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Board Composition and Financial Reporting Quality of Sports Organizations

An empirical study of Norwegian sports organizations

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Abstract

This paper examines the relation between the board of directors and the financial reporting quality (FRQ) of Norwegian sports organizations. While existing literature shows several approaches of assessing the board of directors' performance, our study focuses on the impact of observable attributes of the board: size, age and gender diversity. To obtain insight on the level of financial reporting quality, we utilize abnormal working capital accruals. The following hypotheses were developed for the aforementioned board attributes, respectively. First, we argue that the relation between board size and FRQ can be described as an inverted U-shape. Second, we argue that board age diversity is positively associated with FRQ. Third, we hypothesize that a higher prevalence of female board members contributes to higher financial reporting quality. A panel regression analysis was conducted for 127 Norwegian sports organizations to assess these relations. Our findings indicate a significant linear relation between board size and FRQ, in which large boards are considered beneficial for the level of FRQ. We also find a significant relation between board age diversity and FRQ, indicating that board age diversity negatively affects FRQ. Finally, our evidence for the relation between board gender diversity and FRQ is not significant.

Keywords: financial reporting quality, board characteristics, nonprofit, sports organizations

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1. Introduction

1.1 Background

Sports have been an integral part of Norwegian culture and society for a long time. This is reflected by the fact that the Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF), which is the country's largest nonprofit organization, has around 1.9 million registered members (Norges Idrettsforbund, n.d.). NIF is responsible for all sports activities in Norway, and their work is strongly influenced by values such as volunteerism, democracy, loyalty, and equality (Norges Idrettsforbund, n.d.). The organization's main objective is to promote ethical and social responsibility in sports. In addition to membership fees, the organization is primarily funded by public support through the Ministry of Culture and Equality. Therefore, accurate and reliable financial reporting is crucial for sports organizations in Norway to maintain the public's trust.

Although the Norwegian Olympic and Paralympic Committee has achieved great success in sports, both nationally and globally, there has been significant focus on their financial practices in recent years. In 2018, the Norwegian Office of the Auditor General published a report that revealed incorrect and missing financial information from the organization (Riksrevisjonen, 2018). The report described that the organization had received NOK 52 million in financial support from the public between 2012 and 2017 intended for children and youth initiatives, but was instead used to cover salary expenses. Additionally, the organization was criticized for using public funds to finance non-sports related trips and events. Based on NIF's impermissible practices for financial reporting, this study will look further into the quality of financial reporting within Norwegian sports organizations.

1.2 Theory

Financial reporting quality (FRQ) reflects the degree to which financial information is free from manipulation and accurately represents an organization's financial position (Hasan et al., 2022). In other words, FRQ measures the accuracy and transparency of the financial information disclosed by an organization. According to Gomariz & Ballesta (2014), FRQ contributes to improve the allocation of resources – which stimulates economic growth. Hence, the lack of transparency in financial reporting can have significant repercussions for both the organization and society, since it has an impact on economic decision-making that can

ultimately affect society at large. In particular, financial transparency is critical for sports organizations due to their heavily donative nature of financing activities.

Previous studies show that FRQ can be influenced by several factors, including corporate governance (Cohen et al., 2004). Corporate governance is a widely discussed term in the existing literature and its definition can vary depending on the context. In general, corporate governance refers to the governing and regulating of organizations to ensure that they operate responsibly and efficiently (Keasey et al., 2005). While research on corporate governance is more focused on for-profit organizations, it is equally important for nonprofit organizations to establish an effective governance structure. Since nonprofit organizations mainly depend on financial support from the public, their responsibility to manage allocated funds and resources effectively is crucial – making corporate governance even more critical. Furthermore, effective corporate governance can ensure that nonprofit organizations meet the public's expectations and establish trust.

As the board of directors have the overall responsibility of managing a nonprofit organization, they are expected to implement and maintain good corporate governance practices (Renz, 2010). Furthermore, the board plays a crucial role in the leadership of the organization by making strategic decisions, setting goals, and overseeing management. Besides determining the strategic direction of a nonprofit organization, the board is also responsible for overseeing and assessing its financial matters (Yeh & Taylor, 2008). Such responsibility involves ensuring that the organization's financial activities are in compliance with laws and regulations, which contributes to ensuring the reliability of the financial reporting. Maintaining a healthy financial position is of great importance and should be a prioritized matter for the board. To determine whether the board can fulfill its extensive responsibilities effectively, we will analyze the composition of boards in Norwegian sports organizations. Based on management research, there are a number of factors that can affect board composition. An important topic in management research is the effectiveness of the teams. Cohen and Bailey (1997) present a framework for team effectiveness, which describes the effectiveness of teams as a function of several factors. Among these factors, Cohen and Bailey emphasized the significance of team size and age diversity on team effectiveness.

1.3 Findings and Contribution of This Study

This study aims to examine the level of financial reporting quality within Norwegian sports organizations, with a focus on analyzing the composition of the board and its influence on the organization's financial reporting quality. Furthermore, this study will examine three observable attributes of the board: size, age and gender. Size is measured by the number of members on the board. In terms of age and gender, our approach focuses on the diversity of these characteristics. To measure gender diversity, we calculate the percentage of women on the board and analyze if it has any impact on the FRQ. In addition, we also assess the age diversity by comparing the age difference of the oldest and youngest board member with the average age of the sample.

Our sample initially consisted of 1408 Norwegian sports organizations, which constitutes the entire population. Since our analysis required organizations that are obligated to disclose financial statements, our sample selection was filtered down to 127 Norwegian sports organizations. The data was obtained through the database Proff Forvalt and consisted of necessary financial data over the period of 2020-2021. For our analysis, we used a quantitative research approach. Moreover, among different types of panel data regressions, we find the random effects model to be the most appropriate for our study.

For this empirical study, we created hypotheses by exploring previous studies on topics related to the board of directors and reporting quality. We examined three hypotheses that explored the impact of board members' characteristics on FRQ:

H1*: The relation between board size and FRQ follows an inverted U-shape.*

H2*: Board age diversity is positively associated with FRQ.*

H3*: The proportion of female board members is positively associated with FRQ.*

Existing literature reports several findings of an inverted U-shaped relation between board size and board performance. In testing H1, our results appear to contradict the consensus of existing literature. Rather, we find evidence of a significant linear relation between board size and FRQ for Norwegian sports organizations. Our results also show that larger boards reduce abnormal accruals, indicating that larger boards contribute to enhanced reporting quality. In determining whether board age diversity has a positive impact on FRQ, we based our analysis on the age difference between the oldest and youngest board member. Our findings for H2

show a significant relationship between age diversity and FRQ. Interestingly, our results indicate that age diversity negatively impacts FRQ in Norwegian sports organizations. Additionally, we found that boards with older directors contribute to better financial reporting quality. For H3, our analysis established a non-significant relation between board gender diversity and FRQ.

The findings of this study will contribute to the understanding of how board composition affects the financial reporting of sports organizations in Norway. This knowledge can be useful for sports organizations when considering changes to their board composition and how this could affect their financial reporting, as well as for policymakers who seek to improve the governance of sports organizations. The sports governance structure in Norway follows the western European model and is also present in other non-European countries, such as New Zealand and Canada (Ingrama & O'Boyleb, 2018), which means that the findings of this study will not only apply to Norway, but also to other nations with similar sport governance systems.

