa et al., 2019, Hsieh et al., 2016, Fisher et al., 2019, Guay et al., 2016)
ROE	Return on Equity = Net income divided by shareholders funds	(Fisher et al., 2019, Hasan, 2020)
MTB	Market to book value is measured as market value of equities and liabilities divided by book value of total assets	(Hsieh et al., 2016, Hasan and Habib, 2020, Guay et al., 2016, Xu et al., 2018)
Age	Logarithm of number of years in operation	(Hassan Mostafa et al., 2019, Hsieh et al., 2016, Hasan and Habib, 2020, Xu et al., 2018)
Liquidity	Liquidity is measured as ratio of current assets to current liabilities	(Fisher et al., 2019)
CapitalIntensity	Capital intensity is the ratio of fixed assets to total assets	(Luo et al., 2018)

Table 2 Descriptive Statistics of independent, dependent and control variables of financial sector

Variable	Obs	Mean	Std. Dev.	Min	Max
Dependent Variables					
FleschRead	150	36.120	9.171	20.570	86.620
FleschKinkaid	150	15.539	2.821	2.550	20.180
Lpages	150	1.866	0.188	1.200	2.333
Independent Variables					
VAIC	150	4.616	9.461	-20.687	50.067
HCE	150	3.963	8.824	-16.828	48.959
CEE	150	0.123	0.202	-1.259	0.422
SCE	150	0.553	1.880	-11.814	7.400
BSIZE	150	7.533	1.436	5.000	12.000
BIND	150	0.739	0.217	0.143	1.000
BMEET	150	6.773	2.220	4.000	15.000
OWN	150	0.581	0.191	0.185	0.950
AUDSIZE	150	3.413	0.558	3.000	6.000
AUDMEET	150	4.733	1.185	2.000	10.000
Control Variables					
FirmSize	150	2.418	0.903	0.825	3.912
SalesGrowth	150	17.981	68.705	-60.600	259.700
Leverage	150	0.707	0.888	0.000	3.054
ROE	150	4.824	10.969	-41.583	30.300
MTB	150	0.965	0.562	0.333	3.960
Age	150	19.160	9.827	1.000	44.000
Liquidity	150	4.394	13.621	0.090	83.810
Capitalintensity	150	4.304	10.548	0.020	48.300

Notes: This table provides the descriptive statistics of the financial sector variables used in the study. FleschRead is the Flesch Reading Ease Score calculated as 206.8 - (1.015 x words per sentence) -(84.6 x syllables per word). FleschKinkaid is the Flesch Kinkaid Grade Level Score calculated as (11.8 x syllables per word) + (0.39 x words per sentence) -15.59. Lpages is the natural logarithm of number of annual report pages. VAIC is the Value-Added Intellectual Capital coefficient measured as the sum of HCE + SCE + CEE. HCE is the Human Capital Efficiency measured as HC/ VA (employee costs (HC)/ Operating Profits + Employee Costs + Depreciation and Amortization + Taxes (VA)). SCE is the Structural Capital Efficiency measured as SC/VA (where SC is calculated as VA-HC). CEE is Capital Employed Efficiency measured as VA/CE (where CE refers to capital employed). BSIZE is the board size measured as number of directors. BIND is the board independence measured as the percentage of independent nonexecutive directors in total director composition. BMEET is the board meetings measured as the number of board meetings in a year. OWN is the ownership concentration measured as the sum of the percentage of shareholders holding more than 5%. AUDSIZE is the audit committee size measured as the number of members. AUDMEET is the audit committee meetings held in year. FirmSize is the size of the firm measured as natural logarithm of assets. SalesGrowth is the percentage yearly growth in sales. Leverage is the debt to asset ratio. ROE is return on equity measured as Net income divided by shareholders funds. MTB is the market to book value ratio measured as market value of equities and liabilities divided by book value of total assets. AGE is logarithm of number of years in operation. Liquidity is measured as ratio of current assets to current liabilities. CapitalIntensity is the ratio of fixed assets to total assets.

Table 3 Descriptive Statistics of independent, dependent and control variables of sub-sectors

