



Article

The Influence of Audit-Committee Characteristics on the Association between Corporate Social Responsibility and Earnings Quality

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Abstract: Corporate social responsibility (CSR) activities are affected by the national system, and the social and cultural environment to which a firm belongs. This study investigates whether the characteristics of an audit committee (AC) such as independence, expertise, activity, or power influence the relation between CSR and earnings quality for Korean firms. Multivariate regression analysis is used to identify the effect of AC characteristics on the relation between CSR and the earnings management of firms with CSR excellence, as well as whether their contribution enhances the quality of earnings of firms that actively engage in CSR practices. The results show that when ACs are active, earnings management using the discretionary accruals of firms that participate in CSR activities with an ethical motive is more tightly constrained. ACs are more effective when they have independent directors, accounting expertise, active participation, and relative power. The findings suggest that ACs have a positive effect on the financial reporting quality of firms with high levels of CSR. Furthermore, active ACs are crucial for improving the quality of earnings, which is further enhanced when ACs have a variety of superior characteristics.

Keywords: CSR; audit committee; corporate governance; earnings quality



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1. Introduction

Corporate social responsibility (CSR) activities are those that firms voluntarily carry out, beyond legal requirements, in consideration of the needs of various stakeholders and are long-term resource-allocation activities involving costs [1]. Thus, whether a firm engages in CSR activities is mainly at the discretion of its management [2], and their incentives for performing CSR activities are reflected in the firm's participation. Previous studies report mixed results on the association between CSR activities and earnings management, suggesting that management's intention to participate in CSR activities is not necessarily for social contribution. However, since CSR activities are involved in donations, social welfare support, consumer protection, and environmental management, it is inevitably affected by the national system, as well as the social and cultural environment to which the firm belongs. Prior studies investigating CSR activities of Korean firms report that the incentives for earnings management in financial reporting are low, as they participate in CSR activities with an ethical motive to contribute to society [3,4].

Moreover, corporate governance is at the heart of systems such as management systems, decision-making systems and audit systems, which must be prioritized for firms to perform CSR practices. Therefore, corporate governance plays a pivotal role in the CSR activities of firms [5]; in addition, sound governance induces efficient CSR activities [6], boosts CSR performance [7], and improves the level and the credibility of CSR disclosure [8,9]. Corporate governance also moderates the link between CSR and earnings management, as it can prevent CSR practices driven by managers' opportunistic behavior and encourage them to make management decisions from a long-term perspective [10]. As such, corporate governance plays a crucial role in CSR activities' effectiveness. In addition, in the CSR field, research on earnings management is a significant continuing concern [11]. However,

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CSR and earnings management issues have not been fully addressed. Specifically, the impact of corporate governance on the link between CSR and earnings management has not been sufficiently addressed [11]. In particular, even though an audit committee (AC) is responsible for overseeing a corporate-financial-reporting process and, therefore, plays a significant role in improving the quality of earnings, there is a lack of research analyzing the impact of ACs on the relationship between CSR and earnings quality [11]. This study fills the gap in the literature by investigating the role of AC characteristics in the link between CSR and earnings management.

The AC is an auditing body established within the firm, supervising the management from an independent position and controlling the firm's financial reporting activities to improve the transparency of the company and quality of accounting information [12]. Accordingly, the Securities and Exchange Commission (SEC) and the Sarbanes-Oxley Act (SOX) place special emphasis on the functions of the AC [13]. The US has mandated the establishment of an AC for listed firms since 1989, and the role of an AC was further strengthened by enacting the SOX after the Enron scandal. Similarly, Korea has strengthened regulations on ACs through the Securities and Exchange Act and the Commercial Act [14].

The characteristics of ACs are independence, expertise, activity, and power. Previous studies analyzing the individual effects of these AC characteristics show that an AC that is independent, active, and has accounting expertise or relative power actively performs the functions of monitoring and controlling management [13,14]. This suggests that ACs with superior characteristics improve the quality of financial reporting. However, in the case of emerging countries, it is reported that governance management is insufficient due to weak legal systems and investor protection, compared to advanced countries. In addition, although many emerging countries, including South Korea, have adopted the AC system, according to the Anglo-Saxon corporate governance model, there is little evidence that such a system is effective in these countries [15], with a few studies finding no effect [16,17].

If the characteristics of ACs have a positive effect on the behavior of a firm, they can contribute to the improvement of the earnings quality of firms with high CSR levels. However, if ACs operate only formally and fail to perform their original effective supervisory function [18], even if they have desirable characteristics, they may not have a significant positive effect on the financial reporting quality of firms with high CSR levels. Therefore, this study investigates whether AC characteristics, namely, independence, expertise, activity, and power, influence the relation between CSR and the quality of earnings of Korean firms with CSR excellence.

The remainder of this study is organized as follows. Section 2 reviews related previous literature and develops the hypotheses. Section 3 describes research design and data, and Section 4 presents the empirical results. Section 5 concludes the study.

2. Literature Review and Hypothesis Development

There are various motives for firms to engage in CSR activities. On one hand, a firm may engage with an ethical motive for the purpose of contributing to society. On the other hand, a firm may engage for the private benefit of its managers. In this case, a firm conducts CSR with opportunistic motives to cover up corporate misconduct.