2. Literature Review and Hypothesis Development

Financial reporting quality is a critical aspect of any organization, but research on this topic is mostly focused on for-profit organizations. Jegers (2013) argues that, in contrast to the extensive research on for-profit organizations, there is a lack of research on nonprofit organizations. Prior research shows that some nonprofits engage in financial disclosure management to increase compensations, get more donations and grants, or to protect their reputation. This can include anything from distorting financial information to withholding crucial information (Hofmann & McSwain, 2013). Others engage in accruals management to get their current ratio beyond the threshold of one which otherwise could be a sign of liquidity problems (Lancksweerdt et al., 2021). As argued by Yetman & Yetman (2013), financial statements containing errors and inaccuracies, can result in poor decision-making and improper allocation of resources. Furthermore, nonprofit organizations have longer financial reporting lags than for-profit, with 17.2% of nonprofits filling in crucial information beyond the deadline. This is most often connected to the delivery of bad news which may reflect poor leadership (Reheul et al., 2012). A study by Van Caneghem (2015) takes Benford's Law into account when investigating the accuracy of the financial statements by looking at over 8000 NPO-year observations. Most nonprofits adhere to Benford's Law, indicating high accuracy in their reported financial figures. However, deviations were more significant in smaller nonprofits and those heavily reliant on grants and donations.

Due to the increased level of professionalization and commercialization within sports organization, corporate governance has been an area of growing importance (Ingrama & O'Boyleb, 2017). Good corporate governance depends on the organization-specific characteristics and decision context of each organization. Governance practices need to be tailored to the unique needs of each organization. This was demonstrated by a group of researchers from the US, which analyzed information from IRS Form 990 on thousands of US nonprofits firms (Boland et al., 2020). The findings highlighted how there is *"no one-size-fits-all"* definition of good governance in the nonprofit sector.

In conducting a meta-analysis of over 100 studies, Wellens & Jegers (2014) found conflicting needs and objectives between groups of stakeholders and even within stakeholder groups. Being too responsive to some groups could negatively impact other groups of stakeholders. To

implement more effective governance, one should be responsive to multiple stakeholders. Furthermore, research on emerging markets in Vietnam on corporate governance revealed that the more relevant financial information that is disclosed, the lower the firm-specific risk is (Nguyen et al., 2021). The same effect is found for state-owned organizations which can be explained by low risk-taking incentives and better monitoring by the state. The opposite effect was found for organizations with larger board size. Garcia-Rodriguez et al. (2019) findings show that there is no difference between the board composition of financially vulnerable and healthy nonprofit organizations. However, for-profit organizations show increased vulnerability and financial distress based on the board structures.

To our knowledge, relatively few studies have been conducted on the relationship between FRQ and board composition in a nonprofit context. Therefore, we will primarily rely on research conducted in the for-profit sector. By doing so, we gain a more comprehensive understanding of the impact board composition has on financial reporting quality.

Existing literature on the relationship between board size and financial reporting quality shows varied findings. In nonprofit organizations, board size is dependent on organization size and financial structure. As a nonprofit organization experiences growth, it requires a larger and more independent board, than in the early stages of development. Bigger boards are necessary with the increased requirement for expertise, knowledge and resources that comes with growth (De Andrés-Alonso et al., 2009). However, smaller board size is usually more efficient for decision-making, while larger boards may increase group performance (Ingrama & O'Boyleb, 2017). In a comparative study of UK and Pakistani firms, Hasan et al. (2022) analyzed the impact of corporate governance on FRQ for a sample of 1550 firm-year observations. Results show that board size has a negative impact on FRQ. They further suggest that smaller boards have the ability to better coordinate and communicate, which in turn improves effectiveness and financial reporting quality. Such results are supported by Goodstein et al. (1994), who conducted a study on the impact of board size on a board's ability to implement strategic changes. Their study shows that larger boards find it harder to reach a common decision and are less cohesive, making them a weaker board compared to small boards. As larger boards are characterized by more diversity, fragmentation, and factions, it becomes difficult for board members to collaborate toward a common goal as a group. Furthermore, Yermack (1996) presented similar findings in a study that examined the association between

board size and firm value of 452 US corporations. The results indicate that small boards of directors are more effective, as smaller boards are better able to oversee managers more effectively. Additionally, the study shows that financial ratios related to profitability and operating efficiency decrease with an increasing board size. Studies have also indicated an inverse association between board size and FRQ. According to Nieva et al. (1985), the impact of group size on effectiveness can be described as an inverted U-shape. Such a relationship suggests that a board size can have a positive effect on effectiveness up to a certain point, after which effectiveness begins to decline. A practical interpretation of this curve description is that small teams may have limited variation in knowledge and skills, while large teams may face challenges in effectively coordinating their work. Vafeas' (2000) study of 307 US public firms demonstrates an inverse relationship between board size and board monitoring quality, which includes the monitoring of the information contained in financial reports. Moreover, the study specifies that process losses increase as board size grows, since larger boards lack the ability to effectively exchange ideas within the board. In a similar study, by Eisenberg et al. (1998), results show an inverse correlation between board size and firm performance. In a sports context, Taylor & O'Sullivan (2009) explore the optimal board structure for national governing bodies of sports in the UK. Based on interviews of 22 senior administrators involved in sports in the UK, they report that board size should be in the range of 5 to 12 members. This range of members is argued to be facilitating debate while also optimizing decision-making. The majority of the studies report an inverted U-shape relationship, thus the hypothesis:

H1*: The relation between board size and FRQ follows an inverted U-shape.*

Research that specifically examines the age of board members and FRQ is relatively limited. A study by Huang et al. (2012) examined the relationship between chief executive officer (CEO) age and the FRQ among 3413 firms, whereas results show that CEO age has a significant positive impact. The study further suggests that age-based differences in individuals have important implications for the quality of financial reporting. Gibbons & Murphy (1992) support this argument, and their study highlights that age is an important determinant of managers' behavior and incentives. Specifically, the study suggests that younger managers tend to be more risk-seeking, while older managers adopt a more conservative approach and become risk-averse over time. Additionally, it suggests that older managers are more likely to prioritize ethical behavior. Older managers also tend to have richer experiences and practices, which

over time leads to better skill-based competencies (Reed & Defillippi, 1990). On this basis, it can be argued that age is positively associated with a higher level of financial reporting quality. Since older and younger individuals differ in several aspects, an age-diverse board may enhance the overall effectiveness of an organization. Research on board age diversity shows a predominantly positive association with board effectiveness. According to Darmadi (2011), board age diversity creates values and diverse views within the board – which in turn improves board effectiveness. This can be attributed to the fact that a higher level of age diversity brings individuals with different experiences of social, economic, and political environments. Likewise, Goergen et al. (2015) show that a high level of board age diversity improves the effectiveness of boards. However, Horwitz & Horwitz (2007) provide another view. In examining team diversity, such as age, results show no significant relation between bio-demographic diversity and team performance. A similar study, by Schneid et al. (2014), also show findings of an insignificant relationship between age diversity and team outcomes. Despite various findings, our hypothesis regarding the impact of age diversity is as follows:

H2*: Board age diversity is positively associated with FRQ.*

The focus on increasing the representation of women in board positions has led to greater attention on board gender diversity. In Norway, public limited companies are required to follow a gender quota law that mandates at least 40% representation of each gender on boards (cf. the Public Limited Companies Act § 6-11a). A recent study by Lara et al. (2022) examined the impact of this gender quota on FRQ and found that companies that made significant changes to their board to comply with the law experienced a decline in reporting quality. Similarly, a study conducted on 77 UK firms also show that board gender diversity has a negative effect on the quality (Hasan et al., 2022). Nevertheless, most of the current literature strongly indicates that gender diversity has a positive impact on FRQ. In analyzing the effect of corporate governance on FRQ among pharmaceutical companies in Nigeria, Amah & Ekwe (2021) found that higher representation of women on boards improves FRQ. Dobija et al. (2021) examined the same relationship among 50 listed Polish companies, and their findings also indicate that an increased share of women on boards is associated with improved FRQ. Additionally, Gul et al. (2011) address the role of female directors in increasing the disclosure of firm-specific information. Results show a positive relationship, and further suggest that gender-diverse boards improve the quality of public disclosure due to better monitoring.