	Banks					Finance					Insurance					Investment				
	N	mean	sd	min	max	N	mean	sd	min	max	N	mean	sd	min	max	N	mean	sd	min	max
Dependent Variables																				
FleschRead	40	32.85	4.31	24.08	41.65	25	34.22	2.84	26.44	37.53	25	37.97	16.80	20.57	86.62	60	38.32	8.18	20.57	57.28
FleschKinkaid	40	17.08	1.48	14.57	20.18	25	15.33	1.14	12.89	17.56	25	14.55	4.51	2.55	20.16	60	15.01	2.74	8.34	20.18
Lpages	40	2.06	.178	1.75	2.33	25	1.76	.10	1.59	1.97	25	1.82	.07	1.66	1.92	60	1.80	.16	1.2	2.15
Independent Variables																				
VAIC	40	3.36	2.36	-3.20	10.46	25	12.79	17.67	1.14	50.07	25	3.81	7.42	-20.69	18.44	60	2.38	6.18	-20.69	14.59
HCE	40	2.63	2.12	-3.30	9.47	25	11.81	17.59	0.00	48.96	25	2.88	4.40	-8.68	10.87	60	2.04	5.33	-16.83	13.56
CEE	40	0.16	0.09	-0.06	0.29	25	0.24	0.10	0.09	0.42	25	0.13	0.16	-0.39	0.42	60	0.05	0.26	-1.26	0.30
SCE	40	0.58	0.85	-3.44	3.18	25	0.74	0.18	0.29	1.00	25	0.71	3.48	-11.81	7.40	60	0.39	1.86	-11.81	5.69
BSIZE	40	8.45	1.41	7.00	12.00	25	8.20	1.35	6.00	11.00	25	7.20	1.32	5.00	9.00	60	6.78	1.03	5.00	10.00
BIND	40	0.72	0.18	0.44	1.00	25	0.78	0.22	0.20	1.00	25	0.79	0.17	0.43	1.00	60	0.71	0.25	0.14	1.00
BMEET	40	8.38	2.47	6.00	15.00	25	6.40	1.87	4.00	10.00	25	6.48	2.40	4.00	13.00	60	5.98	1.48	4.00	10.00
OWN	40	0.60	0.21	0.19	0.90	25	0.69	0.12	0.39	0.92	25	0.48	0.14	0.30	0.67	60	0.56	0.20	0.23	0.95
AUDSIZE	40	3.63	0.67	3.00	6.00	25	3.44	0.51	3.00	4.00	25	3.48	0.59	3.00	5.00	60	3.23	0.43	3.00	4.00
AUDMEET	40	5.50	1.65	4.00	10.00	25	4.60	0.71	4.00	6.00	25	4.40	1.12	2.00	6.00	60	4.42	0.70	3.00	6.00
Control Variables																				
FirmSize	40	3.53	0.42	2.30	3.91	25	2.51	0.16	2.27	2.95	25	2.07	0.32	1.24	2.53	60	1.79	0.77	0.82	3.75
SalesGrowth	40	12.70	26.68	-14.90	148.20	25	4.57	23.98	-53.00	99.50	25	23.80	54.90	-9.40	259.70	60	24.67	99.17	-60.60	259.70
Leverage	40	0.63	0.61	0.00	2.45	25	2.33	0.65	1.09	3.05	25	0.04	0.08	0.00	0.26	60	0.37	0.38	0.00	1.44
ROE	40	7.06	6.29	-6.04	16.40	25	11.43	3.52	1.72	15.80	25	0.79	13.87	-33.10	14.60	60	2.26	12.61	-41.58	30.30
MTB	40	0.88	0.27	0.49	1.50	25	0.95	0.29	0.45	1.44	25	1.01	0.51	0.50	2.43	60	1.01	0.77	0.33	3.96
Age	40	19.10	13.54	2.00	44.00	25	19.40	5.46	12.00	31.00	25	17.00	12.20	1.00	33.00	60	20.00	6.88	10.00	35.00
Liquidity	40	0.37	0.34	0.13	1.71	25	34.22	2.84	26.44	37.53	25	0.94	0.28	0.55	1.67	60	9.62	20.53	0.09	83.81
CapitaIntensity	40	5.69	13.18	0.21	46.09	25	15.33	1.14	12.89	17.56	25	2.28	1.50	0.65	6.32	60	5.69	12.44	0.02	48.30

Notes: This table provides the descriptive statistics of the sub-sector (Banks, Finance, Insurance and Investment) variables used in the study. FleschRead is the Flesch Reading Ease Score calculated as 206.8 - (1.015 x words per sentence) -(84.6 x syllables per word). FleschKinkaid is the Flesch Kinkaid Grade Level Score calculated as (11.8 x syllables per word) + (0.39 x words per sentence) -15.59. Lpages is the natural logarithm of number of annual report pages. VAIC is the Value-Added Intellectual Capital coefficient measured as the sum of HCE + SCE + CEE. HCE is the Human Capital Efficiency measured as HC/ VA (employee costs (HC)/ Operating Profits + Employee Costs + Depreciation and Amortization + Taxes (VA)). SCE is the Structural Capital Efficiency measured as SC/VA (where SC is calculated as VA-HC). CEE is Capital Employed Efficiency measured as VA/CE (where CE refers to capital employed). BSIZE is the board size measured as number of directors. BIND is the board independence measured as the percentage of independent nonexecutive directors in total director composition. BMEET is the board meetings measured as the number of board meetings in a year. OWN is the ownership concentration measured as the sum of the percentage of shareholders holding more than 5%. AUDSIZE is the audit committee size measured as the number of members. AUDMEET is the audit committee meetings held in year. FirmSize is the size of the firm measured as natural logarithm of assets. SalesGrowth is the percentage yearly growth in sales. Leverage is the debt to asset ratio. ROE is return on equity measured as Net income divided by shareholders funds. MTB is the market to book value ratio measured as market value of equities and liabilities divided by book value of total assets. AGE is logarithm of number of years in operation. Liquidity is measured as ratio of current assets to current liabilities. CapitalIntensity is the ratio of fixed assets to total assets.