Firms that ethically carry out CSR activities will try to maintain transparency in financial reporting by suppressing earnings management. This is because these firms are more likely to report financial statements responsibly [19]. In contrast, managers who engage in CSR activities with unethical motives are more likely to mislead stakeholders through opportunistic financial reporting such as earnings management [20].

Previous studies have not reported consistent findings on the association between CSR and earnings management. Kim et al. [20] provide evidence that US firms with higher CSR scores are less likely to perform earnings management through discretionary accruals and real operating activities. Palacios-Manzano et al. [21] find a negative (–) effect of CSR activities on earnings management using a sample of Spanish firms; and Ghaleb et al. [22]

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document that CSR reporting is negatively related with real earnings manipulation through an analysis of Jordanian listed firms. These results indicate that CSR firms tend to promote long-term relationships with their stakeholders rather than maximizing their short-term profits [21]. Similarly, Dimitropoulos and Koronios [23] analyze listed and unlisted firms in EU member countries and report that activities related to corporate environmental reporting mitigate accruals and real earnings management. However, Muttakin et al. [24] show that there is a positive (+) association between the level of CSR disclosure and earnings management using discretionary accruals through an analysis of Bangladeshi firms. This suggests that firms that carry out CSR activities with opportunistic motives report lower earnings quality by adjusting it unethically. Prior et al. [25] analyze the association between CSR and earnings management for firms in 26 countries and report that firms strategically use CSR to hide earnings-management behavior. Salewski and Zülch [26], who analyze European countries that apply IFRS, also report that firms with higher CSR levels adjust their earnings and do not report bad news in a timely manner.

However, as CSR activities include donations, social welfare support, consumer protection, and environmental management, they are inevitably influenced by the national system and social and cultural environment to which the firm belongs. Choi and Moon [3] show that the top-200 CSR companies in the Korea Economy Justice Institute (KEJI) index limit earnings management and have higher earnings persistence. Lim and Choi [4] find that, in the case of Korean firms with CSR excellence, earnings management using accruals is small. Kim and Jung [1], examining the association between the CSR activities and real earnings management of Korean firms, demonstrate that firms with excellent CSR performance have a lower level of real earnings management compared to those with poor CSR performance. This implies that CSR performance is not only a predictive indicator of accounting transparency, but also an indicator of sustainable growth. Based on an analysis of Korean firms, Kim [27] also provides evidence that CSR level has a negative (-) effect on earnings management, and a positive (+) effect on the price-to-earnings ratio. This result indicates that the more active a firm is in CSR activities, the more transparent the accounting is; therefore, investors positively evaluate the firms that actively engage in CSR activities. Similar to this finding, Moon [28] also provides evidence that, among Korean firms, the more ethical management is introduced, the less the manager indulges in earnings management using discretionary accounting choices, and suggests that the introduction of ethical management improves accounting transparency. These findings suggest that Korean firms with high CSR levels pursue ethical values and maintain high financial reporting quality by limiting earnings management.

In addition, in order to carry out CSR activities, the establishment of management objectives, a management system, a decision-making system, an audit system, etc., must be prioritized for firms. Corporate governance is at the core of these systems and is pivotal for firms' CSR activities [5]. Therefore, good governance is expected to induce efficient CSR activities [6], improve CSR performance [7], and increase the level and credibility of CSR disclosure [8,9]. Specifically, Maglio et al. [7] show that board gender diversity, which constrains earnings management, enhances a firm's CSR performance. Khan et al. [29] provide evidence that directors' independence and the AC presence have a positive (+) effect on CSR disclosure. Handayati et al. [30] report that diligent boards lead to a higher level of CSR disclosure. Similarly, according to Appuhami and Tashakor [8], the size, activity, independence and gender diversity of ACs are positively linked to the level of CSR disclosure. Dwekat et al. [9] document that active ACs are positively associated with the scope of CSR assurance.

Furthermore, previous research reports that corporate governance moderates the relation between CSR and earnings management. Choi et al. [10] report evidence that institutional ownership intensifies the negative (—) relationship between earnings management and CSR, indicating that corporate governance can deter CSR activities driven by opportunistic behavior and encourage managers to make management decisions from a long-term perspective. Ghaleb et al. [22] show that the presence of female directors strength-

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ens the negative (—) impact of CSR on real earnings management, consistent with the claim that female directors on a board are more closely associated with corporate non-financial reporting and alleviating firms' earnings-management behaviors [31,32]. In a similar vein, Kook and Kang [6] provide evidence that firms with sound governance cement the positive relationship between CSR activities and firm value. Hwang and Ryu [33] document the moderating effect of the board size on the association between CSR and CEO compensation, suggesting that CSR activities and corporate governance complement each other. Jung [34] reports that the relationship between CSR and tax strategy is moderated by blockholders' ownership.

As explained above, corporate governance plays a significant role in the effectiveness of CSR activities. In addition, a study of earnings management is a crucial continuing concern in the CSR field [11]. However, there is little evidence presenting the influence of corporate governance on the relationship between CSR and earnings management. In particular, although the AC is responsible for monitoring firms' financial reporting process and thus plays the important role of a key corporate governance mechanism that enhances earnings quality, the impact of ACs on the link between CSR and earnings management has not been adequately addressed [11]. Hence, this study explores the impact of AC characteristics on the association between CSR and earnings management.