Schwartz-Ziv (2017) further provides evidence that supports the relation between gender diverse boards and higher supervision of financial information, which in turn improves the reporting quality. In a similar study, Krishnan & Parsons (2008) examine the earnings quality (i.e., the degree to which reported earnings reflect the economic reality) – in which the results show that the inclusion of women in management positions positively affect earnings quality. Studies that examine board gender diversity in sports organizations show that women are underrepresented on boards and leadership positions (Adriaanse, 2013). This underrepresentation of women is also occurring in the for-profits sector (Mahadeo et al., 2012). A comprehensive review of the research of over 400 publications through the last 30 years found that when women were appointed to the board, the corporate governance of the organizations was improved (Terjesen et al., 2009). Consistent with the majority of research articles, we therefore hypothesize that:

H3*: The proportion of female board members is positively associated with FRQ.*

3. Research Method

3.1 Sample Selection

The sample data were collected from Proff Forvalt, a database that retrieves data from The Brønnøysund Register Centre. Proff Forvalt can be utilized to retrieve large samples of categorized data in one go. Data for our sample were collected from the period of 2020-2021. We also collected some data from 2019 to calculate the dependent variable AWCA (abnormal working capital accruals).

Initially, we collected data from all 1408 Sports organizations from the Proff Forvalt database, then we filtered it down to the large organizations (in terms of having audited financial statements). Smaller sports organizations with revenues under 5 million NOK are not required to have audits nor to publish their annual reports (Norges Fotballforbund, 2018, § 8-7). While some smaller organizations choose to register their financial statements in the register voluntarily, this remains a minority practice (Frivillighetsregisterloven, 2007). Only large organizations that have sufficient data availability fulfill our research objectives. It is also worth noting that according to Jegers (2013), larger organizations may have a greater tendency to manipulate costs and revenues during the financial reporting process. As financial information, such as membership income, grants and gifts, was not available in the Proff Forvalt database, we had to manually gather this information from annual financial statements retrieved from The Brønnøysund Register Centre. Manual data collection was also necessary to obtain information on board composition. The data for our test variables were collected from the Proff Forvalt database, which provided information on the names, birth years and number of board members. Additionally, we excluded certain clubs that were not mandated to have audits in both 2020 and 2021. This resulted in a final sample of 127 Norwegian sports organizations over the period of 2020-2021.

3.2 Research Design

Research design provides guidance on how to proceed with investigating and addressing the research question of a study (Gripsrud et al., 2010). Three primary research designs can be distinguished depending on the research question: exploratory, descriptive and causal. Exploratory research design is suitable when there is limited knowledge about a phenomenon, and the main objective is to gain more insight and understanding. On the other hand,

descriptive research design aims to describe a phenomenon accurately and systematically, assuming that a basic understanding already exists. Causal studies, however, seek to identify causal relationships between variables by examining the impact of changes in one variable on another variable. Our study aims to investigate a potential relation between board composition and financial reporting quality, where a causal research design would be the most suitable to achieve this objective. With this approach, we can examine the effect of various independent variables (board size, gender and age diversity) on a dependent variable (financial reporting quality), while also controlling for other possible factors that could impact the outcome. Additionally, the research design can have a qualitative or quantitative approach (Rutberg & Bouikidis, 2018). In a qualitative approach, research questions typically require information that cannot be quantified numerically. Quantitative methods involve the collection of numerical data, which is analyzed using statistical methods to identify patterns, trends and associations between the variables of interest. As the purpose of our research is to examine quantifiable data to conclude, the use of a quantitative research design is appropriate.

An appropriate statistical method is necessary to assess the influence of different attributes of board members on financial reporting quality. The following paragraphs will mainly rely on the econometric methods described by Stock and Watson (2020), which give a detailed overview of the fundamental factors that should be considered to achieve precise and reliable outcomes.

Regression models are considered an important statistical tool which can be utilized to examine the relationship between one or more independent variable(s) and a dependent variable. There are various types of regression models. Linear regression is the simplest form and is limited to examining the explanatory power of a single independent variable. As our study aims to conduct an examination of multiple regressors, linear regression in its simplest form is not suitable for our study. Instead, a multivariate regression model is more appropriate; the method involves a more comprehensive analysis by accounting for the effect of two or more independent variables, $X_1, X_2 \dots X_k$, on a dependent variable, Y. Multivariate regression analysis has several applications, including testing for a significant relationship between a dependent variable and a set of independent variables, estimating the size and direction of these relationships, and evaluating how well the model fits the data. An important

assumption in multiple regression analysis is linearity, meaning that the change in the dependent variable is proportional to the change in the independent variables.

Ordinary Least Squares (OLS) is a common technique used to find the linear function that best describes the relationship between the dependent variable and a set of independent variables. The method estimates the model's regression coefficients by minimizing the sum of squared differences between actual observations and the predicted values. Since actual observations do not precisely fall on this linear line, an error term ε (u_i) is added to the equation. The error term accounts for the portion of the dependent variable that cannot be linearly explained by the independent variables used in the model. The OLS model, with *k* independent variables, can be illustrated by the following regression equation:

$$Y_i = \beta_0 + \beta_k X_{ki} + u_i \qquad (3.1)$$

where β_0 is the constant, β_k is the coefficient for the independent variable X_{ki}, and u_i is the error term as described earlier. Coefficient β_k provides information on how much Y_i is affected by the increase of one unit in X_i.

For OLS to provide reliable estimates about causal effects in a multiple regression model, Stock and Watson (2020) specify certain requirements that must be met. However, it is challenging to fully satisfy these criteria in practice, and one should consider the degree of severity and consequences of any violations of the assumptions. The following table presents the least squares assumptions in multiple regression:

Table 1. Least squares assumptions for causal inference in the multiple regression model (Stock & Watson, 2020, p. 227)

#	Assumption
1	Error term u_i has an expected value of 0 for combinations of values of $X_{1i}, X_{2i} \ldots X_{ki}$
2	Variables $X_{1i}, X_{2i} \ldots X_{ki}$ and Y_i are independently and identically distributed
3	Large outliers are unlikely: $X_{1i}, X_{2i} \ldots X_{ki}$ and Y_i have nonzero finite fourth moments
4	There is no perfect multicollinearity

In addition to the four assumptions in Table 1, there is an assumption of homoscedasticity for the error term u_i in multiple regression analysis. If all the assumptions hold, including homoscedasticity, the OLS estimator β_k is considered the Best Linear conditionally Unbiased Estimator (BLUE). Under certain conditions, alternative estimators are more efficient than OLS.

For instance, violating the assumption of homoscedasticity leads to an OLS estimator that is no longer considered BLUE. The method of generalized least squares (GLS) is a generalization of OLS and is an appropriate method for dealing with the violation of homoscedasticity (Taboga, 2021). Given that the other assumptions hold, except homoscedasticity, the GLS estimator is considered BLUE. Furthermore, the consequences of violating assumptions and appropriate measures will be discussed in section 3.4, in the context of our model.