Table 4 Pearson's Correlation Matrix

Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
(1) FleschRead	1.00																				
(2) FleschKinkaid	-0.91***	1.00																			
(3) Lpages	0.07	-0.18**	1.00																		
(4) VAIC	-0.16*	0.14*	0.11	1.00																	
(5) HCE	-0.07	0.08	0.12	0.96***	1.00																
(6) CEE	-0.11	0.10	-0.22***	0.32***	0.32***	1.00															
(7) SCE	-0.25***	0.19**	-0.02	0.31***	0.05	-0.03	1.00														
(8) BSIZE	-0.14*	0.19**	-0.39***	0.07	0.04	0.24***	0.09	1.00													
(9) BIND	-0.17**	0.12	0.18**	0.27***	0.27***	0.17**	0.02	-0.08	1.00												
(10) BMEET	-0.16**	0.25***	-0.44***	-0.05	-0.05	0.01	0.03	0.08	-0.02	1.00											
(11) OWN	-0.13	0.15*	0.00	0.04	0.05	0.02	0.01	0.07	-0.26***	0.06	1.00										
(12) AUDSIZE	0.12	-0.04	-0.25***	0.09	0.11	0.05	-0.05	0.40***	0.11	0.08	0.14*	1.00									
(13) AUDMEET	-0.18**	0.26***	-0.44***	0.04	0.06	0.16**	-0.02	0.26***	-0.05	0.50***	0.19**	0.12	1.00								
(14) FirmSize	-0.17**	0.27***	-0.64***	0.06	0.04	0.34***	0.06	0.61***	0.01	0.46***	-0.01	0.27***	0.50***	1.00							
(15) SalesGrowth	0.23***	-0.21***	-0.01	-0.10	-0.03	0.03	-0.25***	-0.14*	-0.08	0.07	-0.07	-0.07	-0.05	-0.13	1.00						
(16) Leverage	-0.06	0.00	-0.01	0.27***	0.28***	0.31***	0.05	0.32***	0.09	0.14*	0.21**	0.03	0.13	0.29***	-0.09	1.00					
(17) ROE	-0.05	0.06	-0.16**	0.38***	0.38***	0.61***	0.01	0.31***	0.12	-0.03	0.00	0.13*	0.12	0.29***	0.09	0.30***	1.00				
(18) MTB	-0.09	0.03	0.31***	-0.12	-0.13	-0.24***	0.03	-0.08	0.11	-0.09	0.26***	0.16*	-0.19**	-0.30***	-0.08	-0.05	-0.28***	1.00			
(19) Age	-0.15*	0.22***	-0.24***	-0.06	-0.06	0.21**	0.02	0.38***	-0.01	0.17**	0.10	0.17**	0.37***	0.31***	-0.14*	0.16**	0.17**	0.00	1.00		
(20) Liquidity	-0.06	0.08	-0.02	-0.06	-0.07	-0.06	0.05	-0.07	-0.18**	-0.21**	0.24***	-0.05	-0.16*	-0.25***	-0.05	-0.15*	-0.08	-0.06	-0.09	1.00	
(21) CapitalIntensty	-0.01	0.01	0.09	-0.11	-0.12	-0.08	-0.02	-0.10	0.06	0.01	-0.19**	-0.02	-0.12	-0.07	0.17**	-0.22***	-0.14*	0.04	-0.19**	-0.07	1.00

Notes: This table shows the Pearson's pairwise correlation coefficient between the dependent, independent and control variables used in this study. FleschRead is the Flesch Reading Ease Score calculated as 206.8 - (1.015 x words per sentence) -(84.6 x syllables per word). FleschKinkaid is the Flesch Kinkaid Grade Level Score calculated as (11.8 x syllables per word) + (0.39 x words per sentence) -15.59. Lpages is the natural logarithm of number of annual report pages. VAIC is the Value-Added Intellectual Capital coefficient measured as the sum of HCE + SCE + CEE. HCE is the Human Capital Efficiency measured as HC/ VA (employee costs (HC)/ Operating Profits + Employee Costs + Depreciation and Amortization + Taxes (VA)). SCE is the Structural Capital Efficiency measured as SC/VA (where SC is calculated as VA-HC). CEE is Capital Employed Efficiency measured as VA/CE (where CE refers to capital employed). BSIZE is the board size measured as number of directors. BIND is the board independence measured as the percentage of independent nonexecutive directors in total director composition. BMEET is the board meetings measured as the number of board meetings in a year. OWN is the ownership concentration measured as the sum of the percentage of shareholders holding more than 5%. AUDSIZE is the audit committee size measured as the number of members. AUDMEET is the audit committee meetings held in year. FirmSize is the size of the firm measured as natural logarithm of assets. SalesGrowth is the percentage yearly growth in sales. Leverage is the debt to asset ratio. ROE is return on equity measured as Net income divided by shareholders funds. MTB is the market to book value ratio measured as market value of equities and liabilities divided by book value of total assets. AGE is logarithm of number of years in operation. Liquidity is measured as ratio of current assets to current liabilities. CapitalIntensity is the ratio of fixed assets to total assets.

***Significant at p<0.01,

** Significant at p<0.05,

* Significant at p<0.1

Table 5: Random-effect GLS Regression results: VAIC, Corporate Governance and Annual Report Readability (Equation 1)