The purpose of ACs, as a subcommittee within the board of directors, is to increase the reliability of financial reporting by appointing an auditor and overseeing the corporate financial reporting process. Thus, ACs, which play a pivotal role in corporate governance, are particularly emphasized by the SEC and SOX [13]. Accordingly, prior studies on the role of ACs mainly analyze how the characteristics of ACs affect the quality of financial reporting. AC characteristics are broadly categorized into independence, expertise, activity, and power, as follows.

First, previous research on the independence of AC members shows that independent ACs curb earnings management or accounting irregularities, indicating that the higher the ratio of independent external directors among AC members, the better ACs perform their monitoring function. Examples of such studies include those by Carcello and Neal [35] using the audit opinion, Klein [36] and Xie et al. [37] using discretionary accruals, and Choi et al. [38] using the frequency of accounting fraud.

Second, prior empirical studies on the role of AC expertise investigate the effects of the presence of AC members with financial expertise. Most of the studies report that the quality of financial reporting improves when ACs include accounting experts [39–42].

Third, prior studies on ACs' activities present evidence that active ACs perform their supervision function well. For instance, as a result of the analyses using earnings management [37], correction of accounting error [16], audit fees [43], and appointment of an industry-expert auditor [44], the research finds evidence that the more frequently the ACs meet, the more actively they perform their supervisory duties.

Finally, there is prior research on the power of ACs. The research finds that the monitoring function of ACs is strengthened when there are powerful AC members. To be specific, Beck and Mauldin [45] document that AC members with more power due to their long tenure perform stronger monitoring activities. This is because AC members with longer tenure are more aware of the firm's circumstances, including management and financial reporting, and, therefore, are considered to have greater power [46,47]. Badolato et al. [48] also show the similar results.

Put together, the prior literature on ACs reports that ACs with independent directors, accounting expertise, diligence or more power monitor and control management more effectively. This suggests that ACs with superior characteristics constrain the opportunistic behavior of managers and improve the quality of financial reporting. Therefore, it is expected that ACs discourage CSR practices driven by managers' opportunistic behavior and influence them to make long-term decisions for businesses. Previous research also shows the consistent findings that CSR activities and corporate governance have a complementary relationship [6,10,22,33,34]. Accordingly, ACs with superior characteristics are expected to

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more strictly constrain the earnings management of firms that perform CSR activities with an ethical motive. Thus, this study proposes the following four hypotheses.

Hypothesis 1 (H1). Audit committees that are independent increase the negative association between CSR activities and earnings management.

Hypothesis 2 (H2). Audit committees with accounting expertise increase the negative association between CSR activities and earnings management.

Hypothesis 3 (H3). Audit committees that are active increase the negative association between CSR activities and earnings management.

Hypothesis 4 (H4). Audit committees with more power increase the negative association between CSR activities and earnings management.

However, these predictions only hold true when ACs play their intended supervisory role. As mentioned earlier, compared to developed countries, weak legal systems and investor protection in emerging countries render governance inoperative. If ACs only play a ceremonial role, it is possible that these AC characteristics do not have a significantly positive impact on the association between CSR activities and earnings quality. Furthermore, AC members with longer tenure may build improper relationships with management, resulting in impaired independence [47]. Thus, longer tenures of AC members may lead to impaired earnings quality. The role of AC characteristics in the association between CSR and earnings quality is, thus, an issue that needs to be empirically analyzed, and there are only few studies that address this issue. For this reason, this study aims to investigate the role of these characteristics in the association between CSR and earnings management by examining the characteristics of ACs in detail for Korean firms.

3. Materials and Methods

3.1. Empirical Model

To analyze the effects of AC characteristics on the association between CSR and earnings management, this study uses the following regression:

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\begin{split} \text{DACC} &= \beta_0 + \beta_1 \text{CSR} + \beta_2 \text{CSR} \times \text{ACIND} + \beta_3 \text{CSR} \times \text{ACEXP} \\ &+ \beta_4 \text{CSR} \times \text{InACACTIVITY} + \beta_5 \text{CSR} \times \text{InACTENURE} + \beta_6 \text{ACIND} \\ &+ \beta_7 \text{ACEXP} + \beta_8 \text{InACACTIVITY} + \beta_9 \text{InACTENURE} + \beta_{10} \text{SIZE} \\ &+ \beta_{11} \text{STDCFO} + \beta_{12} \text{ZSCORE} + \beta_{13} \text{LEV} + \beta_{14} \text{LOSS} + \beta_{15} \text{TACCt-1} \\ &+ \beta_{16} \text{AUDEXPERT} + \beta_{17} \text{InAGE} + \text{Industry and year fixed effects} + \epsilon. \end{split}
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The dependent variable DACC is discretionary accruals measured according to the methodology of Dechow et al. [49]. Most of the studies related to CSR accounting investigate whether the firms that engage in CSR activities are more likely to manage earnings and, thus, adversely affect the quality of earnings [3,4,20,21,24–28]. Accordingly, as a proxy for the quality of earnings, this study uses the magnitude of earnings management. Discretionary accruals is a widely used measure of earnings management [3]. In particular, discretionary accruals measured using the modified Jones model are most commonly used and the basis of various models [50,51]. Thus, this study uses discretionary accruals calculated following Dechow et al. [49].