3.2.1 Panel Data Regression

A panel dataset contains time series observations for a number of entities (Hsiao, 2007). Such a definition applies to our study, since the dataset contains observations on multiple Norwegian sports organizations, where each organization (*i*) is observed at two time periods (*t*). Although panel data has several advantages, it also has limitations that need to be considered in the analysis.

Hiestand (2005) distinguishes between three panel analytic models: pooled model, fixed effects model (FEM) and random effects model (REM). In a pooled regression model, one can pool all observations into a simple dataset and use OLS regression. While this method has a straightforward approach and may provide relevant information, it does not account for individual variations across the different entities. To ensure accuracy for panel data, FEM and REM are considered better options. FEM assumes that each entity has individual traits that can influence the dependent and/or independent variables (Torres-Reyna, 2007). The model allows controlling for the presence of individual variation across entities, without actually observing it. Controlling for these unobserved time-invariant differences between the entities ensures that the estimated coefficients are not biased due to omitted time-invariant variables. Furthermore, the model assumes a correlation between the unobservable variables and the independent variables. Similarly, REM also controls for variation across entities – however, the unobserved variables are assumed to be random and not correlated with the independent variables.

For the conduct of our study, the approach of FEM is unattainable. This is due to the nature of our dataset, specifically variables that are time-invariant. These variables remain constant for each entity over time, which results in perfect collinearity with entity-fixed effects (unobserved variables). Kohler & Kreuter (2005) suggest that fixed effects models are suitable for

investigating changes within entities, which is not feasible in the case of time-invariant variables. To address this issue, REM can be used as an alternative model since the unobserved variables are not correlated with the independent variables, allowing for the use of time-invariant variables as explanatory variables.

To determine whether a pooled model is efficient for our panel data, or if it is necessary to utilize random effects, we conducted Breusch-Pagan's Lagrange Multiplier (LM) test. The test examines whether there is individual variation across entities, where H_0 is that there is no variance across entities (Torres- Reyna, 2007). Given a significance level of 1 %, the test results for our model show that we fail to accept H_0 and conclude that REM is needed.

3.3 Empirical Model for Measuring FRQ

We estimate a random effects regression model following the approach of Lancksweerdt et al. (2021). As we are solely examining sports organizations, we have excluded the independent dummy variable INDUSTRY from our analysis.

$$\begin{aligned} \text{AWCA\_ABS}_{it} &= \beta_0 + \beta_1 \text{C\_MEMBER}_{it} + \beta_2 \text{C\_MEMBER2}_{it} + \beta_3 \text{AGE\_DIV}_{it} \\ &+ \beta_4 \text{GENDER\_DIV}_{it} + \beta_5 \text{AGE\_AVERAGE}_{it} + \beta_6 \text{PREBELOW}_{it} + \beta_7 \text{TRADELEV}_{it} \\ &+ \beta_8 \text{DONSUBS}_{it} + \beta_9 \text{FINLEV}_{it} + \beta_{10} \text{NCCA}_{it} + \beta_{11} \text{SIZE}_{it} + \beta_{12} \text{YEAR}_{it} + \varepsilon \end{aligned} \qquad \textit{(3.2)}$$

3.3.1 Dependent variable – Financial Reporting Quality

To assess the quality of financial reporting among Norwegian sports associations, we employ techniques from existing literature. There is no standard measure of financial reporting quality, and various proxies have been used in previous studies. A frequently used proxy among nonprofit organizations is abnormal working capital accruals (AWCA) as it is shown to be a trustworthy indicator. Thus, the regression model of this study is inspired by Lancksweerdt et al., (2021), which employs AWCA as the dependent variable to measure financial reporting quality.

Defond and Park (2001) refer to AWCA as the difference between realized working capital and expected working capital. By examining the deviation from expected values, our dependent variable helps detect potential errors or misstatements in the financial statements. It can be practically interpreted such that lower levels of abnormal accruals indicate a reduced probability of financial misreporting, while higher levels of abnormal accruals may suggest that the organization made a deliberate effort to improve or manipulate its financial outcome. In

equation 3.2, the dependent variable is denoted as AWCA_ABS. ABS refers to the absolute value of AWCA, meaning that the negative values were transformed to their corresponding positive values. This will not cause any practical implications since the focus is to examine the magnitude of deviations from expected outcomes.

To calculate the dependent variable, we rely on Lancksweerdt et al., (2021):

AWCA (Abnormal working capital accruals) is defined as follows:

$$\mathrm{AWCA_t} = \mathrm{NCWC_t} - \left(\frac{\mathrm{NCWC_{t-1}}}{\mathrm{OPREV_{t-1}}} * \mathrm{OPREV_t}\right) \qquad (3.3)$$

where NCWC (noncash working capital) and OPREV are defined as follows:

NCWC = Current assets –

Cash and Short-term investment –

Current liabilities – Other short-term debt.

OPREV = Operating revenues

Equation 3.3 illustrates that AWCA represents the difference between actual NCWC and expected NCWC. Additionally, AWCA is scaled by total assets to achieve a comparable measurement of abnormal accruals across the organizations.

3.3.2 Test Variables – Board Characteristics

MEMBER = Defined as the number of members on the board (board size).

AGE_DIV = Dummy variable coded 1 if the age difference between the oldest and youngest board member equals or exceeds 26 and coded 0 if otherwise.

GENDER_DIV = Defined as the percentage of female board members. Number of female board members divided by sum of board members.

Board size is represented by the variable MEMBER. In accordance with hypothesis 1, the search for a possible non-linear relation between AWCA and MEMBER requires some adjustments. For MEMBER to model an inverted U-shape relation, it had to be transformed into a quadratic term. Moreover, the variable was centered (C) to avoid collinearity problems between the

quadratic term and the linear term. Thus, the quadratic term is denoted as C_MEMBER2 tests for an inverted U-shaped relation, while C_MEMBER tests for a linear relation.

In order to capture the effect of age diversity, we calculated the age difference between the oldest and youngest board member for each board. Based on this premise, the average age difference for the sample was calculated to be approximately 26 years. We then used the average age difference of the sample as a benchmark to create a dummy variable that takes the value 1 if the age difference between the oldest and youngest board member equals or exceeds 26 years, and 0 otherwise.

To measure gender diversity within the boards, our approach is relatively simple. The variable shows the ratio of female board members. Other approaches for the measurement of gender diversity will be considered in section 4.3.2, where we discuss the effects of a balanced board.

3.3.3 Control Variables

AGE_AVERAGE =	Defined as the average age of the board.
PREBELOW =	Defined as a dummy variable coded 1 if the pre-managed current ratio drops below 1 and the current ratio is equal to or higher than 1. If none of these instances occurs, PREBELOW is coded 0.
TRADELEV =	Defined as trade payables scaled by total assets.
DONSUBS =	Defined as the sum of membership payments, donations, grants and bequests scaled by operating revenues.
FINLEV =	Defined as financial debt scaled by total assets.
NCCA =	Defines as noncash current assets scaled by total assets.
SIZE =	Defined as the natural log of total assets.
YEAR =	Defined as a dummy variable of the test period, 2020 and 2021.

Our empirical model includes several control variables. First, we control for the average age of the board (AGE_AVERAGE). As the test variable for age diversity captures the age difference between the youngest and oldest board member, we included AGE_AVERAGE to control for the overall age in each of the 127 boards. Thus, the control variable indicates whether boards

consist of either older or younger board members. The remaining control variables are derived from the study of Lanckweerdt et al. (2021) and will be further explained in the following paragraphs.