Dependent Variable=	Panel A: FleschRead					Panel B: FleschKinkaid				
	1	2	3	4	5	6	7	8	9	10
	Financial Sector	Bank Sub-Sector	Finance Sub-Sector	Insurance Sub-Sector	Investment Sub-Sector	Financial Sector	Bank Sub-Sector	Finance Sub-Sector	Insurance Sub-Sector	Investment Sub-Sector
VAIC	-0.225*	0.490*	-0.167	-1.694	-0.067	0.0602*	-0.105	0.128**	0.198	0.041
	(-0.020)	(-0.030)	(-0.062)	(-0.370)	(-0.800)	(-0.039)	(-0.318)	(0.000)	(-0.653)	(-0.622)
BSIZE	-0.854	-1.798**	-0.749	3.007	0.207	0.248	0.393	1.021**	0.088	0.408
	(-0.280)	(-0.007)	(-0.358)	(-0.633)	(-0.920)	(-0.298)	(-0.200)	(0.000)	(-0.952)	(-0.533)
BIND	-10.50**	-7.880**	-1.527	-28.990	-10.110	2.674*	1.499	1.923	6.589	2.081
	(-0.006)	(-0.004)	(-0.652)	(-0.441)	(-0.052)	(-0.017)	(-0.243)	(-0.08)	(-0.452)	(-0.207)
BMEET	-0.216	0.029	-0.715*	3.444*	-0.654	0.072	-0.085	0.204	-0.759*	0.277
	(-0.560)	(-0.895)	(-0.028)	(-0.037)	(-0.528)	(-0.504)	(-0.404)	(-0.054)	(-0.049)	(-0.399)
OWN	-7.209	-3.722	-6.838	8.050	-10.350	2.727	3.058*	2.597	8.913	3.581
	(-0.163)	(-0.236)	(-0.236)	(-0.891)	(-0.169)	(-0.081)	(-0.036)	(-0.166)	(-0.516)	(-0.133)
AUDSIZE	2.961*	-0.394	-0.509	26.00**	1.429	-0.502	0.173	-0.280	-7.305**	-0.267
	(-0.022)	(-0.508)	(-0.632)	(-0.010)	(-0.688)	(-0.182)	(-0.531)	(-0.419)	(-0.002)	(-0.813)
AUDMEET	-0.179	-1.175**	3.693**	0.723	-1.312	0.182	0.001	-0.611*	-0.746	0.657
	(-0.808)	(-0.001)	(0.000)	(-0.916)	(-0.479)	(-0.397)	(-0.997)	(-0.022)	(-0.640)	(-0.263)
FirmSize	-1.334	1.368	22.59**	5.618	2.247	0.544	-1.120	-5.987*	-0.626	-0.803
	(-0.364)	(-0.67)	(-0.006)	(-0.828)	(-0.436)	(-0.227)	(-0.452)	(-0.025)	(-0.917)	(-0.38)
SalesGrowth	0.006	0.017	-0.037	-0.154	0.009	-0.002	0.005	-0.001	0.021	-0.007
	(-0.536)	(-0.483)	(-0.239)	(-0.528)	(-0.485)	(-0.551)	(-0.654)	(-0.941)	(-0.716)	(-0.111)
Leverage	1.101	-1.120	-4.366*	-3.475	9.259*	-0.631	1.582**	0.541	-0.534	-3.077*
	(-0.357)	(-0.221)	(-0.033)	(-0.96)	(-0.045)	(-0.088)	(0.000)	(-0.416)	(-0.974)	(-0.035)
ROE	0.117	0.402*	0.905**	0.236	-0.127	-0.040	-0.104	-0.332**	-0.090	0.053
	(-0.127)	(-0.025)	(0.000)	(-0.511)	(-0.335)	(-0.073)	(-0.213)	(0.000)	(-0.285)	(-0.208)
MTB	-0.798	-5.655*	0.759	-0.722	-0.334	-0.128	0.697	0.644	-1.072	-0.176
	(-0.589)	(-0.037)	(-0.75)	(-0.948)	(-0.879)	(-0.768)	(-0.579)	(-0.406)	(-0.677)	(-0.801)
Age	-0.099	0.125	-0.398*	-0.683	-0.527	0.037	0.035	0.337**	0.244	0.150
	(-0.377)	(-0.177)	(-0.028)	(-0.271)	(-0.120)	(-0.297)	(-0.417)	(0.000)	(-0.092)	(-0.163)
Liquidity	-0.058	1.143	15.38**	11.430	-0.087	0.008	0.069	-3.700**	0.177	0.018
	(-0.388)	(-0.643)	(0.000)	(-0.671)	(-0.193)	(-0.696)	(-0.952)	(-0.001)	(-0.978)	(-0.381)
CapitalIntensity	0.016	-0.111*	-3.569	2.361	0.101	-0.022	0.0751**	0.893	-0.508	-0.050
	(-0.837)	(-0.039)	(-0.096)	(-0.606)	(-0.259)	(-0.328)	(-0.003)	(-0.200)	(-0.634)	(-0.079)
Constant	51.52**	58.44**	-32.950	-82.670	59.99**	9.283**	12.82*	20.25**	35.850	4.036
	(0.000)	(0.000)	(-0.112)	(-0.34)	(0.000)	(0.000)	(-0.037)	(-0.003)	(-0.076)	(-0.398)
Year	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	150	40	25	25	60	150	40	25	25	60
r	0.303	0.924	0.955	0.943	0.471	0.332	0.861	0.970	0.957	0.528
Adj R2	0.201	0.851	0.782	0.725	0.220	0.234	0.730	0.856	0.793	0.304
Wald chi2	32.23	242.30	104.90	82.32	35.67	33.690	124.300	162.200	110.700	44.800
p	0.029	0.000	0.000	0.000	0.012	0.020	0.000	0.000	0.000	0.001

Notes: This table reports the random-effects regression results of the effect of VAIC and Corporate Governance variables on FleschRead (Panel A) and FleschKinkaid (Panel B) over the period 2014 to 2018. FleschRead is the Flesch Reading Ease Score calculated as 206.8 - (1.015 x words per sentence) -(84.6 x syllables per word). FleschKinkaid is the Flesch Kinkaid Grade Level Score calculated as (11.8 x syllables per word) + (0.39 x words per sentence) -15.59. VAIC is the Value-Added Intellectual Capital coefficient measured as the sum of HCE + SCE + CEE. BSIZE is the board size measured as number of directors. BIND is the board independence measured as the percentage of independent nonexecutive directors in total director composition. BMEET is the board meetings measured as the number of board meetings in a year. OWN is the ownership concentration measured as the sum of the percentage of shareholders holding more than 5%. AUDSIZE is the audit committee size measured as the number of members. AUDMEET is the audit committee meetings held in year. FirmSize is the size of the firm measured as natural logarithm of assets. SalesGrowth is the percentage yearly growth in sales. Leverage is the debt to asset ratio. ROE is return on equity measured as Net income divided by shareholders funds. MTB is the market to book value ratio measured as market value of equities and liabilities divided by book value of total assets. AGE is logarithm of number of years in operation. Liquidity is measured as ratio of current assets to current liabilities. CapitalIntensity is the ratio of fixed assets to total assets.
p-values in parentheses * p<0.05, ** p<0.01