The interest variables of this study are the interaction terms between the CSR and AC variables. First, CSR indicates a dummy variable for firms with CSR excellence. This study uses a list of the top 200 firms in the KEJI index to determine whether a firm has excellent social-responsibility activities. The KEJI annually evaluates the social-responsibility performance of firms listed on the Korea Stock Exchange (KSE) and discloses the top-200 list in the KEJI index. The KEJI index consists of six items, namely, soundness, fairness of firms'

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activities, social-service activities, customer-protection activities, environmental-protection activities, and employee satisfaction. The total score is 100 points. However, the score is standardized through a formula and, thus, the scores of the top-200 firms are normally distributed with a small standard deviation. For instance, the standard deviation of their scores in 2015 was 1.8. Accordingly, research related to Korean firms' CSR activities assess the levels of CSR activities of the listed firms. Next, AC variables are the proxies for AC characteristics: independence of ACs (ACIND), AC accounting expertise (ACEXP), the natural log of the number of AC meetings held during the fiscal year (lnACACTIVITY), and the natural log of the average number of years AC members have served as a firm's directors (lnACTENURE). If the interactions between CSR and AC characteristics decrease the magnitude of earnings management, the coefficients β_2 to β_5 will be negative.

As control variables, this study employs firm characteristics that affect the quality of earnings according to prior literature [52,53]. First, this study controls the variables for firm size (SIZE), financial risk (ZSCORE), financial position (LEV), profitability (LOSS) and firm age (lnAGE). The past three-year standard deviation of operating cash flows (STDCFO) is also controlled to reduce discretionary accruals' measurement error. In addition, this study adds lagged total accruals (TACCt-1) and industry-specialist auditors (AUDEXPERT) to control the accrual reversal and auditor characteristics, respectively. Table 1 defines these variables. To control for variations in different years and industries, this study includes year and industry indicator variables.

Table 1. Variable definitions.

Variable	Definition
DACC	Discretionary accruals [49].
CSR	Indicator variable equal to 1 if a firm is ranked in the top-200 list in the KEJI index, and 0 otherwise.
ACIND	Indicator variable equal to 1 if all AC members are external directors, and 0 otherwise.
ACEXP	Indicator variable equal to 1 if at least one accounting expert exists on the AC, and 0 otherwise.
lnACACTIVITY	Natural log of the number of meetings held by the AC during the fiscal year.
lnACTENURE	Natural log of the average number of years AC members have served as directors of a firm.
SIZE	Natural log of total assets.
STDCFO	Past three-year standard deviation of the ratio of operating cash flows to lagged total assets.
ZSCORE	Financial risk measure [54].
LEV	Ratio of total liabilities to lagged total assets.
LOSS	Indicator variable equal to 1 if a firm experiences a net loss during the fiscal year, and 0 otherwise.
TACCt-1	Ratio of total accruals (= net income — operating cash flows) to total assets at the beginning of the year.
AUDEXPERT	Indicator variable equal to 1 if a firm receives external audit from an auditor with the largest market share on the basis of sales during an industry year, and 0 otherwise.
lnAGE	Natural log of firm age.

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3.2. Samples and Data

The sample of this study comprises listed firms on the KSE during 2011–2015. In Korea, listed firms whose asset size is over KRW 2 trillion (approximately USD 1.6 billion) are required to have an AC according to the Commercial Act. AC data is collected from firms' annual reports available in the data retrieval and transfer system of the Financial Supervisory Service. Financial data is obtained from the TS2000 database. This study excludes firms in the financial industry, those with non-December fiscal year end or missing variables, and those without ACs, resulting in a final sample of 896 firm-year observations. Continuous variables are winsorized at the 1st and 99th percentiles in order to mitigate outliers' potential impacts.

Table 2 presents the distribution of sample firms by industry. Therein, % CSR refers to the percentage of firms with CSR excellence. As shown in Table 2, firms that actively engage in CSR practices exist across various industries. In particular, the proportion of these firms is the highest in the publishing-activities industry (100%), followed by the wearing-apparel, clothing-accessories, and fur-articles (75%) industries.

Table 2. Sample distribution by industry.