PREBELOW examines the presence of managerial intervention of working capital items. The current ratio is a commonly used metric to assess an organization's liquidity, and studies of for-profit organizations reveal managerial intervention of working capital items to avoid the current ratio falling below 1 (Dyreng et al., 2017; Jiang et al., 2016). Furthermore, we include PREBELOW to control for the potential managerial intervention of the current ratio within our sample of nonprofits.

Due to different financing sources of the organizations, we include the control variables TRADELEV, DONSUBS and FINLEV. TRADELEV and FINLEV measure the organization's trade payables and financial debt, respectively. Both variables are scaled by total assets to attain a relative metric across the organizations. DONSUBS includes the sum of membership payments, donations, grants and bequests, and is scaled by operating revenue. Overall, the variables control for the impact of different stakeholders.

Our model further controls for noncash current assets (NCCA) scaled by total assets, the size of the organization (SIZE) and the sample period (YEAR). NCCA controls for the organization's level of inventories and receivables, in which higher levels are perceived to be more susceptible for manipulation. In controlling for the size of the organization (SIZE), we take the natural logarithm of total assets. SIZE controls for the varying sizes of organizations in our sample, which essentially could have an impact on the performance of the organization. YEAR accounts for the sample period of 2020 and 2021, and captures the potential time-related effects.

3.4 Examination of OLS Assumptions

The following paragraphs will discuss the causes and possible solutions of violations of the least square assumptions and establish parallels to our model. By doing so, we provide insight on the reliability and accuracy of our analysis. It should be emphasized that the following discussion of causes and solutions does not constitute an exhaustive examination, as there are several approaches to evaluate them.

3.4.1 Omitted Variable Bias

The first OLS assumption holds if the expected value of error term u_i is 0 for any value of X_1, X_2, …, X_k. Consequently, the independent variable X_k and error term u_i should not be correlated. In the case of correlation between the independent variables and error term, the model suffers from an endogeneity problem. It causes a problem for the calculation of the OLS estimators, which indifferently will assume a non-correlated relation. This can result in biased and unreliable coefficients β_k, as the OLS estimators are calculated based on incorrect information.

Endogeneity issues may arise if the model fails to include relevant variables, known as omitted variable bias. As our research model examines the financial reporting quality of Norwegian sports organizations, we relied on Lanckswеerdt et al. (2021) to include relevant control variables. Additionally, we have controlled for the average age of each board, which may isolate the effect of age diversity within the board.

However, the model does not control for the academic competence and work experience of the board members. The effect of education and work experience is likely to have an impact on FRQ, especially if the board members have a financial background. Due to the possible impact of this attribute, we consider this omitted variable as a potential weakness of our model. Despite our attempts to collect data for education and work experience, through the platform LinkedIn, the data collection resulted in a significant amount of missing values.

3.4.2 Outliers

In research literature, outliers are typically referred to as “a minority of observations in a dataset that have different patterns from that of the majority of observations in the dataset” (Dovoedo & Chakraborti, 2015). If such observations are present in the dataset, they may disproportionately influence the relationship between the variables (Aguinis et al., 2013). Nevertheless, it is important to note that outliers are not inherently negative. It is in cases

where outliers arise from extraordinary circumstances, that they can have a negative impact on the outcome (Huber, 2011). Therefore, it is important to identify any outliers and handle them appropriately to ensure that the results of the analysis are not biased.

Prior to performing the regression analysis, we examined the data for any potential outliers. There are several methods for identifying outliers. Initially, we created boxplots to gain an understanding of the distribution of observations for each variable. Boxplot is a commonly used statistical tool within data analysis (Dovoedo & Chakraborti, 2015), and is especially useful for identifying outliers as it provides a five-number summary (min, q1, median, q3 and max). By using this tool, we could graphically observe that several variables were characterized by outlier observations. In further investigating the dataset for outliers, we examined the descriptive statistics for each variable – including the mean, standard deviation, minimum, median and maximum. To determine the criteria for identifying outliers, we rely on a commonly used method introduced by Hawkes and Webb (1962). Based on a threshold technique, this method defines a cutoff point of three times standard deviations above or below the mean to indicate an outlier observation. When applying this method to our dataset, we had to further examine the following three variables: AWCA_ABS, TRADELEV and MEMBER. As a first measure, we ensured that observations on these variables were not a result of measurement or recording errors, by verifying the accuracy of calculations and data obtained from annual reports and Proff Forvalt.

Since our sample selection of 127 sports organizations is relatively small, trimming the data for outliers would not be beneficial for our analysis. Instead, AWCA_ABS, TRADELEV, and MEMBER were winsorized at 1% of the upper and lower tails. Thus, the extreme values within a selected percentile were transformed into the value of that percentile. Winsorizing is a commonly used method for handling outliers to obtain robust results (Dechow et al., 2012; Francis et al., 2005; Gjerde et al., 2011). The observations connected to the extreme values will still be represented in the dataset, but their influence on the overall results is reduced.

3.4.3 Multicollinearity

The calculation of the slope coefficient β_k is based on the unique variation between the dependent variable Y_i and the explanatory variable X_{ki}. Multicollinearity occurs when one or more explanatory variables are strongly correlated with each other, resulting in reduced unique variance between Y_i and X_k (Stock & Watson, 2020). A severe consequence of multicollinearity is incorrectly estimated standard errors. The importance of reliable standard errors is related to their influence on the confidence intervals, which ultimately decide the statistical significance of the relationship. Hence, the presence of multicollinearity may lead to incorrect conclusions. However, moderate collinearity is generally not an issue and is commonly encountered when multiple explanatory variables are included.

To check for multicollinearity among the variables in our model, we used a statistical measure called the variation inflation factor (VIF). The VIF statistic examines the correlation between an independent variable and the other independent variables. If the VIF value exceeds 5, it implies that the variable is highly correlated with other variables in the model (Megmetoglu & Jakobsen, 2017). First, VIF statistics were conducted on our empirical model, with the linear and quadratic term of MEMBER uncentered. Since the two terms resulted in VIF values of 51.25 and 42.79, we used a mean-centering approach to minimize the multicollinearity problem (Singh, 1998). Table 2 shows the VIF statistics, including the mean-centered linear (C_MEMBER) and quadratic terms (C_MEMBER2). The VIF values appear to be relatively low, apart from C_MEMBER and C_MEMBER2. As moderate collinearity is to be expected when the quadratic term is derived from the linear term, we do not consider this a multicollinearity problem. Furthermore, most of the values are significantly below the threshold of 5, suggesting that our model is not influenced by multicollinearity.

Table 2. Variance inflation factor (VIF)

	VIF	1/VIF
C_MEMBER	5.242	.191
C_MEMBER2	3.145	.318
AGE_DIV	1.114	.898
GENDER_DIV	1.106	.904
AGE_AVERAGE	1.098	.911
PREBELOW	1.227	.813
TRADELEV	1.215	.819
DONSUBS	1.116	.896
FINLEV	1.184	.845
SIZE	2.378	.420
NCCA	1.394	.717
YEAR	1.015	.985
Mean VIF	1.77	

3.4.4 Homoscedasticity

As mentioned in section 3.2, the error term u_i is assumed to demonstrate homoscedasticity when conducting a multiple regression analysis. Such an assumption requires that the error term has a constant variance for all observations, and thus does not depend on the values of X_{ki}. If this assumption is not met, the error term is characterized as heteroscedastic (non-constant variance). A simple approach to verify the homoscedasticity assumption is to create scatterplots of standardized residuals against both a) the predicted values of the outcome variable and b) the corresponding values of X_{ki}. The graphical inspection of the different scatterplots in our model suggests heteroscedasticity. For instance, the scatterplot of standardized residuals and predicted values illustrates a "fan"-like pattern – meaning that the variance increases along the axis, which implies a violation of the homoscedasticity assumption.