Table 6: Random-effect GLS Regression results: VAIC sub-components (HCE, CEE, SCE), Corporate Governance and Annual Report Readability (Equation 2)

Dependent Variable=	Panel A: FleschRead					Panel B: FleschKinkaid				
	1	2	3	4	5	6	7	8	9	10
Variables	Financial Sector	Bank Sub-Sector	Finance Sub-Sector	Insurance Sub-Sector	Investment Sub-Sector	Financial Sector	Bank Sub-Sector	Finance Sub-Sector	Insurance Sub-Sector	Investment Sub-Sector
HCE	-0.025	-0.170	0.070	2.556	-0.324	0.029	0.030	0.080	-0.515	0.093
	(-0.827)	(-0.637)	(-0.800)	(-0.344)	(-0.411)	(-0.418)	(-0.871)	(-0.245)	(-0.405)	(-0.464)
CEE	-0.625	-39.81*	33.770	-3.744	6.673	-0.263	5.541	-5.789	-1.229	-1.041
	(-0.888)	(-0.046)	(-0.358)	(-0.957)	(-0.313)	(-0.838)	(-0.585)	(-0.525)	(-0.938)	(-0.625)
SCE	-0.829**	0.748	4.272	-0.504	-0.476	0.166	-0.322	-1.682	-0.061	0.125
	(-0.008)	(-0.204)	(-0.638)	(-0.815)	(-0.41)	(-0.059)	(-0.281)	(-0.455)	(-0.903)	(-0.502)
BSIZE	-0.733	-1.515*	-0.038	-4.313	0.421	0.215	0.307	0.803	1.325	0.382
	(-0.349)	(-0.017)	(-0.983)	(-0.64)	(-0.84)	(-0.368)	(-0.341)	(-0.073)	(-0.53)	(-0.569)
BIND	-11.98**	-9.554**	-6.305	-19.560	-10.290	2.536*	1.952	2.777	5.924	2.050
	(-0.002)	(0.000)	(-0.477)	(-0.373)	(-0.063)	(-0.015)	(-0.155)	(-0.207)	(-0.238)	(-0.248)
BMEET	-0.192	0.002	0.381	1.638	-0.801	0.110	-0.078	-0.028	-0.386	0.316
	(-0.613)	(-0.991)	(-0.648)	(-0.289)	(-0.438)	(-0.3)	(-0.452)	(-0.892)	(-0.275)	(-0.342)
OWN	-7.223	-8.267*	0.599	11.940	-10.040	2.610	4.127*	1.836	9.427	3.484
	(-0.153)	(-0.020)	(-0.956)	(-0.834)	(-0.183)	(-0.09)	(-0.023)	(-0.499)	(-0.468)	(-0.151)
AUDSIZE	2.942*	-0.236	-0.105	8.800	0.228	-0.481	0.117	-0.316	-3.827	-0.024
	(-0.027)	(-0.675)	(-0.962)	(-0.504)	(-0.95)	(-0.212)	(-0.682)	(-0.566)	(-0.204)	(-0.984)
AUDMEET	-0.426	-1.044**	1.456	1.090	-0.813	0.097	-0.038	-0.089	-0.852	0.558
	(-0.571)	(-0.001)	(-0.233)	(-0.788)	(-0.663)	(-0.645)	(-0.815)	(-0.77)	(-0.358)	(-0.353)
FirmSize	-1.186	3.309	9.987	-13.530	2.064	0.533	-1.123	-2.509	4.321	-0.793
	(-0.412)	(-0.327)	(-0.637)	(-0.509)	(-0.478)	(-0.24)	(-0.513)	(-0.632)	(-0.357)	(-0.397)
SalesGrowth	0.004	-0.002	-0.070	0.086	0.005	-0.001	0.007	-0.002	-0.019	-0.006
	(-0.661)	(-0.931)	(-0.372)	(-0.569)	(-0.681)	(-0.611)	(-0.558)	(-0.933)	(-0.582)	(-0.161)
Leverage	0.796	-2.121*	-0.911	-12.350	9.367*	-0.608	1.792**	-0.270	1.768	-3.080*
	(-0.487)	(-0.027)	(-0.876)	(-0.896)	(-0.044)	(-0.1)	(0.000)	(-0.852)	(-0.935)	(-0.039)
ROE	0.049	0.788**	0.350	0.298	-0.126	-0.025	-0.167	-0.156	-0.092	0.051
	(-0.576)	(-0.001)	(-0.642)	(-0.718)	(-0.338)	(-0.305)	(-0.181)	(-0.404)	(-0.625)	(-0.226)
MTB	-1.097	-2.452	-3.987	9.004	0.346	-0.264	0.656	1.762	-2.865	-0.295
	(-0.463)	(-0.489)	(-0.477)	(-0.54)	(-0.877)	(-0.518)	(-0.716)	(-0.205)	(-0.394)	(-0.683)
Age	-0.064	0.105	-0.062	-0.895	-0.582	0.041	0.048	0.250*	0.260*	0.158
	(-0.549)	(-0.252)	(-0.903)	(-0.055)	(-0.098)	(-0.215)	(-0.301)	(-0.047)	(-0.015)	(-0.163)
Liquidity	-0.059	-1.858	5.562	-6.377	-0.098	0.008	1.381	-1.351	2.615	0.020
	(-0.367)	(-0.593)	(-0.231)	(-0.75)	(-0.15)	(-0.705)	(-0.434)	(-0.24)	(-0.568)	(-0.355)
CapitalIntensity	0.009	-0.198**	1.559	0.367	0.078	-0.022	0.0860*	-0.253	0.012	-0.046
	(-0.908)	(-0.003)	(-0.803)	(-0.908)	(-0.396)	(-0.329)	(-0.012)	(-0.87)	(-0.987)	(-0.123)
Constant	52.69**	57.19**	2402.200	-8911.500	62.29**	9.603**	11.210	-204.500	2284.600	3.528
	(0.000)	(0.000)	(-0.326)	(-0.238)	(0.000)	(0.000)	(-0.109)	(-0.736)	(-0.187)	(-0.471)
Year	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	150	40	25	25	60	150	40	25	25	60
Rsq	0.271	0.941	0.982	0.976	0.498	0.330	0.870	0.894	0.935	0.539
Adj-Rsq	0.202	0.871	0.859	0.808	0.221	0.220	0.719	0.636	0.777	0.284
Wald Chi2	36.290	285.200	16.080	80.320	37.730	28.71	120.700	51.730	112.600	44.370
p	0.020	0.000	0.587	0.000	0.014	0.04	0.000	0.000	0.000	0.002