Industry	Industry Name	% CSR
A03	Fishing and aquaculture.	20
C10	Manufacture of food products.	33
C11	Manufacture of beverages.	33
C14	Manufacture of wearing apparel, clothing accessories and fur articles.	75
C17	Manufacture of pulp, paper and paper products.	50
C20	Manufacture of chemicals and chemical products; except pharmaceuticals and medicinal chemicals.	42
C21	Manufacture of pharmaceuticals, medicinal chemical and botanical products.	48
C22	Manufacture of rubber and plastics products.	48
C23	Manufacture of other non-metallic mineral products.	20
C24	Manufacture of basic metals.	41
C25	Manufacture of fabricated metal products, except machinery and furniture.	40
C26	Manufacture of electronic components, computer; and visual, sounding and communication equipment.	47
C27	Manufacture of medical, precision and optical instruments, watches and clocks.	13
C28	Manufacture of electrical equipment.	43
C29	Manufacture of other machinery and equipment.	22
C30	Manufacture of motor vehicles, trailers and semi-trailers.	50
C31	Manufacture of other transport equipment.	19
D35	Electricity, gas, steam and air-conditioning supply.	33
F41	General construction.	14
G46	Wholesale trade on own account or on a fee or contract basis.	50
G47	Retail trade, except motor vehicles and motorcycles.	38
H49	Land transport and transport via pipelines.	60
J58	Publishing activities.	100
J59	Motion picture, video and television program production, sound recording and music publishing activities.	20
J60	Broadcasting activities.	55
J61	Postal activities and telecommunications.	20

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Table 2. Cont.

Industry	Industry Name	% CSR
J62	Computer programming, consultancy and related activities.	40
J63	Information-service activities.	56
M71	Professional services.	26
M72	Architectural, engineering and other scientific technical services.	40
N75	Business support services.	40

4. Empirical Results

4.1. Univariate Analysis

Table 3 shows the descriptive statistics of the variables used for empirical analysis, using Equation (1). The mean value of CSR is 0.376, and in terms of AC characteristics, 88.3% of the sample firms have an AC composed of all external directors (ACIND) and 49.3% of the sample firms have an AC with at least one accounting expert (ACEXP). ACs hold an average of five meetings per year (ACTIVITY) and the average tenure of AC members (TENURE) has the mean of 3.23 years.

Table 3. Descriptive statistics.

Variable	Mean	Std. Dev.	Q1	Median	Q3
DACC	-0.000	0.063	-0.032	-0.001	0.033
CSR	0.376	0.485	0.000	0.000	1.000
ACIND	0.883	0.322	1.000	1.000	1.000
ACEXP	0.493	0.500	0.000	0.000	1.000
ACTIVITY	5.002	3.524	3.000	4.000	6.000
InACACTIVITY	1.397	0.667	1.099	1.386	1.792
TENURE	3.231	1.962	2.000	2.667	4.000
InACTENURE	1.007	0.578	0.693	0.981	1.386
SIZE	21.065	1.611	19.657	21.109	22.266
STDCFO	0.049	0.041	0.021	0.038	0.064
ZSCORE	3.707	4.202	1.601	2.498	4.113
LEV	0.440	0.212	0.269	0.457	0.592
LOSS	0.209	0.407	0.000	0.000	0.000
TACCt-1	-0.017	0.070	-0.051	-0.018	0.011
AUDEXPERT	0.335	0.472	0.000	0.000	1.000
lnAGE	2.712	1.019	2.164	3.064	3.562

Note: See Table 1 for variable definitions.

Table 4 presents the Pearson correlations between the variables included in the empirical model. The correlation between DACC and CSR is statistically insignificant. AC characteristic variables (ACIND, ACEXP, InACACTIVITY, and InACTENURE) have a negative (—) correlation with DACC, but this correlation is also not statistically significant. Net loss (LOSS) and firm age (InAGE) are significantly negatively (—) correlated with DACC, while corporate financial risk (ZSCORE) and total accruals at the beginning of the year (TACCt-1) show a significantly positive (+) correlation with DACC. However, since these are the results of the univariate analysis, this study also performs multivariate analysis considering other variables that may affect DACC to test the hypotheses. Meanwhile, this study finds that the variance inflation factor of the regression analysis is less than 10. Therefore, there is little possibility that the results of this study will be distorted due to multicollinearity.

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Iable 4	Orrela	tion coc	efficients.

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) DACC	1.00													
(2) CSR	0.03	1.00												
(3) ACIND	-0.01	-0.03	1.00											
(4) ACEXP	-0.00	0.08	0.11	1.00										
(5) lnACACTIVITY	-0.01	0.02	0.05	-0.04	1.00									
(6) InACTENURE	-0.04	0.06	-0.08	-0.03	0.04	1.00								
(7) SIZE	0.03	-0.16	0.31	-0.08	0.08	0.00	1.00							
(8) STDCFO	0.05	-0.09	-0.05	-0.05	0.03	-0.10	-0.02	1.00						
(9) ZSCORE	0.11	0.14	-0.11	0.19	-0.09	-0.00	-0.13	-0.06	1.00					
(10) LEV	-0.08	-0.24	0.09	-0.22	0.07	-0.03	0.20	0.17	-0.64	1.00				
(11) LOSS	-0.28	-0.33	-0.00	-0.13	0.03	0.02	0.05	0.09	-0.29	0.43	1.00			
(12) TACCt-1	0.11	-0.05	0.02	0.01	-0.02	-0.04	-0.01	0.10	0.11	-0.10	-0.05	1.00		
(13) AUDEXPERT	-0.05	-0.09	0.11	-0.02	0.02	-0.08	0.30	-0.04	0.01	0.00	-0.00	-0.03	1.00	
(14) lnAGE	-0.16	-0.02	0.05	-0.04	0.08	0.26	0.10	-0.16	-0.09	0.05	0.15	-0.04	-0.02	1.00

Note: This table shows Pearson correlations. The bold coefficients indicate significance at $p \le 0.01$ (two-tailed tests). Please see Table 1 for variable definitions.