A possible consequence of heteroscedasticity is that the estimates of OLS standard error become biased, which further leads to biased statistical tests. To address this issue, our model implements the GLS method which allows for heteroscedasticity. As this approach accounts for the non-constant variance in the error term, GLS provides a more efficient estimator than OLS.

4. Empirical Results

4.1 Descriptive Statistics

The following table provides a comprehensive list of the variables used in this study and their corresponding definitions. The dependent variable and the majority of the control variables are inspired by the study of Lancksweerdt et al. (2021).

Table 3. Variables and definitions

Variables	Definition	
AWCA_ABS	Absolute value of abnormal working capital accruals scaled by total assets.	Dependent
C_MEMBER	Number of members on the board. Testing a linear relation between board size and FRQ.	Test
C_MEMBER2	Quadratic term of C_MEMBER. Testing an inverted U-shaped relation between board size and FRQ.	Test
AGE_DIV	A dummy variable coded 1 if the age difference between the youngest and oldest board member is equal or exceeds 26, and 0 otherwise.	Test
GENDER_DIV	Number of female board members divided by sum of members on the board.	Test
AGE_AVERAGE	Average age of the board members.	Control
PREBELOW	A dummy variable coded 1 if pre-managed current ratio drops below 1 and current ratio is equal or higher than 1, and 0 otherwise.	Control
TRADELEV	Trade payables scaled by total assets.	Control
DONSUBS	Sum of membership payments, donations, grants and bequest scaled by operating revenues.	Control
FINLEV	Financial debt scaled by total assets.	Control
SIZE	Natural log of total assets.	Control
NCCA	Noncash current assets scaled by total assets.	Control
YEAR	Dummy variable of the test period, 2020 and 2021.	Control
ϵ	Error term	Control

Table 4. Descriptive statistics

Variable	Mean	Std. Dev.	Min.	Median	Max.
AWCA_ABS	.092	.136	0.001	.044	.814
MEMBER	6.929	2.239	3.000	7	14
AGE_DIV	.465	.5	0.000	0	1
GENDER_DIV	.386	.139	0.000	.4	.75
AGE_AVERAGE	51.057	4.946	39.571	51	65
PREBELOW	.071	.257	0.000	0	1
TRADELEV	.058	.079	0.000	.032	.493
DONSUBS	.345	.255	0.000	.347	.993
FINLEV	.275	.248	0.008	.193	.973
NCCA	.18	.212	0.000	.094	.912
SIZE	4.129	.560	2.997	4.04	5.977
YEAR	2020.5	.501	2020	2020.5	2021

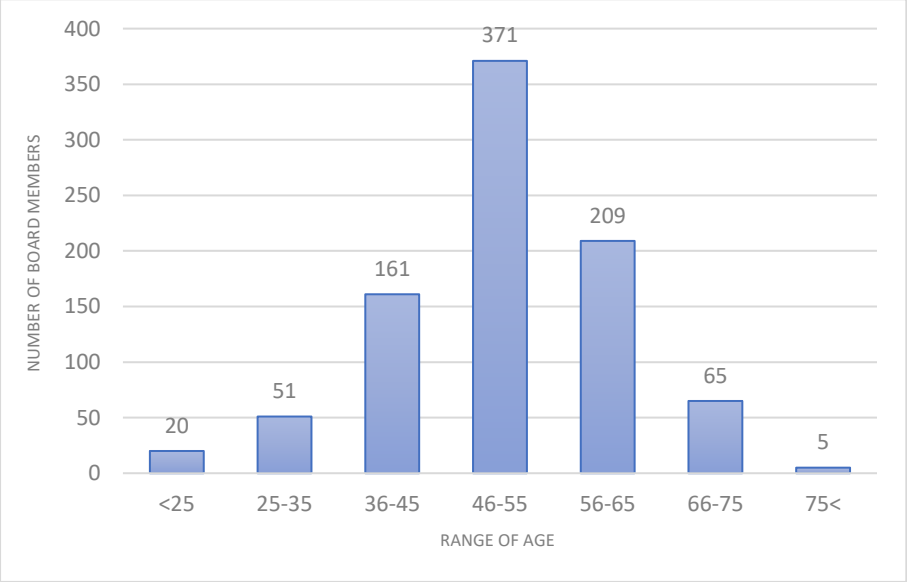
Table 4 presents the descriptive statistics of the variables included in our multivariate model. As stated in section 3.4.2, the dependent variable AWCA_ABS, TRADEELEV and MEMBER have been winsorized at the 1% and 99% levels. The descriptive statistics show that the average board of our sample consists of 7 members, 38.6% women and an average age of 51 years. Since age diversity is expressed as a dummy variable, the average value of age diversity will not provide a substantial interpretation. This sample gives an average abnormal working capital accrual of 9.2%, with a standard deviation of 13.6%. A lower abnormal working capital accrual indicates better financial reporting quality. However, the maximum (minimum) values of AWCA_ABS reaching 81.4% (0.1%) indicates significant variations in financial reporting quality among Norwegian sport associations. Additionally, the board size varies considerably, with the smallest boards consisting of only 3 members, while the largest boards can have up to 14 members. Moreover, gender diversity also shows considerable variation, ranging from 0% to 75%. The average age of board members varies from a minimum of 39.5 years to a maximum of 65 years.

Table 5. Detailed overview of board composition

Size # 		Average age # 		Gender diversity % 	
<4	2	<20	0	<10	4
4-5	31	20-30	0	10-20	9
6-7	62	31-40	2	21-30	19
8-9	18	41-50	55	31-40	44
10-11	7	51-60	66	41-50	38
12-13	2	61-70	4	51-60	6
13<	5	70<	0	60<	7
Obs.	*127*		*127*		*127*

Table 5 shows a detailed overview of the board composition characteristics, respectively board size, average age and gender diversity, distributed across different intervals. First, 95 of 127 (75%) of the sports organizations have boards consisting of 7 or less members. Referring to Taylor & O'Sullivans' (2009) optimal board size of 5 to 12 members, the majority of our sample evidently consists of relatively small boards. Second, the average age of the sample appears to be centered around 50-60 years. In order to appropriately study the age diversity, figure 1 presents the age distribution of all board members in the sample.

Figure 1. Age distribution of the board members



Note: n=882

Among 882 board members, the youngest board member is 17 years old. However, our sample appears to have a limited representation of younger board members. Only 8% of the overall sample consists of board members aged 35 years or younger. Third, table 5 indicates that gender diversity is evenly distributed across the sports organizations. The majority of the organizations (65%) have female board representation ranging from 31-50%. 44 of 127 organizations have 31-40% representation of women on the board, closely followed by 38 of 127 organizations which have 41-50% female board members. Considering 50% female board representation as a threshold, the table shows that only 10% of the organizations exceeds this threshold.