Notes: This table reports the random-effects regression results of the effect of HCE, CEE, SCE and Corporate Governance variables on FleschRead (Panel A) and FleschKinkaid (Panel B) over the period 2014 to 2018. FleschRead is the Flesch Reading Ease Score calculated as 206.8 - (1.015 x words per sentence) -(84.6 x syllables per word). FleschKinkaid is the Flesch Kinkaid Grade Level Score calculated as (11.8 x syllables per word) +

(0.39 x words per sentence) -15.59. HCE is the Human Capital Efficiency measured as HC/ VA (employee costs (HC)/ Operating Profits + Employee Costs + Depreciation and Amortization + Taxes (VA)). SCE is the Structural Capital Efficiency measured as SC/VA (where SC is calculated as VA-HC). CEE is Capital Employed Efficiency measured as VA/CE (where CE refers to capital employed). BSIZE is the board size measured as number of directors. BIND is the board independence measured as the percentage of independent nonexecutive directors in total director composition. BMEET is the board meetings measured as the number of board meetings in a year. OWN is the ownership concentration measured as the sum of the percentage of shareholders holding more than 5%. AUDSIZE is the audit committee size measured as the number of members. AUDMEET is the audit committee meetings held in year. FirmSize is the size of the firm measured as natural logarithm of assets. SalesGrowth is the percentage yearly growth in sales. Leverage is the debt to asset ratio. ROE is return on equity measured as Net income divided by shareholders funds. MTB is the market to book value ratio measured as market value of equities and liabilities divided by book value of total assets. AGE is logarithm of number of years in operation. Liquidity is measured as ratio of current assets to current liabilities. CapitalIntensity is the ratio of fixed assets to total assets.

p-values in parentheses * p<0.05, ** p<0.01

Table 7: Sensitivity Analysis for financial sector: VAIC, Sub-components (HCE, CEE, SCE) Corporate Governance and Annual Report Readability (Lpages)