4.2. Multivariate Results

Table 5 reports the results of the multivariate regression analysis for hypothesis testing. For the analysis, this study uses standard errors clustered at the firm and year levels [55,56]. First, Column (1) presents the results of the analysis on CSR and earnings quality. The coefficient on CSR is significantly negative (-), indicating that, consistent with the results of prior studies, Korean firms with CSR excellence restrict earnings management more strictly [3,4,27]. Columns (2)–(5) report the results of the regression analysis adding each AC characteristic variable. In Columns (2)–(5), the coefficient of CSR is also significantly negative (-) except for Column (4). With respect to the interactions between CSR and AC characteristics, the coefficient on CSR \times lnACACTIVITY has a significantly negative (-) value. These results show that active ACs intensify the positive effect of CSR on earnings quality, which indicates that only when an AC is more active do the firms that actively perform CSR activities with an ethical motive control earnings management through discretionary accruals more tightly.

Table 5. The role of audit-committee (AC) characteristics in the relation between corporate social responsibility (CSR) and earnings quality.

** * 1 1	Dependent Variable = DACC							
Variable	(1)	(2)	(3)	(4)	(5)	(6)		
Constant	-0.078 * (-1.959)	-0.073 * (-1.763)	-0.075 * (-1.887)	-0.079 * (-1.926)	-0.079 * (-1.921)	-0.072 * (-1.665)		
CSR	-0.014 *** (-4.095)	-0.026 ** (-2.088)	-0.019 *** (-3.515)	-0.004 (-1.116)	-0.018 *** (-4.296)	-0.025 *** (-3.558)		
CSR × ACIND		0.013 (1.280)				0.013 (1.065)		
$CSR \times ACEXP$			0.010 (0.896)			0.009 (0.746)		
$CSR \times InACACTIVITY$				-0.007 ** (-2.170)		-0.008 ** (-2.098)		
CSR × lnACTENURE					0.004 ** (2.002)	0.005 *** (6.886)		
ACIND		-0.004 (-0.297)				-0.003 (-0.221)		
ACEXP			-0.005 (-0.727)			-0.005 (-0.593)		

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Table 5. Cont.

37 1.1.			Dependent V	ariable = DACC		
Variable	(1)	(2)	(3)	(4)	(5)	(6)
lnACACTIVITY				0.004 (1.001)		0.003 (0.934)
lnACTENURE					-0.000 (-0.030)	-0.000 (-0.149)
SIZE	0.001 (0.625)	0.001 (0.619)	0.001 (0.551)	0.000 (0.536)	0.001 (0.585)	0.000 (0.330)
STDCFO	-0.025 (-0.462)	-0.022 (-0.427)	-0.023 (-0.426)	-0.030 (-0.547)	-0.025 (-0.463)	-0.025 (-0.492)
ZSCORE	0.002 *** (3.230)	0.002 *** (3.489)	0.002 *** (2.892)	0.002 *** (3.371)	0.002 *** (3.249)	0.002 *** (3.162)
LEV	0.002 (0.096)	0.000 (0.011)	0.002 (0.145)	0.000 (0.015)	0.002 (0.129)	0.000 (0.018)
LOSS	-0.053 *** (-8.747)	-0.053 *** (-8.908)	-0.054 *** (-8.811)	-0.053 *** (-8.591)	-0.053 *** (-8.665)	-0.054 ** (-8.719)
TACCt-1	0.045 (1.525)	0.043 (1.483)	0.044 (1.405)	0.045 (1.530)	0.046 (1.523)	0.043 (1.386)
AUDEXPERT	-0.012 *** (-3.462)	-0.012 *** (-3.397)	-0.012 *** (-3.335)	-0.012 *** (-3.534)	-0.012 *** (-3.377)	-0.012 ** (-3.284)
lnAGE	-0.008 *** (-6.160)	-0.008 *** (-5.960)	-0.008 *** (-6.143)	-0.008 *** (-6.463)	-0.008 *** (-5.476)	-0.008 ** (-5.731)
Industry/Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Clustering	Firm, Year	Firm, Yea				
Observations	896	896	896	896	896	896
Adjusted R2	0.176	0.175	0.175	0.175	0.174	0.172

Note: *, ** and *** represent significance at the 10, 5 and 1% levels, respectively (all two-tailed tests). Please see Table 1 for variable definitions.