Table 6. Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) AWCA_ABS	1.000												
(2) C_MEMBER	-0.020	1.000											
(3) C_MEMBER2	-0.060	0.704	1.000										
(4) AGE_DIV	0.225	0.178	0.154	1.000									
(5) GENDER_DIV	0.010	0.220	0.098	0.024	1.000								
(6) AGE_AVERAGE	-0.113	-0.175	0.018	-0.029	-0.092	1.000							
(7) PREBELOW	0.280	0.084	0.088	0.112	-0.034	0.035	1.000						
(8) TRADELEV	0.171	0.033	0.017	-0.010	0.086	-0.046	-0.040	1.000					
(9) DONSUBS	-0.001	-0.042	-0.009	0.164	0.080	-0.001	-0.007	-0.021	1.000				
(10) FINLEV	0.235	-0.032	0.079	-0.033	0.051	0.039	0.319	0.070	-0.081	1.000			
(11) NCCA	0.440	0.132	0.032	0.149	0.007	-0.115	0.227	0.374	-0.195	0.134	1.000		
(12) SIZE	-0.005	-0.612	-0.123	-0.073	-0.099	0.135	0.015	-0.051	0.079	0.067	-0.091	1.000	
(13) YEAR	0.034	0.000	0.000	0.000	0.000	0.000	0.061	0.038	-0.056	-0.030	0.003	-0.020	1.000

Table 6 is conducted to further study whether our variables are characterized by multicollinearity. While the VIF test (as discussed in section 3.4.3) accounts for the correlation between one independent variable and all the other independent variables in the model, table 6 presents a pairwise correlation matrix. The coefficients can range from -1 to +1, where ± 1 indicates a perfect correlation, and measures the strength and direction of the correlation between two variables (Schober et al., 2018). If the coefficients exhibit high values of pairwise correlations, multicollinearity exists between the given variables.

Overall, the table shows relatively low to moderate correlations. There are no strong indications of multicollinearity issues, as the correlations do not exceed 0.8 (Kennedy, 2008). C_MEMBER and C_MEMBER2 exhibits a correlation of .704. Due to the mathematical relation between the linear and quadratic terms, as discussed in section 3.4.3, a moderate to strong correlation between the terms is expected. The dependent variable AWCA_ABS is positively correlated with NCCA (.440) and FINLEV (.235). A higher level of non-cash current assets (NCCA) and a higher financial leverage (FINLEV) are both factors that could contribute to financial reporting manipulations. This could be due to the fact that 1) non-cash current assets, such as inventory and accounts receivables, are perceived as more susceptible to manipulation compared to cash, and 2) higher levels of financial leverage are associated with incentives to manipulate the financial statements to strengthen their financial position. As for the test variables, age diversity (AGE_DIV) is positively correlated (.225) with abnormal accruals (AWCA_ABS). Such a relation indicates that the financial reporting quality of our sample does not benefit from age diverse boards. Moreover, board size (MEMBER) and the size of the organization (SIZE) exhibit a strong correlation (-.612). As larger firms may require larger boards, a strong correlation between the two variables is to be expected. However, a negative correlation indicates the opposite – our sample seemingly consist of organizations that do not require larger boards for larger organizations. Additionally, the table shows moderate correlations between some of the independent variables: PREBELOW is positively correlated with FINLEV (.319) and NCCA (.227), and NCCA is positively correlated with TRADELEV (.374).

4.2 Multivariate Regression Results

Table 7. Random Effects Regression Results

AWCA_ABS	(1) Model 1	(2) Model 2
C_MEMBER	-.006	-.009**
	(.007)	(.006)
C_MEMBER2	-.001	-
	(.001)	
AGE_DIV	.053**	.052**
	(.021)	(.021)
GENDER_DIV	.004	.008
	(.068)	(.067)
AGE_AVERAGE	-.003*	-.003**
	(.001)	(.001)
PREBELOW	.050	.051
	(.043)	(.043)
TRADELEV	.129	.125
	(.255)	(.255)
DONSUBS	.035	.034
	(.036)	(.036)
FINLEV	.078	.075
	(.066)	(.066)
NCCA	.219**	.216**
	(.089)	(.09)
SIZE	-.001	-.010
	(.014)	(.014)
YEAR	.009	.009
	(.013)	(.013)
Observations	254	254
Overall R^2	0.29	0.29
Chi-square	35.14	35.28
Prob > chi2	0.000	0.000

Robust standard errors are in parentheses

*** p<.01, ** p<.05, * p<.1

Table 7 presents the multivariate regression results estimated using the random effects regression model. Both model 1 and 2 consist of 254 observations (organizations), equally distributed between two years (2020 and 2021). In measuring "goodness-of-fit", R-squared indicates that 29% of the variation in abnormal working capital accruals can be explained by

the set of independent variables in our models. Moreover, the models show a significant chi-square indicating a significant relation between abnormal working capital accruals and the independent variables. The consecutive paragraphs will further present the findings of this study, structured according to each of the hypotheses.

4.2.1 Impact of Board Size

H1: *The relation between board size and FRQ follows an inverted U-shape.*

Board size is assumed to have a positive impact on FRQ up to a certain point, after which the impact is assumed to become negative. In accordance with H1, model 1 tests for an inverted U-shaped relationship between C_MEMBER2 and AWCA_ABS. Furthermore, this approach examines the potential non-linear relationship and seeks to identify the optimal level of board size. As model 2 excludes the quadratic term C_MEMBER2, it examines a linear relationship between C_MEMBER and AWCA_ABS.

The regression results of model 1 show quadratic function of C_MEMBER2 is statistically insignificant at any levels at or below 10%. This suggests that the relationship between board size and FRQ in our sample does not conform to a pattern of an inverted U-shaped relationship, where board size ranged from 3 members to 14 members. In model 2, C_MEMBER is statistically significant at a 5%-significance level, demonstrating a linear relationship between C_MEMBER and AWCA_ABS. The slope coefficient of C_MEMBER has a negative sign with a value of -.009. Such a relation indicates that larger boards reduce the level of abnormal accruals in our sample, which ultimately contributes to enhancing the reporting quality.

Our finding does not necessarily contradict the conclusions observed in previous studies, such as Nieva et al. (1985), Vafeas (2000), and Taylor & O'Sullivan (2009), on the inverted U-shaped relationship between board size and board performance. As 75% of the boards in our sample consist of 7 or less members, it is worth noting that our sample primarily consists of small boards (table 5). When we examine the average size of nonprofit boards across borders, the average board size of our sample (7 members) is comparatively smaller. Nonprofits in the UK report a somewhat larger average board size of 10 members (Cornforth & Simpson, 2002). Moreover, the average size of nonprofit boards in Australia and Spain consists of 12 directors (Steane & Christie, 2001; De Andrés-Alonso et al., 2009). Among US

nonprofits, the average board size of nonprofits reaches as high as 18 members (O'Regan & Oster, 2005). Our sample may therefore not have reached sufficiently large boards to examine a possible inverted U-shaped relation between board size and FRQ. Thus, our results indicate that Norwegian sports organizations benefit from larger boards, where board size in our sample ranged from 3 members to 14 members. Additionally, the correlation matrix (table 6) reveals that having a larger organization does not necessarily require a larger board. Upon closer inspection of our sample, the four largest organizations consisted of only three board members, whereas the smallest organization had seven members on its board. Such a relation may also have contributed to the somewhat conflicting findings.

4.2.2 Impact of Board Age Diversity

H2: *Board age diversity is positively associated with FRQ.*

Our measurement for board age diversity is based on the age difference between the oldest and youngest board member. This measure is denoted AGE_DIV, while AGE_AVERAGE controls for the average age of the boards. Since the findings of model 1 show an insignificant inverted U-shaped relationship between MEMBER and AWCA_ABS, we will rely on model 2 for further examination of the results. Our analysis provides evidence of a statistically significant relation between board age diversity and FRQ (at the 5% level). The estimated coefficient for AGE_DIV is .052, indicating a negative relationship between board age diversity and FRQ. This is due to the positive relation between age diversity and abnormal accruals, in which age diversity contributes to increased abnormal accruals. Furthermore, the increase in abnormal accruals negatively affects the reporting quality. Although AGE_AVERAGE is considered a control variable, it may still provide useful information in achieving a more comprehensive understanding of its impact on FRQ. Model 2 shows a significant impact of AGE_AVERAGE, with the respective estimated coefficient being -.003. The negative sign of the coefficient indicates that older boards contribute to lower levels of abnormal accruals, which positively affects the reporting quality. Conclusively, our findings show that both AGE_DIV and AGE_AVERAGE significantly affect the FRQ of Norwegian sports organizations.