	Dependent Variable = Lpages									
	Panel A					*Panel B*				
	1	2	3	4	5	6	7	8	9	10
	Financial Sector	Bank	Finance	Insurance	Investment	Financial Sector	Bank	Finance	Insurance	Investment
VAIC	-0.001	-0.016	-0.001	-0.001	0.004					
	(-0.682)	(-0.074)	(-0.639)	(-0.867)	(-0.462)					
HCE						-0.002	0.001	-0.005	-0.003	0.001
						(-0.187)	(-0.928)	(-0.329)	(-0.799)	(-0.913)
CEE						0.072	1.331	-0.448	0.300	0.063
						(-0.276)	(-0.119)	(-0.478)	(-0.251)	(-0.618)
SCE						0.004	-0.006	0.239	-0.001	0.004
						(-0.436)	(-0.823)	(-0.126)	(-0.878)	(-0.738)
BSIZE	0.009	0.003	-0.019	0.080**	-0.013	0.008	-0.002	-0.028	0.101**	-0.011
	(-0.434)	(-0.922)	(-0.323)	(-0.005)	(-0.73)	(-0.491)	(-0.944)	(-0.366)	(-0.004)	(-0.787)
BIND	-0.036	-0.121	0.074	0.076	-0.106	-0.034	-0.088	0.081	0.051	-0.096
	(-0.528)	(-0.277)	(-0.349)	(-0.658)	(-0.276)	(-0.558)	(-0.444)	(-0.595)	(-0.544)	(-0.364)
BMEET	0.009	0.015	-0.002	-0.006	0.000	0.009	0.015	-0.009	-0.006	0.000
	(-0.102)	(-0.097)	(-0.744)	(-0.454)	(-0.996)	(-0.104)	(-0.081)	(-0.522)	(-0.298)	(-0.98)
OWN	-0.027	0.066	-0.127	0.340	-0.045	-0.035	0.172	-0.172	0.350	-0.048
	(-0.734)	(-0.601)	(-0.347)	(-0.204)	(-0.75)	(-0.65)	(-0.258)	(-0.362)	(-0.104)	(-0.742)
AUDSIZE	0.024	0.008	0.007	-0.064	0.098	0.030	0.006	0.011	-0.072	0.091
	(-0.215)	(-0.743)	(-0.775)	(-0.166)	(-0.14)	(-0.122)	(-0.799)	(-0.769)	(-0.151)	(-0.191)
AUDMEET	0.016	0.002	-0.043	0.001	0.004	0.018	0.000	-0.027	0.007	0.008
	(-0.159)	(-0.882)	(-0.025)	(-0.966)	(-0.907)	(-0.098)	(-0.99)	(-0.195)	(-0.655)	(-0.813)
FirmSize	0.118**	0.297*	-0.174	-0.046	0.079	0.114**	0.203	-0.103	-0.064	0.077
	(0.000)	(-0.022)	(-0.365)	(-0.696)	(-0.14)	(0.000)	(-0.159)	(-0.778)	(-0.41)	(-0.168)
SalesGrowth	0.000	-0.002	0.000	0.000	0.000	0.000	-0.001	0.002	0.000	0.000
	(-0.289)	(-0.044)	(-0.597)	(-0.831)	(-0.107)	(-0.253)	(-0.224)	(-0.264)	(-0.485)	(-0.145)
Leverage	-0.030	0.099**	0.077	-0.225	-0.072	-0.028	0.125**	0.062	-0.480	-0.074
	(-0.102)	(-0.007)	(-0.109)	(-0.48)	(-0.403)	(-0.116)	(-0.002)	(-0.538)	(-0.183)	(-0.403)
ROE	0.001	0.003	0.001	-0.003	-0.001	0.000	-0.008	-0.011	-0.006	-0.001
	(-0.566)	(-0.633)	(-0.853)	(-0.061)	(-0.548)	(-0.797)	(-0.418)	(-0.394)	(-0.054)	(-0.606)
MTB	-0.014	-0.078	0.078	-0.138**	-0.052	-0.014	-0.229	0.041	-0.127*	-0.047
	(-0.517)	(-0.472)	(-0.163)	(-0.006)	(-0.205)	(-0.532)	(-0.131)	(-0.675)	(-0.023)	(-0.272)
Age	0.000	-0.001	-0.009	0.003	0.006	0.000	-0.002	-0.008	0.003	0.005
	(-0.807)	(-0.698)	(-0.043)	(-0.257)	(-0.326)	(-0.989)	(-0.625)	(-0.385)	(-0.09)	(-0.424)
Liquidity	0.002*	0.099	-0.103	-0.113	0.002	0.002*	0.105	-0.062	-0.084	0.002
	(-0.048)	(-0.319)	(-0.188)	(-0.357)	(-0.103)	(-0.047)	(-0.48)	(-0.436)	(-0.269)	(-0.143)
CapitalIntensity	0.000	0.003	0.078	0.007	0.000	-0.001	0.00573*	0.032	0.008	0.000
	(-0.686)	(-0.216)	(-0.119)	(-0.725)	(-0.936)	(-0.584)	(-0.047)	(-0.769)	(-0.489)	(-0.852)
Constant	1.334**	0.967	2.456**	1.567**	1.444**	1.323**	1.198*	-120.9**	21.480	1.334**
	(0.000)	(-0.069)	(0.000)	(0.000)	(0.000)	(0.000)	(-0.042)	(-0.004)	(-0.454)	(0.000)
Year	Included	Included	Included	Included	Included	Included	Included	Included	Included	Included
Observations	150	40	25	25	60	150	40	25	25	60
Rsq	0.683	0.927	0.981	0.936	0.520	0.693	0.936	0.939	0.946	0.521
Adj-Rsq	0.637	0.857	0.910	0.694	0.293	0.643	0.861	0.866	0.633	0.257
Wald Chi2	123.6	253.3	260.5	73.52	43.4	132.7	262.1	92.96	105.3	41.4
p	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.005

Notes: This table reports the random-effects regression results of the effect of VAIC and Corporate Governance variables on Lpages (Panel A). It also reports the random-effects regression results of the effect of HCE, CEE, SCE and Corporate Governance variables on Lpages (Panel B) over the period 2014 to 2018. Lpages is the natural logarithm of number of annual report pages. VAIC is the Value-Added Intellectual Capital coefficient measured as the sum of HCE + SCE + CEE. HCE is the Human Capital Efficiency measured as HC/ VA (employee costs (HC)/ Operating Profits + Employee Costs + Depreciation and Amortization + Taxes (VA)). SCE is the Structural Capital Efficiency measured as SC/VA (where SC is calculated as VA-HC). CEE is Capital Employed Efficiency measured as VA/CE (where CE refers to capital employed). BSIZE is the board size measured as number of directors. BIND is the board independence measured as the percentage of independent nonexecutive directors in total director composition. BMEET is the board meetings measured as the number of board meetings in a year. OWN is the ownership concentration measured as the sum of the percentage of shareholders holding more than 5%. AUDSIZE is the audit committee size measured as the number of members. AUDMEET is the audit committee meetings held in year. FirmSize is the size of the firm measured as natural logarithm of assets. SalesGrowth is the percentage yearly growth in sales. Leverage is the debt to asset ratio. ROE is return on equity measured as Net income divided by shareholders funds. MTB is the market to book value ratio measured as market value of equities and liabilities divided by book value of total assets. AGE is logarithm of number of years in operation. Liquidity is measured as ratio of current assets to current liabilities. CapitalIntensity is the ratio of fixed assets to total assets.

p-values in parentheses * p<0.05, ** p<0.01

Table 8: System GMM Results of VAIC, its sub-components, Corporate Governance and Annual Report Readability (FleschRead, FleschKinkaid, Lpages) for financial sector