Column (6) presents the results of the regression analysis using Equation (1). When all the AC characteristic variables are included in Column (1), which reports the analysis of CSR and earnings quality, the results are qualitatively similar to those of Columns (1)–(5). Specifically, CSR shows a significantly negative (–) coefficient value and the coefficient on $CSR \times InACACTIVITY$ is also negative (–) and significant. Meanwhile, $CSR \times ACIND$ and $CSR \times ACEXP$ have an insignificant coefficient value, and the coefficient of $CSR \times InACTENURE$ is significantly positive (+). Taken together, the results of Columns (1)–(6) highlight that the firms that engage in CSR activities with an ethical motive show an enhanced quality of earnings, which is further boosted when their AC works more actively. This finding is consistent with the evidence in previous research, demonstrating that ACs' meeting frequency is associated with an improved quality of accounting information [16,37], high audit fees [43], and the hiring of an industry-specialist auditor [44]. Furthermore, the finding suggests that the role of AC activity among its characteristics is crucial for ACs to function effectively. This result is important given that there are few studies that examine the effectiveness of the AC system adopted according to the Anglo-Saxon corporate governance model in emerging countries, and those studies simultaneously verify the effectiveness of AC characteristics. The result of this study also reports new empirical evidence that active ACs have a positive influence on the association between CSR and earnings quality, which implies that the AC's impact on the association between CSR and the quality of earnings depends on the type of AC characteristics.

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4.3. Additional Tests

This study uses individual measures of AC characteristics in the main analysis to examine their role in the association between CSR and earnings management. However, some prior research demonstrates that ACs are more effective when they have several desirable characteristics at the same time rather than when they have only one desirable characteristic [48,57]. Thus, this study also uses composite measures of AC characteristics. First, for each AC characteristic, a dummy variable equal to 1 is defined if a firm-year sample belongs to the top 25%, and 0 otherwise. Then, this study defines AC1 (AC2, AC3, AC4), a dummy variable equal to 1, if the sample has an AC with superior characteristics in one criterion (two, three, four criteria), and 0 otherwise.

Columns (1)–(4) of Table 6 show the results of the analysis including each of the above four variables and Column (5) presents the results of the analysis in which all the four variables are included in the regression equation. Consistent with the results in Table 5, Table 6 reports that the coefficient on CSR is generally negative (–) and significant. With regard to the interaction terms, CSR \times AC4 has a significantly negative (–) coefficient. This finding suggests that ACs strengthen the positive impact of CSR activities on the quality of earnings when they have all the superior characteristics at the same time; that is, when ACs have external directors, have at least one accounting expert, work more diligently, and have relative power. Thus, the AC effectiveness of firms that perform CSR activities based on ethical motivation differs depending on whether the AC has a variety of superior characteristics.

Table 6. The role of AC characteristics in the relation between CSR and earnings quality using the composite measures of AC characteristics.

** * * * * * * * * * * * * * * * * * * *		DACC			
Variable -	(1)	(2)	(3)	(4)	(5)
Constant	-0.078 * (-1.937)	-0.073 * (-1.789)	-0.078 ** (-2.022)	-0.075 * (-1.738)	-0.075 (-1.598)
CSR	-0.010 (-1.645)	-0.021 *** (-3.960)	-0.014 *** (-3.829)	-0.013 *** (-3.983)	-0.013 (-0.738)
$CSR \times AC1$	-0.012 (-0.874)				-0.009 (-0.425)
CSR × AC2		0.014 (1.317)			0.006 (0.544)
CSR × AC3			-0.001 (-0.088)		-0.002 (-0.136)
CSR × AC4				-0.077 ** (-2.165)	-0.077 ** (-2.521)
AC1	0.003 (0.414)				0.005 (0.431)
AC2		-0.004 (-0.576)			0.001 (0.063)
AC3			0.001 (0.069)		0.003 (0.230)
AC4				0.055 (1.426)	0.058 (1.623)
SIZE	0.000 (0.537)	0.001 (0.599)	0.001 (0.651)	0.001 (0.523)	0.000 (0.466)
STDCFO	-0.023 (-0.416)	-0.024 (-0.430)	-0.025 (-0.457)	-0.026 (-0.487)	-0.023 (-0.409)

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Table 6. Cont.

** • 11	Dependent Variable = DACC							
Variable –	(1)	(2)	(3)	(4)	(5)			
ZSCORE	0.002 *** (2.836)	0.002 *** (2.847)	0.002 *** (3.475)	0.002 *** (3.261)	0.002 *** (2.844)			
LEV	0.002 (0.131)	0.001 (0.061)	0.001 (0.100)	-0.001 (-0.039)	-0.001 (-0.040)			
LOSS	-0.053 *** (-8.990)	-0.053 *** (-8.897)	-0.053 *** (-8.732)	-0.053 *** (-7.992)	-0.054 *** (-8.283)			
TACCt-1	0.044 (1.511)	0.043 (1.433)	0.045 (1.564)	0.047 * (1.760)	0.046 * (1.696)			
AUDEXPERT	-0.012 *** (-3.154)	-0.012 *** (-3.224)	-0.012 *** (-3.339)	-0.012 *** (-3.716)	-0.012 *** (-3.314)			
lnAGE	-0.008 *** (-5.817)	-0.008 *** (-5.679)	-0.008 *** (-6.385)	-0.008 *** (-6.382)	-0.008 *** (-6.084)			
Industry/Year fixed effects	Yes	Yes	Yes	Yes	Yes			
Clustering	Firm, Year	Firm, Year	Firm, Year	Firm, Year	Firm, Year			
Observations	896	896	896	896	896			
Adjusted R2	0.176	0.177	0.174	0.178	0.175			

Note: *, ** and *** represent significance at the 10, 5 and 1% levels, respectively (all two-tailed tests). Please see Table 1 for variable definitions. ACN refers to an indicator variable equal to 1 if a firm has an AC with superior characteristics in N criteria, and 0 otherwise.