Our findings contradict H2, suggesting that 1) less age diversity and 2) older boards contribute to improved financial reporting quality of Norwegian sports organizations.

Negative effects of AGE_DIV could potentially be linked to intergroup bias, which origins from social categorization theory (Van Knippenberg et al., 2004). Intergroup bias can be described as the tendency of favoring team members similar to oneself, creating several subgroups within a group. Related to age diversity, this group dynamic can emerge as members of a particular age classify themselves into a sub(age)group. Balkundi et al. (2007) and Byrne et al. (1966) argue that members within an age group share the same social, political and economic values, leading to them favoring each other. As group members favor their own subgroup and discriminate against other subgroups, intergroup bias arises (Schneid et al., 2014). Such a group dynamic can result in an incohesive team that suffers from poor communication skills. For our sample, figure 1 illustrates that 75% of the board members are aged 46 years or older. If this was to constitute a subgroup, the younger board members only constitute a very small subgroup. A possible parallel to the social categorization theory is that both the quantity of older board members and their experience can be perceived as a threat to younger board members. Younger board members may therefore feel less inclined to express their thoughts and opinions. This essentially leads to the loss of valuable perspectives and contributions from younger board members. The disregard of younger board members may also be associated with our findings related to AGE_AVERAGE. Our results show that older boards contribute to enhanced FRQ, but this relation might be affected by intergroup bias. Furthermore, another possible interpretation of our findings for AGE_AVERAGE is consistent with the findings of Gibbons & Murphy (1992) and Reed & Defillippi (1990). They argue that older board members have richer experiences and practices, which over time leads to better skill-based competencies. On the other hand, the approach of younger board members is perceived as more risk-seeking.

4.2.3 Impact of Board Gender Diversity

H3*: The proportion of female board members is positively associated with FRQ.*

In testing H3, our analysis examines whether a higher proportion of female board members positively affect FRQ. Thus, the sign of the slope coefficient for GENDER_DIV is expected to be negative. Neither of the models show a statistically significant relation between gender diversity and FRQ at any significance levels at or below 10%. Contrary to our expectation of H3, gender diversity does not exhibit a significant relationship with FRQ.

4.3 Sensitivity Analyses

This section provides further analyses of our model to evaluate the robustness of our main findings. Additionally, the analyses will enhance our understanding of the relations between different variables. Our sensitivity analyses were carried out by changing certain parameters in our model. We used the random effects model for the regression analyses, consistent with the approach of our main model.

4.3.1 Identifying the Threshold of Significance for Age Diversity

The dummy variable AGE_DIV accounts for the board age diversity of our sample, in which our findings indicate a statistically significant relation between board age diversity and FRQ. Considering the significant relation observed at an average difference of 26 years, we will further explore the potential threshold at which the significant relation ceases. By using the average age difference as a starting point (26 years), we created dummy variables for all ages below 26. Moreover, we conducted several regressions substituting AGE_DIV with each dummy variable, with the objective of determining the age difference where the relationship no longer is statistically significant.

Our findings indicate that the significant relation between board age diversity and FRQ persists at any age difference of 14 years and above, given a significance level of 10% (p=.065). Considering a significance level of 5%, the corresponding relation would apply for any age difference of 15 years and above (p=.008). The regression results also reveal a consistent decrease in the slope coefficient of age difference, from .052 in our main model to .036 in the model with an age difference of 14 years. Such findings suggest that the impact of age difference on FRQ decreases as the age difference between board members reduces.

4.3.2 Gender Balanced Boards

The approach of our main model measures gender diversity as the proportion of female board members. As concluded in section 4.2.3, our findings show an insignificant relation between GENDER_DIV and FRQ. To further examine a possible relation between gender diversity and FRQ, we consider the effect of a gender balanced board. In assuming that gender balance varies around 50%, we provide regressions results for the following intervals (%): 40-60, 45-55 and 35-65 female board members. By including several intervals, we attempt to cover the possible structures of a gender balanced board. Moreover,

GENDER_DIV was divided into three dummy variables for the respective intervals which were examined in three separate regression analyses.

The regression results for 40-60% female board members reports a p-value of .833, which indicates strong evidence that the effect of gender balance on FRQ occurred by random chance. Similarly, the results for 35%-65% female board members also show an insignificant effect (p=.919). On the other hand, the outcome of 45%-55% female board members provide critical insight with a p-value of .123. This p-value is considerably smaller than the reported p-value for GENDER_DIV in our main analysis (p=.904). Also, the p-value is seemingly approaching the significance level of 10 %. As the relation is still considered statistically insignificant at any levels at or below 10%, conclusions about the relation of board gender diversity and FRQ must be interpreted with caution. An additional finding regards the model's goodness-of-fit. While our main model reports R-square of .29, this model shows a slight improvement with an R-square of .32. Thus, utilizing the measurement of gender balanced boards, in terms of 50% ± 5% female board members, improves the explanatory power of our model.

5. Conclusion

The reporting quality of the largest nonprofit in Norway, the Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF), has received a considerable amount of attention. In 2018, reports from the Norwegian Office of the Auditor General revealed concerning circumstances regarding NIF's accounting practices. Particularly, NIF used significant amounts of restricted funds for purposes other than what was intended. On this basis, our study further assessed the financial reporting quality of sports organizations in Norway.

The study examines the relation between the composition of board of directors and the financial reporting quality of Norwegian sports organizations. Specifically, we consider the impact of three observable attributes of the board: size, age and gender. This was conducted by analyzing several aspects of the financial statements of 127 Norwegian sports organizations, as well as assessing the board structure of the corresponding organizations. While the majority of previous studies refer to an inverted U-shape relationship between board size and financial reporting quality, our findings revealed a significant linear relationship where board size of the organizations in the sample ranged from 3 members to 14 members. Results also show a positive relation between board size and FRQ. In examining the relation of board age diversity and financial reporting quality, we assume a positive impact of age diversity. Our findings contradict such a relation, and rather show a significant negative relationship between board age diversity and FRQ. Our findings for the relationship between board gender diversity and financial reporting quality show an insignificant impact of gender diversity.

Overall, our results show that larger and less age diverse boards contributes to enhance the financial reporting quality of Norwegian sports organizations. These findings emphasize the significance of considering the unique circumstances of each sector and country when examining the relationship between board composition and financial reporting quality. It also highlights the importance of further research on this area.

There are certain limitations to our study. As our sample only consists of 127 organizations, it is considered relatively small. To further increase the validity of the findings, it is advisable to use larger sample size in future studies. The sample period of 2020 and 2021 may also be

considered somewhat limited. Hence, our analysis does not analyze the potential long-term effect of board characteristics on FRQ. In extending the sample period, a possible approach for further research is to analyze the difference in FRQ before and after the disclosing report in 2018. Moreover, our analysis does not account for the professional background of the board members. Although we attempted to obtain data on these attributes of the board members, which we assume have an impact on the FRQ, it was not included due to insufficient data. Finally, the financial statements among the sports organizations in our sample are subject to inconsistent specifications. While some organizations reported detailed income statements, others had more general bulks of accounting items. As a result, some of our control variables may be affected by the inconsistent accounting practices of our sample.

6. References

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