	Panel A			Panel B		
	1	**2**	**3**	**4**	**5**	**6**
Dependent=	FleschRead	FleschKinkaid	Lpages	FleschRead	FleschKinkaid	Lpages
L.VAIC	0.005	0.026	0.000			
	(-0.968)	(-0.616)	(-0.867)			
L.HCE				-0.053	0.0442**	0.000
				(-0.238)	(-0.005)	(-0.552)
L.CEE				5.279*	-1.159	0.009
				(-0.023)	(-0.263)	(-0.841)
L.SCE				-0.077	0.036	0.001
				(-0.772)	(-0.682)	(-0.788)
BSIZE	2.303	-2.197	0.002	-3.891*	0.969	0.035
	(-0.636)	(-0.348)	(-0.979)	(-0.041)	(-0.253)	(-0.504)
BIND	-8.102	-1.536	0.637	-7.521	1.090	0.008
	(-0.636)	(-0.822)	(-0.146)	(-0.177)	(-0.624)	(-0.952)
BMEET	3.494	-0.753	0.027	-0.680	-0.305	0.000
	(-0.187)	(-0.438)	(-0.472)	(-0.557)	(-0.271)	(-0.977)
OWN	79.030	-24.62*	-0.828	-22.020	9.130	-0.621
	(-0.081)	(-0.029)	(-0.184)	(-0.108)	(-0.107)	(-0.075)
AUDSIZE	-7.309	3.092	0.064	4.534**	-0.042	0.000
	(-0.257)	(-0.182)	(-0.431)	(-0.009)	(-0.936)	(-0.995)
AUDMEET	-8.927	2.165	-0.117	-1.679	0.167	0.002
	(-0.29)	(-0.545)	(-0.377)	(-0.106)	(-0.719)	(-0.949)
FirmSize	11.470	1.302	0.080	-8.995	1.512	-0.072
	(-0.544)	(-0.858)	(-0.759)	(-0.185)	(-0.477)	(-0.574)
SalesGrowth	0.022	-0.006	0.000	-0.011	0.00618*	0.000
	(-0.355)	(-0.32)	(-0.732)	(-0.252)	(-0.019)	(-0.671)
Leverage	-17.840	3.992	-0.048	0.427	-0.394	-0.026
	(-0.059)	(-0.168)	(-0.751)	(-0.905)	(-0.765)	(-0.792)
ROE	0.008	-0.052	-0.002	0.117	-0.0855*	0.001
	(-0.97)	(-0.577)	(-0.623)	(-0.159)	(-0.012)	(-0.496)
MTB	-0.172	-0.657	-0.092	-1.988	-0.417	-0.033
	(-0.954)	(-0.648)	(-0.094)	(-0.199)	(-0.486)	(-0.315)
Age	0.253	0.322	-0.011	-0.650	0.315	-0.003
	(-0.857)	(-0.5)	(-0.595)	(-0.407)	(-0.223)	(-0.828)
Liquidity	-0.615	0.114	-0.007	-0.116	0.006	0.001
	(-0.325)	(-0.68)	(-0.638)	(-0.129)	(-0.487)	(-0.26)
CapitalIntensity	-1.755	0.587	-0.018	-0.210	0.253	0.002
	(-0.139)	(-0.286)	(-0.464)	(-0.702)	(-0.206)	(-0.818)
Constant	12.530	19.440	2.177**	114.7**	-5.552	2.168**
	(-0.82)	(-0.32)	(-0.009)	(0.000)	(-0.595)	(0.000)
Year	Included	Included	Included	Included	Included	Included
Observations	149	149	149	149	149	149
Instruments	23	23	23	30	30	30
chi2	85.390	56.510	84.040	6406.800	654.400	529.400
P>chi2	0.000	0.000	0.000	0.000	0.000	0.000
AR1	0.150	0.206	0.245	0.152	0.196	0.112
AR2	0.711	0.828	0.869	0.359	0.979	0.584
Sargan (p-value)	0.512	0.632	0.555	0.795	0.727	0.399
Sargan chi2	1.341	0.918	1.178	3.868	4.449	7.291
Hansen (p-value)	0.215	0.292	0.322	0.246	0.079	0.587
Hansen chi2	3.071	2.462	2.268	9.095	12.730	5.597

Notes: This table reports the System GMM results of the effect of VAIC and Corporate Governance variables on FleschRead, FleschKinkaid and Lpages (Panel A). It also reports the System GMM results of the effect of HCE, CEE, SCE and Corporate Governance variables on FleschRead, FleschKinkaid and Lpages (Panel B) over the period 2014 to 2018 FleschRead is the Flesch Reading Ease Score calculated as 206.8 - (1.015 x words per sentence) -(84.6 x syllables per word). FleschKinkaid is the Flesch Kinkaid Grade Level Score calculated as (11.8 x syllables per word) + (0.39 x words per sentence) -15.59. Lpages is the natural logarithm of number of annual report pages. VAIC is the Value-Added Intellectual Capital coefficient measured as the sum of HCE + SCE + CEE. HCE is the Human Capital Efficiency measured as HC/ VA (employee costs (HC)/ Operating Profits + Employee Costs + Depreciation and Amortization + Taxes (VA)). SCE is the Structural Capital Efficiency measured as SC/VA (where SC is calculated as VA-HC). CEE is Capital Employed Efficiency measured as VA/CE (where CE refers to capital employed). BSIZE is the board size measured as number of directors. BIND is the board independence measured as the percentage of independent nonexecutive directors

in total director composition. BMEET is the board meetings measured as the number of board meetings in a year. OWN is the ownership concentration measured as the sum of the percentage of shareholders holding more than 5%. AUDSIZE is the audit committee size measured as the number of members. AUDMEET is the audit committee meetings held in year. FirmSize is the size of the firm measured as natural logarithm of assets. SalesGrowth is the percentage yearly growth in sales. Leverage is the debt to asset ratio. ROE is return on equity measured as Net income divided by shareholders funds. MTB is the market to book value ratio measured as market value of equities and liabilities divided by book value of total assets. AGE is logarithm of number of years in operation. Liquidity is measured as ratio of current assets to current liabilities. CapitalIntensity is the ratio of fixed assets to total assets.

p-values in parentheses * $p<0.05$, ** $p<0.01$