This study also uses the proportions of external directors and accounting experts in the AC (r_ACIND and r_ACEXP) instead of the dummy variables for their existence. The results are reported in Table 7. Columns (1) and (2) report the results of the regression analysis including each of the above two variables. In both columns, only CSR \times lnACACTIVITY has a significantly negative (–) coefficient value, consistent with the results in Table 5.

Table 7. The role of AC characteristics in the relation between CSR and earnings quality using the ratio measures of AC characteristics.

	Dependent Variable = DACC				
Variable —	(1)	(2)			
Constant	-0.067 (-0.987)	-0.071 (-1.639)			
CSR	-0.051 (-1.510)	-0.025 *** (-2.792)			
$CSR \times ACIND$		0.012 (1.068)			
$CSR \times r_ACIND$	0.039 (0.991)				
$CSR \times ACEXP$	0.009 (0.737)				
$CSR \times r_ACEXP$		0.028 (1.077)			
CSR × lnACACTIVITY	-0.008 ** (-2.085)	-0.008 ** (-2.187)			

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Table 7. Cont.

	Dependent Variable = DACC				
Variable —	(1)	(2)			
CSR × lnACTENURE	0.005 *** (8.596)	0.005 (0.782)			
ACIND		-0.002 (-0.176)			
r_ACIND	-0.007 (-0.162)				
ACEXP	-0.005 (-0.602)				
r_ACEXP		-0.016 (-1.102)			
lnACACTIVITY	0.003 (0.926)	0.003 (0.990)			
InACTENURE	$-0.000 \\ (-0.121)$	$-0.000 \ (-0.491)$			
SIZE	0.000 (0.283)	0.000 (0.307)			
STDCFO	-0.025 (-0.487)	-0.023 (-0.455)			
ZSCORE	0.002 *** (3.166)	0.002 *** (3.316)			
LEV	0.000 (0.011)	-0.000 (-0.013)			
LOSS	-0.054 *** (-8.766)	-0.053 *** (-8.904)			
TACCt-1	0.043 (1.383)	0.044 (1.420)			
AUDEXPERT	-0.012 *** (-3.260)	-0.012 *** (-3.255)			
lnAGE	-0.008 *** (-5.725)	-0.008 *** (-5.508)			
Industry/Year fixed effects	Yes	Yes			
Clustering	Firm, Year	Firm, Year			
Observations	896	896			
Adjusted R2	0.172	0.173			

Note: ** and *** represent significance at the 5 and 1% levels, respectively (all two-tailed tests). Please see Table 1 for variable definitions. Here, r_ACIND and r_ACEXP refer to the ratio of external directors in the AC to the number of AC members and the ratio of accounting experts in the AC to the number of AC members, respectively.

5. Conclusions

This study examines the role of AC characteristics in the association between CSR and earnings quality. Firms with CSR excellence make more efforts to manage the quality of earnings in Korea. Moreover, when the AC works hard, the firms' earnings-management behavior using discretionary accruals is more severely limited. This result indicates that diligent ACs play a crucial role in improving the earnings quality of firms that practice CSR with an ethical motive. ACs are more effective when they have all the desirable characteristics in terms of independence, expertise, activity, and power, suggesting that it is important for ACs to have diverse superior characteristics to perform their supervisory function more effectively.

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The findings of this study have several important implications and contributions. First, this study contributes to the literature by offering an improved analysis of the impact of CSR activities on earnings management and by showing another path for ACs in raising earnings quality. Second, globally, as the uncertainty of business environments increases over time, corporate sustainability and non-financial performance are receiving more attention. Accordingly, CSR is becoming an essential management strategy for maintaining corporate sustainability. However, a company should be financially sound in order to be capable of practicing CSR. A company's future earnings can be predicted by earnings quality. The findings of this study highlight how ACs with superior characteristics play a crucial role in enhancing earnings quality for firms that practice CSR with an ethical motive. This study finds that AC activity is important for firms with CSR excellence to maintain high earnings quality. Particularly, ACs with all the superior characteristics, in terms of independence, expertise, activity, and power, are more effective for these firms. This is the first study ever conducted of CSR that simultaneously considers various AC characteristics: namely, independence, expertise, activity, and power. While prior research analyzes the effects of AC characteristics separately, this study comprehensively investigates their effectiveness, providing a broader view of their moderating roles in the relation between CSR and the quality of earnings. Third, regulators seeking to strengthen corporate governance can use these findings to understand the impact of governance and formulate related policies. Fourth, investors can make investment-related decisions in consideration of a firm's CSR level and AC characteristics as well as its financial statements at the same time by referring to the findings of this study. Fifth, external auditors can conduct an audit considering that the quality of firms' accounting information differs depending on their CSR level and AC characteristics. However, this study has limitations. To be specific, this study only investigates Korean firms, so the findings may not be widely applicable to other countries. Future research on the impact of AC characteristics on the relationship between CSR and earnings quality in other countries may verify the results of this study and add to the related literature.

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